NEW ISSUE – Book-Entry Only **See "RATINGS" herein**

In the opinion of Wilentz, Goldman & Spitzer, P.A., Bond Counsel, under existing statutes, regulations, rulings and court decisions, and assuming continuing compliance by the Authority with certain requirements described herein, interest on the Series 2019 A Bonds is not includable in gross income for Federal income tax purposes pursuant to Section 103 of the Internal Revenue Code of 1986, as amended (the "Code") and is not treated as a preference item under Section 57 of the Code for purposes of calculating the Federal alternative minimum tax. Under existing laws of the State of New Jersey, interest on the Series 2019 A Bonds and any gain on the sale thereof are not includible in gross income under the New Jersey Gross Income Tax Act. For a more complete discussion, see "TAX MATTERS" herein.

$449,110,000
NEW JERSEY TURNPIKE AUTHORITY
Turnpike Revenue Bonds, Series 2019 A

Dated: Date of Delivery **Due: January 1, as shown on the inside front cover**

This Official Statement has been prepared to provide information relating to the issuance by the New Jersey Turnpike Authority (the "Authority") of its $449,110,000 aggregate principal amount of Turnpike Revenue Bonds, Series 2019 A (the "Series 2019 A Bonds"). The Bank of New York Mellon, Woodland Park, New Jersey, will serve as the Trustee, Paying Agent and Registrar for the Series 2019 A Bonds.

The Series 2019 A Bonds will be issued in fully registered form without coupons, and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"). DTC will act as securities depository for the Series 2019 A Bonds, as more fully described herein. Individual purchases of the Series 2019 A Bonds will be made in book-entry form only in denominations of $5,000 or any integral multiples thereof. Purchasers of the Series 2019 A Bonds will not receive certificates representing their interest therein.

Interest on the Series 2019 A Bonds will accrue from their Date of Delivery, and will be payable semiannually on each January 1 and July 1, commencing on July 1, 2019, until prior redemption or maturity, and will be calculated on the basis of a 360-day year of twelve 30-day months. The Series 2019 A Bonds will bear interest at the interest rates per annum set forth on the inside front cover page of this Official Statement.

The Series 2019 A Bonds are being issued pursuant to the New Jersey Turnpike Authority Act of 1948 (Chapter 454 of the Laws of New Jersey of 1948), as amended and supplemented (the "Act"), the Turnpike Revenue Bond Resolution adopted by the Authority on August 20, 1991, as amended, restated and supplemented (the "General Bond Resolution"), including as supplemented by the Series 2017 Turnpike Revenue Bond Resolution adopted by the Authority on September 19, 2017 (the "Series 2017 Resolution"), and a Certificate of Determination to be executed by the Executive Director of the Authority prior to the issuance of the Series 2019 A Bonds (the "Certificate of Determination" and, together with the General Bond Resolution and the Series 2017 Resolution, the "Resolution"). The Series 2019 A Bonds will be 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 Resolution from time to time, and the Authority's reimbursement and payment obligations under certain Credit Facilities and Qualified Swaps (as such terms are defined in the Resolution).

The Series 2019 A Bonds are subject to redemption prior to maturity at such prices and pursuant to such terms as are described herein. See "THE SERIES 2019 A BONDS – Redemption Prior to Maturity" herein.

The Series 2019 A Bonds are being issued by the Authority to (i) pay the costs of Projects permitted and authorized under the Act and the Resolution, and (ii) pay the costs of issuance of the Series 2019 A Bonds, all as more fully described herein.

THE SERIES 2019 A BONDS ARE REVENUE OBLIGATIONS OF THE AUTHORITY. THE SERIES 2019 A BONDS ARE NOT A DEBT OR LIABILITY OF THE STATE OF NEW JERSEY OR OF ANY POLITICAL SUBDIVISION THEREOF (OTHER THAN THE AUTHORITY), AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OF NEW JERSEY OR OF ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE SERIES 2019 A BONDS. THE AUTHORITY HAS NO TAXING POWER.

Selected information is presented on this cover page for the convenience of the user in brief or summary form. To make an informed decision regarding the Series 2019 A Bonds, a prospective purchaser should read this Official Statement in its entirety.

The Series 2019 A Bonds are offered when, as and if issued by the Authority and received by the Underwriters and subject to the approval of legality thereof by Wilentz, Goldman & Spitzer, P.A., Woodbridge, New Jersey, Bond Counsel to the Authority. Certain legal matters will be passed upon for the Authority by Robert J. Carroll, Esq., Director of Law of the Authority. Certain legal matters will be passed upon for the Underwriters by their counsel, Gibbons P.C., Newark, New Jersey. Hilltop Securities, New York, New York is acting as Financial Advisor to the Authority. It is expected that the Series 2019 A Bonds will be available for delivery through DTC on or about February 7, 2019.

Citigroup **Morgan Stanley**

Raymond James **Stifel, Nicolaus & Company, Incorporated**
US Bancorp **Wells Fargo Securities**

Dated: January 24, 2019

$449,110,000

NEW JERSEY TURNPIKE AUTHORITY
Turnpike Revenue Bonds, Series 2019 A

$200,000,000 4.00% Term Bond Due January 1, 2048 Yield - 3.97%* CUSIP 646140DC4**
$249,110,000 5.00% Term Bond Due January 1, 2048 Yield - 3.59%* CUSIP 646140DD2**

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* Yield to first optional redemption date of January 1, 2029.

** CUSIP is a registered trademark of the American Bankers Association. CUSIP numbers have been provided by CUSIP Global Services, which is operated on behalf of the American Bankers Association by S&P Global Market Intelligence. The CUSIP numbers are being provided solely for the convenience of the holders of the Series 2019 A Bonds only and the Authority does not make any representation with respect to such numbers or undertake any responsibility for their accuracy. The CUSIP numbers are subject to being changed after the issuance of the Series 2019 A Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of the Series 2019 A Bonds.

NEW JERSEY TURNPIKE AUTHORITY

COMMISSIONERS

DIANE GUTIERREZ-SCACCETTI, *Chair*

RONALD GRAVINO, *Vice Chairman*

MICHAEL R. DuPONT, *Treasurer*

RAYMOND M. POCINO

ULISES E. DIAZ

JOHN D. MINELLA

RAPHAEL SALERMO

EXECUTIVE STAFF

JOHN M. KELLER, *Executive Director*

JAMES CARONE, *Deputy Executive Director*

DONNA MANUELLI, *Chief Financial Officer*

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IN CONNECTION WITH THE OFFERING OF THE SERIES 2019 A BONDS, THE UNDERWRITERS MAY OVER ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZATION, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

No dealer, broker, salesman, or any other person has been authorized by the Authority to give any information or to make any representations, other than those contained in this Official Statement, and if given or made, such other information must not be relied upon as having been authorized by the Authority. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series 2019 A Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

The Series 2019 A Bonds have not been registered under the Securities Act of 1933, as amended, and the Resolution has not been qualified under the Trust Indenture Act of 1939, as amended, in reliance upon certain exemptions contained in such Federal laws. In making an investment decision, investors must rely upon their own examination of the Series 2019 A Bonds and the security therefor, including an analysis of the risks involved. The Series 2019 A Bonds have not been recommended by any Federal or state securities commission or regulatory authority. The registration, qualification or exemption of the Series 2019 A Bonds in accordance with applicable provisions of securities laws of the various jurisdictions in which the Series 2019 A Bonds have been registered, qualified or exempted cannot be regarded as a recommendation thereof. Neither such jurisdictions nor any of their agencies have passed upon the merits of the Series 2019 A Bonds or the adequacy, accuracy or completeness of this Official Statement. Any representation to the contrary may be a criminal offense.

References in this Official Statement to statutes, laws, rules, regulations, resolutions, agreements, reports and documents do not purport to be comprehensive or definitive, and all such references are qualified in their entirety by reference to the particular document, the full text of which may contain qualifications of and exceptions to statements made herein. This Official Statement is distributed in connection with the sale of the Series 2019 A Bonds referred to herein and may not be reproduced or used, in whole or in part, for any other purpose.

The order and placement of materials in this Official Statement, including the Appendices, are not to be deemed to be a determination of relevance, materiality or importance, and this Official Statement, including the Appendices, must be considered in its entirety. The offering of the Series 2019 A Bonds is made only by means of this entire Official Statement.

The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstance, create any implication that there has been no change in the affairs of the Authority since the date hereof.

Certain statements included or incorporated by reference in this Official Statement constitute projections or estimates of future events, generally known as forward-looking statements. These statements are generally identifiable by the terminology used such as “anticipate” “plan,” “expect,” “estimate,” “budget” or other similar words. The achievement of certain results or other expectations contained in such forward-looking statements involves known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements described in or expressed or implied by such forward-looking statements. Other than as may be required by law, the Authority does not plan to issue any updates or revisions to any such forward-looking statements if or when its expectations are realized or not realized, or when the events, conditions or circumstances on which such statements are based, occur.

The Underwriters have provided the following sentence for inclusion in this Official Statement, as well as certain information attributed to the Underwriters in the "UNDERWRITING" section of this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as a part of, their responsibilities to investors under the Federal securities laws as applied to the facts and circumstances of this transaction, but, except for the information attributed to the Underwriters in the "UNDERWRITING" section of this Official Statement, the Underwriters do not guarantee the accuracy or completeness of such information.

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OFFICIAL STATEMENT

of the

NEW JERSEY TURNPIKE AUTHORITY

relating to

\$449,110,000
Turnpike Revenue Bonds,
Series 2019 A

INTRODUCTION

This Official Statement has been prepared to provide information relating to the issuance by the New Jersey Turnpike Authority (the "Authority") of its \$449,110,000 Turnpike Revenue Bonds, Series 2019 A (the "Series 2019 A Bonds"). The Bank of New York Mellon, Woodland Park, New Jersey, will serve as Trustee, Paying Agent and Registrar (the "Trustee", "Registrar" and "Paying Agent") for the Series 2019 A Bonds.

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. See "THE AUTHORITY" herein.

The Series 2019 A Bonds will be issued under and pursuant to the Act and the Turnpike Revenue Bond Resolution adopted by the Authority on August 20, 1991, as amended, restated and supplemented (the "General Bond Resolution"), including as supplemented by the Series 2017 Turnpike Revenue Bond Resolution adopted by the Authority on September 19, 2017 (the "Series 2017 Resolution"), and a Certificate of Determination to be executed by the Executive Director of the Authority prior to the issuance of the Series 2019 A Bonds (collectively, the "Certificate of Determination" and, together with the General Bond Resolution and the Series 2017 Resolution, the "Resolution"). The Series 2019 A Bonds and any other Outstanding Bonds (as hereinafter defined) under the Resolution are referred to herein as the "Bonds". All capitalized terms used herein and not otherwise defined in this Official Statement will have the meanings ascribed to them in the Resolution.

The Series 2019 A Bonds will be 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 Resolution from time to time, and the Authority's reimbursement and payment obligations under certain Credit Facilities and Qualified Swaps. See "SECURITY FOR THE BONDS" herein.

The proceeds of the Series 2019 A Bonds will be used by the Authority to (i) pay the Cost of Construction of various Projects which are part of the Authority's ongoing capital improvement program for the Turnpike System (the "Capital Improvement Program"), and (ii) pay the costs of issuance of the Series 2019 A Bonds. See "THE SERIES 2019 A BONDS", "ESTIMATED SOURCES AND USES OF FUNDS" and "THE AUTHORITY – Capital Improvement Program" herein.

The Authority is engaged in a comprehensive Capital Improvement Program which was approved in 2008 and currently provides for the expenditure by the Authority of an estimated aggregate amount of approximately $7,000,000,000 through the end of the Capital Improvement Program to fund numerous capital improvements to the Turnpike System, including, without limitation, the widening of certain sections of both the Turnpike and the Parkway. In April 2009, the Authority issued its $375,000,000 Turnpike Revenue Bonds, Series 2009 E and $1,375,000,000 Turnpike Revenue Bonds, Series 2009 F (Federally Taxable – Issuer Subsidy – Build America Bonds) (respectively, the "Series 2009 E Bonds" and the "Series 2009 F Bonds" and, collectively, the "Series 2009 E and F Bonds") under the Resolution to initially fund the costs of the Capital Improvement Program. In December 2010, the Authority issued its $1,850,000,000 Turnpike Revenue Bonds, Series 2010 A (Federally Taxable – Issuer Subsidy – Build America Bonds) (the "Series 2010 A Bonds", together with the Series 2009 F Bonds, the "Build America Bonds") under the Resolution to further fund costs of the Capital Improvement Program. In addition, the Authority has also issued its $1,400,000,000 Turnpike Revenue Bonds, Series 2013 A (the "Series 2013 A Bonds"), its $1,000,000,000 Turnpike Revenue Bonds, Series 2014 A (the "Series 2014 A Bonds"), its $750,000,000 Turnpike Revenue Bonds, Series 2015 E (the "Series 2015 E Bonds"), and its $600,000,000 Turnpike Revenue Bonds, Series 2017 A (the "Series 2017 A Bonds"), to further fund costs of the Capital Improvement Program. The Series 2019 A Bonds are being issued by the Authority to further fund the remaining costs of the Capital Improvement Program. The Series 2019 A Bonds will be the final Series of Non-Refunding Bonds issued by the Authority to fund the costs of the Capital Improvement Program. See "THE AUTHORITY – Capital Improvement Program" herein.

The current toll rates in effect for the Turnpike System are anticipated to provide the Authority with sufficient Net Revenues to satisfy all of the requirements of the Resolution relating to the issuance of all Bonds issued by the Authority to fund the Costs of Construction of the various Projects comprising the Capital Improvement Program. See "SECURITY FOR THE BONDS – Toll Covenant", "THE AUTHORITY – Certain Powers" and "THE AUTHORITY – Existing Toll Rates and Schedule" herein.

The Series 2019 A Bonds will be issued in fully registered form without coupons, and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"). DTC will act as securities depository for the Series 2019 A Bonds, as more fully described herein. Individual purchases of the Series 2019 A Bonds will be made in book-entry form only, in denominations of $5,000 or any integral multiples thereof. Purchasers of the Series 2019 A Bonds will not receive certificates representing their interest therein. See "BOOK-ENTRY ONLY SYSTEM" herein.

For a complete description of the Series 2019 A Bonds, including the redemption provisions thereof, see "THE SERIES 2019 A BONDS" herein.

THE SERIES 2019 A BONDS

General

The Series 2019 A Bonds shall be dated their Date of Delivery and shall bear interest from such date, payable on January 1 and July 1 of each year, commencing on July 1, 2019 (each, an "Interest Payment Date"), until their maturity date or prior redemption. Interest shall be calculated on the basis of a 360-day year consisting of twelve (12) 30-day months. The Series 2019 A Bonds will bear interest at the interest rates per annum set forth on the inside cover page of this Official Statement.

The Series 2019 A Bonds will mature on the dates, in the years and in the amounts shown on the inside front cover page of this Official Statement. The Series 2019 A Bonds are subject to optional and mandatory sinking fund redemption prior to maturity. See "THE SERIES 2019 A BONDS – Redemption Prior to Maturity" herein.

The Series 2019 A Bonds are being initially issued and delivered in fully registered form only, in the denomination of $5,000 or any integral multiples thereof (the "Authorized Denominations"), and will be registered in the name of Cede & Co., as nominee of DTC. DTC will act as securities depository for the Series 2019 A Bonds. So long as the Series 2019 A Bonds are held in DTC's book-entry only system, DTC (or a successor securities depository) or its nominee will be the registered owner of the Series 2019 A Bonds for all purposes of the Resolution, the Series 2019 A Bonds and this Official Statement, and payments of principal and interest with respect to the Series 2019 A Bonds will be made solely through the facilities of DTC. See "BOOK-ENTRY ONLY SYSTEM" herein.

Principal of the Series 2019 A Bonds is payable upon surrender of the Series 2019 A Bonds at the corporate trust office of the Paying Agent. Interest on the Series 2019 A Bonds will be paid by check or draft mailed by the Paying Agent to the registered holders at their addresses as they appear in the registry books of the Trustee as of the regular record date, which shall be the fifteenth (15^{th}) day (whether or not a Business Day) of the calendar month next preceding an Interest Payment Date. Any interest not paid on an Interest Payment Date shall be paid to the persons in whose names Series 2019 A Bonds are registered as of a special record date established by notice mailed by or on behalf of the Authority not less than ten (10) days prior to such date to the persons in whose names Series 2019 A Bonds are registered at the close of business on the fifth day prior to such mailing.

The Series 2019 A Bonds are transferable in accordance with the provisions of the Resolution. The Trustee may charge an amount sufficient to reimburse it for any tax, fee or other governmental charge required to be paid in connection with any such transfer, registration, conversion or exchange.

The Resolution and all provisions thereof are incorporated by reference in the text of the Series 2019 A Bonds, and the Series 2019 A Bonds provide that each registered owner, beneficial owner, DTC Participant or Indirect Participant (as such terms are hereinafter defined) in DTC, by acceptance of a Series 2019 A Bond (including receipt of a book-entry credit evidencing an interest therein) assents to all of such provisions as an explicit and material portion of the consideration running to the Authority to induce it to issue such Series 2019 A Bond.

Redemption Prior to Maturity

Optional Redemption

The Series 2019 A Bonds are subject to optional redemption by the Authority, in whole or in part, on any date on or after January 1, 2029, at a Redemption Price equal to the principal amount of the Series 2019 A Bonds being redeemed, without premium, plus accrued interest to the redemption date.

Mandatory Sinking Fund Redemption

The Series 2019 A Bonds maturing on January 1, 2048 and bearing interest at the rate of 4.00% per annum are subject to mandatory redemption prior to maturity from Sinking Fund Installments in part on January 1 of the years and in the amounts set forth below, at a redemption price equal to 100% of the principal amount thereof, plus accrued interest to the redemption date:

Year	Principal Amount
2044	$ 9,580,000
2045	10,015,000
2046	57,480,000
2047	60,095,000
2048†	62,830,000

† Stated maturity.

The Series 2019 A Bonds maturing on January 1, 2048 and bearing interest at the rate of 5.00% per annum are subject to mandatory redemption prior to maturity from Sinking Fund Installments in part on January 1 of the years and in the amounts set forth below, at a redemption price equal to 100% of the principal amount thereof, plus accrued interest to the redemption date:

Year	Principal Amount
2044	$ 11,930,000
2045	12,470,000
2046	71,590,000
2047	74,855,000
2048†	78,265,000

† Stated maturity.

Purchase of Series 2019 A Bonds to Satisfy Sinking Fund Installments

Pursuant to the provisions of the General Bond Resolution, amounts on deposit in the Debt Service Fund can be utilized by the Authority to purchase Bonds of any Series (including the Series 2019 A Bonds) which are subject to redemption by operation of Sinking Fund Installments and any Bonds so purchased may be credited against the Sinking Fund Installments coming due for such Series of Bonds.

Selection of Series 2019 A Bonds for Redemption

If less than all of the Series 2019 A Bonds are to be redeemed and paid prior to maturity, the specific maturity or maturities of the Series 2019 A Bonds to be redeemed shall be selected by the Authority, and then within each such maturity, (a) if the Series 2019 A Bonds are in book-entry form at the time of such redemption, the Paying Agent shall instruct DTC to instruct the DTC Participants to select the specific Series 2019 A Bonds within such maturity for redemption by lot among such Series 2019 A Bonds, and neither the Authority nor the Paying Agent shall have any responsibility to insure that DTC or its Participants properly select such Series 2019 A Bonds for redemption and (b) if the Series 2019 A Bonds are not then in book-entry form at the time of such redemption, on each redemption date the Paying Agent shall select the specific Series 2019 A Bonds within such maturity for redemption by lot among such Series 2019 A Bonds.

In the case of a partial redemption of the Series 2019 A Bonds when Series 2019 A Bonds of denominations greater than the minimum applicable Authorized Denomination are then Outstanding, for all purposes in connection with such redemption, each principal amount equal to the minimum

Authorized Denomination shall be treated as though it were a separate Series 2019 A Bond for purposes of selecting the specific Series 2019 A Bonds to be redeemed, provided that no Series 2019 A Bond shall be redeemed in part if the principal amount to be Outstanding following such partial redemption is not an applicable Authorized Denomination.

Notice of Redemption

In the event of any such redemption, either in whole or in part, notice of such redemption shall be sent by first class mail mailed, postage prepaid, at least thirty (30) days, but not more than sixty (60) days prior to the redemption date to the registered owners of any Series 2019 A Bonds or portions of Series 2019 A Bonds to be redeemed at their registered addresses and to S&P Global Ratings, acting through Standard & Poor's Financial Services LLC, and Moody's Investors Service or their respective successors, if any, in the manner and under the terms and conditions provided in the Resolution. As long as DTC remains the sole registered owner of the Series 2019 A Bonds, notice of redemption shall be sent to DTC as provided in the Resolution. Such mailing shall not be a condition precedent to such redemption and failure to mail any such notice shall not affect the validity of the proceedings for the redemption of the Series 2019 A Bonds. Notice of redemption having been given as aforesaid, the Series 2019 A Bonds or portions thereof so called for redemption shall become due and payable at the applicable redemption price herein provided, and from and after the date so fixed for redemption, interest on the Series 2019 A Bonds or portions thereof so called for redemption shall cease to accrue and become payable. Any failure of DTC to advise any DTC Participant, or of any DTC Participant or Indirect Participant to notify the beneficial owner of any such notice and its content or effect will not affect the validity of the redemption of the Series 2019 A Bonds called for redemption or of any other action premised on such notice. See "BOOK-ENTRY ONLY SYSTEM" herein.

BOOK-ENTRY ONLY SYSTEM

The information in this section has been obtained from DTC. DTC will act as securities depository for the Series 2019 A Bonds. The Series 2019 A Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered certificate will be issued for each maturity and, if applicable, interest rate within a maturity of the Series 2019 A Bonds in the aggregate principal amount of each such Series, maturity and, if applicable, interest rate within the Series 2019 A Bonds, and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission.

Purchases of Series 2019 A Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2019 A Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2019 A Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct Participant or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2019 A Bonds are to be accomplished by entries made on the books of Direct Participants and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Series 2019 A Bonds, except in the event that use of the book-entry system for the Series 2019 A Bonds is discontinued.

To facilitate subsequent transfers, all Series 2019 A Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2019 A Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not affect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2019 A Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2019 A Bonds are credited, which may or may not be the Beneficial Owners. The Direct Participants and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the Series 2019 A Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2019 A Bonds, such as redemptions, tenders, defaults and proposed amendments to the Series 2019 A Bonds documents. For example, Beneficial Owners of the Series 2019 A Bonds may wish to ascertain that the nominee holding the Series 2019 A Bonds for their benefit has agreed to obtain and transmit notices to the Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the Trustee and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series 2019 A Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Series 2019 A Bonds unless authorized by a Direct Participant in accordance with DTC's Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Series 2019 A Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds and principal and interest payments on the Series 2019 A Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority or the Trustee, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee, or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds and principal and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as securities depository with respect to the Series 2019 A Bonds at any time by giving reasonable notice to the Authority or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Series 2019 A Bond certificates are required to be printed and delivered.

The Authority may decide to discontinue use of the system of book-entry only transfers through DTC (or a successor securities depository). In that event, Series 2019 A Bond certificates will be printed and delivered to DTC.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Authority believes to be reliable, but the Authority takes no responsibility for the accuracy thereof.

NONE OF THE AUTHORITY, THE TRUSTEE OR THE PAYING AGENT WILL HAVE ANY RESPONSIBILITY OR OBLIGATION, EITHER SINGULARLY OR JOINTLY, TO DTC PARTICIPANTS, TO INDIRECT PARTICIPANTS, OR TO ANY BENEFICIAL OWNER WITH RESPECT TO (I) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC, ANY DTC PARTICIPANT, OR ANY INDIRECT PARTICIPANT; (II) ANY NOTICE THAT IS PERMITTED OR REQUIRED TO BE GIVEN TO THE HOLDERS OF THE SERIES 2019 A BONDS UNDER THE RESOLUTION; (III) THE PAYMENT BY DTC OR ANY DTC PARTICIPANT OR INDIRECT PARTICIPANT OF ANY AMOUNT WITH RESPECT TO THE PRINCIPAL OR INTEREST DUE WITH RESPECT TO THE SERIES 2019 A BONDS; (IV) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY DTC AS THE HOLDER OF THE SERIES 2019 A BONDS; OR (V) ANY OTHER MATTER.

THE AUTHORITY AND THE UNDERWRITERS CANNOT AND DO NOT GIVE ANY ASSURANCES THAT DTC OR DIRECT PARTICIPANTS OR INDIRECT PARTICIPANTS OF DTC WILL DISTRIBUTE TO THE BENEFICIAL OWNERS OF THE SERIES 2019 A BONDS: (1) PAYMENTS OF PRINCIPAL OF OR INTEREST ON THE SERIES 2019 A BONDS; (2) CONFIRMATIONS OF THEIR OWNERSHIP INTERESTS IN THE SERIES 2019 A BONDS; OR (3) NOTICES SENT TO DTC OR CEDE & CO., ITS NOMINEE, AS THE REGISTERED OWNER OF THE SERIES 2019 A BONDS, OR THAT THEY WILL DO SO ON A TIMELY BASIS. THE AUTHORITY AND THE UNDERWRITERS CANNOT AND DO NOT GIVE ANY ASSURANCES THAT DTC, DIRECT PARTICIPANTS OR INDIRECT PARTICIPANTS WILL SERVE AND ACT IN THE MANNER DESCRIBED IN THIS OFFICIAL STATEMENT.

THE INFORMATION CONTAINED IN THIS OFFICIAL STATEMENT CONCERNING DTC AND ITS BOOK-ENTRY SYSTEM HAS BEEN OBTAINED FROM DTC, AND NEITHER THE AUTHORITY NOR THE UNDERWRITERS MAKE ANY REPRESENTATIONS AS TO THE COMPLETENESS OR THE ACCURACY OF SUCH INFORMATION OR AS TO THE ABSENCE OF MATERIAL ADVERSE CHANGES IN SUCH INFORMATION SUBSEQUENT TO THE DATE HEREOF.

SECURITY FOR THE BONDS

General

The Series 2019 A Bonds will be entitled to the benefit and security of the Resolution.

The Series 2019 A Bonds will be on parity as to payment and security with all other currently Outstanding Bonds and any other Bonds hereafter issued under the Resolution, and with the Authority's reimbursement and payment obligations under certain Credit Facilities and Qualified Swaps, and will be secured by a lien on and pledge of Pledged Revenues under the Resolution.

Pledge of Revenues and Funds

The Resolution pledges to the payment of all Bonds (including the Series 2019 A Bonds) and any provider under a Credit Facility and a Qualified Swap Agreement, (i) the proceeds of the sale of the Bonds (including the Series 2019 A Bonds), (ii) all Pledged Revenues, and (iii) all amounts on deposit in Funds established by the Resolution (other than amounts derived from any Federal or State grants and certain other grants and except as otherwise provided in the Resolution). The pledge and lien created may be modified by a Series Resolution or Supplemental Resolution to provide for a pledge of amounts on deposit in certain funds and accounts, which amounts are provided from proceeds of Bonds issued pursuant to such Series Resolution or Supplemental Resolution, superior to the pledge of such funds and accounts and such proceeds for other Bonds. For purposes of the Resolution, Pledged Revenues include (i) all tolls, revenues, fees, rents, charges and other income and receipts derived from the operation of the Turnpike System; (ii) the proceeds of business interruption insurance relating to the Turnpike System and other insurance which insures against loss of Turnpike Revenues; (iii) amounts deposited in the Revenue Fund derived from amounts in the Construction Fund, Special Project Reserve Fund or General Reserve Fund; (iv) other revenues of the Authority, including, but not limited to, payments under Qualified Swap Agreements to the extent specifically pledged pursuant to one or more Series Resolutions, and the cash subsidy payments to be received by the Authority from the United States Treasury in connection with the interest payable on the Build America Bonds (collectively, the "Subsidy Payments"); and (v) investment income on amounts in the funds and accounts held under the Resolution and deposited in the Revenue Fund.

Toll Covenant

The Authority has covenanted in the General Bond Resolution to fix, charge and collect tolls for the use of the Turnpike System in amounts so that, in each calendar year, the Net Revenues shall at least equal the Net Revenue Requirement for such year.

For purposes of the Resolution, Net Revenues (calculated for any period of time) are defined as Pledged Revenues for such period less Operating Expenses for such period, and the Net Revenue Requirement (calculated for any period of time) 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 sum of the Aggregate Debt Service for such period (excluding, for purposes of clause (ii) only, any payments due and payable by the Authority under any Qualified Swap Agreement upon an early termination thereof). Aggregate Debt Service is, for any calendar year, the sum of interest (net of any capitalized interest) and Principal Installments (which include Sinking Fund Installments) for the Bonds and all payments due by the Authority under Qualified Swap Agreements for such period.

On or before December 1 of each year, the Authority is required to review its financial condition in order to estimate and determine whether the Net Revenue Requirement for such year and for the following year can be satisfied. The Authority is required to file with the Trustee on or before December 20 of each year a certified copy of its resolution making such determination, together with a statement of the actual and estimated Pledged Revenues, Operating Expenses, Aggregate Debt Service, Maintenance Reserve Payments and Special Project Reserve Payments and the other estimates and assumptions upon which such determination was based, which must take into consideration the cost of completion of any uncompleted Projects and the issuance of future Series of Bonds, if necessary, to finance the completion of such Projects. If the Authority determines that Pledged Revenues may be insufficient, the Authority is required to (i) cause its Traffic Engineer to make a study for the purpose of recommending a schedule of tolls which, in the opinion of the Traffic Engineer, will cause sufficient Pledged Revenues to be collected in the following year to comply with the toll covenant and will provide additional Pledged Revenues to be collected in such following year and later years to eliminate any deficiency at the earliest practicable time, and (ii) as promptly as practicable but no later than the next April 1, adopt and place in effect the schedule of tolls recommended by the Traffic Engineer.

Failure to comply with the toll covenant described above will not constitute an Event of Default under the Resolution if the Traffic Engineer is of the opinion that a toll schedule that will comply with such toll covenant is impracticable at that time, and the Authority establishes a schedule of tolls which is recommended by the Traffic Engineer to comply as nearly as practicable with the toll covenant.

Pursuant to the Act, whenever the Authority desires to increase the tolls on the Turnpike and/or the Parkway, it is required to hold a public hearing on such toll increase at least 45 days prior to the date on which such toll increase is proposed to become effective. In addition, the resolution or other action of the Authority authorizing such toll increase cannot be adopted or otherwise made effective without the prior written approval of the Governor and the Treasurer of the State and the Governor has the right to veto such resolution or other action of the Authority within a 10-day period (exclusive of Saturdays, Sundays and public holidays) after the minutes of the Authority meeting at which such resolution was adopted or other action taken are delivered to the Governor. The Act further provides that the powers conferred upon the Governor and the Treasurer of the State described above shall be exercised with due regard for the rights of the holders of bonds of the Authority at any time outstanding, and nothing in, or done pursuant to, the Act shall in any way limit, restrict or alter the obligation or powers of the Authority or any representative or officer of the Authority to carry out and perform in every detail each and every covenant, agreement or contract at any time made or entered into by or on behalf of the Authority with respect to its bonds or for the benefit, protection or security of the holders thereof. See “THE AUTHORITY – Certain Powers” herein.

The Authority has increased tolls on the Turnpike seven times since its opening in 1951. The effective dates of those increases were March 23, 1975, April 1, 1980, March 17, 1991, September 30, 2000, January 1, 2003, December 1, 2008 and January 1, 2012. Tolls on the Parkway have increased three times since its opening in 1950. The first increase went into effect April 15, 1989, the second increase took effect December 1, 2008 and the third took effect on January 1, 2012. See “THE AUTHORITY – Certain Powers” and “THE AUTHORITY – Existing Toll Rates and Schedule” herein.

As permitted by the Resolution, from time to time in the past (most recently in fiscal year 2008), the Authority has withdrawn amounts from the General Reserve Fund and deposited such amounts in the Revenue Fund in order to comply with the toll covenant described above.

Flow of Funds

The General Bond Resolution creates and establishes various Funds and provides that the Pledged Revenues shall be deposited into such Funds in the amounts and in the order of priority set forth in the General Bond Resolution. The following chart illustrates and generally describes the provisions of the General Bond Resolution governing the deposit and application of the Pledged Revenues to the various Funds created and established under the General Bond Resolution:

Pledged Revenues

Revenue Fund

The Authority covenants in the General Bond Resolution (a) to deposit promptly all Pledged Revenues to the credit of the Revenue Fund, which is held by the Authority, (b) to pay reasonable and necessary Operating Expenses out of the Revenue Fund and retain in the Revenue Fund reasonable and necessary amounts for working capital and reserves for Operating Expenses, including expenses which do not recur annually, provided that the total amount of such working capital and reserves held at any time shall not exceed ten percent (10%) of the amount appropriated by the Authority's Annual Budget for Operating Expenses for the then current year, and (c) to apply on or before the twentieth (20th) day of each month the balance of moneys in the Revenue Fund in the following amounts and order of priority:

Debt Service Fund

(1) to the Debt Service Fund, which is held by the Trustee, the amount necessary so that the balance in such Fund shall equal the Accrued Debt Service as of the date of such deposit;

Debt Reserve Fund

(2) to the Debt Reserve Fund, which is held by the Trustee, the amount, if any, necessary so that the balance in such Fund shall equal the Debt Reserve Requirement, provided that any deficiency in the Debt Reserve Fund shall be fully replenished within one year from the date the balance in the Debt Reserve Fund first falls below the Debt Reserve Requirement;

Charges Fund

(3) to the Charges Fund, which is held by the Authority, the amount necessary so that the balance in such Fund shall equal the sum of all amounts accrued or due and payable by the Authority as fees and charges under any Standby Agreement or Remarketing Agreement or to any Tender Agent during such month, but only to the extent that the Authority has determined that such amounts shall not be paid as Operating Expenses;

Maintenance Reserve Fund

(4) to the Maintenance Reserve Fund, which is held by the Authority, an amount equal to one-twelfth of the amount provided in the Annual Budget for Maintenance Reserve Payments during the then current calendar year, provided that if any such monthly allocation to such Fund shall be less than the required amount, the deficiency shall be included in the next succeeding monthly deposit to such Fund;

Special Project Reserve Fund

(5) to the Special Project Reserve Fund, which is held by the Authority, an amount equal to one-twelfth of the amount provided in the Annual Budget for Special Project Reserve Payments during the then current calendar year; and

General Reserve Fund

(6) to the General Reserve Fund, which is held by the Authority, the balance remaining in the Revenue Fund after making all of the above deposits, to be used for any corporate purpose of the Authority. See "SECURITY FOR THE BONDS – Agreements with the State," "Feeder Road Payments" and "Potential Future Authority Payments for Non-Turnpike System Purposes" herein.

Debt Reserve Fund

The Resolution establishes a Debt Reserve Fund for all Bonds issued thereunder, including the Series 2019 A Bonds, and for the benefit of the provider of any Credit Facility or any Qualified Swap Agreement. There is required to be on deposit in the Debt Reserve Fund an amount equal to the Debt Reserve Requirement for all Bonds then Outstanding under the Resolution (including the Series 2019 A Bonds), provided that any deficiency in the Debt Reserve Fund shall be fully replenished within one year from the date the balance in the Debt Reserve Fund first falls below the Debt Reserve Requirement.

For purposes of the Resolution, the Debt Reserve Requirement is equal to the maximum amount of interest accruing on Bonds Outstanding in the then current or any future calendar year (including, for these purposes, the incremental accreted value for any such year for capital appreciation Bonds and interest calculated at the fixed rate established in the Resolution for any Bonds bearing interest at a variable rate). The Debt Reserve Requirement is calculated without consideration of any Subsidy Payments the Authority may receive from the United States Treasury in connection with the Build America Bonds. In calculating the Debt Reserve Requirement, interest on variable rate Bonds swapped to a fixed rate is assumed to be paid at the applicable fixed swap rate and the spreads over the variable rate index used to determine the interest rate on such variable rate Bonds are not included in the calculation of the interest accruing on such Bonds. In addition, in calculating the Debt Reserve Requirement, interest on the $5,000,000 unhedged portion of the Authority's Outstanding Turnpike Revenue Bonds, Series 2015 A, is calculated at the Maximum Rate under the Resolution, which is 12%.

Prior to the issuance of the Series 2019 A Bonds, the Debt Reserve Requirement is $571,280,759. Upon issuance of the Series 2019 A Bonds, the Debt Reserve Requirement will be $589,690,709. Since the amounts currently on deposit in the Debt Reserve Fund equal or exceed the Debt Reserve Requirement, no deposit to the Debt Reserve Fund will be made in connection with the issuance of the Series 2019 A Bonds. The entire amount of the Debt Reserve Requirement has been funded with proceeds of various Authority Bond issuances and other available funds of the Authority.

Agreements with the State

The Authority and the State have two separate agreements in effect, one dated as of March 27, 2000 (the "2000 State Agreement"), and the other dated as of June 28, 2016, as amended as of October 4, 2018 (the "Current State Transportation Projects Funding Agreement" and, collectively with the 2000 State Agreement, the "State Agreements") pursuant to which the Authority has agreed to make annual payments to the State. The obligation of the Authority to make any such payments is limited to the amounts on deposit in the General Reserve Fund which are legally available to be used by the Authority for such purposes and is subject and subordinate in all respects to the pledge created under the Resolution. Pursuant to the 2000 State Agreement, the Authority has agreed to make annual payments to the State in the amount of $22,000,000 until all of the obligations of the New Jersey Transportation Trust Fund Authority as set forth in the New Jersey Transportation Trust Fund Authority Act, constituting Chapter 108 of the Laws of New Jersey of 1995, are paid or such payment has been provided for. Payments made by the Authority pursuant to the 2000 State Agreement are to be used by the State to provide for the development of State transportation projects.

When originally entered into on June 28, 2016, the Current State Transportation Projects Funding Agreement obligated the Authority to make payments to the State, commencing September 30, 2016, in the amount of $102,000,000 for the six months ending December 31, 2016, $204,000,000 in year 2017, $166,500,000 in year 2018, $129,000,000 in each of the years 2019 and 2020, and $64,500,000 for the six months ending June 30, 2021. As of October 4, 2018, the Authority and the State entered into an amendment to the original version of the Current State Transportation Projects Funding Agreement which increased the amount payable by the Authority to the State in calendar year 2019 by $25,000,000 to a total of $154,000,000. Such amendment did not amend or modify any other amounts required to be paid by the Authority in any year in accordance with the terms of the original version of the Current State

Transportation Projects Funding Agreement. The Current State Transportation Projects Funding Agreement expires on June 30, 2021. Payments made by the Authority pursuant to the Current State Transportation Projects Funding Agreement are to be used by the State to pay or provide for the development of State transportation projects in an effort to further satisfy the overall transportation needs of the State. There can be no assurance that the Authority will not be requested to modify, accelerate and/or make additional payments to the State before or after the expiration of the Current State Transportation Projects Funding Agreement. Any such payments to the State would be paid from legally available amounts on deposit in the General Reserve Fund and will be subject and subordinate in all respects to the pledge created under the Resolution. The Current State Transportation Projects Funding Agreement is a successor agreement to a prior agreement between the Authority and the State in which the Authority made payments to the State for the development of State transportation purposes during the period commencing September 30, 2011 and ending on June 30, 2016.

As of the date of this Official Statement, the Authority has made all required payments under the State Agreements.

Feeder Road Payments

The Authority has also entered into an agreement with the New Jersey Department of Transportation ("DOT" or "NJDOT") (the "Current Feeder Road Maintenance Agreement") whereby the Authority has agreed to make certain payments (the "Feeder Road O&M Payments") to the DOT to reimburse the DOT for the costs of reconstruction, maintenance and repair of certain roadways which the DOT owns and operates and which constitute "feeder roads" to the Turnpike System for purposes of the Act and the Resolution. Pursuant to the Current Feeder Road Maintenance Agreement, the DOT has agreed to maintain the feeder roads in a state of good repair sufficient to support the safe and efficient access and egress onto the Turnpike and the Parkway. The term of the Current Feeder Road Maintenance Agreement commenced on July 1, 2016 and ends on June 30, 2023. Pursuant to the Current Feeder Road Maintenance Agreement, the Authority has agreed to make Feeder Road O&M Payments in the aggregate amounts of $4,000,000 for the six months ending December 31, 2016, $6,500,000 in year 2017, $4,500,000 in year 2018, $3,500,000 in year 2019, $2,500,000 for each of the years 2020 through 2022 and $1,250,000 for the six months ending June 30, 2023. The Authority anticipates that it will be required to continue to make annual Feeder Road O&M Payments to the DOT after the expiration of the term of the Current Feeder Road Maintenance Agreement. The obligation of the Authority to make the Feeder Road O&M Payments to the DOT is limited to the amounts on deposit in the General Reserve Fund which are legally available to be used by the Authority for such purposes and is subject and subordinate in all respects to the pledge created under the Resolution. The Current Feeder Road Maintenance Agreement is a successor agreement to a prior agreement between the Authority and the DOT, which required the Authority to make Feeder Road O&M Payments to the DOT during the period commencing July 1, 2009 and ending on June 30, 2016.

As of the date of this Official Statement, the Authority has made all of the Feeder Road O&M Payments required to be made pursuant to the Current Feeder Road Maintenance Agreement.

Potential Future Authority Payments for Non-Turnpike System Purposes

There can be no assurance that the Authority will not be requested to make future payments to the State in connection with State transportation purposes. Any such payments to the State would be paid from legally available amounts on deposit in the General Reserve Fund and would be subject and subordinate in all respects to the pledge created under the Resolution.

Additional Indebtedness

The Authority may issue Non-Refunding Bonds and Refunding Bonds under the General Bond Resolution on parity with Outstanding Bonds and the Authority's obligations under any Qualified Swap Agreement and Credit Facility upon satisfaction of the requirements described below and in Appendix D hereto under the captions "Issuance of Non-Refunding Bonds" and "Issuance of Refunding Bonds".

Issuance of Non-Refunding Bonds

One or more Series of Non-Refunding Bonds may be issued for the purpose of (i) paying the Cost of Construction of a Project, and (ii) raising funds to complete any Project for which Non-Refunding Bonds were issued pursuant to clause (i) above, subject to the following conditions and tests, among others:

(1) The Net Revenues for any period of twelve (12) consecutive calendar months (reflecting any adjustment in toll rates made at any time during such period as if such toll rates were effective since the beginning of such period) out of the preceding twenty-four (24) calendar months equal or exceed the Net Revenue Requirement for such twelve (12) months without regard to the Bonds to be issued;

(2) The estimated Net Revenues for the then current and each future calendar year to and including the fifth full calendar year after the estimated date when the Project will be placed in service equal or exceed the Net Revenue Requirement for each such year and Net Revenues in the fifth such calendar year equal or exceed future maximum Aggregate Debt Service in any year; and

(3) There will be deposited (i) in the Debt Reserve Fund the amount, if any, necessary so that the balance in such fund equals the Debt Reserve Requirement, calculated immediately after delivery of such Non-Refunding Bonds, (ii) in any other Fund the amount required by the Resolution, and (iii) in the Construction Fund for the Project specified by the applicable Series Resolution the remaining balance.

For the purposes of the above tests, the estimated Net Revenues are to be based on estimates by the Traffic Engineer of Turnpike Revenues and estimates by the Consulting Engineer of Operating Expenses and are to give effect to the construction of the Project for which such Bonds are being issued and any other uncompleted Project. The estimates of the Traffic Engineer are to reflect the effect of the construction, improvement or acquisition of any highway or other facility which any Federal, State or other agency is then projecting or planning and which, in its opinion, may be materially competitive with any part of the Turnpike System.

Issuance of Refunding Bonds

One or more Series of Refunding Bonds may be issued to refund (i) any or all Outstanding Bonds of one or more Series or maturities within a Series or Bonds within a maturity, or (ii) any Variable Rate Debt, Commercial Paper or Subordinated Indebtedness.

Bonds may be issued to refund Outstanding Bonds only if, among other conditions, (i) either the Authority meets the tests described above under "Issuance of Non-Refunding Bonds" or Aggregate Debt Service is not increased for any calendar year as a result of such refunding, and (ii) there shall be in effect a Qualified Swap with respect to the Bonds to be refunded and such Qualified Swap shall be terminated upon the date such Refunding Bonds are issued, and moneys in an amount sufficient to make the payment, if any, due by the Authority under such Qualified Swap upon such termination are deposited with the Trustee.

The issuance of Bonds to refund Variable Rate Debt, Commercial Paper or Subordinated Indebtedness is subject to substantially the same conditions and tests referred to above under "Issuance of Non-Refunding Bonds."

Subordinated Indebtedness

The Authority is also authorized to incur Subordinated Indebtedness under the General Bond Resolution. Such Subordinated Indebtedness is a special and limited obligation of the Authority, subject, subordinated and junior in all respects to the lien and pledge created by the Resolution in favor of all Bonds, certain Credit Facilities and Qualified Swaps. Subordinated Indebtedness is payable under the Resolution solely from amounts on deposit in the General Reserve Fund established under the Resolution that may be available from time to time to pay principal of and/or interest on Subordinated Indebtedness.

INTEREST RATE SWAP AGREEMENTS

Authority Payment Obligations under Qualified Swap Agreements

The Authority's respective fixed and termination payment obligations under its current Qualified Swap Agreements described below are secured by the pledge under the Resolution and are payable from amounts deposited in the Debt Service Fund equally and ratably and on parity with the payment of principal of and interest on Bonds and certain Credit Facilities.

Based upon the current ratings of the applicable Bonds, the Authority is currently not required to post collateral under any of its Qualified Swap Agreements. With respect to all Qualified Swap Agreements, other than the Series 2017 D-2, D-3 and D-4 Swap Agreement (as hereinafter defined) with Citibank, N.A., the rating on the applicable Bonds would have to drop below either Baa2 from Moody's (as hereinafter defined) or below BBB from S&P (as hereinafter defined), for any collateral posting requirements to be imposed upon the Authority under such agreements. With respect to the Series 2017 D-2, D-3 and D-4 Swap Agreement with Citibank, N.A., the rating on the Outstanding Series 2017 D-2, D-3 and D-4 Bonds would have to drop below A2 from Moody's, below A from S&P and below A from Fitch (as hereinafter defined) for any collateral posting requirements to be imposed upon the Authority under such agreements.

Each of the Authority's current Qualified Swap Agreements provides that an automatic, immediate termination of such Agreement shall take place upon the occurrence of the dissolution, bankruptcy, insolvency, liquidation or any similar related events involving or related to the Authority's counterparty under such Agreement. If a Qualified Swap Agreement is automatically and immediately terminated as a result of any such event and the fair value of such Qualified Swap Agreement is negative to the Authority on the date of such automatic immediate termination, the Authority could be obligated to make a substantial termination payment to the Counterparty.

In connection with each of its Qualified Swap Agreements, the Authority has the option to terminate all or part of such Qualified Swap Agreements at any time. In the event that any Qualified Swap Agreement terminates prior to its stated termination date (including any optional termination by the Authority), either the Authority or the respective Counterparty will be required to make a termination payment to the other party. The party required to make such payment and the amount thereof will be determined by market conditions at the time of such early termination.

No financial or other information has been authorized to be provided herein with respect to any Counterparty. There can be no assurance that any Counterparty will pay or perform its obligations under its respective Qualified Swap Agreement in accordance with the terms thereof, or that such Counterparty will be able to pay any termination payment which it may be required to pay upon the occurrence of certain events of default or termination events under its respective Qualified Swap Agreement.

The following chart summarizes some of the material provisions of each of the Authority's current Qualified Swap Agreements. It is not intended to be a complete description of all of the material terms and provisions of each of those Agreements. See "APPENDIX A – FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016 WITH INDEPENDENT AUDITORS' REPORT THEREON – Management's Discussion and Analysis – Debt Administration – 2017-2016" and "- Notes to Financial Statement – Note 7" for additional information about the Authority's Qualified Swap Agreements and the status of such Qualified Swap Agreements.

Swap Agreement/ Related Series of Bonds	Notional Amount	Termination Date	Rate Paid by Authority	Rate Received by Authority	Counterparty	Fair Value(1) (as of December 31, 2018)
Series 2015 A	43,750,000	1/1/2024	2.9800	67% of USD-LIBOR-BBA	U.S. Bank National Association(2)	$ (1,241,015)
Series 2015 A	43,750,000	1/1/2024	2.9800	67% of USD-LIBOR-BBA	U.S. Bank National Association(2)	(1,241,340)
Series 2015 B	50,000,000	1/1/2024	3.3310	75% of USD-LIBOR-BBA	Barclays Bank PLC	(1,582,530)
Series 2015 C	43,750,000	1/1/2024	3.2488	67% of USD-LIBOR-BBA	Barclays Bank PLC	(1,518,811)
Series 2015 D	43,750,000	1/1/2024	3.2525	67% of USD-LIBOR-BBA	Barclays Bank PLC	(1,521,922)
Series 2015 F	72,350,000	1/1/2022	3.4486	73.2% of USD-LIBOR-BBA	Wells Fargo Bank, N.A.(3)	(3,521,507)
Series 2015 G	25,000,000	1/1/2024	3.3500	67% of USD-LIBOR-BBA	Wells Fargo Bank, N.A.(3)	(1,643,170)
Series 2015 H	48,235,000	1/1/2022	3.3050	67% of USD-LIBOR-BBA	Wells Fargo Bank, N.A.(3)	(2,395,156)
Series 2016 B	75,025,000	1/1/2023	3.4486	73.2% of USD-LIBOR-BBA	Wells Fargo Bank, N.A.(3)	(4,777,098)
Series 2016 C	50,015,000	1/1/2023	3.4486	63% USD-LIBOR-BBA plus 20 bp	Wells Fargo Bank, N.A.(3)	(3,273,262)
Series 2016 D	50,000,000	1/1/2024	3.3500	67% of USD-LIBOR-BBA	Wells Fargo Bank, N.A.(3)	(3,286,365)
Series 2017 C	240,000,000	1/1/2030	4.1720	70% of USD-LIBOR-BBA	Wells Fargo Bank, N.A. (3)	(35,407,935)
Series 2017 C	160,000,000	1/1/2030	4.1720	70% of USD-LIBOR-BBA	Wells Fargo Bank, N.A. (4)	(23,604,631)
Series 2017 D-1	77,625,000	1/1/2024	3.4486	73.2% of USD-LIBOR-BBA	Wells Fargo Bank, N.A.(4)	(6,033,535)
Series 2017 D-1	51,750,000	1/1/2024	3.4486	63% USD-LIBOR-BBA plus 20 bp	Wells Fargo Bank, N.A.(3)	(4,135,665)
Series 2017 D-2, D-3 and D-4	50,000,000	1/1/2024	3.3500	67% of USD-LIBOR-BBA	Citibank, N.A.	(3,286,023)

(1) Provided by the Authority's Financial Advisor; includes accrued interest.

(2) Former Counterparty was Morgan Stanley Capital Services LLC. Swap Agreement was novated to U.S. Bank National Association in 2016.

(3) Former Counterparty was Morgan Stanley Capital Services LLC. Swap Agreement was novated to Wells Fargo Bank, N.A. in 2015.

(4) Former Counterparty was UBS AG. Swap Agreement was novated to Wells Fargo Bank, N.A. in 2013.

Series 2015 A Swap Agreements

In connection with the issuance of its $92,000,000 Turnpike Revenue Bonds, Series 2015 A (the "Series 2015 A Bonds"), the Authority re-identified two then-existing Interest Rate Swap Agreements with Morgan Stanley Capital Services LLC (guaranteed by Morgan Stanley) in order to hedge the interest rate on those Bonds (collectively, the "Series 2015 A Swap Agreements"). In 2016, the Series 2015 A Swap Agreements were novated to U.S. Bank National Association. The Series 2015 A Swap Agreements currently have the following notional amounts:

Counterparty	Notional Amount
U.S. Bank National Association (A-1)	$43,750,000
U.S. Bank National Association (A-2)	43,750,000
	$87,500,000

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2015 A Swap Agreements is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2015 A Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2015 A Swap Agreements will be sufficient to pay the interest accruing on the Series 2015 A Bonds during such period.

The Series 2015 A Swap Agreements will terminate on January 1, 2024 (the final maturity date of the Series 2015 A Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2015 A-1 Swap Agreement had a negative fair value (including accrued interest) to the Authority of $1,241,015. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2015 A-2 Swap Agreement had a negative fair value (including accrued interest) to the Authority of $1,241,340.

Series 2015 B Swap Agreement

In connection with the issuance of its $50,000,000 Turnpike Revenue Bonds, Series 2015 B (the "Series 2015 B Bonds"), the Authority re-identified a then-existing Interest Rate Swap Agreement with Barclay's Bank PLC in the notional amount of $50,000,000 in order to hedge the interest rate on those Bonds (the "Series 2015 B Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2015 B Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2015 B Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2015 B Swap Agreement will be sufficient to pay the interest accruing on the Series 2015 B Bonds during such period.

The Series 2015 B Swap Agreement will terminate on January 1, 2024 (the final maturity date of the Series 2015 B Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2015 B Swap Agreement had a negative fair value (including accrued interest) to the Authority of $1,582,530.

Series 2015 C Swap Agreement

In connection with the issuance of its $43,750,000 Turnpike Revenue Bonds, Series 2015 C (the "Series 2015 C Bonds"), the Authority re-identified a then-existing Interest Rate Swap Agreement with Barclay's Bank PLC in the notional amount of $43,750,000 in order to hedge the interest rate on those Bonds (the "Series 2015 C Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2015 C Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2015 C Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2015 C Swap Agreement will be sufficient to pay the interest accruing on the Series 2015 C Bonds during such period.

The Series 2015 C Swap Agreement will terminate on January 1, 2024 (the final maturity date of the Series 2015 C Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2015 C Swap Agreement had a negative fair value (including accrued interest) to the Authority of $1,518,811.

Series 2015 D Swap Agreement

In connection with the issuance of its $43,750,000 Turnpike Revenue Bonds, Series 2015 D (the "Series 2015 D Bonds"), the Authority re-identified a then-existing Interest Rate Swap Agreement with Barclay's Bank PLC in the notional amount of $43,750,000 in order to hedge the interest rate on those Bonds (the "Series 2015 D Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2015 D Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2015 D Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2015 D Swap Agreement will be sufficient to pay the interest accruing on the Series 2015 D Bonds during such period.

The Series 2015 D Swap Agreement will terminate on January 1, 2024 (the final maturity date of the Series 2015 D Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2015 D Swap Agreement had a negative fair value (including accrued interest) to the Authority of $1,521,922.

Series 2015 F Swap Agreement

In connection with the issuance of its $72,350,000 Turnpike Revenue Bonds, Series 2015 F (the "Series 2015 F Bonds"), the Authority re-identified a portion of a then-existing Interest Rate Swap Agreement with Wells Fargo Bank, N.A. in the notional amount of $72,350,000 in order to hedge the interest rate on those Bonds (the "Series 2015 F Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2015 F Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2015 F Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2015 F Swap Agreement will be sufficient to pay the interest accruing on the Series 2015 F Bonds during such period.

The Series 2015 F Swap Agreement will terminate on January 1, 2022 (the final maturity date of the Series 2015 F Bonds), unless terminated sooner in accordance with its terms. As calculated by the

Authority's Financial Advisor, as of December 31, 2018, the Series 2015 F Swap Agreement had a negative fair value (including accrued interest) to the Authority of $3,521,507.

Series 2015 G Swap Agreement

In connection with the issuance of its $25,000,000 Turnpike Revenue Bonds, Series 2015 G (the "Series 2015 G Bonds"), the Authority re-identified a portion of a then-existing Interest Rate Swap Agreement with Wells Fargo Bank, N.A. in the notional amount of $25,000,000 in order to hedge the interest rate on those Bonds (the "Series 2015 G Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2015 G Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2015 G Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2015 G Swap Agreement will be sufficient to pay the interest accruing on the Series 2015 G Bonds during such period.

The Series 2015 G Swap Agreement will terminate on January 1, 2024 (the final maturity date of the Series 2015 G Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2015 G Swap Agreement had a negative fair value (including accrued interest) to the Authority of $1,643,170.

Series 2015 H Swap Agreement

In connection with the issuance of its $48,235,000 Turnpike Revenue Bonds, Series 2015 H (the "Series 2015 H Bonds"), the Authority re-identified a portion of a then-existing Interest Rate Swap Agreement with Wells Fargo Bank, N.A. in the notional amount of $48,235,000 in order to hedge the interest rate on those Bonds (the "Series 2015 H Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2015 H Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2015 H Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2015 H Swap Agreement will be sufficient to pay the interest accruing on the Series 2015 H Bonds during such period.

The Series 2015 H Swap Agreement will terminate on January 1, 2022 (the final maturity date of the Series 2015 H Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2015 H Swap Agreement had a negative fair value (including accrued interest) to the Authority of $2,395,156.

Series 2016 B Swap Agreement

In connection with the issuance of its $75,025,000 Turnpike Revenue Bonds, Series 2016 B (the "Series 2016 B Bonds"), the Authority re-identified a portion of a then-existing Interest Rate Swap Agreement with Wells Fargo Bank, N.A. in the notional amount of $75,025,000 in order to hedge the interest rate on those Bonds (the "Series 2016 B Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2016 B Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2016 B Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2016 B Swap Agreement will be sufficient to pay the interest accruing on the Series 2016 B Bonds during such period.

The Series 2016 B Swap Agreement will terminate on January 1, 2023 (the final maturity date of the Series 2016 B Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2016 B Swap Agreement had a negative fair value (including accrued interest) to the Authority of $4,777,098.

Series 2016 C Swap Agreement

In connection with the issuance of its $50,015,000 Turnpike Revenue Bonds, Series 2016 C (the "Series 2016 C Bonds"), the Authority re-identified a portion of a then-existing Interest Rate Swap Agreement with Wells Fargo Bank, N.A. in the notional amount of $50,015,000 in order to hedge the interest rate on those Bonds (the "Series 2016 C Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2016 C Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2016 C Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2016 C Swap Agreement will be sufficient to pay the interest accruing on the Series 2016 C Bonds during such period.

The Series 2016 C Swap Agreement will terminate on January 1, 2023 (the final maturity date of the Series 2016 C Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2016 C Swap Agreement had a negative fair value (including accrued interest) to the Authority of $3,273,262.

Series 2016 D Swap Agreement

In connection with the issuance of its $50,000,000 Turnpike Revenue Bonds, Series 2016 D (the "Series 2016 D Bonds"), the Authority re-identified a portion of a then-existing Interest Rate Swap Agreement with Wells Fargo Bank, N.A. in the notional amount of $50,000,000 in order to hedge the interest rate on those Bonds (the "Series 2016 D Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2016 D Swap Agreement is meant to closely approximate the method of determining the floating interest rate payable in such period by the Authority for the Series 2016 D Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2016 D Swap Agreement will be sufficient to pay the interest accruing on the Series 2016 D Bonds during such period.

The Series 2016 D Swap Agreement will terminate on January 1, 2024 (the final maturity date of the Series 2016 D Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2016 D Swap Agreement had a negative fair value (including accrued interest) to the Authority of $3,286,365.

Series 2017 C Swap Agreements

In connection with the issuance of its $400,000,000 Turnpike Revenue Bonds, Series 2017 C (the "Series 2017 C Bonds"), the Authority re-identified two then-existing Interest Rate Swap Agreements with Wells Fargo Bank, N.A. in order to hedge the interest rate on those Bonds (collectively, the "Series 2017 C Swap Agreements"). The Series 2017 C Swap Agreements currently have the following notional amounts:

Counterparty	Notional Amount
Wells Fargo Bank, N.A.	$ 240,000,000
Wells Fargo Bank, N.A.	160,000,000
	$ 400,000,000

The method of determining the floating interest rates payable in any period by the Counterparty under the Series 2017 C Swap Agreements is meant to closely approximate the methods of determining the floating interest rate payable in such period by the Authority for the Series 2017 C Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2017 C Swap Agreements will be sufficient to pay the interest accruing on the Series 2017 C Bonds during such period.

The Series 2017 C Swap Agreements will terminate on January 1, 2030 (the final maturity date of the Series 2017 C Bonds), unless terminated sooner in accordance with their respective terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2017 C Swap Agreement with a notional amount of $240,000,000 had a negative fair value (including accrued interest) to the Authority of $35,407,935. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2017 C Swap Agreement with a notional value of $160,000,000 had a negative fair value (including accrued interest) to the Authority of $23,604,631.

Series 2017 D-1 Swap Agreements

In connection with the issuance of its $129,375,000 Turnpike Revenue Bonds, Series 2017 D-1 (the "Series 2017 D-1 Bonds"), the Authority re-identified two then-existing Interest Rate Swap Agreements with Wells Fargo Bank, N.A. in order to hedge the interest rate on those Bonds (collectively, the "Series 2017 D-1 Swap Agreements"). The Series 2017 D-1 Swap Agreements currently have the following notional amounts:

Counterparty	Notional Amount
Wells Fargo Bank, N.A.	$ 77,625,000
Wells Fargo Bank, N.A.	51,750,000
	$ 129,375,000

The method of determining the floating interest rates payable in any period by the Counterparty under the Series 2017 D-1 Swap Agreements is meant to closely approximate the methods of determining the floating interest rate payable in such period by the Authority for the Series 2017 D-1 Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2017 D-1 Swap Agreements will be sufficient to pay the interest accruing on the Series 2017 D-1 Bonds during such period.

The Series 2017 D-1 Swap Agreements will terminate on January 1, 2024 (the final maturity date of the Series 2017 D-1 Bonds), unless terminated sooner in accordance with their respective terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2017 D-1 Swap Agreement with a notional amount of $77,625,000 had a negative fair value (including accrued interest) to the Authority of $6,033,535. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2017 D-1 Swap Agreement with a notional value of $51,750,000 had a negative fair value (including accrued interest) to the Authority of $4,135,665.

Series 2017 D-2, D-3 and D-4 Swap Agreement

In connection with the issuance of its $16,075,000 Turnpike Revenue Bonds, Series 2017 D-2, its $16,675,000 Turnpike Revenue Bonds, Series 2017 D-3, and its $17,250,000 Turnpike Revenue Bonds, Series 2017 D-4 (collectively, the "Series 2017 D-2, D-3 and D-4 Bonds"), the Authority re-identified a then-existing Interest Rate Swap Agreement with Citibank, N.A in the notional amount of $50,000,000 in order to hedge the interest rate on those Bonds (the "Series 2017 D-2, D-3 and D-4 Swap Agreement").

The method of determining the floating interest rate payable in any period by the Counterparty under the Series 2017 D-2, D-3 and D-4 Swap Agreement is meant to closely approximate the method of determining the floating interest rates payable in such period by the Authority for the Series 2017 D-2, D-3 and D-4 Bonds. However, there can be no assurance that the floating amounts received in any period by the Authority under the Series 2017 D-2, D-3 and D-4 Swap Agreement will be sufficient to pay the interest accruing on the Series 2017 D-2, D-3 and D-4 Bonds during such period.

The Series 2017 D-2, D-3 and D-4 Swap Agreement will terminate on January 1, 2024 (the final maturity date of the Series 2017 D-2, D-3 and D-4 Bonds), unless terminated sooner in accordance with its terms. As calculated by the Authority's Financial Advisor, as of December 31, 2018, the Series 2017 D-2, D-3 and D-4 Swap Agreement had a negative fair value (including accrued interest) to the Authority of $3,286,023.

DIRECT PURCHASE TRANSACTIONS

The following table summarizes the terms of the Authority's direct purchase transactions as of the date of this Official Statement. The Series 2015 A Bonds, the Series 2015 B Bonds, the Series 2015 C Bonds, the Series 2015 D Bonds, the Series 2015 F Bonds, the Series 2015 G Bonds, the Series 2015 H Bonds, the Series 2016 B Bonds, the Series 2016 C Bonds and the Series 2016 D Bonds are on parity with all Bonds Outstanding under the Resolution from time to time, including the Series 2019 A Bonds, and the Authority's reimbursement and payment obligations under certain Credit Facilities and Qualified Swaps. See "SECURITY FOR THE BONDS" herein.

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Series of Bonds	Direct Purchaser	Tax-Exempt or Federally Taxable	Final Maturity Date	Par Amount	Floating Rate[1]	Interest Rate Reset	Mandatory Tender Date
2015 A	DNT Asset Trust	Tax-Exempt	01/01/2024	92,500,000	67% of 1-month LIBOR + 78 bp	Monthly	n/a
2015 B	Citibank, N.A	Tax-Exempt	01/01/2024	50,000,000	75% of 1-month LIBOR + 45 bp	Monthly	1/1/2020
2015 C	DNT Asset Trust	Tax-Exempt	01/01/2024	43,750,000	67% of 1-month LIBOR + 70 bp	Monthly	n/a
2015 D	DNT Asset Trust	Tax-Exempt	01/01/2024	43,750,000	67% of 1-month LIBOR + 70 bp	Monthly	n/a
2015 F	U.S. Bank National Association	Tax-Exempt	01/01/2022	72,350,000	75% of 1-month LIBOR + 59.5 bp	Weekly	n/a
2015 G	TD Bank, N.A.	Tax-Exempt	01/01/2024	25,000,000	69.75% of 1-month LIBOR + 60 bp	Weekly	n/a
2015 H	DNT Asset Trust	Tax-Exempt	01/01/2022	48,235,000	67% of 1-month LIBOR + 74 bp	Monthly	n/a
2016 B	TD Bank, N.A.	Tax-Exempt	01/01/2023	75,025,000	70% of 1-month LIBOR + 63 bp	Weekly	n/a
2016 C	TD Bank, N.A.	Tax-Exempt	01/01/2023	50,015,000	70% of 1-month LIBOR + 63 bp	Weekly	n/a
2016 D	TD Bank, N.A.	Tax-Exempt	01/01/2024	50,000,000	70% of 1-month LIBOR + 64 bp	Weekly	n/a

[1] Such floating rates are subject to increase under certain circumstances as provided in the respective certificates of determination executed by the Authority in connection with each Series of the Direct Purchase Bonds; provided, however, that in no event shall the floating rate exceed the Maximum Rate (the lesser of 12% or the highest rate allowed by applicable law).

Pursuant to the terms of each Series of the above-described Bonds (collectively, the "Direct Purchase Bonds"), in addition to being subject to mandatory tender for purchase on any Mandatory Tender Date set forth in the chart above, upon the occurrence of certain extraordinary mandatory purchase events (the "Extraordinary Mandatory Purchase Events"), the respective Series of Direct Purchase Bonds may also be subject to mandatory tender for purchase at the option of the holder of such Series of Direct Purchase Bonds prior to the occurrence of such Mandatory Tender Date. In addition to the failure of the Authority to pay the debt service on any Bond or other parity obligation of the Authority, when due, and the occurrence of an Event of Default under the Resolution, the Extraordinary Mandatory Purchase Events generally include (i) the rating on the Bonds is reduced to or below BBB by Fitch or S&P or Baa2 by Moody's, or removed, suspended or withdrawn, (ii) the occurrence of a determination of taxability with respect to the applicable Series of Direct Purchase Bonds, (iii) a judgment in the amount of $10,000,000 or more is entered against the Authority which is not covered by insurance and which is not discharged, stayed or bonded within 45 days after the entry of such judgment, (iv) any court or other governmental authority shall rule that any provision of the Resolution relating to payment and security of the Bonds or any provision of the applicable Bondholder Agreement entered into by and between the Authority and the purchaser of each Series of the Direct Purchase Bonds is not valid and binding on the Authority, (v) the Authority, or any person on its behalf, shall contest the validity or enforceability any provision of the Resolution relating to payment and security of the Bonds or any provision of the applicable Bondholder Agreement, (vi) if, for any other reason, any provision of the Resolution relating to payment and security of the Bonds or any provision of the applicable Bondholder Agreement shall cease be to valid and binding on the Authority, (vii) the failure of the Authority to pay, when due, any Subordinated Indebtedness in an aggregate outstanding principal amount of $5,000,000 or more, or the occurrence of any event of default by the Authority under any agreement or instrument relating to such Subordinated Indebtedness, and (viii) the occurrence of an event of default under the applicable Bondholder Agreement. In the event that the Authority cannot pay the purchase price for all or a portion of such Series of Bonds on the Mandatory Tender Date or any such extraordinary mandatory purchase date, (i) 50% of the principal amount of any unpurchased Bonds will be subject to mandatory redemption on the date that is one year after such Mandatory Tender Date or extraordinary mandatory purchase date, at a Redemption Price equal to 100% of the principal amount of such Direct Purchase Bonds to be redeemed plus accrued interest to the redemption date, and (ii) the entire remaining aggregate principal amount of such unpurchased Bonds will be subject to mandatory redemption on the date that is two years after such Mandatory Tender Date or extraordinary mandatory purchase date, at a Redemption Price equal to 100% of the principal amount of such Direct Purchase Bonds to be redeemed plus accrued interest to the redemption date. A copy of each Bondholder Agreement has been filed with, and is available to be viewed on, the Electronic Municipal Market Access ("EMMA") system of the Municipal Securities Rulemaking Board located at www.emma.msrb.org.

ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of funds for the Series 2019 A Bonds are as follows:

Sources of Funds:	
Par Amount of Series 2019 A Bonds	$ 449,110,000
Original Issue Premium on Series 2019 A Bonds	29,518,753
Total Sources of Funds	$ 478,628,753
Uses of Funds:	
Deposit to Construction Fund	$ 477,000,000
Costs of Issuance[1]	1,628,753
Total Uses of Funds	$ 478,628,753

[1] Includes legal fees, financial advisory fees, Trustee fees, rating agency and consulting fees and costs, underwriters' discount, and other costs of issuance, including rounding amount.

AGGREGATE BOND DEBT SERVICE REQUIREMENTS

The table below shows debt service after the issuance of the Series 2019 A Bonds.

Fiscal Year Ending December 31	Debt Service on Outstanding Bonds(1),(2),(3)	Series 2019 A Bonds(1) Principal	Series 2019 A Bonds(1) Interest	Total Debt Service After Issuance of Series 2019 A Bonds
2019	$ 806,572,620	--	$ 18,409,950	$ 824,982,570
2020	817,241,172	--	20,455,500	837,696,672
2021	836,624,345	--	20,455,500	857,079,845
2022	835,147,541	--	20,455,500	855,603,041
2023	838,072,754	--	20,455,500	858,528,254
2024	875,939,183	--	20,455,500	896,394,683
2025	876,185,363	--	20,455,500	896,640,863
2026	875,031,134	--	20,455,500	895,486,634
2027	875,608,642	--	20,455,500	896,064,142
2028	866,737,203	--	20,455,500	887,192,703
2029	848,212,977	--	20,455,500	868,668,477
2030	844,511,668	--	20,455,500	864,967,168
2031	844,518,768	--	20,455,500	864,974,268
2032	860,085,518	--	20,455,500	880,541,018
2033	875,822,718	--	20,455,500	896,278,218
2034	834,993,918	--	20,455,500	855,449,418
2035	820,178,525	--	20,455,500	840,634,025
2036	801,620,140	--	20,455,500	822,075,640
2037	806,277,595	--	20,455,500	826,733,095
2038	799,517,905	--	20,455,500	819,973,405
2039	799,493,360	--	20,455,500	819,948,860
2040	851,452,740	--	20,455,500	871,908,240
2041	210,443,200	--	20,455,500	230,898,700
2042	210,448,600	--	20,455,500	230,904,100
2043	105,557,800	$ 21,510,000	20,455,500	147,523,300
2044	105,560,000	22,485,000	19,475,800	147,520,800
2045	--	129,070,000	18,451,700	147,521,700
2046	--	134,950,000	12,573,000	147,523,000
2047	--	141,095,000	6,426,450	147,521,450
TOTAL*	**$ 19,121,855,389**	**$ 449,110,000**	**$ 566,268,900**	**$ 20,137,234,289**

* Totals may not add up due to rounding.

(1) Debt service payable on January 1 of each year is included in the debt service for the prior fiscal year.

(2) Interest assumed to be paid at the fixed swap rate for any variable rate bonds swapped to fixed rate and does not include fees such as those for letters of credit, standby agreements, remarketing fees, or any potential mismatch between the bond variable rate and swap variable rate. Spreads over the variable rate index on variable rate bonds are included in the calculation of the interest accruing on such bonds and are assumed to be constant through final maturity of the associated variable rate bonds.

(3) Interest on the $5,000,000 unhedged portion of the Outstanding Turnpike Revenue Bonds, Series 2015 A, is calculated at the Maximum Rate of 12%.

THE AUTHORITY

General

The Authority is a body corporate and politic of the State organized and existing by virtue of the Act and is a public instrumentality exercising essential governmental functions. The Authority is empowered to acquire, construct, maintain, repair, and operate projects at locations established by law, to fix and establish tolls for the use of the Turnpike System, and to issue revenue bonds for its purposes.

Abolishment of Highway Authority

In July 2003, the Highway Authority was abolished and the Authority assumed all powers, rights, obligations, assets, debts, liabilities, and statutory responsibilities and duties of the Highway Authority, including the ownership and operation of the Parkway. 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.

Certain Powers

The Act authorizes the Authority to acquire, improve, construct, maintain, repair, manage, and operate transportation projects or any part thereof at such locations as established by law or by the Authority and to exercise the power of eminent domain in connection with any of its corporate purposes.

The Act also authorizes the Authority to issue revenue bonds maturing not later than forty (40) years from their date or dates for any of its corporate purposes, payable solely from or secured by a pledge of tolls, other revenues of transportation projects, and the proceeds of such bonds. The Act provides that such bonds shall not be deemed to constitute a debt or liability of the State or of any political subdivision thereof, or a pledge of the faith, credit or taxing power of the State or of any such political subdivision, but that such bonds shall be payable from funds pledged or available for their payment as authorized in the Act. The Authority is also empowered to issue notes for any of its corporate purposes in the same manner as bonds are issued under the Act.

In addition, the Authority has the power, by resolution, to fix and revise from time to time and charge and collect tolls, fees, licenses, rents, concessions, and other charges for each transportation project or part thereof constructed or acquired by it; and, subject to any agreement with bondholders, to invest moneys of the Authority not required for immediate use, including proceeds from the sale of any bonds, in such obligations, securities and other investments as the Authority shall deem prudent. Pursuant to the Act, whenever the Authority desires to increase any existing toll or establish any new toll for the use of any highway project, including the Turnpike and/or the Parkway, it is required to hold a public hearing on such proposed toll at least 45 days prior to the date on which such toll is proposed to become effective.

The Act provides that no resolution or other action of the Authority providing for the issuance of bonds, refunding bonds or other obligations or for the fixing, revising or adjusting of tolls for the use of the Turnpike System or any parts or sections thereof shall be adopted or otherwise made effective by the Authority without the prior approval in writing of the Governor and the Treasurer of the State. In addition, the Act requires that a true copy of the minutes of every meeting of the Authority shall be forthwith delivered to the Governor and that no action taken at such meeting by the Authority shall have force or effect until 10 days, exclusive of Saturdays, Sundays and public holidays, after such copy of the minutes shall have been so delivered. If, during such 10-day period, the Governor returns such copy of the minutes with a veto of any action taken by the Authority, or any member thereof, at such meeting, such action shall be null and of no effect. The Act permits the Governor to approve all or part of the action taken at such meeting prior to the expiration of such 10-day period. The Act further provides that the powers conferred upon the Governor and the Treasurer of the State described above shall be exercised with due regard for the rights of the holders of bonds of the Authority at any time outstanding, and nothing in, or done pursuant to, the Act shall in any way limit, restrict or alter the obligation or powers of the Authority or any representative or officer of the Authority to carry out and perform in every detail each and every covenant, agreement or contract at any time made or entered into by or on behalf of the Authority with respect to its bonds or for the benefit, protection or security of the holders thereof.

Governance

The Act provides that the Board of Commissioners of the Authority shall consist of eight members as follows: the Commissioner of the New Jersey Department of Transportation, ex officio, or his/her designee; five members appointed by the Governor with the advice and consent of the Senate; one member appointed by the Governor upon recommendation of the President of the Senate; and one member appointed by the Governor upon recommendation of the Speaker of the General Assembly. Members of the Authority (other than the Commissioner of Transportation) sit for a term of five years and until a successor is appointed and has been confirmed. Five members of the Authority constitute a quorum and the vote of five members is necessary for any action taken by the Authority. The Governor designates the chairman and vice chairman, who serve in these positions at the pleasure of the Governor and until their successors have been designated. The Authority selects its secretary and treasurer, neither of whom need be members. All Authority members serve without compensation but are reimbursed for actual expenses incurred in the performance of duties.

The current members of the Authority are as follows:

DIANE GUTIERREZ-SCACCETTI (Commissioner; Chair). Ms. Gutierrez-Scaccetti is the Commissioner of the New Jersey Department of Transportation. She began serving in an acting capacity on January 16, 2018 and was confirmed by the State Senate on June 7, 2018. As NJDOT Commissioner, Ms. Gutierrez-Scaccetti serves ex-officio as a Commissioner of the Authority and by gubernatorial designation as Chair of the Authority's Board. She is a native of New Jersey and a career transportation professional. Ms. Gutierrez-Scaccetti worked for six and a half years as Executive Director and CEO of Florida's Turnpike Enterprise before returning to New Jersey in 2018. Previously, she worked for more than 20 years in various management positions at the Authority, including serving as Executive Director from 2008 to 2010. She holds a B.S. from the University of Connecticut and an M.S. from Rutgers University.

RONALD GRAVINO (Commissioner; Vice Chairman). Mr. Gravino is Vice President for finance and human resources at Invidi Technologies Corp. in Princeton, which he joined after many years as a financial/turnaround consultant. He serves as chairman of the Newark Liberty International Airport Advisory Board and on the boards of the Transportation Finance Review Commission and the Garden State Arts Foundation. He served for six years as a commissioner of the former New Jersey Highway Authority, including a term as chairman. Mr. Gravino earned a B.A. in Accountancy from Charter Oak College in Hartford, Connecticut. Mr. Gravino's term expires in February 2022.

MICHAEL R. DuPONT (Commissioner; Treasurer). Mr. DuPont is a partner in the law firm McKenna, DuPont, Higgins & Stone. He has worked on the transition teams of Governor Jon S. Corzine and former Governor James E. McGreevey. He serves as President of the Garden State Arts Foundation. Mr. DuPont earned a B.A. in Political Science and Business Administration from Loyola University and a J.D. from the John Marshall Law School. Mr. DuPont's term expired in February 2013, and he is currently serving in a hold-over capacity.

RAYMOND M. POCINO (Commissioner). Mr. Pocino is a 50-year member of the Laborers International Union of North America (LIUNA) and holds the title of President Emeritus with the 3,500-member Construction & General Laborers Local 172 in Trenton. He has been manager of the Eastern Region Office of LIUNA since 1995 and serves on its Executive Board. He also serves on the Executive Board of the New Jersey AFL-CIO and on the board of the Port Authority of New York & New Jersey.

He is serving his fifth term on the Authority. Mr. Pocino's term expired in February 2011, and he is currently serving in a hold-over capacity.

ULISES E. DIAZ (Commissioner). Mr. Diaz is employed at Horizon Blue Cross Blue Shield of New Jersey, where he is responsible for the development of government affairs activities and legislative programs for New Jersey. He previously was employed in a similar capacity at Verizon Communications. Mr. Diaz also worked at United Water New Jersey for several years, where he was responsible for all external affairs activities, including government and public affairs, communications and business development. He holds a B.A. in Business Administration from Rutgers University. Mr. Diaz's term expired in November 2018, and he is currently serving in a hold-over capacity.

JOHN D. MINELLA (Commissioner). Mr. Minella is the Executive Director of the Hudson County Democratic Organization. He retired from the Authority in 2011 after more than 25 years of service. For most of his tenure, he served as Assistant Superintendent of Garden State Parkway Roadway Maintenance. Mr. Minella also previously worked as Management Specialist for the Office of the Mayor, Jersey City, and Real Estate Manager and Assistant Director, Public Service Employment, Jersey City Office of Employment and Training. He is the First Vice President of the Bayonne Chapter U.N.I.C.O., a member of the Loyal Order of Moose Lodge #266, and he has been a member of the Madeline Fiadini LoRe Foundation for Cancer Prevention since it was founded in 2008. He formerly served a member of the Jersey City Board of Education and the Jersey City Municipal Utilities Authority, and as Chair of the Jersey City Sewerage Authority. He is a graduate of St. Peters College, Jersey City. Mr. Minella's term expired in July 2018, and he is currently serving in a hold-over capacity.

RAPHAEL SALERMO (Commissioner). Mr. Salermo is a Managing Partner of the MAR Acquisition Group LLC. He has held leadership positions in several civic organizations including the Greater Elizabeth Chamber of Commerce, the Elizabeth Development Corporation, the YMCA of Eastern Union County, the Elizabeth Avenue Partnership and the Union County Workforce Investment Board. Mr. Salermo's term as a Commissioner of the Authority began on June 29, 2017 and expires in February 2019.

There is currently one vacancy on the Board of Commissioners of the Authority.

The Authority is empowered to appoint such officers, employees and agents as may be necessary in its judgment. The Commissioners have created the executive staff positions of Executive Director, Deputy Executive Director and Chief Financial Officer, among others. The Authority's executive staff currently includes:

JOHN M. KELLER, P.E. (Executive Director). Mr. Keller was appointed Executive Director in April 2018 after 20 years with the Authority. He was serving as Deputy Chief Engineer, Design, immediately before his appointment. Mr. Keller has managed several of the Authority's largest capital programs during his career. Those include the widening of the Turnpike between Interchanges 6 and 9, the construction of Turnpike Interchange 15X in Secaucus, and the ongoing Facilities Improvement Program, under which more than 50 tolls, maintenance and State Police buildings are being constructed or rehabilitated. Mr. Keller has a bachelor of science in Civil Engineering from the Indiana Institute of Technology and is a Certified Project Management Professional and a licensed Professional Engineer. He has served terms as President and Regional Director of the North/Central NJ Section of American Society of Highway Engineers and is an active member of several engineering and construction associations both locally and nationally.

JAMES CARONE (Deputy Executive Director). Mr. Carone, a Certified Public Accountant, was named Deputy Executive Director of the Authority in April 2018. He began work as a Staff Auditor at the New Jersey Highway Authority in 1977, and during his 26 years with the Highway Authority held the positions of Senior Auditor, Audit Manager, and Assistant Chief Auditor. When the Highway Authority and the New Jersey Turnpike Authority were consolidated in 2003, Mr. Carone was named Director of

Internal Audit, a position he held until his promotion to Deputy Executive Director. Mr. Carone is a 1976 graduate of Lycoming College in Williamsport, Pennsylvania.

DONNA MANUELLI (Chief Financial Officer). Ms. Manuelli was promoted to Chief Financial Officer in December 2010. She has served the Authority for the past twenty years, holding various positions of increasing responsibility in the organization. She previously served as Comptroller from 2005 – 2010 and as Assistant Comptroller from 1999 – 2005. Prior to joining the Authority, Ms. Manuelli was a Vice President at Midlantic National Bank, where she spent ten years in credit analysis and asset based lending. Ms. Manuelli currently serves on the Finance Committee of the E-ZPass Group, an organization of toll roads and bridges throughout the United States, and was Chairperson for three years. Ms. Manuelli received a B.S. degree in Business Administration with a concentration in Finance from Villanova University where she graduated Cum Laude and has taken graduate level courses at Rutgers University.

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 a total of 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 $2.2 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 41, 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 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 35 to 48 is under construction. The third lane between milepost 41 and 48 was opened in June 2016. The remaining portion of the Parkway widening to milepost 35 was opened to traffic in the spring of 2018.

Capital Improvement Program

In October 2008, the Authority adopted and approved the Capital Improvement Program for the Turnpike System. As originally adopted and approved by the Board, the Capital Improvement Program was intended to be a ten year program ending in October 2018. However, at its meeting on September 25, 2018, the Board authorized a two year extension of the Capital Improvement Program. This extension was necessary as certain Turnpike projects were delayed to coordinate with the State and to lessen the impact on commuters and travelers as other State Transportation projects were occurring simultaneously in the region. The Capital Improvement Program provides for the expenditure by the Authority of an estimated aggregate amount of approximately $7,000,000,000 through the end of the Capital Improvement Program to fund the Costs of Construction of various Projects involving capital improvements to the Turnpike System, including, without limitation, the widening of certain sections of both the Turnpike and the Parkway. The estimated total cost of the Capital Improvement Program and the estimated cost of each individual Project included in the Capital Improvement Program are subject to change based upon varying economic conditions and other factors which may occur during the term of the Capital Improvement Program. In addition, the Projects included in the Capital Improvement Program are also subject to change at the discretion of the Authority. To date, the Capital Improvement Program has been proceeding under the budget. The Projects currently included in the Capital Improvement Program are the following as of November 30, 2018:

Project	Current Budget	Amount Spent or Committed to Date
Turnpike Widening (Interchange 6-9)	$ 2,135,328,000	$ 2,134,390,000
Bridge Improvements	1,685,344,000	1,505,750,000
Interchange Improvements	1,068,629,000	1,029,159,000
Roadway Improvements	847,329,000	794,144,000
Facilities Improvements	672,334,000	664,397,000
Parkway Widening (Mileposts 35-80)*	591,036,000*	574,072,000
	$ 7,000,000,000	$ 6,701,912,000

* Total costs of Parkway 35-80 Widening Program are $691,000,000, however, $100,000,000 of those costs were financed from the proceeds of bond anticipation notes prior to the issuance of the first Series of Bonds for the Capital Improvement Program.

For more information with respect to the Projects currently included in the Capital Improvement Program, see APPENDIX C – "REPORT OF CONSULTING ENGINEER" attached hereto.

The Authority has previously issued the Series 2009 E and F Bonds, the Series 2010 A Bonds, the Series 2013 A Bonds, the Series 2014 A Bonds, the Series 2015 E Bonds and the Series 2017 A Bonds under the Resolution to fund a portion of the Costs of Construction of the various Projects included in the Capital Improvement Program. The Series 2019 A Bonds are being issued by the Authority to further fund the remaining costs of the Capital Improvement Program. The Series 2019 A Bonds will be the final Series of Non-Refunding Bonds issued by the Authority to fund the costs of the Capital Improvement Program. The current toll rates in effect for the Turnpike System are anticipated to provide the Authority with sufficient Net Revenues to satisfy all of the requirements of the Resolution relating to the issuance of all Bonds issued by the Authority to fund the Costs of Construction of the various Projects comprising the Capital Improvement Program. See "SECURITY FOR THE BONDS – Toll Covenant", "THE AUTHORITY – Capital Improvement Program", "THE AUTHORITY – Certain Powers" and "THE AUTHORITY – Existing Toll Rates and Schedule" herein and APPENDIX B – "REPORT OF TRAFFIC ENGINEER" and APPENDIX C – "REPORT OF CONSULTING ENGINEER" hereto.

At its July 25, 2017 meeting, the Board of Commissioners of the Authority authorized (i) the creation of a new account within the Construction Fund established under the Resolution and the funding of such account in the years 2019 through 2022 with a portion of the aggregate cash flow savings to the Authority in such years as a result of the issuance of the Authority's Turnpike Revenue Bonds, Series 2017 B, the proceeds of which were used to refund and defease certain previously Outstanding Bonds of the Authority, and (ii) the use of the amounts on deposit in such new account to fund the costs of various capital projects of the Authority which are not included in the current Capital Improvement Program, including the repair and rehabilitation of major bridges crossing the Passaic River on both the Turnpike and the Parkway.

On December 19, 2018, the Governor of the State and the Commissioner of the NJDOT (who also serves as the Chair of the Authority) announced that the Authority will be entering into more than $600,000,000 in new construction contracts in 2019, including more than $400,000,000 in additional construction work for various new capital projects of the Authority which are not included in the current Capital Improvement Program. According to the announcement, the new capital projects will include, but not be limited to, the reconstruction of bridge decks on the Parkway in Union County, and the lengthening of certain bridges on the Turnpike located in Camden and Burlington Counties to prepare for the possible future widening of the southern portion of the Turnpike. The specific new capital projects to be undertaken by the Authority in connection with such additional construction work and the expenditure of the amounts necessary to fund the costs thereof have not yet been authorized or approved by the Board of Commissioners of the Authority and the Board has not yet authorized the issuance of any additional Bonds or other indebtedness to finance the costs thereof.

Summary of Historical Operations

The Turnpike

Table 1(a) sets forth the annual traffic usage for passenger car, commercial, and non-revenue vehicles on the Turnpike for the 10 year period ending in 2017. Table 1(b) details the annual toll revenues from passenger cars and commercial vehicles on the Turnpike during the same 10 years.

Table 1(a) – Turnpike – Number of Vehicles (000s)*

Year	Passenger Cars	Commercial Vehicles(1)	Non-Revenue Vehicles(2)	Total Vehicles
2008	210,926	31,943	1,744	244,612
2009	205,366	28,738	1,802	235,906
2010	205,687	29,395	1,771	236,853
2011	203,626	29,603	1,417	234,645
2012	194,508	28,633	1,437	224,578
2013	195,208	29,278	1,504	225,990
2014	202,347	29,895	1,517	233,759
2015	215,358	31,239	1,558	248,155
2016	223,634	31,859	1,571	257,064
2017	227,978	32,687	1,559	262,224

* Totals may not add up due to rounding.

(1) Commercial vehicles include non-commuter buses.

(2) Non-revenue vehicles include commuter buses traveling during peak hours, towing operations, police, first aid responding to emergencies and employees traveling to and from work.

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Table 1(b) – Turnpike – Toll Revenues ($000s)

Year	Passenger Car Revenues	Commercial Vehicle Revenues[1]	Total Toll Revenues
2008[2]	$ 345,394	$ 195,289	$ 540,683
2009	449,897	224,738	674,635
2010	446,045	227,848	673,893
2011	447,433	225,716	673,149
2012[3]	667,987	324,033	992,020
2013	672,828	333,893	1,006,721
2014	695,130	342,614	1,037,744
2015	745,007	361,261	1,106,268
2016	776,337	368,221	1,144,558
2017	780,181	371,557	1,151,738

(1) Commercial vehicles include non-commuter buses.

(2) Reflects a 40 percent toll increase on the Turnpike beginning December 1, 2008.

(3) Reflects a 53 percent toll increase on the Turnpike beginning January 1, 2012.

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The Parkway

Table 2(a) below sets forth the annual number of transactions for passenger car, commercial and non-revenue vehicles on the Parkway for the 10 years ending in 2017. Table 2(b) sets forth the annual toll revenues from the Parkway during the same period. Because tolls are collected solely at barriers and ramps, only the number of transactions is tracked; the number of vehicles is not.

Table 2(a) – Parkway – Number of Transactions (000s)*

Year	Passenger Cars	Commercial Vehicles(1)	Non-Revenue Vehicles(2)	Total Vehicles
2008	402,413	4,619	1,617	408,650
2009	391,240	5,031	1,642	397,912
2010	377,718	4,758	1,638	384,114
2011	373,058	4,833	1,113	379,004
2012	361,333	4,824	1,297	367,453
2013	363,863	5,054	1,543	370,460
2014	365,337	5,012	1,497	371,846
2015	374,092	5,192	1,476	380,760
2016	384,586	5,024	1,458	391,068
2017	387,787	5,109	1,532	394,428

* Totals may not add up due to rounding.

(1) Trucks are only allowed below Exit 105 (Eatontown) on the Parkway.

(2) Non-revenue vehicles include towing operations, police, first aid responding to emergencies and employees traveling to and from work.

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Table 2(b) – Parkway – Toll Revenues ($000s)			
Year	Passenger Cars	Commercial Vehicles[(1)]	Total Revenues
2008[(2) (3)]	$ 200,253	$ 5,802	$ 206,055
2009	267,340	10,444	277,784
2010	267,642	10,631	278,273
2011	264,842	10,888	275,730
2012[(4)]	384,978	16,661	401,639
2013	390,296	16,746	407,042
2014	392,777	15,227	408,004
2015	400,910	15,955	416,865
2016	410,567	15,537	426,104
2017	412,423	15,735	428,158

(1) Truck traffic is only allowed below Exit 105 (Eatontown) on the Parkway.

(2) The Parkway vehicle classification system was changed on December 1, 2008 to be the same as the Turnpike classification system. As a result, revenues for the entire year have been reclassified between passenger car and commercial vehicles to conform to the new classification system.

(3) Reflects a 43 percent toll increase on the Parkway beginning December 1, 2008.

(4) Reflects a 50 percent toll increase on the Parkway beginning January 1, 2012.

Service Areas and Concessions

There are 12 service areas on the Turnpike. Six of them are accessible by only southbound traffic, five by only northbound traffic and one by both north and southbound traffic. The service areas, which are open 24 hours a day, offer food, fuel and minor repair services, along with travel information, restrooms, automated teller machines and other conveniences. In addition, there are eight (8) service areas on the Parkway where food and fuel are sold and one (1) service area where only fuel is sold. Six of these full-service areas are accessible to north and southbound traffic, while one service area is available northbound only and one service area is available southbound only. The service area where only fuel is sold is accessible to only northbound traffic.

HMS Host, Inc. ("HMS" or "HMS Host") operates the food concessions at all 12 Turnpike service areas and 5 of the Parkway service areas. At its September 12, 2017 meeting, the Board of Commissioners of the Authority approved a contract with HMS Host relating to its operation of the food services facilities at the service areas on both the Turnpike and the Parkway (the "HMS Agreement"). The term of the HMS Agreement commenced on September 12, 2017 and will expire on September 11, 2044. HMS will provide food services at 17 of the Authority's 21 service areas. Pursuant to the HMS Agreement, HMS is required to invest at least $125,000,000 during the first seven years of the HMS Agreement to construct eight new restaurant buildings and refurbish and remodel six other existing restaurant buildings located at various service areas on the Turnpike and the Parkway. Additionally, HMS is also required to make a capital contribution of $1,000,000 per year for 25 years for the purpose of ongoing maintenance and capital improvements to the restaurant facilities at the service areas on the Turnpike and the Parkway. Under the HMS Agreement, the Authority receives an annual fee from HMS that is the greater of: (i) a percentage of gross sales which begins at 12.75% and rises to 14.0% over the term of the HMS Agreement; or (ii) a minimum annual guaranteed fee, which is $12,000,000 in the first two years and it increases to approximately to $19,300,000 during the final five years of the HMS Agreement.

Sunoco, Inc. ("Sunoco") provides gasoline, diesel fuel and minor repair services at all Turnpike service areas and the 9 Authority owned Parkway service areas. At its September 12, 2017 meeting, the Board of Commissioners of the Authority also approved a contract with Sunoco relating to its operations at service areas on both the Turnpike and the Parkway (the "Sunoco Agreement"). The term of the Sunoco Agreement commenced on September 12, 2017 and will expire on December 31, 2042. Pursuant to the Sunoco Agreement, Sunoco is required to invest at least $90,000,000 during the first seven years of the Sunoco Agreement to, among other things, build two new convenience stores, refurbish its fuel service facilities, and refurbish and remodel all of its existing convenience stores located at various service areas on the Turnpike and the Parkway. Additionally, Sunoco is also required to make a capital contribution of $500,000 per year for 25 years for the purpose of ongoing maintenance and capital improvements to the fuel service and convenience store facilities at the service areas on the Turnpike and the Parkway. Under the Sunoco Agreement, the Authority receives an annual fee from Sunoco which is the greater of: (i) $0.1025 per gallon of fuel sold; or (ii) a minimum annual guaranteed fee which is $14,000,000 in the first five years of the agreement and increases to approximately to $18,000,000 during the final five years of the Sunoco Agreement.

In addition to the Authority owned service areas, PMG New Jersey II ("PMG") operates one fueling station and convenience store on its property in Colonia, New Jersey, which abuts the Parkway northbound at approximately milepost 133.6, and one fueling station and convenience store on its property in Iselin, New Jersey, which abuts the Parkway southbound at approximately milepost 132.7. On June 18, 2014, the Authority and PMG entered into an agreement whereby PMG remits to the Authority fifteen thousand dollars ($15,000) per month related to PMG's operation of its facilities that have direct access to the Parkway. The initial term of the agreement ended on December 31, 2016 and it renews automatically every three (3) years thereafter for consecutive three (3) year renewal terms. The first renewal term began on January 1, 2017, as neither party terminated the agreement for cause. During each renewal term, the monthly fee increases by three percent (3%) over the fee due in the initial term or prior renewal term, as applicable.

133 Colonia, L.L.C. operates one fueling station on its property in Colonia, New Jersey, which abuts the Parkway northbound at approximately milepost 133.6. 82 Iselin, L.L.C., operates one fueling station on its property in Iselin, New Jersey, which abuts the Parkway southbound at approximately milepost 132.7. On July 23, 2015, the Authority entered into an agreement with 133 Colonia, L.L.C. and 82 Iselin, L.L.C. to operate a convenience store on each of their properties. The initial term of the agreement ends on the last day of the 96th month after the Authority begins receiving the fees which are due and payable to the Authority under the terms of the agreement. The agreement renews automatically every eight (8) years thereafter as provided in the agreement. Pursuant to the agreement, 133 Colonia, L.L.C. and 82 Iselin, L.L.C. will each pay the Authority $5,000 per month when the stores are operational. Construction of the store owned by 133 Colonia, L.L.C. has been completed, but it is not yet open for business. The store owned by 82 Iselin, L.L.C. opened in May 2018 and the Authority began receiving payment of its fees in January 2019. During each renewal term, the monthly fee increases by six percent (6%) over the fee due in the initial term or prior renewal term, as applicable.

Gross revenues received by the Authority from all Turnpike service areas in 2017 were $23,558,000. Gross revenues received by the Authority during 2017 from all service areas on the Parkway were $12,033,000.

E-ZPass Fees

The Authority utilizes an electronic toll collection system to collect a majority of its toll revenue. The Authority is part of the New Jersey E-ZPass Group (the "NJ E-ZPass Group"), which includes the

Authority, the South Jersey Transportation Authority, the Delaware River Port Authority, the Delaware River & Bay Authority, the Burlington County Bridge Commission, and the Delaware River Joint Toll Bridge Commission. On December 6, 2016, the NJ E-ZPass Memorandum of Agreement ("MOA") became effective. The MOA is an agreement between the agencies above clarifying their rights and responsibilities with respect to the terms and conditions of the contract with Xerox State & Local Solutions d/b/a Conduent relating to the operation of the E-ZPass electronic toll collection system in the State. See "THE AUTHORITY – Electronic Toll Collection" herein. The NJ E-ZPass Group shares a main Customer Service Center (the "NJ CSC") located in Newark, New Jersey, in addition to smaller satellite service centers that are a part of the NJ CSC. The Authority is the lead agency for the NJ E-ZPass Group and is primarily responsible for the group's financial and operational decisions. The NJ E-ZPass Group is part of the northeast regional E-ZPass Group which extends from Maine to North Carolina and as far west as Illinois. In 2017, over 84.2% of the Turnpike's transactions and over 81.4% of the Parkway's transactions were processed electronically. Customers of the NJ CSC can use their E-ZPass account anywhere E-ZPass is accepted.

The Authority receives fees and other related income from the operation of E-ZPass system on the Turnpike and the Parkway. In 2017, total E-ZPass fee revenue was $60,505,000, as further discussed below.

Monthly membership fees of $1.00 are assessed on account holders to help offset the cost of operations. In 2017, the Authority's portion of the membership fees was approximately $24,314,000. Included with the account, customers receive account statements every other month. The NJ CSC also allows customers to receive monthly statements for a fee of $6.00 per year. In 2017, the Authority received $1,661,000 in statement fees.

Vehicles passing through a toll lane without paying the full toll due are treated as violators and, in addition to the toll due, are assessed an administrative fee designed to offset the increased collection costs. The current Administrative Fee is $50.00 per violation on the Turnpike. Up to four violations can be included on notices sent to Parkway violators for the same $50.00 fee. The Authority collected administrative fees of $31,109,000 in 2017.

The Authority and the South Jersey Transportation Authority collectively co-own, operate and maintain a fiber optic network which runs along the Turnpike, Parkway and Atlantic City Expressway and connects to the NJ CSC. The fiber is used to transmit toll data and other internal needs. The excess capacity of this network is leased to various commercial enterprises. In 2017, the Authority received $1,553,000 from these leases.

Several parking authorities accept E-ZPass transponders as payment. The NJ CSC charges these authorities transaction fees to offset the costs of maintaining the customer accounts for this convenience. In 2017 the Authority recorded $489,000 in parking fee revenue.

Other fees associated with the E-ZPass system include tag sales to business customers, bad check fees, interest income on deposits and damaged and returned tag fees. These fees amounted to $1,379,000 in 2017.

Miscellaneous Revenues

The Authority maintains contracts with several major telecommunications carriers that permit the carriers to construct, install, operate and maintain cellular towers at various locations along the Authority's right-of-way. This provides state of the art communications capability for the Authority, its patrons and others. The Authority may install its own radio transmitting and receiving equipment in the same locations. In 2017, the Authority received rent of $5,532,000 for these sites.

A separate fiber optic network is located along the Parkway right-of-way. The excess capacity of this network is leased to various communications companies. The revenue produced from these leases in 2017 was $1,698,000.

Under an agreement between the Authority and New Jersey Transit Corporation (the "NJ Transit"), NJ Transit operates the park/ride facility at the Vince Lombardi Service Area on the Turnpike in Ridgefield Park. The Authority also contracts with Academy Bus to operate the park/ride facility off Interchange 8A on the Turnpike in Cranbury and a parking lot at the Garden State Arts Center. In 2017, the Authority received revenues totaling $816,000 for these parking facilities.

The Authority allows billboards to be operated at several locations along the Turnpike and Parkway. In April 2010, the Authority awarded a contract to Allvision Inc. to manage the Authority's billboard assets. Pursuant to this award, Allvision Inc. is marketing the Authority's billboard assets and upgrading several sites to digital billboards. In 2017, the Authority received rent payments of $1,143,000 for the sites located along the roadways.

From time to time, the Authority is party to settlement agreements. In 2017, the Authority received $2.9 million pursuant to a Multi-State Attorney Generals settlement agreement with Barclays Bank. Additionally, in 2017 the Authority also received $2.6 million in disaster recovery funds from the Federal Emergency Management Agency (FEMA) related to Superstorm Jonas (2016).

Arts Center

The PNC Bank Arts Center (the "Arts Center") is an entertainment facility located in the Telegraph Hill Nature Area, a 400-acre recreational tract along the Parkway in Holmdel. The facility, which opened in 1968, plays host to major touring performers.

The Arts Center is owned by the Authority and leased to a private operator, Live Nation Worldwide, Inc. ("Live Nation"). The term of the Authority's current lease agreement with Live Nation (the "Lease") commenced on January 1, 2018 and ends on December 31, 2042. The annual rent payable to the Authority by Live Nation under the Lease is the greater of (i) 10.5% of the gross revenues of the operation of the Arts Center, or (ii) a minimum annual guaranteed rent of $2,940,507, which amount increases by 2.5% every four years, commencing in the 5th year of the Lease, and ultimately rises to $3,326,914 during the final five years of the Lease. The Lease also requires Live Nation and the Authority to each contribute $11,000,000 to reconstruct and renovate the Arts Center, with Live Nation making its contribution in four equal annual installments of $2,750,000 by no later than March 1 in each of the years 2018 through 2021. To the extent that the costs of reconstructing and renovating the Arts Center exceed $22,000,000, the Authority is responsible to pay the first $500,000 of such costs overages, with all costs overages above $500,000 being shared equally between the Authority and Live Nation. In addition to Live Nation's $11,000,000 contribution to reconstruct and renovate the Arts Center, the Lease also requires Live Nation to make annual deposits of the lesser of $300,000 or 0.5% of annual gross revenues into a capital improvement fund, which shall be used to fund capital improvements to the Arts Center. All amounts remaining in the capital improvement fund at the end of the term of the Lease will belong to the Authority. Finally, under the Lease, the Authority and Live Nation agree to share equally (50% each) the proceeds to be received from any future naming/sponsorship agreement relating to the Arts Center.

Under a separate agreement (the "Sponsorship Agreement"), which expired on December 31, 2017, PNC Bank, National Association ("PNC Bank") pays the Authority for the naming and marketing rights to the Arts Center. The Authority and PNC Bank are currently in the process of negotiating the terms and provisions of a replacement agreement for the expired Sponsorship Agreement and, in the interim, have continued to operate under the terms of the expired Sponsorship Agreement.

As of December 2004, the Arts Center became part of the Turnpike System for purposes of the Resolution and revenues received by the Authority from the Arts Center (other than revenues received pursuant to the Sponsorship Agreement) became Pledged Revenues under the Resolution and the expenses, if any, incurred by the Authority in connection with the operation of the Arts Center became Operating Expenses of the Turnpike System for purposes of the Resolution.

The Authority received $4,061,000 in gross revenues from the Arts Center in 2017.

Organization

The Authority budgeted for 2,073 full-time employees for 2018. In addition to the full-time workforce, the Authority also employs part-time and temporary employees. There were 585 part-time and 336 temporary employees as of December 31, 2017.

The departments of the Authority include Executive, Finance and Budgets, Information Technology Services, Human Resources, Community and Government Relations, Procurement and Materials Management, Law, Internal Audit, Engineering, Operations, Maintenance and Toll Collection.

There are eight negotiating units representing different classifications of full-time Authority employees. These eight unions represent approximately 95% of the Authority's full-time workforce. The Authority has entered into labor contracts with all eight unions. Six of those contracts expire on June 30, 2019 and one contract expires on September 30, 2019. The remaining contract with one union which represents full-time employees expired on October 31, 2017 and the Authority and such union are in negotiations to put a successor agreement in place. Under New Jersey public sector labor law, union employees are not permitted to strike but all terms and conditions of expired collective negotiations agreements remain in place until new agreements are agreed upon. In addition, there are three negotiating units representing different classifications of part-time toll collectors. Each of these three contracts expires on June 30, 2019. The bargaining units, along with the status of their collective negotiation agreements, are as follows:

- Local 97 Teamsters Industrial and Allied Workers Union, AFL/CIO represents office, clerical, and technical employees in the Administrative departments and in Parkway maintenance and Parkway tolls. The term of this agreement was November 1, 2011 through October 31, 2017.

- Local 193 International Federation of Professional and Technical Engineers ("IFPTE") represents Parkway Toll Supervisors. The term of this agreement is October 1, 2011 through September 30, 2019.

- Local 193C IFPTE represents Parkway Crew Supervisors. The original term of this agreement was July 1, 2007 through June 30, 2011. The term of this agreement has been extended through June 30, 2019.

- Local 194 IFPTE represents Turnpike toll collection and Turnpike maintenance employees. Local 194 IFPTE also represents office, clerical and technical employees in Administrative departments and in Turnpike maintenance and Turnpike tolls. The original term of this agreement was July 1, 2007 through June 30, 2011. The term of this agreement has been extended through June 30, 2019.

- Local 194 IFPTE Part-Time Toll Collectors represents Turnpike part-time toll collectors. The original term of this agreement was October 27, 2007 through October 31, 2011. The term of this agreement has been extended through June 30, 2019.

- Local 196 IFPTE represents Parkway toll collectors and Parkway maintenance employees. The original term of this agreement was July 1, 2007 through June 30, 2011. The term of this agreement has been extended through June 30, 2019.

- Local 196, Chapter 12 IFPTE represents Parkway Craftspersons. The original term of this agreement was January 1, 2008 through December 31, 2011. The term of this agreement has been extended through June 30, 2019.

- Local 196 IFPTE Senior Citizen Toll Collectors represents Parkway senior citizen toll collectors. The original term of this agreement was July 1, 2007 through June 30, 2011. The term of this agreement has been extended through June 30, 2019.

- Local 196 IFPTE Part-Time Toll Collectors represents Parkway part-time toll collectors. The original term of this agreement was July 1, 2011 through December 31, 2013. The term of this agreement has been extended through June 30, 2019.

- Local 200 IFPTE represents Turnpike Toll and Turnpike Maintenance supervisory employees as well as administrative supervisory employees. The original term of this agreement was September 24, 2011 through October 4, 2015. The term of this agreement has been extended through June 30, 2019.

- Local 3914, American Federation of State, County and Municipal Employees ("AFSCME") represents low to mid-level managers and the attorneys in the Law Department of the Authority. The original term of this agreement was July 1, 2011 through June 30, 2017. The term of this agreement has been extended through June 30, 2019.

Pension and OPEB Obligations

Authority employees belong to the Public Employees' Retirement System ("PERS"), an actuarially funded pension system operated by the State of New Jersey. Each employee contributes to PERS based on a percentage of the employee's salary. Employees are enrolled in PERS upon commencement of employment with the Authority. The Authority makes an annual contribution to PERS in an amount determined by the New Jersey Division of Pensions and Benefits. In 2016, the amount billed to local employers was 100% of the Actuarially Determined Contribution (ADC) as determined by the New Jersey Division of Pensions and Benefits actuaries. P.L. 2011, c.78, effective June 28, 2011, increased the active member contribution rates from 5.5% of annual compensation to 6.5% plus an additional 1% phased in over seven years. The payment of automatic cost-of-living adjustments (the "COLA") additional increases to current and future retirees and beneficiaries was suspended. COLA increases may be reactivated at a future date as permitted by this law. Please see Note 11 in the financial statements of the Authority included as Appendix A to this Official Statement for additional information regarding pension benefits. Set forth below are the contractually required contributions made by the employees of the Authority and the Authority itself during the fiscal years ending December 31, 2013 through and including December 31, 2017:

	2013	2014	2015	2016	2017
Employee Contributions	$ 9,031,855	$ 9,083,409	$ 9,089,000	$ 9,271,000	$ 9,478,000
Employer Contributions	14,954,000	16,129,000	16,660,558	16,841,164	17,450,000
Total Contributions	$ 23,985,855	$ 25,212,409	$ 25,749,558	$ 26,112,164	$ 26,928,000

In June 2013, GASB issued Statement No. 68, *Financial Reporting for Pension Plan – an amendment of GASB Statement No. 27*. GASB Statement No. 68 changes how governments calculate and report the costs and obligations associated with pensions and improve the decision-usefulness of reported pension information and increase the transparency, consistency, and comparability of pension information. GASB Statement No. 68 requires that the proportionate share of the PERS net pension liability be reflected in the reported amounts on the Authority's statement of net position, as well as the related deferred inflows and outflows from pension activities. In 2015, the Authority implemented GASB Statement No. 68. As a result of the implementation, the Authority restated its beginning net position at January 1, 2014 by reducing unrestricted net position by $397,309,000. In addition, its statement of revenues, expenses, and changes in net position for the year ended December 31, 2014 was also restated.

The Authority provides medical, prescription drug, vision, dental and Medicare Part B reimbursement to retirees and their covered dependents, in accordance with the terms of the applicable collective bargaining agreements or Authority personnel policies for non-bargaining unit members. The Authority maintains a single-employer, self-funded health plan administered by third party claims administrators. All active employees who retire from the Authority and meet the eligibility criteria will receive these benefits. The plan does not issue a stand-alone report. As required by P.L. 2011, c.78 mandated by the State, retirees with less than twenty years of service as of June 28, 2011 will contribute towards health benefits in retirement.

The Authority currently funds for the cost to provide postemployment benefits on a pay-as-you-go basis. The Authority establishes and has the power to amend benefits and contribution obligations, subject to collective bargaining agreements to the extent they do not conflict with P.L. 2011, c.78 mandated by the State.

As required by the accounting standards of GASB Statement No. 45, "*Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pension*," the Authority must report cost associated with "other postemployment benefits" (OPEB). OPEB costs are actuarially calculated based on benefits that current and retired employees have accrued as a result of years of service. The statement sets the method for determining the Authority's postemployment benefits accrual, the Annual Required Contribution (ARC), to include both the value of benefits earned during the year (Normal Cost) and an amortizing of the unfunded actuarial accrued liability over a period not to exceed thirty years. The amortization costs for the initial unfunded actuarial accrued liability is a level percentage of payroll for a period of 30 years, with an assumption that payroll increases by 3% per year.

The following table shows the components of the Authority's annual OPEB cost assuming no prefunding of obligations at December 31, 2017 and 2016:

	Year Ended December 31 2017	Year Ended December 31 2016
	(in thousands)	
Annual required contribution (ARC)	$ 104,375	$ 100,099
Interest on net OPEB obligation	17,302	12,796
Adjustment to annual required contribution	(17,191)	(12,713)
Total annual OPEB cost (AOC)	104,486	100,182
Contributions made	42,933	43,501
Increase in net OPEB obligation	61,553	56,681
Net OPEB obligation, beginning of year	432,545	375,864
Net OPEB obligation, end of year	$ 494,098	$ 432,545

At January 1, 2017, the actuarial accrued liability (AAL) for postemployment benefits earned through the valuation date was approximately $1.5 billion, based on certain actuarial methods and assumptions. Since this liability has not been pre-funded as of the valuation date, the unfunded actuarial accrued liability (UAAL) as of January 1, 2017 was approximately $1.5 billion. Please see Note 12 in the financial statements of the Authority included as Appendix A to this Official Statement for additional information regarding the Authority's postemployment benefits.

In June 2015, GASB issued Statement No. 75, *"Accounting and Financial Reporting for Postemployment Benefits Other than Pensions"* ("GASB 75"). The objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities to the extent applicable. This Statement is effective for fiscal years beginning after June 15, 2017. The total OPEB liability of the Authority that will be reported as of December 31, 2018, which consistent with the provisions of GASB 75 was measured as of December 31, 2017, is approximately $1.7 billion. The Authority is evaluating the effect on its financial statements and anticipates that it will meet the required reporting for the period ended December 31, 2018.

At its December 18, 2018 meeting, the Board of Commissioners of the Authority authorized the adoption of an OPEB Trust Agreement and Plan of Benefits (the "Plan") which provides for the pre-funding of all or a portion of the Authority's OPEB obligations through the establishment of an irrevocable OPEB Trust Fund pursuant to Section 115 of the Internal Revenue Code of 1986, as amended. Under the Plan, the amounts deposited by the Authority into the OPEB Trust Fund, and the investment earnings thereon, cannot be used for, or diverted to, any purpose other than the payment of OPEB benefits to the persons entitled thereto. Once established and funded, the OPEB Trust Fund will provide the Authority with a financial benefit in that the amounts on deposit therein will reduce the Authority's unfunded OPEB liability calculated and recorded on the Authority's financial statements in accordance with GASB 75.

Public Safety

Patrol services for the Authority are provided by Troop D of the New Jersey State Police. The members of Troop D are employees of the State. The Authority makes payments to the State for the patrol services they provide. The amount paid to the State for those services in 2017 was $60,808,000.

Budget Procedures

The Authority's annual budget provides the basis for expenditures during the year. The Authority operates on a calendar-year basis. Not 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 15th 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 15th 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.

Electronic Toll Collection

An electronic toll collection system (the "ETC System") became operational on the Parkway in December 1999 and on the Turnpike in September 2000. The ETC System allows users to pay tolls at toll collection facilities without stopping to exchange tickets or money. The ETC System uses various electronic sensors and other equipment to automatically detect, profile and classify a vehicle. With the use of on board vehicle transponders linked to customer accounts and readers in toll lanes, this system allows the Authority to seamlessly record and charge toll transactions, making errors less likely while allowing for real-time traffic management. The Authority is one of 38 toll road agencies in 16 States from Maine to North Carolina to Illinois who are members of the E-ZPass Group. E-ZPass Group members use similar technology and standardized protocols allowing them to accept other members' customers under the E-ZPass brand of Electronic Toll Collection. For the fiscal year ended December 31, 2017, approximately 84.2% of the toll transactions on the Turnpike and approximately 81.4% of the toll transactions on the Parkway were processed through the ETC System.

The Authority and the South Jersey Transportation Authority ("SJTA") entered into a Professional Services Agreement (the "Prior E-ZPass Agreement") with Xerox State & Local Solutions, Inc. ("Xerox") (formerly known as ACS State & Local Solutions ("ACS")) pursuant to which Xerox agreed to operate and maintain the ETC System for the toll roadways and bridges operated by the Authority and SJTA, including customer service, violations processing and financial back-office services (New Jersey E-ZPass). The Prior E-ZPass Agreement, effective August 2, 2002, as amended on May 20, 2004, and on January 1, 2011 and supplemented on May 27, 2011 to include the Delaware River Port Authority (the "DRPA") and the Delaware River and Bay Authority (the "DRBA") and to extend the terms of the Prior E-ZPass Agreement, provided that it would be in effect until July 31, 2014, unless it was terminated earlier in accordance with its terms. On February 26, 2013, the Board of Commissioners of the Authority approved an extension of the Prior E-ZPass Agreement until July 31, 2016. Amendment No. 3, approved by the Authority's Commissioners on November 19, 2013, allowed for the Delaware River Joint Toll Bridge Commission (the "DRJTBC") to become a part of the NJ E-ZPass Group (formerly known as ETC Group) and utilize the services of New Jersey E-ZPass. DRJTBC fully joined the NJ CSC on May 19, 2014. On July 28, 2015, the Authority Commissioners approved a supplement to the Prior E-ZPass Agreement to extend the contract until January 31, 2017. In January 2015, the Authority issued a Request for Proposal (RFP) for New Jersey E-ZPass customer service, violations processing and financial back office services to replace the expiring Prior E-ZPass Agreement. In addition to the agencies mentioned above, the Burlington County Bridge Commission ("BCBC") was a full participant of this RFP. At its September 29, 2015 meeting, the Board of Commissioners of the Authority awarded the new contract (the "Current E-ZPass Agreement") to Xerox based upon its proposal submitted in response to the RFP. The First Addendum to the Current E-ZPass Agreement clarified the invoicing process under the Current E-ZPass Agreement. The Second Addendum to the Current E-ZPass Agreement extended the cut-over date of implementing certain upgrades to the customer service center from February 1, 2017 to July 17, 2017. This Second Addendum also provided for Xerox to provide payment and credit card processing. The Third Addendum to the Current E-ZPass Agreement extended the cut-over date to October 16, 2017. The Fourth Addendum to the Current E-ZPass Agreement clarified the responsibilities of the contractor to meet certain timeline and performance goals and prescribed penalties for failing to achieve the goals. On January 3, 2017, Xerox split into two separate companies. The contract to operate the New Jersey E-ZPass was assigned to Xerox State & Local Solutions D/B/A Conduent ("Conduent"). The Current E-ZPass Agreement with Conduent has an operating period of eight (8) years beginning February 1, 2017 with an option to extend the contract and the operating period for one, 2-year term at the Authority's discretion. Relative to the E-ZPass contract with Conduent, in 2016, the Authority and the other agencies (SJTA, DRPA, DRBA, DRJTBC and BCBC) forming the New Jersey E-ZPass Group entered into a Memorandum of Agreement which established the rights and responsibilities of each agency and designated the New Jersey Turnpike Authority as the lead agency. In 2018, a First Amendment to such Memorandum of Agreement was entered into which admitted Cape May County Bridge Commission ("CMCBC") into the New Jersey E-ZPass Group.

The Authority is responsible for paying approximately 77% of all amounts due and owing to Conduent under the Current E-ZPass Agreement. The remaining 23% is shared by SJTA, DRPA, DRBA, DRJTBC, BCBC and CMCBC. Payments required to be made by the Authority under the Current E-ZPass Agreement constitute Operating Expenses of the Turnpike System under the Resolution and are payable from Pledged Revenues prior to the deposit of Pledged Revenues into the Debt Service Fund to pay Debt Service on the Bonds.

Manual Toll Collection

The Toll Collection Department of the Authority manages the collection of cash tolls on both the Turnpike and the Parkway. Administrative personnel in the Toll Collection Department include eight directors or managers, one supervisor, two support staff, and two clerks. The administrative staff is responsible for developing procedures for collecting toll revenues and ensuring that the toll plazas are safe for motorists and for the Authority's field staff.

The Turnpike

The Turnpike has 28 interchanges connecting the roadway with major traffic arteries, cities and transportation centers. Toll collection at the interchanges is managed and operated by 204 full-time and 434 part-time toll collectors, 97 supervisors, eight interchange managers, two assistant division managers, one division manager and four clerks. The Authority's Integrated Technology Services Department is responsible for maintaining the Turnpike's manual toll equipment.

Except for two cash toll barriers (at Interchanges 6A and 17), toll collection on the Turnpike is done through a closed system: Drivers take tickets when they enter the roadway and return the tickets with their payment when they exit. (The State Legislature has directed that tolls not be collected on the I-95 extension; thus, that section of the roadway is not part of the closed toll system.) All tickets are processed through a computerized toll system that imprints them with interchange number, date, time of entry, lane number, class of vehicle, and toll collector identification information. As drivers enter the Turnpike, they drive over treadles that record the number of axles on their vehicles. As they exit, the time is imprinted on their tickets, and they drive over treadles once again and pass through an Automatic Vehicle Classification system. The axle count, tickets, revenues and Automatic Vehicle Classifications are reconciled daily by the Finance and Budget Department of the Authority.

The Parkway

Cash toll collection along the Parkway's 48 barriers and ramps is managed and operated by 144 full-time and 105 part-time toll collectors, 63 plaza and assistant plaza supervisors, five area managers and two clerks. The Authority's Integrated Technology Services Department is responsible for maintaining the Parkway's manual toll equipment and automatic coin machines.

The collection of cash tolls on the Parkway is done through an "open" system: drivers pay a set toll at barriers and ramps along the roadway. The tolls vary by vehicle class determined by number of axles. Automatic coin machines are also used to collect cash tolls at Parkway ramps.

Control Procedures

The cash and tickets are collected from the interchanges, plazas and ramps by armored car. Tickets are delivered to the Turnpike Administration Building and the cash is counted and deposited to a designated toll revenue bank account.

The Authority's Finance Department audits manual, automatic and E-ZPass transactions to ensure the proper credit and handling of funds. Toll collectors, the ETC System and bank tellers and interchanges are monitored for variances in vehicle classification, axle count, transaction count and expected revenue.

Collector variances over a certain threshold are reported to senior Toll Collection management and/or the Internal Audit Department for possible re-training, counseling, discipline or legal action. Additionally, bank errors or shortages are reported to the bank to ensure proper credit of funds. Either periodically, or upon request from the Finance Department, the Internal Audit Department makes a site visit to the bank to monitor and review banking control procedures.

Existing Toll Rates and Schedule

The toll increases which became effective on December 1, 2008 and on January 1, 2012 on both the Turnpike and the Parkway, are anticipated to provide the Authority with sufficient Net Revenues to satisfy all of the requirements of the Resolution relating to the issuance of all Bonds expected to be hereafter issued by the Authority to fund the Costs of Construction of the various Projects comprising the

Capital Improvement Program. See “SECURITY FOR THE BONDS – Toll Covenant” and “SECURITY FOR THE BONDS – Additional Indebtedness” herein and APPENDIX B – “REPORT OF TRAFFIC ENGINEER” and APPENDIX C – “REPORT OF CONSULTING ENGINEER” hereto.

The Turnpike

The Authority has increased tolls on the Turnpike seven times since its opening in 1951. The effective dates of those increases were March 23, 1975, April 1, 1980, March 17, 1991, September 30, 2000, January 1, 2003, December 1, 2008 and January 1, 2012. In addition, the Turnpike eliminated various E-ZPass discounts on January 1, 2006 and July 1, 2011. With the exception of Interchanges 6A and 17, tolls are collected by use of a closed-ticket system, with payment made at the point of exit. The toll rate is determined by distance traveled, class of vehicle, time of day, method of payment, and other factors.

Since January 1, 2012, passenger vehicles pay tolls averaging approximately 11.4 cents per mile for a full-length, peak period trip on the mainline Turnpike. The Authority offers discounted toll rates on the Turnpike based on time of travel, method of payment, type of vehicle, frequency of use, and other factors.

Table 3 depicts the current E-ZPass tolls for selected peak-period trips by class of vehicles for the Turnpike.

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Table 3 – Summary of Current Toll Rates on the Turnpike — E-ZPass, Peak Period

Trip	Passenger Cars	2-Axle Dual-Tire	3-Axle	4-Axle	5-Axle	6-Axle	2-Axle Buses
Delaware Memorial Bridge (Exit 1)							
NORTH TO:							
George Washington Bridge (Exit 18E/18W)	$ 13.85	$ 26.00	$ 32.45	$ 39.00	$ 45.45	$ 51.95	$ 20.05
Lincoln Tunnel (Exit 16E/16W)	12.55	23.50	32.20	37.25	44.75	51.95	18.00
Holland Tunnel (Exit 14C)	13.30	24.70	32.45	38.10	45.45	51.95	18.95
Lincoln Tunnel (Exit 16E/16W)							
SOUTH TO:							
Newark Airport (Exit 14)	2.15	4.30	5.30	6.45	7.75	9.05	3.20
Parkway (Exit 11)	5.15	9.05	12.80	15.00	17.65	20.65	6.95
New Brunswick (Exit 9)	6.50	12.00	16.00	18.75	22.80	26.25	9.20
Pennsylvania Turnpike (Exit 6)	10.25	18.75	25.15	29.45	35.55	40.95	14.45
Philadelphia-Camden (Exit 4)	9.70	18.30	24.95	29.20	34.90	40.45	14.00
Holland Tunnel (Exit 14C)							
SOUTH TO:							
Newark Airport (Exit 14)	2.45	5.30	6.45	7.50	9.05	10.50	4.05
Parkway (Exit 11)	5.45	9.95	14.00	16.00	19.20	21.95	7.75
New Brunswick (Exit 9)	6.65	12.95	17.20	19.80	23.65	27.55	9.95
Pennsylvania Turnpike (Exit 6)	10.65	19.80	26.70	30.50	36.70	42.40	15.30
Philadelphia-Camden (Exit 4)	10.25	19.35	26.25	30.20	36.40	42.25	15.00

The Parkway

Tolls on the Parkway have increased three times since its opening in 1950. The first increase went into effect April 15, 1989, the second increase took effect on December 1, 2008, and the third on January 1, 2012. In addition, the Parkway eliminated its E-ZPass discount on January 1, 2002.

After the most recent increase, passenger vehicles now pay tolls of approximately 4.8 cents per mile for a full-length, round trip on the Parkway.

The Authority is currently in the process of reviewing and analyzing the toll discounts it provides to buses owned or operated by NJ Transit that travel on the Parkway in relation to the tolls that are paid by buses owned or operated by other entities that travel on the Parkway. This review and analysis was initiated by the Authority after it became aware that its current toll discount policy for buses travelling on the Parkway may not comply with the provisions of the Federal-Aid Highway Act requiring that any over-the-road bus that serves the public must be provided access to the Parkway under the same toll rates, terms and conditions as public transportation buses. Although the Authority has not yet completed its review and analysis and has not made any final determinations, given that Authority has historically provided steep toll discounts to NJ Transit buses travelling on the Parkway when compared to the tolls paid by buses owned or operated by other entities that travel on the Parkway, it is anticipated that some prospective adjustment to the tolls paid by buses travelling on the Parkway will need to be made in order to achieve the parity in tolling between NJ Transit buses and buses owned or operated by other entities required by the provisions of the Federal-Aid Highway Act. Such prospective adjustment could include a reduction in the current tolls paid by buses which are not NJ Transit buses, an increase in the tolls paid by NJ Transit buses, the implementation of a new toll rate applicable to all buses, or some combination of the foregoing. In any event, once a final determination is made by the Authority and the prospective adjustment to the tolls becomes effective, the Authority believes that such adjustment will not have a material adverse impact on the financial position of the Authority.

Table 4 shows the current Parkway tolls by class of vehicle.

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Table 4 – Summary of Current Toll Rates on the Parkway

Toll Plaza	Milepost	Class 1 Passenger cars, Motorcycles, Taxis	Class 2 2-Axle Dual Tire Vehicle	Class 3 3-Axle Vehicle or Vehicle/Trailer Combination	Class 4 4-Axle Vehicle or Vehicle/Trailer Combination	Class 5 5-Axle Vehicle or Vehicle/Trailer Combination	Class 6 6-Axle Vehicle or Vehicle/Trailer Combination	Classes B2, B3 2-Axle Bus, 3-Axle Bus, Cash	Classes B2, B3 2-Axle Bus, 3-Axle Bus, E-ZPass
MAIN LINE BARRIER PLAZAS									
Pascack Valley*	166.1	$ 1.50	$ 3.00	$ 4.50	$ 6.00	$ 7.50	$ 9.00	$ 8.60	$ 4.30
Bergen NB*	160.5	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Essex SB*	150.7	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Union NB*	142.7	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Raritan SB*	125.4	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Asbury Park NB	104.0	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Toms River	84.7	.75	1.50	2.25	3.00	3.75	4.50	4.30	2.15
Barnegat SB	68.9	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
New Gretna NB	53.5	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Great Egg SB	28.8	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Cape May NB	19.4	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
RAMP PLAZAS									
Paramus*	164.6	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Saddle Brook NB*	160.3	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Clifton*	156.1	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Passaic*	154.5	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Watchung*	152.6	.75	1.50	2.25	3.00	3.75	4.50	4.30	2.15
Bloomfield*	148.9	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
East Orange*	147.1	1.00	2.10	3.10	4.20	5.30	6.50	8.60	4.30

Table 4– Summary of Current Toll Rates on the Parkway (cont'd.)

Toll Plaza	Milepost	Class 1 Passenger cars, Motorcycles, Taxis	Class 2 2-Axle Dual Tire Vehicle	Class 3 3-Axle Vehicle or Vehicle/Trailer Combination	Class 4 4-Axle Vehicle or Vehicle/Trailer Combination	Class 5 5-Axle Vehicle or Vehicle/Trailer Combination	Class 6 6-Axle Vehicle or Vehicle/Trailer Combination	Classes B2, B3 2-Axle Bus, 3-Axle Bus, Cash	Classes B2, B3 2-Axle Bus, 3-Axle Bus, E-ZPass
RAMP PLAZAS									
Irvington*	146.1	$ .50	$ 1.05	$ 1.55	$ 2.10	$ 2.65	$ 3.25	$ 4.30	$ 2.15
Union Ramp NB*	142.8	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Sayreville SB*	142.8	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Matawan*	117.1	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Keyport*	118.6	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Holmdel*	113.6	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Red Bank*	110.3	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Eatontown NB*	106.5	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Belmar/Wall	98.0	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Brick	93.0	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Lakewood	90.1	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Berkeley	77.9	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Lacey	75.3	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15
Waretown	70.4	.75	1.50	2.25	3.00	3.75	4.50	4.30	2.15
Somers Point SB	30.2	1.50	3.00	4.50	6.00	7.50	9.00	8.60	4.30
Wildwood	3.8	.50	1.05	1.55	2.10	2.65	3.25	4.30	2.15

* Heavy trucks registered 10,000 lbs. or more (6 tires or 3 or more axles) prohibited north of Interchange 105.

* E-ZPass tolls are discounted by approximately 5% over cash tolls for vehicles in Classes 2 through 6.

Pending and Future Legislation

Four bills have been introduced in the New Jersey State Legislature in the current legislative session ending in January 2020, which, if enacted in their present form, would (i) authorize the Authority to enter into toll reciprocity agreements with surrounding states to recoup non-paid tolls; (ii) modify the penalties to be charged by the Authority in connection with toll violations, (iii) provide exemptions from the payment of tolls on both the Turnpike and the Parkway for certain disabled veterans, (iv) require the Authority to provide electric vehicle recharging stations at certain rest areas on both the Turnpike and Parkway; and, (v) prohibit employees of the Authority from using power tools in inclement weather to perform non-emergency roadside maintenance, require all Authority roadside maintenance operations involving the use of gas-powered landscaping equipment be performed in daylight hours except in emergency situations, and require that portable roadside light towers be used for all Authority roadside maintenance operations taking place at night. In the current and several of its previous legislative sessions, the State Legislature is considering or has considered several other bills which could adversely impact the Authority's revenues and/or expenses and/or require the Authority to alter the way it currently conducts its operations, including, without limitation, bills requiring that the Authority display toll information at each collection point on the Turnpike and Parkway and that it provide natural gas refueling, propane refueling and electric vehicle recharging stations at certain rest areas on both the Turnpike and Parkway. The Authority is unable to predict whether the currently pending bills will be enacted into law, or whether any such previously introduced bills, or substantially similar bills, will be introduced in the current or any future session of the State Legislature or, if introduced, whether any such bills will be enacted into law. If the currently pending bills or any such future bills are enacted into law, the Authority is unable to predict whether or not such bills will have a material impact on the Authority's operations.

Financial Management Principles and Guidelines

In December 2012, the Authority adopted its "Financial Management Principles and Guidelines" (the "Guidelines"). Among the policies established, the Authority will manage its toll rates, expense budget and debt issuance program to achieve minimum senior debt service coverage of 1.4x and a total requirement coverage of 1.2x. The Guidelines also stated the Authority will manage its cash flow and total expenditure levels such that it maintains an average unrestricted cash balance in the General Reserve Fund equal to at least $75,000,000. In order to maintain current policies that are in the best interest of its stakeholders, the Authority conducted a review of the Guidelines in November 2015. As a result of that review, at its November 2015 meeting, the Authority's Board of Commissioners approved a change to the Guidelines which provided that the Authority's minimum average unrestricted cash balance in the General Reserve Fund be increased to $100,000,000. Thereafter, at the direction of the Board of Commissioners, the Authority's staff and its financial advisor conducted a review of twenty six (26) tolling agencies, which are members of the E-ZPass Interagency Group (IAG), to determine whether other tolling agencies have General Reserve Funds and if they do, whether they have policies requiring a minimum balance for the fund. Based on this review, in January 2017, the Authority's Board of Commissioners approved a change to the Guidelines with respect to the minimum average unrestricted cash balance in the General Reserve Fund which provides that the Authority will manage its cash flow and total expenditures levels such that it will maintain average unrestricted cash balances in the General Reserve Fund equal to at least; (i) $125,000,000 at December 31, 2017, (ii) $150,000,000 at December 31, 2018, (iii) $175,000,000 at December 31, 2019, and (iv) beginning in 2020, by December 31st of each year, an amount equal to 10% of that years' budgeted total annual revenue.

The Guidelines were implemented at the option of the Authority and are not a legal covenant required to be maintained pursuant to the Resolution for the benefit of the Bondholders. Such Guidelines can be changed or eliminated at any time at the option of the Authority. See, however, "SUMMARY OF

GENERAL BOND RESOLUTION AND CERTAIN DEFINITIONS – Toll Covenants." in Appendix D to this Official Statement. In addition, the Authority adopted an Interest Rate Swap Management Plan in March 2013 which was also amended in November 2015, an Investment Policy in September 2013 and a Debt Management Policy in January 2014.

Management's Discussion of Results of Operations

The following table summarizes the Authority's Revenues, Operating Expenses, Debt Service and Net Revenues for its fiscal years 2013 through 2017. The amounts set forth in this table are presented in conformity with the requirements of the Resolution and not on the basis of generally accepted accounting principles. The audited financial statements of the Authority for the years ended December 31, 2017 and December 31, 2016, prepared in conformity with generally accepted accounting principles with reconciling schedules to the Resolution, are included in Appendix A to this Official Statement. This table should be read in conjunction with the audited financial statements.

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5-Year Summary Schedule of Revenues, Operating Expenses, Debt Service and Net Revenues ($000s)*

	2013	2014	2015	2016	2017
TURNPIKE SYSTEM REVENUES					
Toll revenue	$ 1,413,763	$ 1,445,748	$ 1,523,133	$ 1,570,662	$ 1,579,896
E-ZPass Fees	51,372	52,773	56,262	61,052	60,505
Concession revenue	34,961	36,842	38,993	38,192	35,591
Earnings on investments	10,095	11,191	11,266	12,362	17,556
Build America Bonds Subsidy	75,173	75,745	75,908	76,071	76,153
Miscellaneous revenue	12,867	13,853	13,104	25,397(1)	24,738(2)
Arts Center	3,178	3,530	3,632	4,079	4,061
Total Revenues	1,601,409	1,639,682	1,722,298	1,787,815	1,798,500
Operating Expenses					
Maintenance of roadway, buildings and equipment	177,745	177,735	201,129	185,361	215,130
Toll Collection	162,591	157,869	157,558	160,485	146,150
State Police and Traffic Control	70,317	74,448	78,290	79,799	79,232
Technology	23,238	26,078	28,629	28,755	21,722
General Administrative Costs	39,144	36,642	37,847	38,825	45,891
Total operating expenses	473,035	472,772	503,453	493,225	508,125
Net Revenue Available for Debt Service	1,128,374	1,166,910	1,218,845	1,294,590	1,290,375
Debt Service					
Interest Expense	452,891	444,691	519,311	575,338	604,509
Principal Payments	131,881	164,205	142,115	197,740	218,475
Total Debt Service	584,772	608,896	661,426	773,078	822,984
Net Revenue After Operating Expenses and Debt Service	543,602	558,014	557,419	521,512	467,391
Interfund Transfers:					
To Charges Fund	1,646	1,150	535	94	115
To Maintenance Reserve Fund	72,635	74,814	87,058	89,370	116,751
To Special Project Reserve Fund	27,783	28,800	50,301	38,918	39,696
Excess Net Revenues	$ 441,538	$ 453,250	$ 419,525	$ 393,130	$ 310,829
Net Revenue/Total Debt Service	1.93	1.92	1.84	1.67	1.57
Net Revenue/Total Debt Service and Reserves	1.64	1.64	1.52	1.44	1.32

* Totals may not add due to rounding.

(1) Includes $6,578 of reimbursements from the Federal Government.

(2) Includes $2,764 of reimbursements from the Federal Government.

Management's Discussion of Unaudited Interim Results for the Eleven Months Ended November 30, 2018

For the eleven months ended November 30, 2018, revenue available for operating expenses, debt service and reserves was $1,711,746,000 which was $66,520,000 more than the same period of 2017. Toll revenue, investment income, miscellaneous revenue, E-ZPass fees, and concession revenue all increased over the same period in 2017.

Toll revenue for the period was $1,480,842,000 which was $29,373,000, or 2.0%, more than the same period of 2017. The increase in toll revenue is due to normal growth, improved economic conditions and higher commercial traffic on the Turnpike. Toll transactions and revenue increased primarily due to the reopening of Interchanges 6 and 6A on the Turnpike. Those interchanges were closed from January 20, 2017 to March 9, 2017 due to the emergency closure of the Delaware River Turnpike Bridge, which connects the Turnpike to the Pennsylvania Turnpike. Toll revenue increased despite the negative impact of winter storms Grayson (January 4-5, 2018), Quinn (March 7-8, 2018), and Toby (March 21-22, 2018), which were state of emergency events. It is estimated that, without the impact of the storms, 2018 toll revenue would have increased by 2.8%. Both the Turnpike and Parkway experienced toll revenue gains for the eleven months ended November 2018 compared to the same period in 2017.

E-ZPass fees consist of monthly membership fees, transponder sales, return check fees, administrative fees, interest on prepaid accounts and monthly statement fees. Revenue was $77,638,000 which was $22,851,000, or 41.7%, more than the same period of 2017. The increase is due, in part, to higher administrative fees collected from toll violators and higher interest income from increased investment yields on higher invested balances.

Concession revenue consists of revenues generated through the sale of food, gasoline and convenience store items at the service areas located along both roadways. Concession revenue for the eleven months ended November 30, 2018 was $34,203,000, which was $1,183,000 or 3.6%, more than the same period in 2017. The increase in concession revenue is primarily due to extra payments received in 2018 based on revised terms and payment due dates in the new HMS Agreement and the Sunoco Agreement. The Authority receives 50% of the gross profit margin on diesel fuel sales. On the Turnpike, food sales increased 5.6% while fuel sales decreased 10.3% and convenience store sales decreased by 14.7% compared to last year. The decrease in convenience store sales is due in part to the removal of cigarette sales in the gross sales calculation for 2018. On the Parkway, food sales decreased 1.6%, fuel sales decreased 12.1%, and convenience store sales decreased 27.3% compared to the same period in 2017.

Investment income was $27,393,000, which was about $11,811,000 higher than the same period in 2017 due to higher invested balances in the General Reserve Fund and Maintenance Reserve Fund and higher yields on investments due to short term general interest rate increases.

The Build America Bond Subsidy (BABS) is a direct payment by the U.S. Treasury to the Authority which Federal law originally established as an amount equal to 35% of the interest payable on the Series 2009 F Bonds and the Series 2010 A Bonds. The Budget Control Act of 2011 requires automatic spending cuts commonly referred to as sequestration which impacts the subsidy received on BABS. The percentage reduction of the subsidy for the 2017 Federal fiscal year was 6.9%, for the 2018 Federal fiscal year it was 6.6%, and for the 2019 Federal fiscal year it is 6.2%. As a result, the $70,055,000 earned in the eleven months ended November 2018 was approximately $259,000 higher than the $69,796,000 earned during the same period in 2017. See "CERTAIN RISK FACTORS – Federal Subsidy on Build America Bonds" herein.

Miscellaneous revenue collected for the period was $18,252,000, which was approximately $1,067,000 higher than over the same period in 2017. In 2018, an advance payment of approximately $6,000,000 for the Delaware River Turnpike Bridge insurance claim and a payment from a new fiber lease agreement with PEG Bandwith LLC were received. The amount in 2017 included the non-recurring receipts of a $2,925,000 settlement payment from Barclays Bank under a Multi-State Attorney Generals settlement agreement and $1,735,000 from FEMA related to Superstorm Jonas (2016).

Arts Center revenue consists of rent and naming rights for the PNC Bank Arts Center located in Holmdel. For the eleven months ended November 30, 2018, revenue received of $3,363,000 was approximately $23,000 lower than the same period in 2017 as 2017 included $23,000 from Live Nation for an event.

Operating expenses through November 30, 2018 were $447,274,000, which was $19,622,000 higher than the comparable period last year. Operating expenses were higher through November 2018 primarily due to higher state trooper costs resulting from an increased number of troopers spending time patrolling the roadways and less time charged to construction details. Pension costs for state troopers also increased over 2017 rates. Operating expenses were also higher due to higher toll collection costs related to an increase in E-ZPass processing costs resulting from a higher volume of transactions.

Debt service was $722,770,000 for the eleven months ended November 30, 2018, and was approximately $29,401,000 lower than the same period last year due to several factors. First, principal payments are lower in 2018. In addition, interest expense is lower due to the full maturity of the Authority's Turnpike Revenue Bonds, Series 2013 B and Series 2013 C. Also, multiple refundings completed in 2017 resulted in savings.

After providing for required funding to the Maintenance Reserve Fund and the Special Project Reserve Fund, the Authority deposited $395,424,000 into the General Reserve Fund during the eleven months ended November 30, 2018.

Management's Discussion of Results for the Fiscal Years Ended December 31, 2017 through 2013

Fiscal Year 2017

Revenues available for operating expenses, debt service and reserves were $1,798,500,000 in 2017, which was $10,685,000 more than the revenues of $1,787,815,000 in 2016. Toll revenue is the principal source of revenue and in 2017 tolls constituted approximately 87.8% of total revenues. Revenues from tolls were $1,579,896,000 which was $9,234,000, or 0.6%, more than the $1,570,662,000 earned in 2016. The increase in toll revenue was due primarily to generally milder winter weather in 2017 compared to the same period in 2016, favorable economic conditions and stable gas prices. Toll revenue increased despite the effects from winter storm Stella, a state of emergency event which occurred on March 14-15, 2017, and the closure of Interchanges 6 and 6A on the Turnpike from January 20, 2017 to March 9, 2017 due to the emergency closure of the Delaware River Turnpike Bridge, which connects the Turnpike to the Pennsylvania Turnpike. It is estimated that without the impact of winter storm Stella, 2017 toll revenue would have increased by 0.8%. The closure of the Delaware River Turnpike Bridge resulted in an estimated toll revenue loss of $8.8 million. Both the Turnpike and Parkway experienced traffic and toll revenue gains for the year ended December 31, 2017 compared to the same period in 2016 despite the fact that 2017 had one fewer day than 2016, as 2016 was a leap year.

In 2017, E-ZPass Fees accounted for 3.4% of the Authority's 2017 revenue. E-ZPass Fees decreased $547,000, or 0.9%, to $60,505,000 from $61,052,000 in 2016. The decrease in revenues was due to a reduction in the Authority's share of fees to 81.3% from 83.8% based on the updated revenue sharing percentage with the other NJ E-ZPass Agencies under the MOA dated February 1, 2017. E-ZPass fees also decreased due to higher lost/damaged tag fees from the tag swap program included in 2016. E-ZPass transactions in 2017 were 84.2% of all transactions on the Turnpike and 81.3% of all toll transactions on the Parkway increasing from 82.6% and 79.6%, respectively, in 2016.

Concession revenues were $35,591,000 and constituted about 2.0% of 2017 revenues. Concession revenues decreased $2,601,000 or 6.8% from the $38,192,000 recorded in 2016. The decrease was due to a decrease in revenue received by the Authority from the gross profit margin on diesel fuel sales as compared to 2016. The Authority receives 50% of the gross profit margin on all diesel fuel sold on the Turnpike. On the Turnpike, fuel sales decreased 9.3%, food sales decreased 1.1% and convenience store sales increased 2.4% as compared to 2016. The decrease in food and fuel sales was due in part to the closure of the Delaware River Turnpike Bridge for a significant portion of the first quarter. On the Parkway, fuel sales decreased 6.7% due to reduction in the gross profit margin on diesel fuel sales and convenience store sales increased 6.7% due to the receipt of back rent payment for the Oceanview Service Area. Parkway food sales remained flat when compared to 2016.

Investment income in 2017 was $17,556,000 or 1.0% of the Authority's total revenue for 2017. Investment income was approximately $5,194,000, or 42.0%, higher than 2016 due to higher yields on investments due to short term general interest rate increases and higher invested balances in the General Reserve Fund and Maintenance Reserve Fund.

The Authority issued the Series 2009 F Bonds in April 2009 and the Series 2010 A Bonds in December 2010. Both Series were issued under the Build America Bond program authorized by the American Reinvestment and Recovery Act of 2009. Prior to March 1, 2013, the Federal Government reimbursed the Authority for 35% of the interest payable on both of these issues. See "CERTAIN RISK FACTORS – Federal Subsidy on Build America Bonds." The rebate constitutes pledged revenue under the Bond Resolution and totaled $76,153,000 in 2017 which increased $82,000 or 0.1% from $76,071,000 in 2016. This reimbursement constituted about 4.2% of the Authority's 2017 revenue.

Miscellaneous revenue collected for the year was $24,738,000, or about 1.4% of the Authority's total revenue. The 2017 amount was approximately $659,000, or 2.6% lower than over the same period in 2016. The amount in 2017 included a $5,700,000 surplus land sale, a $2,925,000 LIBOR settlement from Barclays and $2,600,000 FEMA Recovery for winter storm Jonas. The amount in 2016 included the receipt of $6,500,000 FEMA Recovery for Superstorm Jonas, the receipt of $3,924,000 in non-recurring insurance settlements and $1,000,000 from a non-recurring FINRA arbitration settlement. Arts Center rent was $4,061,000 or 0.2% of total Authority revenues in 2017 and was $18,000 lower than 2016 due to slightly lower variable rent payment.

Operating expenses in 2017 were $508,125,000, which was $14,900,000 higher than 2016. Annual operating expenses were higher in 2017 primarily due to higher than anticipated snow removal costs incurred during the winter months of 2017. In 2017, the Authority spent $11,907,000 more on snow removal costs as compared to 2016.

Debt service in 2017 was $822,984,000 and was approximately $49,906,000 higher than in 2016. Debt service increased primarily due to higher principal and interest payments on the Series 2017 A Bonds issued in April 2017. Interest on the Series 2014 A Bonds was paid from bond proceeds (capitalized interest) until May 2016.

After providing for required funding to the Charges Fund, the Maintenance Reserve Fund and the Special Project Reserve Fund, the Authority deposited $310,828,000 into its General Reserve Fund in

2017. The Authority's expenses of $293,510,000 consist primarily of $204,000,000 for the State Transportation Capital Plan, $22,000,000 for State Transportation Trust Fund payments, $6,500,000 for feeder road payments to the State Department of Transportation and $7,545,000 on extraordinary snow costs.

Fiscal Year 2016

Revenues available for operating expenses, debt service and reserves were $1,787,815,000 in 2016, which was $65,517,000 more than the revenues of $1,722,298,000 in 2015. Toll revenue is the principal source of revenue and in 2016 tolls constituted approximately 87.9% of total revenues. Revenues from tolls were $1,570,662,000 which was $47,528,000, or 3.1%, more than the $1,523,133,000 earned in 2015. The increase in toll revenue was due primarily to relatively mild winter and spring weather and continued comparatively low gas prices. Toll revenue increased in spite of the impact of Superstorm Jonas which occurred on January 23-24, 2016 and was declared to be a State of Emergency. It is estimated that without the impact of Superstorm Jonas, 2016 toll revenue would have increased by 3.3%. Both the Turnpike and Parkway experienced traffic and toll revenue gains for the year ended December 31, 2016 compared to the same period in 2015. In addition to favorable weather and comparatively low gas prices, traffic and toll revenue have benefited from improving economic conditions, and an extra leap year day in 2016.

In 2016, E-ZPass Fees accounted for 3.5% of the Authority's 2016 revenue. E-ZPass Fees increased $4,790,000, or 8.5%, to $61,052,000 from $56,262,000 in 2015. The increase in revenues was due to enhancements in enforcement efforts which increased administrative fee revenue collected from toll violators and an increase in membership fees and statement fees as the number of customers continues to grow with 139,000 new accounts added in 2016. E-ZPass fees also increased due to higher lost/damaged tag fees from the tag swap program. E-ZPass transactions in 2016 were 82.6% of all transactions on the Turnpike and 79.6% of all toll transactions on the Parkway increasing from 81.7% and 78.7%, respectively, in 2014.

Concession revenues were $38,192,000 and constituted about 2.1% of 2016 revenues. Concession revenues decreased $801,000 or 2.1% from the $38,993,000 recorded in 2015. The decrease was due to the lower gross profit margin on diesel fuel sales on the Turnpike. On the Turnpike, fuel sales increased 5.7%, but revenue received was lower due to a decrease in receipts from the gross profit margin on diesel fuel sales as compared to 2015. The Authority receives 50% of the gross profit margin on all diesel fuel sold. Turnpike food and convenience store sales increased 5.0% and 11.7%, respectively, compared to 2015. The increase in food and fuel sales was in part due to the reopening of the Grover Cleveland Service Area on November 23, 2015 after a three-year closure due to the effects of Superstorm Sandy. On the Parkway, fuel sales increased 2.0% and convenience store sales increased 3.6%. Parkway food sales only increased 0.2%, due to the closure of the Vauxhall Service Area food service facility from October 2, 2015 to May 3, 2016.

Investment income in 2016 was $12,362,000 or 0.7% of the Authority's total revenue for 2016. Investment income was approximately $1,096,000, or 9.7%, higher than 2015 due to higher invested balances in the Debt Reserve Fund from the Series 2015 E Bond issue and higher yields on investments since September 2016 due to short term general interest rate increases.

The Authority issued the Series 2009 F Bonds in April 2009 and the Series 2010 A Bonds in December 2010. Both Series were issued under the Build America Bond program authorized by the American Reinvestment and Recovery Act of 2009. Prior to March 1, 2013, the Federal Government reimbursed the Authority for 35% of the interest payable on both of these issues. See "CERTAIN RISK FACTORS – Federal Subsidy on Build America Bonds." The rebate constitutes pledged revenue under the Bond Resolution and totaled $76,071,000 in 2016 which increased $163,000 or 0.2% from $75,908,000 in 2015. This reimbursement constituted about 4.3% of the Authority's 2016 revenue.

Miscellaneous revenue collected for the year was $23,870,000, or about 1.3% of the Authority's total revenue. The 2016 amount was approximately $10,766,000, or 82.2% higher than over the same period in 2015. The increase in 2016 is due to the $6,500,000 FEMA Recovery for Superstorm Jonas, the receipt of $3,250,000 in non-recurring insurance settlements and $1,000,000 from a non-recurring FINRA arbitration settlement. Arts Center rent was $4,079,000 or 0.2% of total Authority revenues in 2016 and was $447,000 higher than 2015 due to higher variable payments from increased ticket sales and a contractual rent increase.

Operating expenses in 2016 were $493,225,000, which was $10,228,000 lower than 2015. Annual operating expenses were lower in 2015 primarily due to lower than anticipated snow removal costs incurred during the winter months of 2016 and lower utility and fuel costs. In 2016, the Authority spent $21,423,000 less on snow removal costs as compared to 2015. Utility and fuel costs were lower than 2015 due to continued low natural gas and gasoline prices and above average temperatures which reduced heating usage and costs.

Debt service in 2016 was $773,078,000 and was approximately $111,652,000 higher than in 2015. Debt service increased primarily due to higher principal and interest payments on the Series 2015 E Bonds and Series 2014 A Bonds. The Series 2015 E Bonds were issued in September 2015 and 2016 included a full year of interest expense for those Bonds. Interest on the Series 2014 A Bonds was paid from bond proceeds (capitalized interest) in 2015 and became payable from revenues after May 2016.

After providing for required funding to the Charges Fund, the Maintenance Reserve Fund and the Special Project Reserve Fund, the Authority deposited $393,130,000 into its General Reserve Fund in 2016. The Authority's expenses of $334,119,000 consist primarily of $264,000,000 for the State Transportation Capital Plan, $22,000,000 for State Transportation Trust Fund payments, $8,001,000 for feeder road payments to the State Department of Transportation and $10,750,000 on extraordinary snow costs.

Fiscal Year 2015

Revenues available for operating expenses, debt service and reserves totaled $1,722,298,000 in 2015, which was $82,616,000, or 5.0 %, more than the revenues of $1,639,682,000 in 2014. Toll revenue was the principal source of revenue and in 2015 tolls constituted approximately 88.4% of total revenues. Revenues from tolls were $1,523,133,000 which was $77,385,000 or 5.4% more than the $1,445,748,000 earned in 2014. The increase in toll revenue was due in part to the favorable weather conditions since March 2015, which produced two major storms, both of which were declared to be States of Emergency. In addition to favorable weather, traffic benefited from improving economic conditions, comparatively low gas prices and the increased traffic from the completion of the Turnpike Interchange 6 to 9 widening. Traffic on the Turnpike increased by approximately 6.2% and revenue increased by 6.6% while Parkway toll transactions increased by about 2.4% and revenue increased by 2.2%.

In 2015, E-ZPass Fees accounted for 3.3% of the Authority's 2015 revenue. E-ZPass Fees increased $3,489,000 or 6.6%, to $56,262,000 from $52,773,000 in 2014. The increase in revenues was due to enhancements in enforcement efforts which increased administrative fee revenue collected from toll violators and an increase in membership fees as 126,000 new customer accounts were added in 2015. E-ZPass transactions in 2015 were 81.7% of all transactions on the Turnpike and 78.7% of all toll transactions on the Parkway increasing from 81.2% and 78.1%, respectively, in 2014.

Concession revenues were $38,993,000 and constituted about 2.3% of 2015 revenues. Concession revenues increased $2,151,000 or 5.8% from the $36,842,000 recorded in 2014. The increase was due to the higher gross profit margin on diesel fuel sales on the Turnpike and the opening of four convenience stores on the Parkway.

Investment income in 2015 was $11,266,000 or 0.7% of the Authority's total income for 2015. Investment income increased slightly, $76,000 or about 0.7% from 2014 as short term interest rates were at or near historical lows.

The Authority issued the Series 2009 F Bonds in April 2009 and the Series 2010 A Bonds in December 2010. Both Series were issued under the Build America Bond program authorized by the American Reinvestment and Recovery Act of 2009. Prior to March 1, 2013, the Federal Government reimbursed the Authority for 35% of the interest payable on both of these issues. See "CERTAIN RISK FACTORS – Federal Subsidy on Build America Bonds." The rebate constitutes pledged revenue under the Bond Resolution and totaled $75,908,000 in 2015 which increased $163,000 or 0.2% from $75,745,000 in 2014. This reimbursement constituted about 4.4% of the Authority's 2015 revenue.

Miscellaneous revenues were $13,104,000 or about 0.8% of the Authority's revenue. The 2015 amount was $749,000 or 5.4% lower than in 2014. The slight decrease was largely due to a decrease in non-recurring FEMA reimbursements for Superstorm Sandy offset by increases in surplus land property sales, advertising revenues and insurance recoveries. Arts Center rent was $3,632,000 or 0.2% of total Authority revenues and was $102,000 greater than 2014 due to higher variable payments from increased ticket sales and a contractual rent increase.

Operating Expenses in 2015 were $503,453,000, which was $30,681,000 higher than 2014. Annual operating expenses were impacted by higher than anticipated snow removal costs incurred during the severe winter weather in the first three months of 2015 and higher ETC System operating costs. ETC System operating costs increased due to higher transaction processing and credit card fees, due to toll transactions and revenue increases on both roadways, as well as higher violation collection costs arising from the increased violation toll and administrative fee collections.

Debt service in 2015 was $661,426,000, which was a $52,530,000 increase over 2014. Debt service increased primarily due to interest on the Series 2013A Bonds which became payable from revenues in 2015 as compared to payable from bond proceeds (capitalized interest) the prior year.

After providing for required funding to the Charges Fund, the Maintenance Reserve Fund and the Special Project Reserve Fund, the Authority deposited $419,525,000 into its General Reserve Fund in 2015. The Authority's expenses of $400,094,000 consist primarily of $324,000,000 for the State Transportation Capital Plan, $22,000,000 for State Transportation Trust Fund Payments, $8,001,000 for feeder road payments to the State Department of Transportation and $14,030,000 on extraordinary snow costs.

Fiscal Year 2014

Revenues available for operating expenses, debt service and reserves totaled $1,639,681,302 in 2014, which was $38,271,782, or 2.4 %, more than the revenues of $1,601,409,520 in 2013. Toll revenue was the principal source of revenue and in 2014 tolls constituted approximately 88.2% of total revenues. Revenues from tolls were $1,445,748,249 which was $31,984,939 or 2.3% more than the $1,413,763,310 earned in 2013. The increase in toll revenue was due to an improving economy, declining gas prices, and favorable weather conditions from April through December. The strong toll revenue results were achieved despite the major winter storms which occurred in January, February and March 2014. Traffic on the Turnpike increased by approximately 3.5% and revenue increased by 3.1% while Parkway toll transactions increased by about 0.4% and revenue increased by 0.2%.

In 2014, E-ZPass Fees accounted for 3.2% of the Authority's 2014 revenue. E-ZPass Fees increased $1,400,661 or 2.7%, to $52,772,669 from $51,372,008 in 2013. The increase in revenues was due to enhancements in enforcement efforts which increased administrative fee revenue collected from toll violators and an increase in membership fees as 175,000 new customer accounts were added in 2014. E-ZPass transactions in 2014 were 81.2% of all transactions on the Turnpike and 78.1% of all toll transactions on the Parkway increasing from 80.6% and 77.6%, respectively, in 2013.

Concession revenues were $36,842,363 and constituted about 2.2% of 2014 revenues. Concession revenues increased $1,881,178 or 5.4% from the $34,961,185 recorded in 2013. The increase was due to the higher gross profit margin on diesel fuel sales on the Turnpike.

Investment income in 2014 was $11,190,567 or 0.6% of the Authority's total income for 2014. Investment income increased $1,540,000 or about 12.1% from 2013, due primarily to an increase in interest income due to higher invested balances, principally in the Debt Reserve Fund.

The Authority issued the Series 2009 F Bonds in April 2009 and the Series 2010 A Bonds in December 2010. Both Series were issued under the Build America Bond program authorized by the American Reinvestment and Recovery Act of 2009. Prior to March 1, 2013, the Federal Government reimbursed the Authority for 35% of the interest payable on both of these issues. See "CERTAIN RISK FACTORS – Federal Subsidy on Build America Bonds." The rebate constitutes pledged revenue under the Bond Resolution and totaled $75,744,598 in 2014 which increased $571,657 or 0.8% from $75,172,932 in 2013. This reimbursement constituted about 4.6% of the Authority's 2014 revenue.

Miscellaneous revenues were $13,853,053 or about 0.8% of the Authority's revenue. The 2014 amount was $985,813 or 7.7% higher than in 2013. The increase was largely due to an increase in surplus land sales and the $2,335,000 FEMA reimbursement for Superstorm Sandy. Arts Center rent was $3,529,812 or 0.7% of total Authority revenues and was $351,884 greater than 2013 due to higher variable payments from increased ticket sales and a contractual rent increase.

Operating Expenses in 2014 were $472,772,204, which was $262,614 lower than 2013. Annual operating expenses were impacted by decreased general administrative costs. General and administrative expenses decreased by $372,000 due primarily to savings in insurance (other than property insurance) as well as continued control of discretionary expenses. Toll collection costs decreased due to savings from renegotiated toll collector contracts and the extended electronic toll collection contract with Xerox.

Debt service in 2014 was $608,896,000, which was a $24,124,000 increase over 2013. Debt service increased primarily due to increased principal payments on the Series 2003 Bonds.

After providing for required funding to the Charges Fund, the Maintenance Reserve Fund and the Special Project Reserve Fund, the Authority deposited $453,250,000 into its General Reserve Fund in 2014. The Authority's expenses of $401,518,000 consist primarily of $324,000,000 for the State Transportation Capital Plan, $22,000,000 for State Transportation Trust Fund Payments, $8,001,000 for feeder road payments to the State Department of Transportation and $32,294,000 on extraordinary snow costs.

Fiscal Year 2013

Revenues available for operating expenses, debt service and reserves totaled $1,601,409,520 in 2013, which was $18,982,184, or 1.2%, more than the revenues of $1,582,427,336 in 2012. Toll revenue was the principal source of revenue and in 2013 tolls constituted approximately 88.3% of total revenues. Revenues from tolls were $1,413,763,310, which was $20,104,825 or 1.4% more than the $1,393,658,485 earned in 2012. The increase in toll revenue was due to an improving economy, mild weather from August through November and relatively low gas prices. The strong toll revenue results were achieved despite the major winter storms which occurred in February, March and December 2013. Traffic on the Turnpike increased by approximately 0.6% and revenue increased by 1.5% while Parkway toll transactions increased by about 0.8% and revenue increased by 1.3%.

In 2013, E-ZPass Fees accounted for 3.2% of the Authority's 2013 revenue. E-ZPass Fees increased $4,057,436 or 8.6%, to $51,372,008 from $47,314,572 in 2012. The increase in revenues was due to enhancements in enforcement efforts which increased administrative fee revenue collected from toll violators and an increase in membership fees as 87,500 new customer accounts were added in 2013. E-ZPass transactions in 2013 were 80.6% of all transactions on the Turnpike and 77.6% of all toll transactions on the Parkway increasing from 79.2% and 76.0%, respectively, in 2012.

Concession revenues were $34,961,185 and constituted about 2.2% of 2013 revenues. Concession revenues decreased $28,782 or 0.1% from the $34,989,967 recorded in 2012. The slight decrease was due to the closing of the Grover Cleveland Service Area on the Turnpike thereby impacting the fuel and convenience store sales offset by increases in fuel and food sales on the Parkway.

Investment income in 2013 was $10,094,917 or 0.6% of the Authority's total income for 2013. Investment income declined $1,723,306 or about 14.6% from 2012, due primarily to an unrealized decrease in the market value of certain Federal Agency investments of approximately $2,600,000. This mark to market adjustment offset increases in interest income due to a higher invested balance in the Debt Reserve Fund from the Series 2013 A Bonds.

The Authority issued the Series 2009 F Bonds in April 2009 and the Series 2010 A Bonds in December 2010. Both Series were issued under the Build America Bond program authorized by the American Reinvestment and Recovery Act of 2009. Prior to March 1, 2013, the Federal Government reimbursed the Authority for 35% of the interest payable on both of these issues. See "CERTAIN RISK FACTORS – Federal Subsidy on Build America Bonds." The rebate constitutes pledged revenue under the Bond Resolution and totaled $75,172,932 in 2013 which decreased $6,492,393 or 7.9% from $81,665,325 in 2012 due to automatic Federal deficit reduction spending cuts. This reimbursement constituted about 4.7% of the Authority's 2013 revenue.

Miscellaneous revenues were $12,867,240 or about 0.8% of the Authority's revenue. The 2013 amount was $3,004,419 or 30.5% higher than in 2012. The increase is largely due to the receipt of two nonrecurring settlement payments received in 2013. Arts Center rent was $3,177,928 or 0.2% of total Authority revenues and was $59,985 greater than 2012 due to a contractual rent increase.

Operating Expenses in 2013 were $473,034,818, which was $800,286 higher than 2012. Annual operating expenses were impacted by increased snow and utility costs. For the twelve months ended December 31, 2013 the Authority expended $19,935,100 in its operating budget for snow costs offset by the reduction of its authorized headcount from 2,011 in 2012 to 2,004 in 2013. In 2011, the Authority signed the memorandums of agreement with the unions representing the Authority's Toll Collectors. These MOA's achieved payroll savings of $19,994,000 in 2013 due to reductions in toll collector salaries and an increase in the number of part-time toll collectors. The Authority continued to reduce its authorized headcount and control its discretionary expenses.

Debt service in 2013 was $584,772,000 which was a $12,369,000 decrease over 2012. Debt service funding decreased due to savings from the various bond refundings completed in 2013 as well as from the application of excess escrow funds that were required to be applied to Series 2012 B Bonds and Series 2012 G Bonds interest expense payments in 2013.

After providing for required funding to the Charges Fund, the Maintenance Reserve Fund and the Special Project Reserve Fund, the Authority deposited $441,538,000 into its General Reserve Fund in 2013. The Authority's expenses of $381,125,000 consist primarily of $324,000,000 for the State Transportation Capital Plan, $22,000,000 for State Transportation Trust Fund Payments, $8,001,000 for feeder road payments to the State Department of Transportation and $27,124,000 on pay-as-you-go capital projects.

Summary of Projected Operations by the Traffic Engineer

CDM Smith Inc. ("CDM Smith"), as the Traffic Engineer for the Authority, has delivered to the Authority a detailed traffic and toll revenue projection study, dated September 21, 2018, presenting its analyses and findings relative to recent trends in traffic and revenue on the Turnpike and the Parkway (the "Report"). The Report analyzed existing usage and the sensitivity of patrons to adjustments to toll charges as related to the quality of traffic service provided by the Turnpike and the Parkway versus alternate routes. The Report also incorporates analysis of land use developments that will affect traffic and all roadway improvements and operational modifications proposed by the Authority. See APPENDIX B – "REPORT OF TRAFFIC ENGINEER" hereto.

Current professional practices and procedures were used by CDM Smith in the development of the Report. However, there is considerable uncertainty inherent in future traffic and revenue forecasts for any toll facility, including the Turnpike and the Parkway, and there may sometimes be differences, which could be material, between forecasted and actual results caused by events and circumstances beyond the control of the forecasters. Additionally, it should be recognized that the traffic and revenue forecasts contained in the Report are intended to reflect the overall estimated long-term trend and actual experience in any given year may vary due to economic conditions and other factors.

The purpose of the Report was to produce estimates of traffic volume and annual toll revenue on the Turnpike and the Parkway through the year 2028, recognizing all improvements identified for the Authority's Capital Improvement Program, as well as potential impacts resulting from developments not related to the Turnpike or the Parkway. The traffic and revenue forecasts were based on a detailed analysis of the past relationship between actual Turnpike and Parkway transactions and actual socio-economic data. The development of the new forecasts relied on the most currently available information relating to the Capital Improvement Program, historic traffic and toll revenue trends through July 2018, and the Authority's most recent assumptions concerning toll schedules and discount programs. In addition, the estimated E-ZPass market share was developed for the forecast period based on historical trends and on future toll schedule assumptions. Site visits and meetings with local Metropolitan Planning Organizations and other agencies were conducted in order to complete the analysis of the potential growth in traffic and toll revenue on the Turnpike and Parkway contained in the Report.

Table 6(a) provides a summary of CDM Smith's projected traffic volume on the Turnpike through 2028 by vehicle class. As shown in Table 6(a), total passenger car traffic on the Turnpike is expected to increase from approximately 228.3 million cars in 2018 to 261.7 million cars by 2028. Total annual commercial vehicle traffic for the Turnpike is estimated to increase from approximately 34.3 million vehicles in 2018 to 40.6 million vehicles in 2028. Total vehicle traffic for the Turnpike is expected to increase from approximately 262.6 million vehicles to approximately 302.3 million vehicles between the years 2018 and 2028, representing an average annual growth of approximately 1.5 percent.

Table 6(a) – Projected Volume for the Turnpike – Number of Vehicles (000s)

Year	Passenger Cars	Commercial Vehicles	Total Vehicles
2018(1)(2)	228,254	34,322	262,576
2019(2)	226,213	34,895	261,108
2020(3)	230,260	35,577	265,837
2021	233,437	36,088	269,525
2022	237,252	36,699	273,951
2023	241,116	37,315	278,431
2024(3)	245,625	38,032	283,657
2025	248,940	38,564	287,504
2026	252,900	39,197	292,097
2027	256,922	39,840	296,762
2028(3)	261,661	40,595	302,256

(1) Data through July 2018 is actual.

(2) Reflects Pulaski Skyway opening to traffic in both directions beginning July 2, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.

(3) Leap year, includes 29 days in February.

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Table 6(b) provides a summary of CDM Smith's estimated annual gross toll revenue from the Turnpike by vehicle class for the years 2018 through and including 2028. As shown, passenger car toll revenue is expected to increase from approximately $798.7 million in 2018 to approximately $916.2 million in 2028. Commercial vehicle toll revenue is estimated to increase from approximately $370.9 million to approximately $438.3 million over the same forecast period. Total annual gross toll revenue for the Turnpike is estimated to increase from approximately $1,169.6 million in 2018 to approximately $1,354.5 million in 2028. The average annual percent increase in total annual gross toll revenue amounts to approximately 1.6 percent.

Table 6(b) – Estimated Toll Revenues for the Turnpike ($000s)

Year	Passenger Car Toll Revenues	Commercial Vehicle Toll Revenues	Total Toll Revenues
2018(1)(2)	$ 798,675	$ 370,907	$ 1,169,582
2019(2)	794,819	376,918	1,171,737
2020(3)	808,837	384,052	1,192,889
2021	819,575	389,602	1,209,177
2022	832,543	396,218	1,228,761
2023	845,758	402,880	1,248,638
2024(3)	861,218	410,617	1,271,835
2025	872,486	416,368	1,288,854
2026	886,091	423,199	1,309,290
2027	899,907	430,142	1,330,049
2028	916,224	438,292	1,354,516

(1) Data through July 2018 is actual.

(2) Reflects Pulaski Skyway opening to traffic in both directions beginning July 2, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.

(3) Leap year, includes 29 days in February.

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Table 6(c) provides a summary of CDM Smith's projected toll transactions and estimated total annual gross toll revenue for the Parkway through 2028. The Parkway does not separately project the number of transactions involving commercial vehicles or the revenues therefrom since commercial vehicles are only allowed below Exit 105 and provide revenues that amount to less than 4% of total Parkway revenues.

As shown in Table 6(c), CDM Smith's estimates that total toll transactions on the Parkway will increase from approximately 389.7 million transactions in 2018 to 424.8 million transactions by 2028. This represents an average annual increase in toll transactions of approximately 0.9 percent. As shown in Table 6(c), total annual gross toll revenue on the Parkway is estimated by CDM Smith to be approximately $431.7 million in 2018. With normal growth, along with all assumed impacts, CDM Smith estimates that such revenue will increase to approximately $481.4 million in 2028. This represents an average increase in total gross toll revenue for the Parkway of approximately 1.2 percent per year.

Table 6(c) – Parkway – Number of Transactions (000s) and Amount of Toll Revenues ($000s)

Year	Total Toll Transactions	Total Toll Revenues
2018[(1)(2)]	389,662	$ 431,669
2019[(2)]	384,049	434,163
2020[(3)]	389,421	440,409
2021	392,783	444,357
2022	397,121	449,412
2023	401,494	454,480
2024[(3)]	406,902	460,722
2025	410,300	464,661
2026	414,731	469,771
2027	419,209	474,937
2028[(3)]	424,795	481,360

(1) Data through July 2018 is actual.

(2) Reflects one-way toll conversion impacts of Exit 145 on the Parkway beginning July 23, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.

(3) Leap year, includes 29 days in February.

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Table 6(d) provides a summary of CDM Smith's estimated annual gross toll revenue for both the Turnpike and the Parkway during the years 2018 through and including 2028. As shown in Table 6(d), annual gross toll revenue for both the Turnpike and the Parkway is estimated to be approximately $1,601.3 million in 2018. With normal growth, along with all assumed impacts, CDM Smith estimates that such revenue will increase to approximately $1,835.9 million in 2028. This represents a compound growth rate in total gross toll revenue from both the Turnpike and the Parkway of approximately 1.4 percent per year.

Table 6(d) – Estimated Gross Toll Revenue for both the Turnpike and the Parkway ($000s)

Year	Turnpike Toll Revenues	Parkway Toll Revenues	Total Toll Revenues
2018(1)(2)(3)	$ 1,169,582	$ 431,669	$ 1,601,251
2019(2)(3)	1,171,737	434,163	1,605,900
2020(4)	1,192,889	440,409	1,633,298
2021	1,209,177	444,357	1,653,534
2022	1,228,761	449,412	1,678,173
2023	1,248,638	454,480	1,703,118
2024(4)	1,271,835	460,722	1,732,557
2025	1,288,854	464,661	1,753,515
2026	1,309,290	469,771	1,779,061
2027	1,330,049	474,937	1,804,986
2028(4)	1,354,516	481,360	1,835,876

(1) Data through July 2018 is actual.

(2) Reflects Pulaski Skyway opening to traffic in both directions beginning July 2, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.

(3) Reflects one-way toll conversion impacts of Exit 145 on the Parkway beginning July 23, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.

(4) Leap year, includes 29 days in February.

For a more detailed discussion of the assumptions and methodology used by CDM Smith in connection with all of its forecasts summarized above, see APPENDIX B – "REPORT OF TRAFFIC ENGINEER" attached hereto.

Summary of the Report of the Consulting Engineer

HNTB Corporation ("HNTB") serves as the Consulting Engineer to the Authority. In this capacity, HNTB has prepared a report dated January 11, 2019 estimating (a) the operating expenses of the Turnpike System, which is comprised of the Turnpike and the Parkway, for the years 2019 through and including 2028, and (b) the required deposits to the Maintenance Reserve Fund and the Special Project Reserve Fund for the years 2019 through and including 2028. Amounts on deposit in the Maintenance Reserve Fund are used to provide for annual major maintenance of the roadways and bridges, while amounts on deposit in the Special Project Reserve Fund are intended to be used for the annual maintenance and improvement of all other elements of the Turnpike System that in some manner contribute to the proper and efficient operation of the Turnpike and the Parkway.

With respect to the operating expenses of the Turnpike System, HNTB estimates that such expenses will be approximately $582,071,000 in 2019 and will increase to approximately $695,628,000 in 2028, representing an average annual increase of approximately 2.2%.

HNTB's report also estimates that deposits into the Maintenance Reserve Fund and the Special Project Reserve Fund combined should be budgeted at $172,768,000 in 2019 and should be increased to $241,663,000 by 2028.

HNTB's report also discusses the state of good repair of the Turnpike System, including the Authority's annual inspection program for the roads, bridges, buildings and toll plazas comprising the Turnpike System, and contains a description of the pavement structure utilized on the Turnpike which minimizes major rehabilitation needs and allows the Authority to remove and replace only the top two inches of pavement as part of its resurfacing program for the Turnpike.

For a more detailed discussion of the assumptions and methodology used by HNTB in estimating future operating expenses of the Turnpike System and the required deposits to the Maintenance Reserve Fund and the Special Project Reserve Fund, as well as the state of good repair of the Turnpike System and the pavement structure utilized on the Turnpike, see APPENDIX C – "REPORT OF CONSULTING ENGINEER" attached hereto.

Summary of Projected Net Revenues and Debt Service Coverage of the Turnpike System

The following table provides a summary of the Authority's projected Revenues, Operating Expenses, Debt Service and Net Revenues for its fiscal years 2019 through and including 2025 for the Turnpike System. The information contained in this table constitutes "forward-looking statements" for purposes of this Official Statement. Accordingly, the achievement of the results and other expectations contained in this table involves known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from the future results and other expectations of the Authority described in or expressed or implied by the information set forth in this table.

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New Jersey Turnpike Authority

Projected Revenue, Expenditure, and Debt Service Coverage ($000s)

(Based on General Resolution Provisions, Not in Accordance with GAAP)

	Actual 2017	Actual/Est. 2018	Estimated 2019	Estimated 2020	Estimated 2021	Estimated 2022	Estimated 2023	Estimated 2024	Estimated 2025
Revenues									
Toll Revenue									
Turnpike (1)	1,151,739	1,169,582	1,171,737	1,192,889	1,209,177	1,228,761	1,248,638	1,271,835	1,288,854
Parkway (1)	428,157	431,669	434,163	440,409	444,357	449,412	454,480	460,722	464,661
E-ZPass Fees	60,505	76,000	77,500	79,050	80,631	82,244	83,888	85,566	87,278
Federal Subsidy for Series 2009 F and Series 2010 A Bonds (2)	76,153	76,438	76,602	76,602	76,602	76,602	76,602	76,602	76,602
Concession Revenue	35,591	36,063	34,000	35,557	35,884	35,669	37,732	38,487	39,256
Other Revenue	46,355	48,720	39,403	40,191	40,995	41,815	42,651	43,504	44,374
Total Revenues	**1,798,500**	**1,838,472**	**1,833,405**	**1,864,698**	**1,887,646**	**1,914,503**	**1,943,991**	**1,976,716**	**2,001,025**
Operating Expenses (3)	**(508,125)**	**(557,951)**	**(582,071)**	**(593,712)**	**(605,587)**	**(617,698)**	**(630,052)**	**(642,653)**	**(655,506)**
Total Revenues Available for Debt Service	**1,290,375**	**1,280,521**	**1,251,334**	**1,270,986**	**1,282,059**	**1,296,805**	**1,313,939**	**1,334,063**	**1,345,519**
Existing Debt Service (4)(5)	(822,984)	(788,199)	(806,573)	(817,241)	(836,624)	(835,147)	(838,073)	(875,939)	(876,185)
Debt Service on Series 2019 A Bonds	-	-	(18,410)	(20,456)	(20,456)	(20,456)	(20,456)	(20,456)	(20,456)
Net Debt Service	(822,984)	(788,199)	(824,983)	(837,697)	(857,080)	(855,603)	(858,529)	(896,395)	(896,641)
Total Revenues Available After Debt Service	**467,391**	**492,322**	**426,351**	**433,290**	**424,980**	**441,203**	**455,411**	**437,669**	**448,879**
Payment to Charges Fund	(115)	-	-	-	-	-	-	-	-
Cash Flow Available for Reserves	**467,276**	**492,322**	**426,351**	**433,290**	**424,980**	**441,203**	**455,411**	**437,669**	**448,879**
Maintenance Reserve Fund (3)	(116,751)	(119,086)	(131,468)	(134,097)	(136,779)	(139,515)	(142,305)	(152,305)	(162,305)
Special Project Reserve Fund (3)	(39,696)	(40,490)	(41,300)	(42,126)	(42,969)	(43,828)	(44,705)	(45,599)	(46,511)
Net Revenues Available for General Reserve Fund	**310,829**	**332,746**	**253,583**	**257,067**	**245,232**	**257,860**	**268,401**	**239,765**	**240,063**
TTF Payments	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)
Feeder Road Maintenance Agreement	(6,500)	(4,500)	(3,500)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)
Current State Transportation Projects Funding Agreement	(204,000)	(166,500)	(154,000)	(129,000)	(64,500)	-	-	-	-
Assumed Amounts for Additional State Transfers (6)	-	-	-	-	(64,500)	(129,000)	(129,000)	(129,000)	(129,000)
Supplemental Capital/General Reserve Spending	(61,048)	(115,394)	(168,365)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)	(75,000)
Transfer to Construction Fund Account (7)	-	-	(25,000)	(25,000)	(25,000)	(25,000)	-	-	-
Net Annual General Reserve Fund Account Increase (Decrease)	**17,281**	**24,352**	**(119,282)**	**3,567**	**(8,269)**	**4,360**	**39,901**	**11,265**	**11,563**
Ending General Reserve Fund Balance	**348,374**	**372,726**	**253,444**	**257,011**	**248,742**	**253,102**	**293,002**	**304,267**	**315,829**
Debt Service Coverage Ratio									
Net Revenues / Debt Service	**1.57**	**1.62**	**1.52**	**1.52**	**1.50**	**1.52**	**1.53**	**1.49**	**1.50**
Net Revenues / Debt Service and Reserves	**1.32**	**1.35**	**1.25**	**1.25**	**1.24**	**1.25**	**1.26**	**1.22**	**1.22**

Totals may not add due to rounding

Footnotes:

(1) From Traffic Report by CDM Smith dated September 21, 2018
(2) Assumes 6.2% reduction in BAB subsidy throughout projection period
(3) From Consulting Engineer Report by HNTB Corporation dated January 11, 2019
(4) Existing debt service assumes swapped debt will achieve synthetic fixed rate and includes the applicable spreads of the FRNs. The unhedged portion of the 2015 A Bonds ($5 million) assumes the maximum rate of 12%
(5) Bonds with mandatory tender dates are assumed to roll over at their respective current spreads through maturity
(6) Represents amounts the Authority has assumed for payment to the State after the expiration of the Current State Transportation Projects Funding Agreement. There can be no assurance that the Authority will not be requested to modify any such payments either before or after the expiration of the Current State Transportation Projects Funding Agreement
(7) The Authority plans to deposit $100 million into a separate account in the Construction Fund to fund bridge repairs for the Passaic River Bridge on the Parkway and the Laderman and Washington Bridges on the Turnpike

Environmental Matters

The Turnpike

The Authority continues with the remediation of environmental contamination resulting from historical discharges from underground storage tanks located at the service areas, maintenance districts and interchanges along the Turnpike. Progress is being made in addressing the contamination and No Further Action letters or Response Action Outcomes ("RAOs") have been achieved at several locations. The Authority met the New Jersey Department of Environmental Protection ("NJDEP") Remedial Investigation (RI) deadline of May 2016 for all applicable Turnpike sites with the focus now on Remedial Action (RA). The remediation progress has eliminated all but two groundwater treatment systems located at two Services Areas on the Turnpike. One of those groundwater treatment systems has been shut down in order to pursue a more aggressive remedial strategy as part of the Authority's service area improvement program. The second groundwater treatment system will remain in operation for the foreseeable future and will necessitate periodic monitoring, sampling and maintenance under directives issued by the NJDEP.

In the late 1980's, the NJDEP determined that residues from the processing of chromium ore were distributed as fill material on construction projects throughout Hudson County, New Jersey, and in surrounding environs. The contaminant levels at certain sites receiving chromium ore processing residue exceed the currently established standards. Seven sites owned or controlled by the Authority are included on the NJDEP's list of sites containing contamination from chromium ore processing residue above the currently established levels; however, the Authority bears no remedial responsibility for these additional sites.

In May 2005, the NJDEP instituted litigation against the three firms which had generated the chromium ore processing residue. The Authority was not named as a defendant in such litigation by the NJDEP. In March 2006, the Authority was named as a third party defendant by one of the firms as a result of the Authority's ownership of certain parcels impacted by the residue. The Authority accepted responsibility to remediate conditions at three affected sites with the understanding that, by doing so, it will not have any responsibility for any additional sites. The approximate cost to complete the remediation of the three sites is estimated to be approximately $17 million over a 30 year period. Remediation of one site has been completed and a RAO was submitted to the NJDEP in March of 2015 to close the site. Remediation work is ongoing at the remaining two chrome sites.

The Parkway

Remediation of environmental contamination continues on the Parkway resulting from the operation of service areas, toll plazas, maintenance districts, a former communication tower, and State Police barracks along the Parkway. Progress is being made in addressing the contamination and No Further Action letters or RAOs have been achieved at several locations. The Authority met the NJDEP Remedial Investigation (RI) deadline of May 2016 for all but two Parkway sites. Of these two sites, the Remedial Investigation (RI) for one site was recently completed with the focus now on Remedial Action (RA).

The remediation progress has eliminated all but one groundwater treatment system located at one service area on the Parkway roadway. This groundwater treatment system will be in operation for the foreseeable future and will necessitate periodic monitoring, sampling and maintenance under directives issued by the NJDEP.

Generally

With respect to the Turnpike System generally, soil contamination, groundwater contamination and/or solid waste found on off-site properties, Authority properties, and properties for which the Authority has assumed remediation responsibility, as well as waterway contamination that is alleged to have resulted from operations conducted at Parkway facilities, have resulted in claims against the Authority and may lead to additional claims in the future. Claims for reimbursement of remediation costs and other alleged damages have been asserted or may be forthcoming from other parties responsible for undertaking remediation activities at these properties. As a result, it may be necessary for the Authority to undertake, fund or reimburse others for remediation activities at these properties. The Authority believes the ultimate resolution of these claims will not have a material adverse impact on the financial position of the Authority. As to environmental regulatory compliance expenditures, such costs are also not expected to have a material adverse impact on the financial position of the Authority.

State and Interstate Highways

The following is a summary of the relationship between the Turnpike or Parkway and certain existing or planned major State and Interstate highways. In certain cases, these routes serve as "feeders" of traffic to the Turnpike or Parkway, while in other cases, as indicated, the complete routes or certain segments thereof are competitive with the Turnpike or Parkway. In addition, the Turnpike and Parkway intersect each other at Interchange 11 and Interchange 129, respectively, in Woodbridge.

Interstate Route 95 (I-95). This route constitutes the principal north-south Interstate Route between Maine and Florida, and is a very heavily traveled highway. I-95 enters the State in the north via the George Washington Bridge. Just west of the bridge, I-95 becomes part of the Turnpike for a distance of approximately 70 miles to Interchange 6 and across the Pearl Harbor Memorial Extension. Thereafter, I-95 continues onto the Pennsylvania Turnpike to a point west of the Delaware River.

Interstate Route 195 (I-195). This route begins at I-295 just south of Trenton and extends easterly, intersecting with the Turnpike at Interchange 7A. It continues easterly through Monmouth County, terminating at Route 34 just west of the Parkway. This route provides an east-west connection between Trenton and the Jersey Shore.

Interstate Route 295 (I-295). This route extends from the Delaware Memorial Bridge northeasterly in a corridor between the Turnpike and the Delaware River, to an intersection with I-195 west of Interchange 7A. Beyond I-195, I-295 continues northerly to an intersection with US Route 1, north and west of Trenton. The I-295 segment from the Delaware Memorial Bridge to Interchange 7 is in close proximity and roughly parallel to the Turnpike.

Interstate Route 278 (I-278). This route is an auxiliary Interstate Highway in New Jersey and New York. The New York segment travels through four of the five boroughs, excluding Manhattan. The New Jersey segment begins at US Route 1 & 9 traveling easterly to the Goethals Bridge and intersects with the New Jersey Turnpike at Interchange 13.

Interstate Route 287 (I-287). This route is a circumferential bypass of the New York-Northern New Jersey Metropolitan Area. At its southern end, it joins the Turnpike at Interchange 10, swings westward to the area of Bound Brook, thence in a large circular pattern through Morristown and connects at its northern end with the New York State Thruway at Suffern, New York.

Interstate Route 78 (I-78). This route enters the State at the Holland Tunnel, follows the Turnpike's Newark Bay-Hudson County extension (which has been designated I-78) to its intersection with the mainline Turnpike at Newark Airport (Interchange 14) and continues westward and connects with the Parkway in Union and then runs roughly along the alignment of US Route 22 to Phillipsburg, New Jersey – Easton, Pennsylvania.

Interstate Routes 80 and 280 (I-80 and I-280). I-80 is one of the principal east-west routes of the Interstate System extending from New York City to San Francisco. It begins in the State in the vicinity of Ridgefield Park and crosses the State along the same general alignment as US Route 46 as far as Netcong, New Jersey, then swings along a more northerly alignment to the vicinity of the Delaware Water Gap. Crossing Pennsylvania, the route is known as the Keystone Shortway. I-80 directly connects with the Parkway in Saddlebrook and with the Turnpike via I-95 at Ridgefield Park. I-280, an alternate route of I-80, branches off from I-80 in the vicinity of Parsippany-Troy Hills, Morris County, and follows a southeasterly alignment through the Oranges, Newark and Harrison, connecting with the Parkway in East Orange and the Turnpike at Interchange 15W, just north of the Passaic River.

US Route 1 & 9. US Route 1 is a principal urban arterial route and, before the existence of the interstate highway system, served as the original Maine to Florida highway. In the State, US 1 follows a generally northeast-southwest path, closely paralleling the Turnpike from New Brunswick north to the vicinity of Jersey City. South of New Brunswick the paths diverge as US 1 continues on a direct path to Trenton. North of New Brunswick, US 1 joins with US 9. The northern section of US 1&9 and its companion truck route, US 1&9T, serve as feeder roads to the Holland Tunnel. To a limited extent, US 1 and US 1&9T, represent competitive routes to the Turnpike notwithstanding the presence of numerous signal controlled intersections and heavy congestion during peak travel times.

US Route 130. The northern terminus of this highway is south of New Brunswick, where it intersects with US 1. The road roughly parallels the Turnpike throughout its length between the northern terminus and the Camden area. The road has a character similar to southern sections of US 1. There are numerous signalized intersections and such road is heavily congested.

US Route 9. US Route 9 begins in the State at the Cape May Lewes Ferry west of the southernmost terminus of the Parkway in Cape May County. US Route 9 generally parallels the Parkway along the southern half of the Parkway from Cape May to Toms River. There, US Route 9 runs west of the Parkway and rejoins the Parkway at Interchange 123 in Sayreville, just south of the Raritan River. The Parkway and US Route 9 share river crossings at Great Egg Harbor and the Mullica River, and are co-aligned in a four mile section of the Parkway in Cape May County and a three mile section in Ocean County. US Route 9 is a competitive route to the Parkway for the southernmost eighty miles of the Parkway.

Atlantic City Expressway. The Atlantic City Expressway is a limited access toll road operated by the South Jersey Transportation Authority. It runs northwesterly across the State from Atlantic City across the Parkway to Route 42, southeast of Camden. The Atlantic City Expressway provides access to the South Jersey beach resorts from the Philadelphia/Camden area.

Route 17. Route 17 runs northwesterly through Bergen County from North Arlington to Mahwah, where it merges with Interstate 287. This route provides a connection between the George Washington Bridge and Lincoln Tunnel to the New York State Thruway.

Route 72. Route 72 runs northwesterly from the midpoint of Long Beach Island to Route 70 in Pemberton Township. Route 72 provides access from the northern part of the State to the shore resorts in southern Ocean County from the Parkway.

Route 33. Route 33 begins in Trenton, Mercer County. It continues easterly across the State and terminates in Neptune Township. This route provides and east-west connection between Trenton and Monmouth County.

Route 37. Route 37 is a principal arterial route in northern Ocean County. This route begins on Ocean County's northern barrier island and terminates at Route 70 in Lakehurst. Route 37 serves as a collector for traffic traveling both north and south on the Parkway and provides access to the shore area from the north, via the Parkway.

Route 70. Route 70 begins in southern Monmouth County, just north of the Manasquan River. It continues westerly across the State and terminates in Camden. This route provides an east-west connection between Philadelphia/Camden and northern Ocean County.

Route 440. There are two segments of Route 440, one in Middlesex County and the other in Hudson County. The Middlesex County segment links the New Jersey Turnpike and the southerly terminus of Interstate 287 to Staten Island, New York. This segment then intersects the Garden State Parkway 2 miles east, then continues easterly to the Outerbridge Crossing in Perth Amboy. The Hudson County segment of Route 440 runs from the Bayonne Bridge in Bayonne to US Route 1 Truck in Jersey City. Route 440 intersects at the New Jersey Turnpike Interchange 14A in Jersey City.

US Route 206. Route 206 extends from the Pennsylvania state line in northwest New Jersey to the Atlantic City Expressway in the vicinity of Hammonton. The road runs essentially north-south and intersects the Turnpike at Interchange 7. The road has many closely spaced signalized intersections near population centers such as Trenton, Princeton and Somerville and more rural characteristics along its northern and southern limits.

State Route 18. The northern terminus of State Route 18 is located in New Brunswick, just north of its intersection with US Route 1 and Turnpike Interchange 9. The roadway extends in a southeasterly direction and terminates at Interstate 195 in Wall Township. The northern portion of Route 18 is similar to US 1 in that it is flanked with retail development and has many closely spaced traffic signals for cross streets and turning movements. South of Old Bridge the roadway becomes a four lane expressway providing direct access to the Parkway and shore towns from the New Brunswick area.

Interstate Route 495 (I-495). This route intersects the Turnpike at Interchanges 16E and 17 and provides direct access to New York City via the Lincoln Tunnel.

CERTAIN RISK FACTORS

The Series 2019 A Bonds are revenue obligations of the Authority which are payable solely from the Pledged Revenues and the other moneys, funds and accounts pledged to the payment thereof pursuant to the Resolution. The following is a discussion of certain risk factors that should be considered in evaluating an investment in the Series 2019 A Bonds. This discussion does not purport to be either comprehensive or definitive. The order in which risks are presented is not intended to reflect either the likelihood that a particular event will occur or the relative significance of such an event. Moreover, there may well be other risks associated with an investment in the Series 2019 A Bonds in addition to those set forth herein.

General

The financial forecasts set forth in this Official Statement are based generally upon certain assumptions and projections as to estimated revenues and operating and maintenance expenses. See "REPORT OF TRAFFIC ENGINEER" included as Appendix B to this Official Statement. Inevitably, some underlying assumptions and projections used to develop the forecasts will not be realized, and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the forecast periods will vary from the forecasts, and such differences may be material.

Forward-Looking Statements

The statements contained in this Official Statement that are not purely historical are forward-looking statements, including statements regarding the Authority's expectations, hopes, intentions or strategies regarding the future and the projections contained in this Official Statement and in the Report of the Traffic Engineer included as Appendix B to this Official Statement. All forward-looking statements included in this Official Statement are based on information available to the Authority on the date hereof, and the Authority assumes no obligation to update any such forward-looking statements.

The forward-looking statements herein are necessarily based on various assumptions and estimates that are inherently subject to numerous risks and uncertainties, including risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes or developments in social, economic, business, industry, market, legal and regulatory circumstances and conditions and actions taken or omitted to be taken by third parties, including customers, suppliers, business partners and competitors, and legislative, judicial and other governmental authorities and officials. Assumptions related to the foregoing involve judgments with respect to, among other things, future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and, therefore, there can be no assurance that the forward-looking statements included in this Official Statement will prove to be accurate.

Certain Matters Relating to Enforceability of Obligations

The remedies available to the holders of the Series 2019 A Bonds upon the occurrence of an Event of Default under the Resolution are, in many respects, dependent upon regulatory and judicial actions that are often subject to discretion or delay. Under existing law and judicial decisions, including specifically the United States Bankruptcy Code, the remedies specified in the Resolution may not be readily available or may be limited. In addition, enforcement of such remedies (i) may be subject to general principles of equity which may permit the exercise of judicial discretion, (ii) are subject to the exercise in the future by the State and its agencies and political subdivisions of the police power inherent in the sovereignty of the State, (iii) are subject, in part, to the provisions of the United States Bankruptcy Code and other applicable bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting the enforcement of creditors' rights generally, now or hereafter in effect, and (iv) are subject to the exercise by the United States of the powers delegated to it by the Constitution of the United States of America. The various legal opinions to be delivered concurrently with the delivery of the Series 2019 A Bonds will be qualified to the extent that the enforceability of certain legal rights related to the Series 2019 A Bonds is subject to limitations imposed by bankruptcy, reorganization, insolvency or other similar laws affecting the rights of creditors generally and by equitable remedies and proceedings generally.

Legislative Action

Legislation is introduced from time to time in the State Legislature which, if adopted, may affect the Authority and/or the Turnpike System. The Authority cannot predict whether or not these bills will be enacted into law or how such legislation may affect the Authority and its ability to pay debt service on the Series 2019 A Bonds.

Decline in Toll Revenues

The information provided with respect to toll revenues collected by the Authority is based on historical data. The amount of future toll revenues to be collected by the Authority depends upon a number of factors, some of which are not in the control of the Authority. Some of these factors include a decline in traffic on the Turnpike System due to general economic conditions, severe weather conditions, diversion of traffic to alternative non-toll routes, increased fuel costs, availability of alternate forms of travel and shipping, and government regulations, such as Clean Air Act requirements, increased mileage standards or higher fuel taxes, which could significantly restrict motor vehicle use. Although the Authority has covenanted in the Resolution to fix, charge and collect tolls for the use of the Turnpike System in amounts so that, in each calendar year, the Net Revenues shall at least equal the Net Revenue Requirement for such year, there can be no assurance that the traffic on the Turnpike System will continue to be sufficient for the Authority to generate the necessary revenues to meet its obligations under the Resolution.

Adverse Changes to Third Party Financial Institutions

Adverse changes in the financial condition of certain third-party financial institutions may adversely affect the Authority's financial position. Different types of investment and contractual arrangements may create exposure for the Authority to such institutions including: (i) risk to the Authority's investment portfolio due to defaults or changes in market valuation of the debt securities of such institutions; and (ii) counterparty risk related to the Qualified Swap Agreements used by the Authority to hedge its interest rate risks with respect to a portion of its Outstanding Bonds.

Failure to Pay Mandatory Purchase Price and other Market Disruptions

As described under "DIRECT PURCHASE TRANSACTIONS" herein, in the event the Authority cannot pay the purchase price for all or a portion of its Direct Purchase Bonds on their respective mandatory tender dates or on any extraordinary mandatory purchase date, such Direct Purchase Bonds will be subject to mandatory redemption in the amounts and on the dates as described under "DIRECT PURCHASE TRANSACTIONS" herein. In addition, the Authority's Outstanding Series 2017 C-5 Bonds and Series 2017 C-6 Bonds are also subject to mandatory tender on the dates and under the circumstances as set forth in the Resolution. In the event the Authority cannot pay the purchase price for all or a portion of the Series 2017 C-5 Bonds and/or the Series 2017 C-6 Bonds on their respective mandatory tender dates, a Delayed Remarketing Period will commence with respect to any unpurchased Series 2017 C-5 Bonds and/or Series 2017 C-6 Bonds on the applicable mandatory tender dates, as described in the Resolution, during which such Series 2017 C-5 Bonds and/or Series 2017 C-6 Bonds will bear interest at the Stepped Interest Rate as described in the Resolution.

The credit markets experience substantial disruption from time to time. There can be no assurance as to the timing of any disruption or the extent of any recovery that may be made by the credit markets. The Authority's currently plans to raise additional funds to pay the remaining costs of the Capital Improvement Program through the issuance of additional Series of Bonds under the Resolution. If the Authority is unable to access the credit markets as a result of any such disruption, it is likely to have to delay the completion of the Capital Improvement Program until such time as the capital markets rebound. The effect of such delays could result in increased costs for the Projects comprising the Capital Improvement Program.

Risks Associated With Qualified Swap Agreements

Based upon the current ratings of the applicable Bonds, the Authority is currently not required to post collateral under any of its Qualified Swap Agreements. With respect to all Qualified Swap Agreements, other than the Series 2017 D-2, D-3 and D-4 Swap Agreement with Citibank, N.A., the rating on the applicable Bonds would have to drop below either Baa2 from Moody's (as hereinafter defined) or below BBB from S&P (as hereinafter defined), for any collateral posting requirements to be imposed upon the Authority under such agreements. With respect to the Series 2017 D-2, D-3 and D-4 Swap Agreement with Citibank, N.A. only, the rating on the Series 2017 D-2, D-3 and D-4 Bonds would have to drop below A2 from Moody's, below A from S&P and below A from Fitch for any collateral posting requirements to be imposed upon the Authority under such agreements. If the Authority is required to post collateral under any such agreements, it could have a material adverse effect on the Authority's liquidity position.

The Authority is exposed to basis risk under its current Qualified Swap Agreements as the variable rate received from the counterparties under the Qualified Swap Agreements may not perfectly match the variable rate paid on the Bonds intended to be hedged by such Qualified Swap Agreements.

Each of the Authority's current Qualified Swap Agreements provides that an automatic, immediate termination of such Agreement shall take place upon the occurrence of the dissolution, bankruptcy, insolvency, liquidation or any similar related events involving or related to the Authority's counterparty under such Agreement. If a Qualified Swap Agreement is automatically and immediately terminated as a result of any such event and the fair value of such Qualified Swap Agreement is negative to the Authority on the date of such automatic immediate termination, the Authority could be obligated to make a substantial termination payment to the counterparty and the Authority's financial position could be materially adversely affected during the period in which such termination payment would be required to be paid by the Authority.

Changes and Reforms Relating to LIBOR

On July 27, 2017, the Financial Conduct Authority (the "FCA") announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR rates after 2021 (the "FCA Announcement"). All of the Authority's Qualified Swap Agreements use a LIBOR based rate as a reference rate for determining the payment obligations of the counterparties thereunder. Additionally, several Series of the Authority's Outstanding variable rate Bonds use a LIBOR based rate as a reference rate for determining the interest rate on such Series of Bonds. It is not possible to predict the effect of the FCA Announcement, any changes in the methods pursuant to which the LIBOR rates are determined or any other reforms to LIBOR that may be enacted, any of which may adversely affect the determination of LIBOR rates or result in the phasing out of LIBOR as a reference rate. Any such effects could result in a sudden or prolonged increase or decrease in reported LIBOR rates, or result in the replacement of LIBOR with other reference rates, and could have a negative impact on the market value of the Authority's Qualified Swap Agreements and the payment obligations of the counterparties thereunder, and/or significantly increase the interest payable on the Authority's Outstanding variable rate Bonds.

Costs of Construction of the Projects Included in the Capital Improvement Program

In connection with the Projects included in the Capital Improvement Program, there is a possibility of time delays and cost increases resulting from (i) design and construction problems and resulting change orders, (ii) environmental litigation or environmental administrative matters, (iii) the unavailability or cost of acquiring right-of-way, (iv) archeological, historic and unidentified subsurface conditions, (v) utility relocation problems, (vi) hazardous materials, (vii) force majeure events, (viii) litigation, or (ix) inflation. As a result, there can be no assurance that the costs of completion for the Capital Improvement Program will not exceed current estimates, or that the completion of such projects will not be delayed beyond the scheduled completion date. Variations in cost estimates and delays in construction could be material.

There is also a possibility of insolvency or bankruptcy of the contractors during construction of one or more of the Projects included in the Capital Improvement Program. While the contractors will be required to provide a performance bond and a payment bond, there can be no assurance that such bonds will be sufficient to assure timely completion of the Projects included in the Capital Improvement Program. Moreover, in the event that a default occurs under a construction contract by the contractor, there is a possibility of litigation between the Authority and the providers of the performance bonds and payment bonds and/or the contractor, which could further delay construction and the opening of the Projects included in the Capital Improvement Program. Any such delays and/or cost overruns could result in a substantial increase in the costs of the Capital Improvement Program.

CDM Smith Traffic and Revenue Study

As the Traffic Engineer for the Authority, CDM Smith was requested by the Authority to prepare the Report presenting its analyses and findings relative to recent trends in traffic and revenue on the Turnpike and the Parkway. See APPENDIX B – "REPORT OF TRAFFIC ENGINEER" attached to this Official Statement. The revenue forecasts contained in the Report are based upon certain assumptions set forth or incorporated therein. The Report is not a guarantee of any future events or trends and the forecasts therein are subject to future economic and social conditions and demographic developments that cannot be predicted with certainty. Further, the estimates and assumptions in the Report are inherently subject to significant economic and competitive uncertainties and contingencies, many of which are beyond the control of the Authority. Failure to achieve or realize any of the assumptions listed in the Report may have a materially adverse effect upon the Net Revenues actually realized by the Authority.

Federal Subsidy on Build America Bonds

A series of automatic Federal deficit reduction spending cuts known as "sequestration" took effect on March 1, 2013. Sequestration reduced the Federal subsidy paid to the Authority with respect to its outstanding Build America Bonds for the Federal fiscal years 2013, 2014, 2015, 2016, 2017 and 2018 and will reduce such Federal subsidy in Federal fiscal year 2019. Continued reductions in such Federal subsidy are anticipated for Federal fiscal year 2020 and beyond. The Authority currently has $3,225,000,000 in principal amount of Build America Bonds outstanding, and is entitled to receive approximately $81,665,325 in Federal subsidy annually through 2034 eventually declining to a final annual amount receivable in 2040 of approximately $16,898,609 with respect to such Build America Bonds. The Federal subsidy paid to the Authority with respect to its Build America Bonds was reduced by approximately 8.7% for the payment received in June 2013 for Federal fiscal year 2013, which ended September 30, 2013. The Federal subsidy payable to the Authority with respect to its Build America Bonds for Federal fiscal year 2014 was reduced by approximately 7.2%. The Federal subsidy payable to the Authority with respect to its Build America Bonds for Federal fiscal year 2015 was reduced by approximately 7.3%. The Federal subsidy payable to the Authority with respect to its Build America Bonds for Federal fiscal year 2016 was reduced by approximately 6.8%. The Federal subsidy payable to the Authority with respect to its Build America Bonds for Federal fiscal year 2017 was reduced by approximately 6.9%. The Federal subsidy payable to the Authority with respect to its Build America Bonds for Federal fiscal year 2018 was reduced by approximately 6.6%. The Federal subsidy payable to the Authority with respect to its Build America Bonds for Federal fiscal year 2019 will be reduced by 6.2% from the amounts anticipated at the time the Build America Bonds were issued. There can be no assurance that additional sequestration measures will not be enacted which will further reduce the amount of the subsidy the Authority receives on its Build America Bonds. The reduction in the amount of the Federal subsidy the Authority received and any future reduction in subsidy will require the Authority to use other funds to offset the loss of this subsidy. In addition, if the current Federal government partial shutdown continues for an extended period of time, the Federal subsidy payments to the Authority with respect to its Build America Bonds could be suspended or delayed.

Other Factors

Additional factors which may affect the financial condition of the Authority and the future operation of the Turnpike System include the following:

- Increased and/or unanticipated costs of operating the Turnpike System;
- Work stoppage, slowdown or action by unionized Authority employees;
- More and expanded mass transit systems;
- Complete or partial destruction or temporary closure of the Turnpike System for extended periods of time;
- Increased pension costs, unfunded healthcare and other non-pension postemployment benefits; and
- The potential for future Authority payments for non-Turnpike System purposes. See "SECURITY FOR THE BONDS – Potential Future Authority Payments for Non-Turnpike System Purposes" herein.

RATINGS

Moody's Investors Services, Inc. ("Moody's") has assigned a rating of "A2" to the Series 2019 A Bonds. S&P Global Ratings, acting through Standard & Poor's Financial Services LLC ("S&P"), has assigned a rating of "A+" to the Series 2019 A Bonds. Fitch Ratings ("Fitch") has assigned a rating of "A" to the Series 2019 A Bonds.

Any desired explanation of the significance of such ratings should be obtained from Moody's, S&P and Fitch, respectively. Certain information and materials, including information and materials not included in this Official Statement, were furnished by the Authority to Moody's, S&P and Fitch. Generally, Moody's, S&P and Fitch base their respective ratings on the information and materials so furnished and on their respective investigations, studies and assumptions.

There is no assurance that a particular rating will be maintained for any given period of time or that it will not be lowered, suspended or withdrawn entirely if, in the judgment of Moody's, S&P or Fitch, as the case may be, circumstances so warrant. Any such change in or withdrawal of such rating could have an adverse effect on the market price or the marketability of the Series 2019 A Bonds.

UNDERWRITING

Citigroup Global Markets Inc. ("Citigroup"), as representative, on behalf of itself and the other Underwriters listed on the cover page hereof (the "Underwriters"), has agreed, subject to certain conditions, to purchase all, but not less than all, of the Series 2019 A Bonds from the Authority at a purchase price of $477,962,022.22 (which represents the principal amount of the Series 2019 A Bonds of

$449,110,000.00, plus net original issue premium in the amount of $29,518,752.70, less an Underwriters' discount of $666,730.48).

The Underwriters will be obligated to purchase all of the Series 2019 A Bonds if any of the Series 2019 A Bonds are purchased. The Series 2019 A Bonds may be offered and sold to certain dealers (including underwriters and other dealers depositing such Series 2019 A Bonds into investment trusts) at yields higher/prices lower than the public offering yields/prices set forth on the inside front cover page of this Official Statement, and such public offering yields/prices may be changed from time to time by the Underwriters.

The following two paragraphs have been furnished by the Underwriters for inclusion in this Official Statement. The Authority does not guarantee the accuracy or completeness of the information contained in such paragraphs and such information is not to be construed as a representation of the Authority.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the Authority, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Authority.

The following paragraph has been furnished by Citigroup, one of the Underwriters of the Series 2019 A Bonds, for inclusion in this Official Statement. The Authority does not guarantee the accuracy or completeness of the information contained in such paragraph and such information is not to be construed as a representation of the Authority.

Citigroup has entered into a retail distribution agreement (the "Citigroup Distribution Agreement") with Fidelity Capital Markets, a division of National Financial Services LLC (together with its affiliates, "Fidelity"). Under the Citigroup Distribution Agreement, Citigroup may distribute municipal securities to retail investors at the original issue price through Fidelity. As part of this arrangement, Citigroup will compensate Fidelity for its selling efforts.

The following paragraph has been furnished by Morgan Stanley & Co. LLC., one of the Underwriters of the Series 2019 A Bonds, for inclusion in this Official Statement. The Authority does not guarantee the accuracy or completeness of the information contained in such paragraph and such information is not to be construed as a representation of the Authority.

Morgan Stanley, parent company of Morgan Stanley & Co. LLC., an underwriter of the Series 2019 A Bonds, has entered into a retail distribution arrangement with its affiliate Morgan Stanley Smith Barney LLC. As part of the distribution arrangement, Morgan Stanley & Co. LLC may distribute municipal securities to retail investors through the financial advisor network of Morgan Stanley Smith Barney LLC. As part of this arrangement, Morgan Stanley & Co. LLC may compensate Morgan Stanley Smith Barney LLC for its selling efforts with respect to the Series 2019 A Bonds.

The following paragraph has been furnished by US Bancorp Investments, Inc., one of the Underwriters of the Series 2019 A Bonds, for inclusion in this Official Statement. The Authority does not guarantee the accuracy or completeness of the information contained in such paragraph and such information is not to be construed as a representation of the Authority.

US Bancorp is the marketing name of U.S. Bancorp and its subsidiaries, including U.S. Bancorp Investments, Inc., which is serving as an Underwriter of the Series 2019 A Bonds. U.S. Bancorp is the parent company of U.S. Bank National Association, which serves as a Co-Trustee under the Resolution, is the Authority's counterparty under the Series 2015 A Swap Agreements, and is also the owner of the Authority's outstanding Series 2015 F Bonds.

The following two paragraphs have been furnished by Wells Fargo Bank, National Association, acting through its Municipal Products Group ("WFBNA"), one of the Underwriters of the Series 2019 A Bonds, for inclusion in this Official Statement. The Authority does not guarantee the accuracy or completeness of the information contained in such paragraphs and such information is not to be construed as a representation of the Authority.

Wells Fargo Securities is the trade name for certain securities-related capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Bank, National Association, which conducts its municipal securities sales, trading and underwriting operations through the Wells Fargo Bank, NA Municipal Products Group, a separately identifiable department of Wells Fargo Bank, National Association, registered with the Securities and Exchange Commission as a municipal securities dealer pursuant to Section 15B(a) of the Securities Exchange Act of 1934.

WFBNA has entered into an agreement (the "WFA Distribution Agreement") with its affiliate, Wells Fargo Clearing Services, LLC (which uses the trade name "Wells Fargo Advisors") ("WFA"), for the distribution of certain municipal securities offerings, including the Series 2019 A Bonds. Pursuant to the WFA Distribution Agreement, WFBNA will share a portion of its underwriting compensation with respect to the Series 2019 A Bonds with WFA. WFBNA has also entered into an agreement (the "WFSLLC Distribution Agreement") with its affiliate, Wells Fargo Securities, LLC ("WFSLLC"), for the distribution of municipal securities offerings, including the Series 2019 A Bonds. Pursuant to the WFSLLC Distribution Agreement, WFBNA pays a portion of WFSLLC's expenses based on its municipal securities transactions. WFBNA, WFSLLC and WFA are each wholly-owned subsidiaries of Wells Fargo & Company.

TAX MATTERS

Federal Income Tax Treatment

The Internal Revenue Code of 1986, as amended (the "Code"), establishes certain requirements which must be met at the time of, and on a continuing basis subsequent to, the issuance and delivery of the Series 2019 A Bonds in order for the interest thereon to be and remain excluded from gross income for Federal income tax purposes under Section 103 of the Code. Noncompliance with such requirements could cause such interest to be included in gross income for Federal income tax purposes retroactive to the date of issuance of the Series 2019 A Bonds. The Authority has covenanted to comply with the provisions of the Code applicable to the Series 2019 A Bonds, and has covenanted not to take any action or fail to take any action that would cause interest on the Series 2019 A Bonds to lose the exclusion from gross income under Section 103 of the Code.

In the opinion of Wilentz, Goldman & Spitzer, P.A., Bond Counsel, under existing statutes, regulations, rulings and court decisions, and assuming continuing compliance by the Authority with the requirements of the Code described above, interest on the Series 2019 A Bonds is not includable in gross income for Federal income tax purposes pursuant to Section 103 of the Code and is not treated as a preference item under Section 57 of the Code for purposes of calculating the Federal alternative minimum tax.

Under Section 171(a)(2) of the Code, no deduction is allowed for the amortizable bond premium (determined in accordance with Section 171 (b) of the Code) on the Series 2019 A Bonds that are initially offered and sold at a premium. Under Section 1016(a)(5) of the Code, however, an adjustment must be made to the purchaser's basis in such Series 2019 A Bonds to the extent of any amortizable bond premium that is disallowable as a deduction under Section 171(a)(2) of the Code.

Additional Federal Income Tax Consequences

Prospective purchasers of the Series 2019 A Bonds should be aware that ownership of, accrual or receipt of interest on or disposition of tax-exempt obligations, such as the Series 2019 A Bonds, may have additional Federal income tax consequences for certain taxpayers, including, without limitation, taxpayers eligible for the earned income credit, recipients of certain Social Security and certain Railroad Retirement benefits, taxpayers that may be deemed to have incurred or continued indebtedness to purchase or carry tax-exempt obligations, financial institutions, property and casualty insurance companies, foreign corporations and certain S corporations. Prospective purchasers of the Series 2019 A Bonds should consult with their tax advisors with respect to the need to furnish certain taxpayer information in order to avoid backup withholding.

State of New Jersey Taxation

In the opinion of Bond Counsel, under existing laws of the State of New Jersey, interest on the Series 2019 A Bonds and any gain on the sale thereof are not includible in gross income under the New Jersey Gross Income Tax Act.

Prospective Tax Law Changes

Federal, state or local legislation, administrative pronouncements or court decisions may affect the Federal tax-exempt status of interest on the Series 2019 A Bonds and the State tax-exempt status of interest on the Series 2019 A Bonds, gain from the sale or other disposition of the Series 2019 A Bonds, the market value of the Series 2019 A Bonds or the marketability of the Series 2019 A Bonds. The effect of any legislation, administrative pronouncements or court decisions cannot be predicted. Prospective purchasers of the Series 2019 A Bonds should consult with their own tax advisors regarding such matters.

Other Tax Consequences

Except as described above, Bond Counsel expresses no opinion with respect to any Federal, state, local or foreign tax consequences of ownership of the Series 2019 A Bonds. Bond Counsel renders its opinion under existing statutes, regulations, rulings and court decisions as of the date of issuance of the Series 2019 A Bonds and assumes no obligation to update its opinion after such date of issuance to reflect any future action, fact, circumstance, change in law or interpretation, or otherwise. Bond Counsel expresses no opinion as to the effect, if any, on the tax status of the interest on the Series 2019 A Bonds paid or to be paid as a result of any action hereafter taken or not taken in reliance upon an opinion of other counsel.

ALL POTENTIAL PURCHASERS OF THE SERIES 2019 A BONDS SHOULD CONSULT WITH THEIR TAX ADVISORS WITH RESPECT TO THE FEDERAL, STATE, LOCAL OR FOREIGN TAX CONSEQUENCES (INCLUDING, BUT NOT LIMITED TO, THOSE DESCRIBED ABOVE) OF THE OWNERSHIP OF THE SERIES 2019 A BONDS.

See Appendix E to this Official Statement for the complete text of the proposed form of Bond Counsel's opinion with respect to the Series 2019 A Bonds.

LITIGATION

There is no litigation pending or, to the knowledge of the Authority, threatened, which (i) questions the official existence of the Authority or the power of the Authority to collect and pledge revenues in accordance with the terms of the Resolution to pay the Series 2019 A Bonds or to establish and adjust tolls, or (ii) seeks to restrain or enjoin the issuance of the Series 2019 A Bonds or to question or affect the validity of the Series 2019 A Bonds or the proceedings of the Authority under which they are to be issued. In addition to commitments in the normal course of business (which includes investigation and remediation of existing and projected action level environmental conditions), the Authority is contingently liable under pending lawsuits and claims, relating principally to construction programs and personal injury claims, in which the Authority is named a defendant. The Authority believes the aggregate liability of the Authority under such actions, if adversely determined, would not materially adversely affect the financial position of the Authority and sufficient funds are expected to be available to satisfy any payments required in connection therewith.

In 2017, a Petition for Rule Change seeking to have the Authority revoke its rule imposing a $50 administrative fee in connection with collecting unpaid tolls from toll violators of the Turnpike System was filed with the Authority. In the Petition, the petitioners argue that the administrative fee is unreasonable and therefore not authorized by the Act. The Petition also includes a demand for a refund of the administrative fees collected by the Authority to the extent unreasonable, which amount the petitioners claim is nearly $200,000,000. After reviewing a financial analysis of the costs of processing, prosecuting and collecting unpaid tolls from toll violators, the Authority concluded that the $50 administrative fee is reasonable and consistent with the Act and, in a written response dated October 18, 2017, the Executive Director of the Authority denied the Petition. On December 1, 2017 the petitioners filed an appeal of that denial with the Appellate Division of the Superior Court of the State of New Jersey and, as of the date hereof, the parties have completed their submission of written briefs to the Appellate Division and oral argument before the Appellate Division has been scheduled for February 2018. In connection with such appeal, the Authority intends to vigorously defend its conclusion that the $50 administrative fee is reasonable and consistent with the Act. Additionally, the Authority believes that, in the unlikely event that a court should ultimately rule that some portion of the $50 administrative fee is not reasonable and must be refunded by the Authority, the aggregate amount required to be refunded would be substantially less than the amount claimed by the petitioners given that the total aggregate amount of administrative fees collected by the Authority since the fee was raised to $50 is substantially less than $200,000,000. On December 1, 2017, the law firm representing the petitioners also filed a class action lawsuit in the United States District Court for the District of New Jersey alleging, among other things, that the $50 administrative fee violates the Fair Debt Collections Practices Act (the "FDCPA") and the Eighth Amendment to the United States Constitution. With the agreement of the parties, on January 17, 2018, the Court issued an order staying this lawsuit pending the resolution of the appeal with the Appellate Division of the Superior Court of the State of New Jersey described above. If and when this lawsuit is reactivated, the Authority intends to vigorously defend its conclusion that the $50 administrative fee does not violate the FDCPA or the United States Constitution.

The Authority is defending several lawsuits arising from operations of the New Jersey State Police (the "State Police") assigned to provide police services on the Turnpike and the Parkway pursuant to the Authority's contract with the State Police. The contract includes an indemnification provision requiring the Authority to defend and indemnify State troopers individually, as well as the State Police and the State, against claims related to their conduct in the course of their duties. The Authority, under the indemnification provisions of the contract, may be responsible for a State trooper's liability for negligent acts, but not for intentional wrongful acts or acts beyond the scope of such trooper's employment. The Authority believes the aggregate liability of the Authority under such actions, if adversely determined, would not materially adversely affect the financial position of the Authority and sufficient funds are expected to be available to satisfy any payments required in connection therewith.

Please see "THE AUTHORITY – Environmental Matters" herein for a discussion of certain litigation involving the Authority and the potential costs and/or liabilities of the Authority associated therewith.

STATE NOT LIABLE

THE SERIES 2019 A BONDS ARE REVENUE OBLIGATIONS OF THE AUTHORITY. THE SERIES 2019 A BONDS ARE NOT A DEBT OR LIABILITY OF THE STATE OR OF ANY POLITICAL SUBDIVISION THEREOF (OTHER THAN THE AUTHORITY) AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR OF ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE SERIES 2019 A BONDS. THE AUTHORITY HAS NO TAXING POWER.

COVENANT OF THE STATE

In the Act, the State pledges to and agrees with the holders of bonds of the Authority (including the holders of all Bonds issued under the Resolution) that it will not limit or restrict the rights thereby vested in the Authority to maintain, construct, reconstruct, and operate any project as defined therein, 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 bondholders or in any way impair their rights or remedies until all bonds issued by the Authority under the Act, together with interest thereon, are fully paid and discharged.

CONTINUING DISCLOSURE

In accordance with the requirements of Rule 15c2-12 (the "Rule") adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, the Authority will enter into an agreement with the Co-Trustees (the "Continuing Disclosure Agreement") pursuant to which the Authority will covenant for the benefit of the holders of the Series 2019 A Bonds to annually provide or cause to be provided to the Municipal Securities Rulemaking Board, through the EMMA system, certain financial and operating data relating to the Authority. Pursuant to the Continuing Disclosure Agreement, the Authority will agree to provide, by no later than May 1 of each year during which any of the Series 2019 A Bonds remain Outstanding, such annual financial and operating data prepared for the respective fiscal year of the Authority ending the immediately preceding December 31 (or if the fiscal year of the Authority shall end on any date other than December 31, the Authority shall provide such annual financial and operating data not later than the first day of the fifth month next following the end of such other fiscal year). The Authority will also covenant in the Continuing Disclosure Agreement to provide notices of the occurrence of certain enumerated events. The form of the Continuing Disclosure Agreement is included in APPENDIX F - "FORM OF CONTINUING DISCLOSURE AGREEMENT" attached hereto.

The Underwriters' obligations to purchase and accept delivery of the Series 2019 A Bonds is conditioned upon the Authority entering into the Continuing Disclosure Agreement at or prior to the delivery of the Series 2019 A Bonds.

A failure by the Authority to comply with the provisions of the Continuing Disclosure Agreement will not constitute an Event of Default under the Resolution, and the holders and Beneficial Owners of the Series 2019 A Bonds are limited to the remedies set forth in the Continuing Disclosure Agreement. However, failure by the Authority to comply with the Continuing Disclosure Agreement must be reported in accordance with the Rule and must be considered by any broker or dealer before recommending the purchase or sale of Series 2019 A Bonds in the secondary market. Consequently, such a failure may adversely affect the transferability and liquidity of the Series 2019 A Bonds and their market price.

CERTAIN LEGAL MATTERS

All legal matters incident to the authorization, issuance, sale and delivery of the Series 2019 A Bonds are subject to the approval of Wilentz, Goldman & Spitzer, P.A., Woodbridge, New Jersey, Bond Counsel to the Authority, whose approving legal opinion will be delivered with the Series 2019 A Bonds, substantially in the form attached hereto as Appendix E. Certain legal matters will be passed upon for the Authority by Robert J. Carroll, Esq., Director of Law of the Authority, and for the Underwriters by their counsel, Gibbons P.C., Newark, New Jersey.

LEGALITY FOR INVESTMENT

Under the Act, the Series 2019 A Bonds are securities in which the State and all political subdivisions of the State, their officers, boards, authorities, departments or other agencies, all banks, bankers, savings banks, trust companies, savings and loan associations, investment companies and other persons carrying on a banking business, all insurance companies, insurance associations and other persons carrying on an insurance business, and all administrators, executors, guardians, trustees and other fiduciaries, and all other persons whatsoever who may be authorized to invest in bonds or other obligations of the State, may properly and legally invest any funds, including capital belonging to them or within their control; and the Series 2019 A Bonds are securities which may properly and legally be deposited with and received by any State or municipal officers or agency of the State for any purpose for which the deposit of bonds or other obligations of the State may be authorized by law.

FINANCIAL ADVISOR

Hilltop Securities Inc. is employed as Financial Advisor to the Authority in connection with the issuance of the Series 2019 A Bonds (the "Financial Advisor"). The Financial Advisor's fee for services rendered with respect to the sale of the Series 2019 A Bonds is contingent upon the issuance and delivery of the Series 2019 A Bonds. Hilltop Securities Inc., in its capacity as Financial Advisor, does not assume any responsibility for the information, covenants and representations contained in any of the legal documents with respect to the Federal income tax status of the Series 2019 A Bonds, or the possible impact of any present, pending or future actions taken by any legislative or judicial bodies.

The Financial Advisor to the Authority has provided the following sentence for inclusion in this Official Statement: The Financial Advisor has reviewed the information in this Official Statement in accordance with, and as part of, its responsibilities to the Authority and, as applicable, to investors under the Federal securities laws, as applied to the facts and circumstances of this transaction, but the Financial Advisor does not guarantee the accuracy or completeness of such information.

FIDUCIARIES

The Bank of New York Mellon, Woodland Park, New Jersey and U.S. Bank National Association, Edison, New Jersey serve as Co-Trustees under the Resolution. The Bank of New York Mellon serves as the Trustee, Paying Agent and Registrar for the Series 2019 A Bonds. The duties of U.S. Bank National Association are limited to administration of certain investments in the Debt Reserve Fund and certain other Authority funds. U.S. Bank National Association is an affiliate of U.S. Bancorp Investments, Inc., which is one of the Underwriters of the Series 2019 A Bonds.

INDEPENDENT AUDITORS

The financial statements of the Authority as of and for the years ended December 31, 2017 and 2016, included in Appendix A to this Official Statement, have been audited by KPMG LLP, independent auditors, as stated in their report which appears therein.

MISCELLANEOUS

The information contained herein has been obtained from the Authority and other sources which the Authority believes to be reliable. There is no guarantee that any of the assumptions or estimates contained herein will be realized.

The references herein to the Act, the Resolution and the Series 2019 A Bonds are brief outlines of certain provisions thereof. Such outlines do not purport to be complete and accordingly, are qualified by reference to the Act, the Resolution and the Series 2019 A Bonds and are subject to the full texts thereof. The respective reports of the Traffic Engineer and of the Consulting Engineer have been approved by said engineers and consultants but do not purport to be complete in all respects, and, accordingly, are qualified by reference to the Report of the Traffic Engineer in Appendix B and to the Report of the Consulting Engineer in Appendix C, respectively, and are subject to the full texts thereof.

The authorization, agreements and covenants of the Authority are set forth in the Resolution and neither this Official Statement nor any advertisement of the Series 2019 A Bonds is to be construed as a contract with the holders of the Series 2019 A Bonds. Any statements made in this Official Statement involving matters of opinion or of estimates, whether or not expressly so identified, are intended merely as such and not as representations of fact.

NEW JERSEY TURNPIKE AUTHORITY

By: /s/John M. Keller
JOHN M. KELLER
Executive Director

APPENDIX A

FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016 WITH INDEPENDENT AUDITORS' REPORT THEREON

New Jersey Turnpike Authority

(A Component Unit of the State of New Jersey)

Financial Statements

December 31, 2017 and 2016

(With Independent Auditors' Report Thereon)

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

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KPMG LLP
New Jersey Headquarters
51 John F. Kennedy Parkway
Short Hills, NJ 07078-2702

Independent Auditors' Report

The Commissioners
New Jersey Turnpike Authority:

Report on the Financial Statements

We have audited the accompanying basic financial statements of the New Jersey Turnpike Authority (the Authority), a component unit of the State of New Jersey, as of and for the years ended December 31, 2017 and 2016, and the related notes to the basic financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority, as of December 31, 2017 and 2016, and the respective statements of revenues, expenses, and changes in net position, and cash flows thereof for the years then ended in accordance with U.S. generally accepted accounting principles.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 3 through 39, the schedule of funding progress – other postemployment benefits plan (schedule 1) on page 100 and Schedule of Proportionate Share, Employer Contributions and Notes (schedule 2) on page 101 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplemental Information

Our audits for the year ended December 31, 2017 and 2016 were conducted for the purpose of forming an opinion on the basic financial statements that collectively comprise the Authority's basic financial statements. The supplemental information included on Schedules 3 through 11B as listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. This information, except for those schedules and portions of schedules marked "unaudited," on which we express no opinion, has been subjected to the auditing procedures applied in the audits of the basic financial statements for the years ended December 31, 2017 and 2016 and certain additional procedures including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information included in Schedules 3 through 11B is fairly stated in all material respects, in relation to the basic financial statements as a whole.

KPMG LLP

June 26, 2018

The management of the New Jersey Turnpike Authority (the Authority) offers this narrative overview and analysis of the Authority's financial activities for the years ended December 31, 2017 and 2016, which should be read in conjunction with the Authority's financial statements.

Overview of the Financial Statements

This discussion and analysis is intended to present an overview of the Authority's financial performance for the years ended December 31, 2017 and 2016. The Authority's financial statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP) as presented by the Governmental Accounting Standards Board (GASB). This section is intended to provide an assessment of how the Authority's financial position has improved or deteriorated, and identify the factors that, in management's view, significantly affected the Authority's overall financial position. It may contain opinions, assumptions, or conclusions by the Authority's management that should not be considered a replacement for the financial statements included in this report.

The Statement of Net Position provides information about the nature and amount of investments in resources (assets) and the obligations to Authority creditors (liabilities), as well as the deferred outflows and inflows of resources, with the difference between these amounts reported as net position.

The Statement of Revenues, Expenses, and Changes in Net Position, which accounts for all of the current year's revenues and expenses, measures the success of the Authority's operations over the past year and can be used to determine how the Authority has funded its costs.

The Statement of Cash Flows provides information about the Authority's cash receipts, cash payments, and net changes in cash resulting from operating, investing and financing activities.

The notes to the Financial Statements provide:

- Information that is essential to understand the basic financial statements, such as the Authority's accounting methods and policies.
- Details of contractual obligations, future commitments and contingencies of the Authority.
- Other events or developing situations that could materially affect the Authority's financial position.

The Required Supplementary Information included in Schedule 1 presents information regarding the Authority's progress in funding its obligation to provide postemployment benefits other than pensions to its employees.

The Required Supplementary Information included in Schedule 2 presents information regarding the Authority's proportionate share, employer contributions and notes related to the State of New Jersey Public Employees' Retirement System (PERS).

The Other Supplementary Information included in Schedules 3 through 11B presents information regarding the Authority's accounting and compliance with its 1991 Turnpike Revenue Bond Resolution, as amended, restated and supplemented (the Resolution), and the Authority's interpretation of such Resolution.

The Authority's Business

The Authority is a body corporate and politic created by the New Jersey Turnpike Authority Act of 1948, as amended and supplemented (the Act). The Act authorizes the Authority to construct, maintain, repair, and operate the New Jersey Turnpike (the Turnpike System); to fix and establish tolls for the use of the Turnpike System; and to issue Turnpike revenue bonds or notes of the Authority, subject to prior approval in writing from the Governor and from either or both the State Treasurer and the Director of the Division of Budget and Accounting of the Department of the Treasury, payable solely from tolls and other revenues of the Authority. Under the provisions of the Act, the Turnpike bonds, notes, and interest thereon shall not be deemed to constitute a debt, liability or pledge of the faith and credit of the State of New Jersey (the State) or any political subdivision thereof. The Act further provides that the powers conferred upon the Governor and the Treasurer of the State described shall be exercised with due regard for the rights of the holders of bonds of the Authority at any time outstanding; and nothing in, or done pursuant to, the Act shall in any way limit, restrict or alter the obligation or powers of the Authority, or any representative or officer of the Authority, to carry out and perform in every detail each and every covenant, agreement or contract at any time made or entered into by, or on behalf of, the Authority with respect to its bonds or for the benefit, protection or security of the holders thereof.

On May 27, 2003, the Act was amended. The amendment empowered the Authority, effective on the Transfer Date which was July 9, 2003, to assume all powers, rights, obligations and duties of the New Jersey Highway Authority (the Highway Authority), which owned and operated the Garden State Parkway (the Parkway) and the PNC Bank Arts Center.

Highlights

- In April 2017, the Series 2017A Turnpike Revenue Bonds were issued in the amount of $600,000 primarily to continue to fund projects under the $7 Billion Capital Improvement Program (CIP). The Series 2017A Bonds have an average life of 14.3 years and an all-in true interest cost of 3.6%, well below the 5% interest assumed in the Authority's financial plan. In addition to this, during 2017 the Authority issued the Series 2017B, the Series 2017C, the Series 2017D, the Series 2017E, the Series 2017F and the Series 2017G Bonds to fully refund the Series 2000B-G, the Series 2009E, the Series 2009I, the Series 2013D-3, the Series 2013E-3 and the Series 2014B-3 Bonds, and to partially refund the Series 2009H, Series 2012A, and Series 2013A Bonds. The fixed rate bond refunding (the Series 2017 B, E, F and G) resulted in net present value savings of approximately $189,706 when compared to the future interest costs on the refunded bonds, while the variable rate bond refunding (the Series 2017 C and D) resulting in net present value savings of approximately $26,122.

- The Delaware River Turnpike Bridge connecting the New Jersey and Pennsylvania Turnpikes was closed on January 20, 2017 for emergency repairs and maintenance, and Turnpike Interchanges 6 and 6A were also closed. After the completion of repairs and extensive examination and testing the bridge was fully reopened to traffic on March 9, 2017. The Authority has filed a claim under is Major Bridge and Property insurance policies for both physical damage and business interruption.

- In February 2017, the Authority exercised the option to purchase its headquarters building located at 1 Turnpike Plaza, Woodbridge, New Jersey, under the lease agreement with O & R Woodbridge Office, LLC. The purchase resulted in savings as compared to the continued long term rental of the property.

- In June 2017, the Authority received the Government Finance Officers Association (GFOA) Distinguished Budget Presentation Award for the submission of its 2017 Annual Budget. The GFOA established the Distinguished Budget Presentation Awards Program in 1984 to encourage and assist state and local governments to prepare budget documents of the very highest quality. The Authority received this award for the third successive year.

- In 2017, for the third consecutive year, the Authority was a recipient of the GFOA's Certificate of Achievement for Excellence in Financial Reporting for the submission of its Comprehensive Annual Financial Report (CAFR) for the years ended December 31, 2016 and 2015. The program was established by the GFOA in 1945 to assist state and local governments in preparing financial reports that evidence the spirit of transparency and full disclosure.

- In July 2017, the Authority opened a new E-Z Pass only exit at Interchange 125 southbound side on the Parkway. This interchange is expected to help ease existing traffic as well as accommodate for anticipated increased traffic with the development of the Raritan River Waterfront.

- In September 2017, The Authority entered into a 27 year agreement with HMS Host Tollroads Inc. (HMS) and a 25 year agreement with Sunoco Retail LLC (Sunoco) for the operation and remodeling of service areas along the Turnpike and the Parkway. The agreement allows HMS to provide food services at the Authority service areas in exchange for the greater of a minimum annual guaranteed payment or a percentage of gross sales, and significant additional contribution to rebuild 8 new restaurant buildings and refurbish 6 existing restaurant buildings. The agreement with Sunoco allows it to provide fuel services at the Authority service areas and a significant additional contribution to rebuild/remodel 20 fuel service facilities over next 7 years. Construction is expected to begin in 2018 on the Thomas Edison Service Area on the Turnpike and the Monmouth location on the Parkway. All locations are expected to be completed by 2024.

- In September 2017, the Authority launched its new website. This new website is more aesthetically pleasing and user friendly. Contributing factors to the increased ease of use of the website are more logical groupings of related links and a larger traffic map.

- In October 2017, the Authority successfully completed a major upgrade to its current Enterprise Resource Planning (ERP) system– PeopleSoft Financials. The upgrade was implemented seamlessly with minimal disruption to the Authority's regular business.

- In November 2017, the Authority entered into a 15 year agreement with the Department of Law and Public Safety, Division of New Jersey State Police for the provision of police services on the Turnpike and the Parkway. Pursuant to this agreement the Authority made a prepayment of $4,500 towards the 2018 New Jersey State Police recruit training academy class. The agreement further provides for the Authority to receive a credit of $450 per year against the indirect costs billed to the Authority, each year for the next 10 years, starting in 2018.

- On December 7, 2017, the Authority entered into a 25 year lease agreement with Live Nation Worldwide, Inc. (Live Nation) to lease the Amphitheater located at the PNC Bank Arts Center in Holmdel, New Jersey, in exchange for the greater of the minimum fixed rent or minimum percentage rental amount for each lease year based on sales and a significant contribution by Live Nation toward capital project funding for the maintenance and repair of the facility.

- In 2017, the American Society of Civil Engineers selected the Authority's Parkway Shoulder Restoration and Improvement Project between Milepost 83 and 100, as the Project of the Year. This award is presented to an exceptional civil engineering and design project constructed in New Jersey.
- During 2017, the Authority increased its rock salt inventory by approximately 66% from 75,000 tons to 125,000 tons, reducing its reliance on just in time shipments during the peak snow season.
- In 2017, the Authority's $7 Billion CIP continued, and as of December 31, 2017, nearly 94% of the overall budget has been spent or committed on projects. The Authority spent over $405,700 on CIP projects in 2017.
- Toll revenue in 2017 was $1,579,896, which was $14,473, or 0.9%, above projections. In 2017, traffic on the Turnpike increased by 2% compared to 2016, while toll transactions on the Parkway increased by 0.9%. Traffic and revenue increased due to favorable weather conditions, an improving economy, lower gas prices through most of the year, and the widening of both roadways. The traffic and revenue increased despite the effects of winter storm Stella in March 2017, the Delaware River Turnpike Bridge closure due to emergency repairs and maintenance for a significant part of the first quarter of 2017, and the absence of the leap year day in 2017. This was the sixth consecutive year that the Authority's toll revenue increased compared to the prior year and also exceeded projections.
- The Authority's net position increased by $329,704 or 35.9%, from $918,309 in 2016 to $1,248,013 in 2017. Net position increased as the Authority's operating income exceeded its net non-operating expenses due to the continued growth in toll revenue, increase in investment income due to higher short term interest rates and the control of operating expenses.

(Dollars shown in thousands)

Condensed Summary of Net Position

		2017	2016	2015
Assets:				
Current assets	$	1,839,772	1,770,771	1,552,246
Other noncurrent assets		759,208	440,753	1,190,230
Capital assets, net of accumulated depreciation		11,841,066	11,455,725	10,801,091
Total assets	$	14,440,046	13,667,249	13,543,567
Deferred outflows:				
Accumulated decrease in fair value of hedging derivatives	$	—	—	4,807
Deferred amount on refunding		281,059	132,231	149,697
Deferred amount relating to pension		110,378	156,574	65,426
Total deferred outflows	$	391,437	288,805	219,930
Liabilities:				
Current liabilities	$	899,866	938,644	903,179
Noncurrent liabilities		12,578,049	12,084,993	12,188,373
Total liabilities	$	13,477,915	13,023,637	13,091,552
Deferred inflows:				
Accumulated increase in fair value of hedging derivatives	$	6,288	2,035	—
Deferred amount relating to pension		99,267	12,073	13,655
Total deferred inflows	$	105,555	14,108	13,655
Net position:				
Net investment in capital assets	$	1,379,079	1,064,121	866,813
Restricted under trust agreements		242,544	221,811	164,511
Unrestricted		(373,610)	(367,623)	(373,034)
Total net position	$	1,248,013	918,309	658,290

Discussion of Condensed Summary of Net Position 2017, 2016, 2015

2017 – 2016

The Authority's total net position is reported at $1,248,013 and $918,309 as of December 31, 2017 and 2016, respectively, representing an increase of $329,704 or 35.9%, compared to 2016. The major factors causing this increase were additional toll revenue, as traffic on both the Turnpike and the Parkway was higher in 2017 than in 2016, higher investment income and lower operating and non-operating expenses. Capital assets increased by $385,341 or 3.4%, and other noncurrent assets increased by $318,455 or 72.3%. Capital assets increased as a result of the continued spending on the ongoing $7 Billion CIP. Other noncurrent assets increased primarily due to the unspent proceeds of the Series 2017A Bonds issued in April 2017. Noncurrent liabilities increased by $493,056, or 4.1%, also primarily due to the issuance of the Series 2017A Bonds which was offset by a decrease in the net pension liability as of December 31, 2017.

2016 – 2015

The Authority's total net position is reported at $918,309 and $658,290 as of December 31, 2016 and 2015, respectively, representing an increase of $260,019 or 39.5%, compared to 2015. The major factors causing this increase were additional toll revenue, as traffic on both the Turnpike and the Parkway was higher in 2016 than in 2015, and lower operating and non-operating expenses. Capital assets increased by $654,634, or 6.1%, and other noncurrent assets decreased by $749,477, or 63.0%. Capital assets increased while other noncurrent assets decreased as a result of the continued spending of the proceeds from the Series 2015E Turnpike Revenue Bonds on the ongoing $7 Billion CIP. Noncurrent liabilities decreased by $103,380, or 0.8%, primarily due to the January 1, 2016 principal payments made on the Series 1991C and Series 2003B Turnpike Revenue Bonds.

(Dollars shown in thousands)

Adjusted Net Position

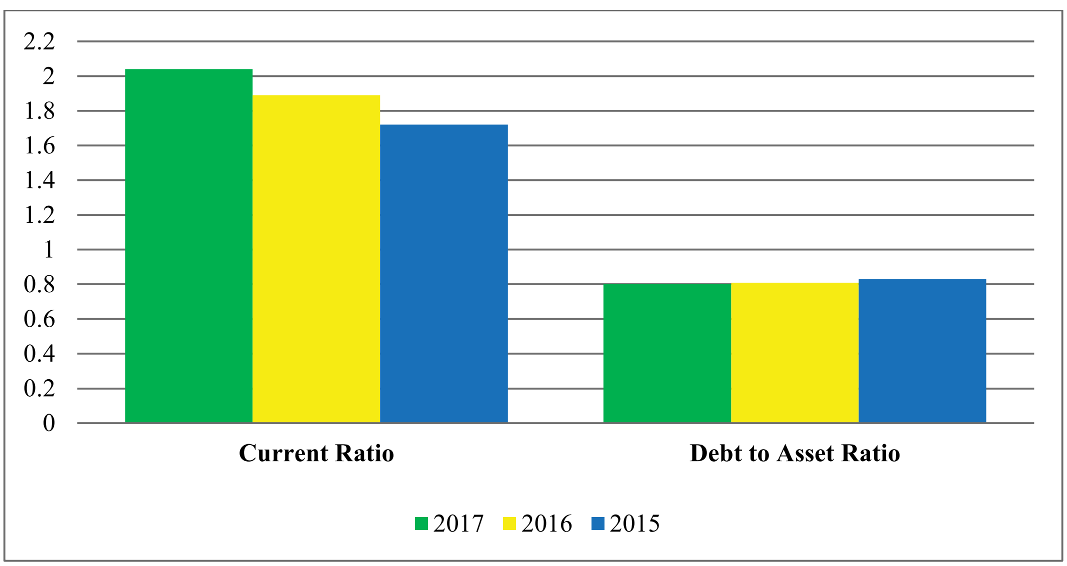
		2017	2016	2015
Net position as per GAAP Financials	$	1,248,013	918,309	658,290
Unfunded non cash adjustment:				
Other postemployment benefit liability		402,773	358,720	315,039
Interest rate swaps liabilities		20,914	29,190	40,199
Net pension liability		438,493	561,453	435,015
Accounts payable and accrued expenses		16,847	24,753	24,482
Other long-term obligations		49,255	71,820	92,009
Hybrid instrument borrowing		143,046	89,302	111,526
Accumulated increase in fair value of hedging derivatives		6,288	2,035	—
Deferred amount relating to pensions		99,267	12,073	13,655
Accumulated decrease in fair value of hedging derivatives		—	—	(4,807)
Deferred amount on refunding		(281,059)	(87,002)	(105,726)
Deferred amount relating to pensions		(110,378)	(156,574)	(65,426)
Restricted investments		—	79,937	93,175
Capital assets, net of accumulated depreciation		(13,673)	(15,719)	(29,398)
Total non cash adjustments	$	771,773	969,988	919,743
Garden State Arts Foundation		(719)	(798)	(737)
Net Position as per Bond Resolution	$	2,019,067	1,887,499	1,577,296

Shown above is the Authority's adjusted net position calculated as per the Authority's Bond Resolution. Net position as per the Bond Resolution has been calculated after adjusting for GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions* (GASB 45), GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments* (GASB 53), and GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* (GASB 68). Net position as per the Bond Resolution also does not include other long-term liabilities such as pollution remediation liability, owner-controlled insurance program (OCIP) claims liabilities and GAAP reserves which are all non-cash liabilities. Over the past several years, the implementation of new GASB pronouncements has resulted in significant non-cash accounting reductions in the Authority's net position. Management believes that the net position as per the Bond Resolution provides an alternate view of the strength of the Authority's operations and its financial position.

(Dollars shown in thousands)

Net Position Ratio Analysis - GAAP Basis

Ratio	2017	2016	2015	Explanation
Current Ratio	2.04	1.89	1.72	The current ratio is calculated as the Authority's current assets divided by current liabilities. A strong current ratio is over 1.0, and indicates an organization's ability to meet their short-term obligations. The Authority's current ratio has continued to improve each year, with the average over the three year period being 1.88. For 2017, the Authority has more than two times the amount of current assets as compared with current liabilities. Further, year over year the Authority's current ratio has increased, reflecting the positive cash flow generated from operations.
Debt to Asset Ratio	0.80	0.81	0.83	The debt to assets ratio is calculated by dividing total debt by total assets. The debt to asset ratio continues to decline, decreasing to 0.80 in 2017 from 0.83 in 2015, as a portion of capital assets are paid for through excess revenues.

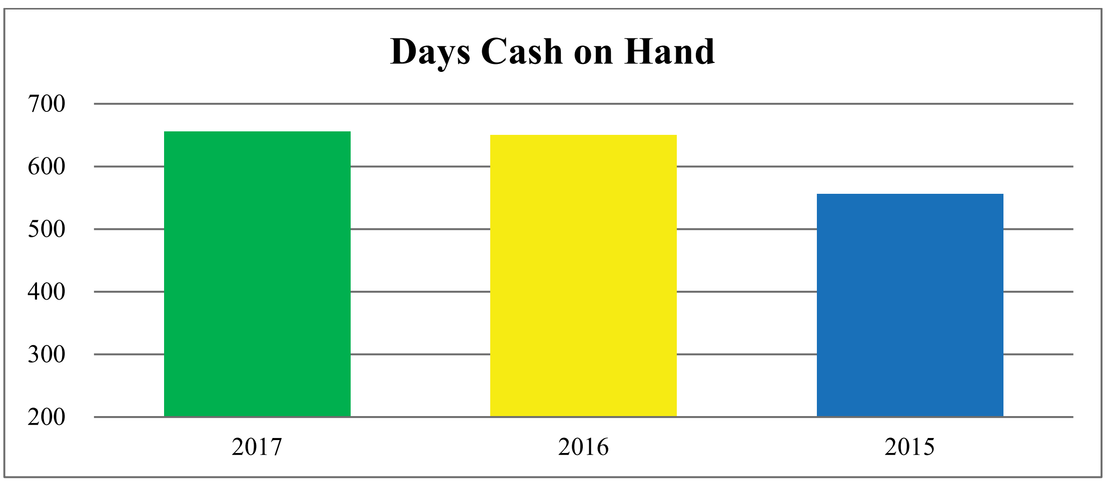


(Dollars shown in thousands)

Key Performance Metric - Net Position

Days Cash on Hand – Days cash on hand is calculated by combining unrestricted cash and unrestricted investments and dividing by daily operating expenses (from the Revenue Fund). This calculation shows how long (in days) the Authority would be able to pay its operating expenses without the generation of revenue. As a result, a larger number of days cash on hand is desirable. As shown in the graph, the days cash on hand has consistently increased each year. Based on this calculation, in 2017, the Authority could go 656 days without generating any revenue and still pay its operating expenses. Days cash on hand has improved due to the positive cash flow generated from operations.

		2017	2016	2015
Unrestricted Cash & Investments	$	913,459	876,311	767,022
Daily Operating Expenses (Revenue Fund)	$	1,392	1,348	1,379
Days cash on hand		656	650	556



Capital Improvement Program (CIP)

- The Authority is nearing the conclusion of a $7 Billion CIP that included large scale projects such as widening stretches of both the Turnpike and Parkway and smaller projects that improve interchanges, rehabilitate bridges, and deploy new technologies. The $7 Billion CIP continues on schedule and on budget. The only project included in the original $7 Billion CIP which is expected to go beyond its original completion date is the bridge rehabilitation/repair project on the Newark Bay Hudson County Extension. This work cannot be started until the New Jersey State Department of Transportation (NJDOT) completes their Pulaski Skyway project. At this time, NJDOT expects the Pulaski Skyway project to be completed in mid-2018. At the ninth year into the ten year program, the Authority has spent or committed 94%, or $6,566,670 of its original $7,000,000 budget with minimal impact to traffic.

- Bond proceeds are deposited in the Construction Fund to support the $7 Billion CIP. Total expenditures in the Construction Fund for the twelve months ended December 31, 2017 were approximately $405,700. Spending included approximately $125,400 for the Authority Phase I Facilities Improvements Program, approximately $44,900 for the Parkway Widening Phase III (from milepost 35 to 48), approximately $43,600 for the Turnpike Interchange 14A Reconstruction Project, approximately $40,000 for the Great Egg Harbor Bridge Project, and approximately $31,900 for the Newark Bay Hudson County Extension Bridge Re-decking Project. In addition to these expenditures, there are open contracts and commitments totaling approximately $469,900.

- As a part of the $7 Billion CIP the Authority has taken great measures to increase mobility and reduce commuting times on both the Parkway and Turnpike. One of the main projects that was successfully completed and open to the public in late 2014 was the 35 mile

(Dollars shown in thousands)

widening of the Turnpike between Interchanges 6 and 9. Phase 1 of the Parkway widening (mileposts 63 to 80) was completed in 2011, with Phase 2 of the Parkway widening (mileposts 48 to 63) completed in 2015. Work on Phase 3 of the Parkway widening (mileposts 41 to 48) was completed in 2016, with the remainder of the work (milepost 35 to 41) to be completed in 2018. The Authority has also undertaken additional projects beyond the Turnpike and the Parkway widenings to improve the safety and mobility of traffic on both roadways such as Bridge and Interchange Improvements. Since the program began, the Authority has expanded and rehabilitated major bridges on both the roadways and more than a dozen interchanges have been re-built, expanded or improved to provide better access to and from both roadways.

The Projects currently included in the $7 Billion CIP are the following:

Project		Current Budget	Amount Spent or Committed to Date	Percent Spent & Committed to Date
Turnpike Widening (Interchange 6-9)	$	2,226,399	2,137,208	96%
Bridge Improvements		1,682,762	1,479,498	88%
Roadway Improvements		816,783	797,285	98%
Interchange Improvements		1,026,431	937,294	91%
Facilities Improvements		657,625	646,385	98%
Parkway Widening (Milepost 35-80)		590,000	569,000	96%
	$	**7,000,000**	**6,566,670**	**94%**

Turnpike Widening*:* The Turnpike Interchanges 6 to 9 Widening Program, which was completed on schedule and under budget, was opened to traffic in November 2014. The Turnpike Widening provides three additional travel lanes in each direction between Interchanges 6 and 8A, and one additional lane in each direction between Interchanges 8A and 9, adding a total of 170 new lane miles to this critical section of roadway. The program also added a new toll plaza at Interchange 8. Program close-out will be completed in 2018.

Bridge Improvements: Bridge improvements in the $7 Billion CIP include approximately $1,682,700 for re-decking, seismic retrofitting, security measures, cleaning and repainting of structural steel, substructure repairs and other improvements to the 16 major Turnpike and Parkway bridges and other high-priority structures. During 2017, work related to the rehabilitation of the northbound span and the demolition of the old southbound span on the Great Egg Harbor/Drag Channel bridges was almost 61% completed. The improvement work on the Delaware River Turnpike Bridge and Newark Bay Hudson County Extension on the Turnpike will continue in 2018 and is scheduled to be completed in early 2018.

Roadway Improvements: Roadway improvements in the $7 Billion CIP include approximately $816,700 for widening and strengthening roadway shoulders, replacing deteriorated guide rail, improving drainage, repairing median barriers, installing variable message signs, replacing weathered and outdated guide signs, and making other investments to improve the safety and operation of the Turnpike and Parkway. The guide sign replacement project on the Turnpike was substantially completed during 2017 and the Authority continues to work on the culvert rehabilitation on the Parkway.

Interchange Improvements: The $7 Billion CIP also includes approximately $1,026,000 for interchange improvements on both roadways. The major projects on which design or construction has started and continued in 2017 are Interchange 14A on the Turnpike and Interchanges 36, 37, 38, 91, 105, 125, and 163 on the Parkway. Interchange 125 on the parkway was partially completed to accommodate existing traffic volumes and future growth resulting from the development of the waterfront. Interchanges 36, 37, 38, 91, 105 and 163 were substantially completed in 2017 and Interchange 14A is scheduled to be completed in 2018.

Facility Improvements: The Facilities Improvements Program in the $7 Billion CIP includes approximately $657,600 for the projects to build forty-two new structures and rehabilitate eighteen existing structures. Projects include the replacement of four State Police Troop D stations, the rehabilitation of sixteen maintenance districts, minor improvements at all Turnpike toll plaza buildings, and construction of a total of thirteen salt storage facilities on both roadways. To date, nine maintenance district facilities, three State Police Stations, a Central Services facility, all the salt sheds, and all Turnpike toll plaza building repairs have been completed. Also, six additional maintenance districts are scheduled for completion in 2018.

Parkway Widening: The Parkway widening project will add a third travel lane and full-width shoulders between Mileposts 35 and 80 and 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 –The widening between Milepost 52-63 was opened in the summer of 2013, with the remaining widening of this section to Milepost 48 opened in May 2015 upon the completion of the rehabilitation of the Bass River Bridge.

Phase III – Milepost 35 to 48 – The first construction contract for this section was awarded in June 2014 and construction began in July 2014. The widening between Milepost 48 to 41 was opened in June 2016 and the remainder is expected to be completed in the spring of 2018.

Total budgeted costs for the Parkway Mileposts 35 to 80 Widening Program are approximately $690,000; however, $100,000 of those costs were financed from the proceeds of bond anticipation notes prior to the issuance of the first series of bonds for the financing of the $7 Billion CIP.

(Dollars shown in thousands)

Capital Assets

		December 31		
		2017	2016	2015
Land	$	832,460	830,612	824,797
Construction-in-progress		1,561,960	1,258,316	2,521,406
Roadways		4,143,232	4,181,281	3,211,595
Bridges		3,829,827	3,808,491	3,237,642
Buildings		559,488	495,102	249,716
Equipment		914,099	881,923	755,935
Total capital assets, net of accumulated depreciation	$	11,841,066	11,455,725	10,801,091

Capital assets consist of land, construction in progress, infrastructure, buildings, and equipment. Infrastructure assets are typically items that are immoveable, such as highways and bridges. Detailed information on capital asset activity can be found in note 4.

2017 – 2016

The Authority's capital assets as of December 31, 2017 were $15,611,339 of gross asset value with an accumulated depreciation of $3,770,273, leaving a net book value of $11,841,066. This represents 82.0% of the Authority's total assets.

Capital assets, net of accumulated depreciation, increased by $385,341 in 2017 primarily due to the continued spending on the Authority's $7 Billion CIP. Major projects include the Parkway widening between Milepost 35 and 48, facility and interchange improvements and bridge reconstructions. Land increased by $1,848 in 2017 due to the continued acquisition of parcels needed for the Turnpike Interchange 6-9 Widening Project and the Facilities Improvements Phase II Project as well as other various improvement projects along the Authority's right-of-way. Construction in progress increased by $303,644 in 2017 as a result of the continued spending on the Authority's $7 Billion CIP. This increase is mainly the result of continued spending for the Facilities Improvements Phase I, Turnpike Interchange 14A Reconstruction, and Parkway Widening Phase III (Milepost 35 to 48) Project. Roadways decreased by $38,049, or 0.9%, in 2017 as depreciation expense was higher than roadway assets created. Bridges increased by $21,336, or 0.6%, in 2017 due to the substantial completion of several bridges on the Turnpike and Parkway which were included in the Interchange Improvements Projects and the Bridge Deck Reconstruction Projects. Buildings increased by $64,386, or 13%, in 2017 due to the substantial completion of two new Turnpike maintenance buildings at the maintenance districts and the purchase of the Authority's Headquarters at 1 Turnpike Plaza. Equipment increased by $32,176, or 3.6%, in 2017 due to the addition of sign structures and safety devices after substantial completion as part of the Sign Replacement Project.

The Authority had open commitments related to construction contracts totaling $469,900 as of December 31, 2017. These construction contracts include work related to the Authority's $7 Billion CIP and will be completed over the next few years.

2016 – 2015

The Authority's capital assets as of December 31, 2016 were $14,921,007 of gross asset value with an accumulated depreciation of $3,465,282 leaving a net book value of $11,455,725. This represents 83.8% of the Authority's total assets.

Capital assets, net of accumulated depreciation, increased by $654,634 in 2016 primarily due to the continued spending on the Authority's $7 Billion CIP. Major projects include the widening of the Turnpike and the Parkway, facility and interchange improvement and bridge improvements. Land increased by $5,815 in 2016 due to the continued acquisition of parcels needed for the Parkway Interchange 125 Improvement Project, Turnpike Interchange 14A Improvement Project and the Parkway Milepost 35 to 63 Widening Project as well as other various improvement projects along the Authority's right-of-way. Constructions in progress decreased by $1,263,090 in 2016 as a result of the addition of assets into their final capital asset categories, as many construction projects were substantially complete and opened to the public in 2016. Roadways increased by $969,686, or 30.2%, in 2016 due to the substantial completion of the Parkway Mainline Shoulder Improvement and the Parkway Widening (Phase II) project. Bridges increased by $570,849, or 17.6%, in 2016 due to the substantial completion of the Great Egg Harbor Bridge, the Bass River Bridge, and several bridges on the Turnpike which were included in the Bridge Deck Reconstruction Project. Buildings increased by $245,386, or 98.3%, in 2016 due to the substantial completion of facility improvement project which includes State Police barracks along the roadways, three maintenance district buildings, salt storage facilities, and a central warehouse facility. Equipment increased by $125,988, or 16.7%, in 2016 due to the addition of sign structures and safety devices after substantial completion of the Sign Replacement Project.

The Authority had open commitments related to construction contracts totaling $742,000 as of December 31, 2016. These construction contracts include work related to the Authority's $7 Billion CIP and will be completed over the next few years.

(Dollars shown in thousands)

Condensed Summary of Revenue, Expenses and Changes in Net Position

		2017	2016	2015
Operating revenues:				
Toll revenue	$	1,579,896	1,570,662	1,523,133
E-ZPass fees		60,505	61,053	54,751
Concession revenue		35,591	38,192	38,993
Miscellaneous revenue		22,601	19,446	15,146
Total operating revenues		1,698,593	1,689,353	1,632,023
Operating expenses, excluding depreciation (1)		(584,880)	(615,469)	(609,550)
Net operating revenue		1,113,713	1,073,884	1,022,473
Depreciation expense		(304,989)	(301,120)	(316,377)
Operating income		808,724	772,764	706,096
Nonoperating revenues (expenses):				
Nonoperating revenues		170,507	101,654	81,943
Nonoperating expenses		(661,997)	(614,399)	(667,364)
Total nonoperating revenues (expenses), net		(491,490)	(512,745)	(585,421)
Change in net position, before capital contribution		317,234	260,019	120,675
Capital contributions		12,470	—	—
Change in net position		329,704	260,019	120,675
Net position – Beginning of period		918,309	658,290	537,615
Net position – End of period	$	1,248,013	918,309	658,290

(1) Operating expenses include both the funded and the non-cash portion of the annual OPEB cost.

Discussion of Condensed Summary of Revenue, Expenses and Changes in Net Position

2017 – 2016

Operating Revenues

Operating revenues totaled $1,698,593 for the year ended December 31, 2017, representing an increase of $9,240 or 0.5% from the year ended December 31, 2016. The principal source of revenue for the Authority is tolls. During 2017, toll revenue totaled $1,579,896 and constituted 93.0% of the Authority's operating revenues, as compared to $1,570,662, or 93.0%, in 2016. On the Turnpike, passenger car traffic increased 1.9% while commercial vehicle traffic increased by 2.6% resulting in an overall increase of 2.0%. On the Parkway, passenger car toll transactions increased by 0.9% while commercial vehicle toll transactions increased by 1.9% resulting in an overall increase by 0.9%. The traffic increase on both roadways as compared to 2016 is due to milder weather conditions, favorable economic conditions, comparatively stable gas prices through most of the year in 2017 and the impacts of the widening programs on both roadways. Toll transactions and revenue increased despite the closure of Interchanges 6 and 6A on the New Jersey Turnpike from January 20, 2017 to March 9, 2017 due to the emergency closure of the Delaware River Turnpike Bridge, which connects the New Jersey Turnpike to the Pennsylvania Turnpike. This closure resulted in an estimated toll revenue loss of $8,800. Traffic and revenue also increased despite the fact that 2017 had one fewer day than 2016, as 2016 was a leap year, and despite the impacts of winter storm Stella in March 2017. The storm resulted in 742 fewer transactions and $2,878 less revenue when compared to similar days in March in 2016.

Electronic toll collection remains popular and overall usage rates continue to be strong. On the Turnpike, the E-ZPass usage rate for passenger cars was 83.2% and for commercial vehicles was 91.6%, resulting in an overall usage rate of 84.2% in 2017, an increase from 82.6% in 2016. On the Parkway, the overall E-ZPass usage rate increased to 81.4% from 79.6% in 2016. During 2017, passenger cars had a usage rate of 81.3% and commercial vehicles had a usage rate of 90%.

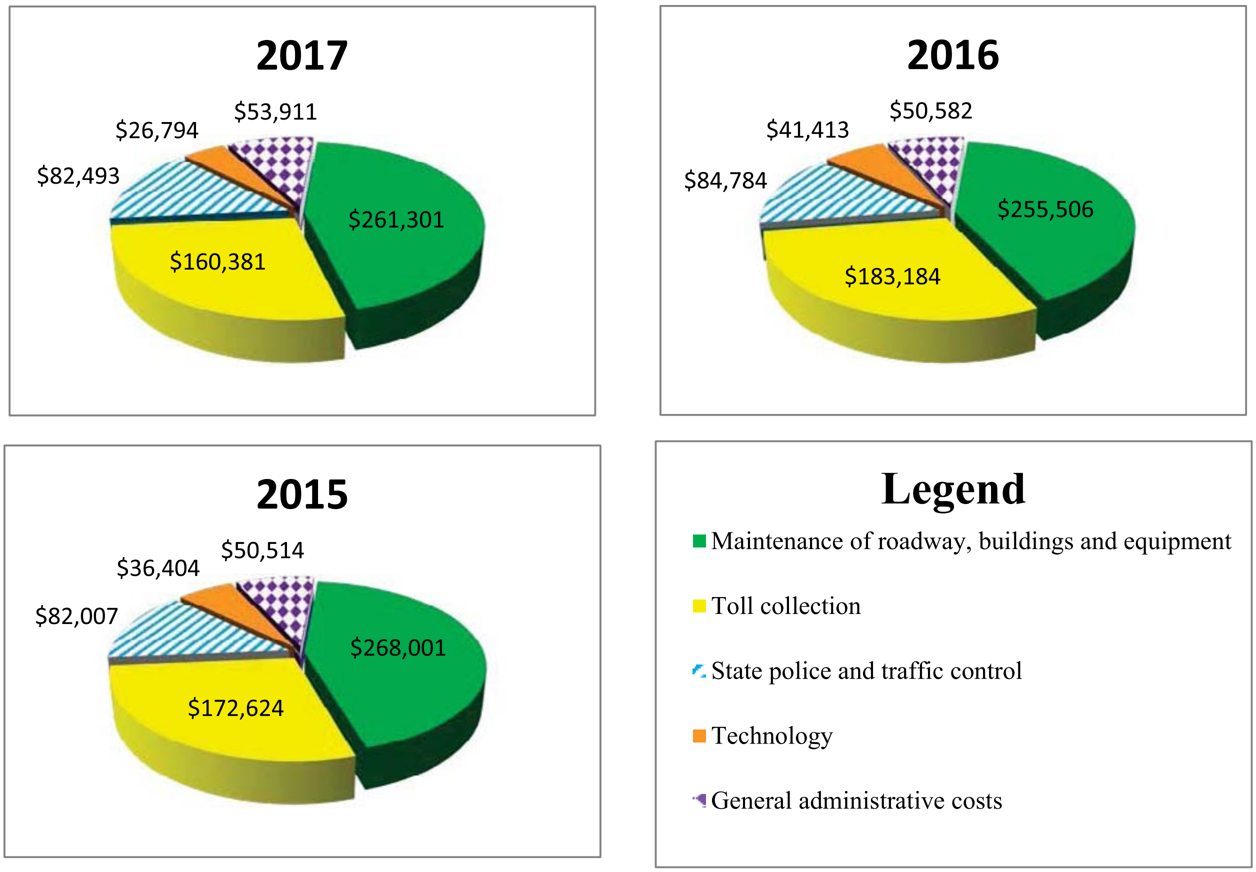
E-ZPass fees totaled $60,505 and $61,053 for the years ended December 31, 2017 and 2016, respectively, representing a minor decrease of $548 or 0.9%. E-ZPass fees consist of monthly membership fees, transponder sales, lost or damaged tag fees, returned check fees, administrative fees, revoked account collection fees, interest on prepaid accounts and monthly statement fees. The decrease primarily resulted from lower lost/damaged tag fees in 2017, as 2016 included amounts collected for transponders that were not returned as part of a prior tag swap program and to a lesser extent, lower administrative fees collected in 2017. These decreases were partially offset by an increase in the interest income earned on the prepaid accounts balances due to a general increase in short term interest rates in 2017.

Concession revenues consist of amounts paid to the Authority from the sale of food, fuel and convenience store items from the companies which operate the service areas on both roadways. Concession revenues were $35,591 in 2017, which represents a decrease of $2,601 or 6.8% from $38,192 in 2016. The decrease is due to a decrease in revenue received by the Authority from the gross profit margin on diesel fuel sales as compared to 2016. The Authority receives 50% of the gross profit margin on all diesel fuel sold on the Turnpike. Fuel sales on the Turnpike decreased by 9.3% in 2017 as compared to 2016. Turnpike food sales decreased 1.1%, and the convenience store sales increased by 2.4%, compared to last year. The decrease in food and fuel sales was in part due to the closure of the Delaware River Turnpike Bridge for a significant portion of the first quarter. On the Parkway, fuel sales decreased 6.7% due to reduction in the gross profit margin on diesel fuel sales and convenience store sales increased 6.7% due to the receipt of back rent payment for the Ocean view Service area. Parkway food sales decreased 3.7%.

Miscellaneous revenue totaled $22,601 for the year ended December 31, 2017, representing an increase of $3,155 or 16.2%, compared to $19,446 for the year ended December 31, 2016. Miscellaneous revenue includes rentals of cell tower sites, fiber lease revenue, fiber optic lines, towing commissions, park and ride receipts, and easements. The increase is primarily due to a significant surplus land sale of $5,700 in 2017. Both 2016 and 2017 included different non-recurring insurance and litigation settlements.

Operating Expenses

Operating expenses by category for the last three years are shown below:



General operating expenses, excluding depreciation, totaled $584,880 for the year ended December 31, 2017, representing a decrease of $30,589, or 5.0%, from $615,469 for the year ended December 31, 2016. The lower operating expenses are primarily the result of a decrease in Toll collection costs by $22,803 to $160,381 from $183,184, for the years ended December 31, 2017 and 2016, respectively. The main reasons for this decrease include the lower pricing for services provided at the New Jersey E-Z Pass Customer Service Center which became effective on February 1, 2017, lower credit card fees, and savings in toll lane equipment maintenance costs as lane maintenance is now performed by in-house staff. Another reason for the decrease in the toll collection cost is reduction in the non-cash portion of the pension expense in 2017. Maintenance expenses increased by $5,795 to $261,301 for the year ended December 31, 2017 from $255,506 for the year ended December 31, 2016 primarily due to an increase in spending on snow and severe weather. In 2017, the Authority spent a total of $34,011 on snow and severe weather events, an increase of $8,702 from 2016. Overall, the Authority managed to maintain the roadways and infrastructure facilities at a relatively stable cost despite the increase in the traffic on both the roadways. State police and traffic control costs decreased by $2,291 to $82,493 for the year ended December 31, 2017 from $84,784 for the year ended December 31, 2016. The primary reason for this decrease is a downward adjustment to a prior year accrual for retroactive salary increases based upon the actual settlement of expired contracts and reduction in the non-cash portion of the pension expense in 2017. Without the adjustment to the accrual for retroactive salary increase, state police and traffic control costs would have increased by $1,777 in 2017 due to higher State Trooper costs due to more troopers patrolling the roadways. Technology costs decreased by $14,619 to $26,794 for the year ended December 31, 2017 from $41,413 for the year ended December 31, 2016. Technology costs went down in 2017 primarily due to the allocation of toll collection equipment maintenance costs, including personnel and parts to the toll collection expense category, as these functions are now fully managed in house since February of 2017. Prior to this, the majority of the maintenance was handled by an outside contractor with the Authority having a small staff to support certain minor maintenance functions. Secondly, the Authority has undertaken fewer technology improvement projects classified as expense projects as compared to the previous year. Technology costs decreased also due to the reduction in the non-cash portion of the pension expense in 2017. General administrative expenses increased by $3,329 to $53,911 for the year ended December 31, 2017 from $50,582 for the year ended December 31, 2016. The slight increase is in part due to higher claim settlements incurred under the deductible limit for various insurance claims. Finally, depreciation expense for the year ended December 31, 2017 totaled $304,989 on the gross depreciable capital asset base of $13,216,919 as compared to $301,120, for the year ended December 31, 2016 showing an increase of $3,869 due to an increase in the gross depreciable capital asset base by $384,840 during 2017.

Nonoperating Revenues (Expenses)

Net non-operating expenses decreased by $21,255 to $491,490 for the year ended December 31, 2017 from $512,745 for the year ended December 31, 2016 primarily due to the contractual reduction in the payments to the State of New Jersey under the new State Transportation Projects Funding Agreement (2016-2021) as compared to the prior agreement and the increase in investment income. The decrease in the payments to the State of New Jersey and the increase in investment income were partially offset by the increase in interest expense on the Turnpike Revenue Bonds in 2017 as compared to the interest expense in 2016, higher bond expenses and lower Federal and State reimbursements.

The Build America Bonds subsidy represents a direct payment by the United States Treasury to the Authority originally equal to 35% of the interest payable on the Series 2009F Bonds and the Series 2010A Bonds. The Build America Bonds subsidy in 2017 was $76,153, an increase of $82 from $76,071 in 2016 due to a decline in the automatic Federal deficit reduction spending cuts. The subsidy payment received for the July 1, 2017 interest payment was reduced by 6.9% and the subsidy payment received for January 1, 2018 interest payment was reduced by 6.6%, while in 2016 the comparable payments were reduced by 6.8% and 6.9%, respectively.

Payments to the State of New Jersey decreased by $61,500 in 2017 to $232,500 from $294,000 in 2016. The payments to the State include an annual payment of $22,000 in 2017 and 2016 to assist in transportation purposes. Under the terms of a State Transportation Projects Funding Agreement dated September 30, 2011 and a successor agreement dated June 28, 2016, the Authority made payments totaling $204,000 in 2017 and $264,000 in 2016. The Authority also made annual payments to the State totaling $6,500 in 2017 and $8,000 in 2016 as per the Feeder Road Maintenance and Cost Sharing Agreement, dated July 1, 2016, for feeder road maintenance provided by the New Jersey Department of Transportation. Payments under all agreements are made from the General Reserve Fund and are subordinate to debt service payments on outstanding bonds and all other obligations under the Authority's General Bond Resolution (note 16).

Investment earnings were $87,529 in 2017 as compared to $12,217 in 2016. Interest income earned by the Authority on investments was $17,732 in 2017, significantly higher than the $12,777 earned in 2016 primarily due to a general increase in short term interest rates. The adoption of GASB 53 in 2010 required the recognition of certain of the Authority's interest rate swaps as investments. Accordingly, the fixed payments made on these interest rate swaps, the variable payments received and the changes in fair market value were required to be reported as investment income (loss). In 2017 and 2016, the Authority was required to report the mark-to-market value of the interest rate swaps that hedge the Series 2000B-G bonds as investments. In 2017, the Authority recorded an investment loss of $10,141 representing the fixed interest payments on the Series 2000B-G swaps, net of the variable payments received, compared to an investment loss of $13,801 in 2016. In October 2017, the Authority amended the terms of its Series 2000B-G swaps as part of a refunding of the Series 2000B-G Bonds. The swaps are now considered effective under GASB 53 and no longer classified as an investment as of December 31, 2017. As such, the Authority recognized an investment gain of $79,938, representing the reclassification of the negative mark to market value of the swap. During 2016, the Authority recorded an investment gain of $13,238 representing the change in fair market value of the Series 2000B-G swaps. In addition, in 2017 and 2016, investment earnings were reduced $5,277 and $2,514, respectively representing interest income capitalized to capital assets.

Interest expense increased by $102,721 in 2017 as compared to 2016, primarily due to the interest expense on the Series 2017A Bonds, which were issued in April 2017 and a reduction in the interest expense capitalized to the construction projects.

2016 – 2015

Operating Revenues

Operating revenues totaled $1,689,353 for the year ended December 31, 2016, representing an increase of $57,330 or 3.5% from the year ended December 31, 2015. The principal source of revenue for the Authority is tolls. During 2016, toll revenue totaled $1,570,662 and constituted 93.0% of the Authority's operating revenues, as compared to $1,523,133, or 93.3%, in 2015. On the Turnpike, passenger car traffic increased 3.8% while commercial vehicle traffic increased by 2.0% resulting in an overall increase of 3.6%. On the Parkway, passenger car toll transactions increased by 2.8% while commercial vehicle toll transactions decreased by 3.2% resulting in an overall increase by 2.7%. The increases on both roadways as compared to 2015 reflect favorable weather conditions, an improving economy, comparatively lower gas prices and an extra leap year day in 2016. In addition, toll revenue increased due to the positive impacts on traffic from the widening of both roadways.

Electronic toll collection remains popular and overall usage rates continue to be strong. On the Turnpike, the E-Z Pass usage rate for passenger cars was 81.4% and for commercial vehicles was 90.8%, resulting in an overall usage rate of 82.6% in 2016, an increase from 81.7% in 2015. On the Parkway, the overall E-Z Pass usage rate increased to 79.6% from 78.7% in 2015. During 2016, passenger cars had a usage rate of 79.5% and commercial vehicles had a usage rate of 89.0%.

E-ZPass fees totaled $61,053 and $54,751 for the years ended December 31, 2016 and 2015, respectively, representing an increase of $6,302 or 11.5%. E-ZPass fees consist of monthly membership fees, transponder sales, returned check fees, administrative fees, interest on prepaid accounts and monthly statement fees. The increase primarily resulted from higher administrative fees collected from toll violators, increases in membership and statement fees, as well as higher lost or damaged tag fees. Administrative fee collections increased due to enhanced enforcement and collection efforts, including New Jersey Motor Vehicle Commission registration holds for repeat violators. There are approximately 139,000 more NJ E-ZPass accounts at the end of 2016 as compared to 2015, accounting for the increase in membership and statement fees while lost or damaged tag fees increased due to fees assessed for transponders not retuned as part of the tag swap program.

Concession revenues were $38,192 in 2016. This represents a decrease of $801 or 2.1% from $38,993 in 2015. The decrease is due to a decrease in revenue from the gross profit margin on diesel fuel sales as compared to 2015. The Authority receives 50% of the gross profit margin on all diesel fuel sold. The fuel sales on Turnpike decreased by 5.7% in 2016 as compared to 2015. Turnpike food and convenience store sales increased 5.0%, and 11.7%, respectively, compared to last year. The increase in food and convenience store sales was in part due to the reopening of the Grover Cleveland Service Area on the Turnpike on November 23, 2015 after a three-year closure due to the effects of Superstorm Sandy. On the Parkway, fuel sales increased 2.0% and convenience store sales increased 3.6%. Parkway food sales only increased 0.2% due to the closure of the food service facility at Vauxhall Service Area for maintenance from October 2, 2015 to May 3, 2016.

Miscellaneous revenue totaled $19,446 for the year ended December 31, 2016, representing an increase of $4,300, and 28.4% respectively, compared to $15,146 for the year ended December 31, 2015. Miscellaneous revenue includes rentals of cell tower sites, fiber lease revenue, fiber optic lines, towing commissions, park and ride receipts and easements. Miscellaneous revenue increased primarily due to the receipt of a non-recurring insurance settlement and a non-recurring Financial Industry Regulatory Authority (FINRA) arbitration settlement.

Operating Expenses

General operating expenses, excluding depreciation, totaled $615,469 for the year ended December 31, 2016, representing an increase of $5,919, or 1.0%, from $609,550 for the year ended December 31, 2015. The higher costs are entirely the result of an increase in the non-cash portion of Pension Expense, which increased by $23,562 to $33,979 from $10,417, for the years ended December 31, 2016 and 2015, respectively. Maintenance expenses decreased by $12,495 to $255,506 for the year ended December 31, 2016 from $268,001 for the year ended December 31, 2015, primarily due to lower snow and severe weather-related costs and utility expenses in 2016 as compared to 2015. Toll collection costs increased by $10,560 to $183,184 for the year ended December 31, 2016 from $172,624 for the year ended December 31, 2015. The main reason for this increase is the non-cash portion of Pension Expense, higher credit card fees due to increased toll revenue processed through electronic toll collection, higher electronic toll collection transaction processing costs due to the overall increase in electronic toll transactions, and higher violation collection expenses, as administrative fee collections also increased due to enhanced collection efforts. State police and traffic control costs increased by $2,777 to $84,784 for the year ended December 31, 2016 from $82,007 for the year ended December 31, 2015. The primary reason for this increase is due to a higher number of state troopers assigned to the roadways, resulting in higher salary and benefit costs paid to the New Jersey Division of State Police, as well as an increase in state police vehicles purchased. Technology costs increased by $5,009 to $41,413 for the year ended December 31, 2016 from $36,404 for the year ended December 31, 2015. This increase is due to the non-cash portion of Pension Expense, higher software license and equipment maintenance fees resulting from the various technology improvement projects initiated by the Authority. General administrative expenses increased by $68 to $50,582 for the year ended December 31, 2016 from $50,514 for the year ended December 31, 2015. Overall, due to the increase of the non-cash portion of Pension Expense, general administrative expenses slightly increased. However, there is a decrease in insurance claims and premiums, lower property taxes paid on surplus real estate, and lower bond-related expenses. Finally, depreciation expense in 2016 totaled $301,120 on the gross depreciable capital asset base of $12,832,079.

Nonoperating Revenues (Expenses)

Net non-operating expenses decreased by $72,676 to $512,745 for the year ended December 31, 2016 from $585,421 for the year ended December 31, 2015 primarily due to the contractual reduction in the payments to the State of New Jersey under the new State Transportation Projects Funding Agreement (2016-2021) as compared to the prior agreement. The decrease in the payments to the State of New Jersey was partially offset by the increase in interest expense on the Turnpike Revenue Bonds in 2016 as compared to the interest expense in 2015.

The Build America Bonds subsidy represents a direct payment by the United States Treasury to the Authority originally equal to 35% of the interest payable on the Series 2009F bonds and the Series 2010A bonds. The Build America Bonds subsidy in 2016 was $76,071, an increase of $163 from $75,908 in 2015 due to a decline in the automatic Federal deficit reduction spending cuts. The subsidy payment received in June 2016 was reduced by 6.8% and the subsidy payment received in December 2016 was reduced by 6.9%, while in 2015 the comparable payments were reduced by 7.3% and 6.8%, respectively.

Payments to the State of New Jersey decreased by $60,001 in 2016 to $294,000 from $354,001 in 2015. The payments to the State include an annual payment of $22,000 in 2016 and 2015 to assist in transportation purposes. Under the terms of a State Transportation Projects Funding Agreement dated September 30, 2011 and as amended on June 28, 2016, the Authority made an annual payment of $264,000 in 2016 and $354,000 in 2015. The Authority also made annual payments to the State totaling $8,000 in 2016 and $8,001 in 2015 as per the Feeder Road Maintenance and Cost Sharing Agreement, as amended on July 1, 2016, for feeder road maintenance provided by the New Jersey Department of Transportation. These payments are made from the General Reserve Fund and are subordinate to debt service payments on all outstanding bonds and all other obligations under the Authority's General Bond Resolution (see note 16).

Investment earnings were a gain of $12,217 in 2016 as compared to a gain of $2,403 in 2015. Interest income earned by the Authority on investments was $12,777 in 2016, slightly higher than the $11,683 earned in 2015. The adoption of GASB 53 in 2010 requires the recognition of certain of the Authority's interest rate swaps as investments. Accordingly, the fixed payments made on these interest rate swaps, the variable payments received and the changes in fair market value are required to be reported as investment income (loss). In 2016 and 2015, the Authority was required to report the mark-to-market value of the interest rate swaps that hedge the Series 2000B-G bonds as investments. In 2016, the Authority recorded an investment loss of $13,801 representing the fixed interest payments on the Series 2000B-G swaps, net of the variable payments received, compared to an investment loss of $13,005 in 2015. In 2016, the Authority recognized an investment gain of $13,238, representing the change in fair market value of the Series 2000B-G swaps as compared to an investment gain of $3,720 in 2015. In addition, in 2016 and 2015, the Authority recorded capitalized interest income of $2,514 and $2,290, respectively.

(Dollars shown in thousands)

Interest expense increased by $8,829 in 2016 as compared to 2015, primarily due to a full year of interest expense on the Series 2015E Bonds, which were issued in October 2015. The increased interest expense on these bonds was partially offset by an increase in interest expense capitalized to projects, again related to a full year of interest costs on the Series 2015E Bonds.

Adjusted Revenue, Expenses and Change in Net Position

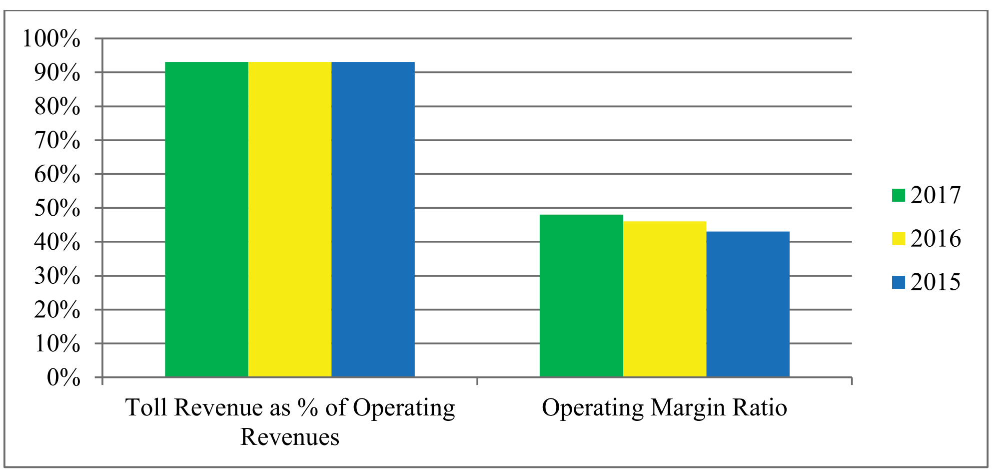
		2017	2016	2015
Change in Net Position as per GAAP Financials	$	329,704	260,019	120,675
Unfunded non cash adjustments:				
Total operating expenses - GAAP adjustments		26,059	71,149	37,285
Interest expense, Turnpike Revenue Bonds		(136,270)	(235,676)	(226,702)
Investment income (loss)		(64,516)	3,078	11,574
Interfund transfers		(23,488)	211,694	196,880
Total Non Cash Adjustment	$	(198,215)	50,245	19,037
Garden State Arts Foundation		79	(61)	238
Change in net position as per Bond Resolution	$	131,568	310,203	139,950
Add other non cash expenses				
Depreciation		304,989	301,120	316,377
Amortization		(46,327)	(39,812)	(35,382)
Change in Net Position - Non-GAAP	$	390,230	571,511	420,945

Shown above is the change in Net Position as per the Bond Resolution and has been calculated by adjusting the change in Net Position as per GAAP for non-cash expenses such as the non-cash portion of the Annual OPEB expense, GASB 68 Pension Expenses, and interest expense and investment income or loss due to the effects of GASB 53. The Change in Net Position – Non-GAAP is calculated by adding back the non-cash expenses such as depreciation and amortization of discounts and premium to the Adjusted Change in Net Position – Bond Resolution. Management believes that the Adjusted Change in Net Position above, which eliminates the more significant GAAP basis non-cash line items, presents an alternate view of the strength of the Authority's financial results.

(Dollars shown in thousands)

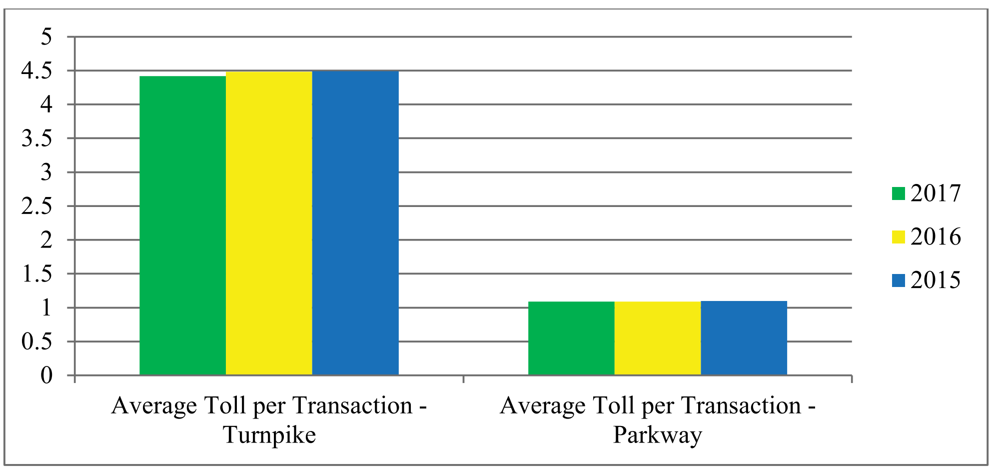
Revenue and Expense Ratio Analysis - GAAP Basis

Ratio	2017	2016	2015	Explanation
Toll Revenue as % of Operating Revenue	93%	93%	93%	Toll revenue as percentage of operating revenue is calculated by dividing toll revenue by operating revenue. This percentage has remained consistent over the three years at 93%, indicating that almost all of the Authority's revenue is earned from toll collection. It also indicates that as a whole, all revenue sources have increased at approximately the same percentage over the past three years.
Operating Margin Ratio Percentage	48%	46%	43%	The operating margin ratio percentage is calculated by dividing operating income by total operating revenue. This ratio has increased to 48% in 2017 as compared to 46% in 2016, due to relatively lower operating expenses and higher operating revenue. The increase in this ratio in 2016 as compared to 2015 is also attributable to higher operating income and operating revenue. This ratio is consistently increasing year over year depicting an upward trend in operating income due to increase in operating revenue and stable operating expenses.



(Dollars shown in thousands)

Ratio	2017	2016	2015	Explanation
Average Toll per Transaction - Turnpike	4.42	4.48	4.49	Average toll per transaction is calculated by dividing toll revenue by the number of toll transactions. With no change in the toll rates the slight decline in the average toll per transaction in 2017 indicates that the average trip lengths per transaction decreased marginally in 2017 as compared to 2016. Overall there is no significant change in the average toll per transaction from 2015 to 2017.
Average Toll per Transaction - Parkway	1.09	1.09	1.10	The average toll per transaction on the Parkway remained essentially unchanged over the three year period with a slight decrease in 2016 and 2017. Accordingly, on average, the composition of toll transactions by barrier and class remained constant over the three year period.



Toll Revenue Schedules

New Jersey Turnpike
Schedule of Toll Revenue
For the Twelve Months Ended December 31, 2017, 2016 and 2015
(all amounts in thousands)

Class	Description	2017 Toll revenue	2017 Number of vehicles (unaudited)	2016 Toll revenue	2016 Number of vehicles (unaudited)	2015 Toll revenue	2015 Number of vehicles (unaudited)
1	Passenger car, motorcycle, taxi or hearse, light truck	$ 797,953	227,978	789,477	223,634	756,561	215,358
2	Vehicles having two axles other than type described under Class 1	64,460	8,676	63,453	8,489	61,429	8,233
3	Vehicle (vehicles), single or in combination, having three axles	29,672	3,632	28,942	3,532	27,479	3,374
4	Vehicle (vehicles), single or in combination, having four axles	35,639	2,877	34,626	2,763	33,465	2,679
5	Vehicle (vehicles), single or in combination, having five axles	233,919	15,345	230,812	15,034	227,615	14,909
6	Vehicle (vehicles), single or in combination, having six or more axles	7,783	411	6,671	352	6,392	335
7	Buses having two axles	2,334	448	2,224	428	2,156	413
8	Buses having three axles	14,026	1,298	13,753	1,261	13,849	1,296
	Nonrevenue vehicles	—	1,559	—	1,571	—	1,558
		1,185,786	262,224	1,169,958	257,064	1,128,946	248,155
	Nonrevenue vehicles	—	(1,559)	—	(1,571)	—	(1,558)
	Toll Adjustments and Discounts	(4,237)	—	(3,520)	—	(5,106)	—
	Net Violations	(29,811)	—	(21,880)	—	(17,572)	—
		$ 1,151,738	260,665	1,144,558	255,493	1,106,268	246,597

Garden State Parkway
Schedule of Toll Revenue
For the Twelve Months Ended December 31, 2017, 2016 and 2015
(all amounts in thousands)

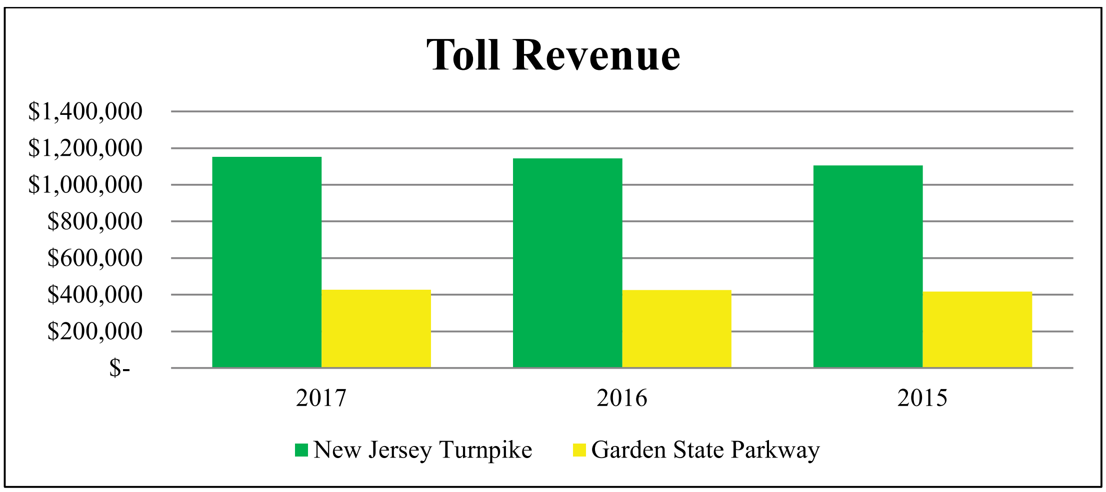
Class	Description	2017 Toll revenue	2017 Number of vehicles (unaudited)	2016 Toll revenue	2016 Number of vehicles (unaudited)	2015 Toll revenue	2015 Number of vehicles (unaudited)
1	Passenger car, motorcycle, taxi or hearse, light truck	$ 420,385	387,787	416,990	384,586	407,254	374,092
2	Vehicles having two axles other than type described under Class 1	1,938	830	2,202	925	2,674	1,124
3	Vehicle (vehicles), single or in combination, having three axles	3,469	1,144	3,376	1,106	3,476	1,142
4	Vehicle (vehicles), single or in combination, having four axles	3,830	888	3,502	817	3,511	815
5	Vehicle (vehicles), single or in combination, having five axles	2,778	583	2,692	564	2,584	532
6	Vehicle (vehicles), single or in combination, having six or more axles	126	21	130	22	138	25
7	Buses having two axles	1,788	687	1,638	634	1,589	605
8	Buses having three axles	2,589	956	2,588	956	2,589	949
	Nonrevenue vehicles	—	1,532	—	1,458	—	1,476
		436,903	394,428	433,118	391,068	423,815	380,760
	Nonrevenue vehicles	—	(1,532)	—	(1,458)	—	(1,476)
	Toll Adjustments and Discounts	(318)	—	(286)	—	(474)	—
	Net Violations	(8,427)	—	(6,728)	—	(6,476)	—
		$ 428,158	392,896	426,104	389,610	416,865	379,284

(Dollars shown in thousands)

Key Performance Metrics - Revenue and Expenses

Toll Revenue – Toll revenue has increased consistently from 2015 to 2017. When comparing 2017 to 2016, there is an increase in toll revenue of 0.6% or $9,234 for both the Turnpike and Parkway. The slight increase in the toll revenue is due to milder weather conditions, favorable economic conditions, and comparatively stable gas prices through most of the year in 2017. Toll revenue increased in 2017 despite the Delaware River Turnpike Bridge closure for 48 days in the first quarter and the impact of winter storm Stella in March 2017. Toll revenue from 2015 to 2016 also increased for both the Turnpike and Parkway, for an overall increase of 3.1%. The substantial increase of 3.5% for the Turnpike can be attributed to the opening of the Turnpike widening between Interchanges 6 and 9 in late 2014.

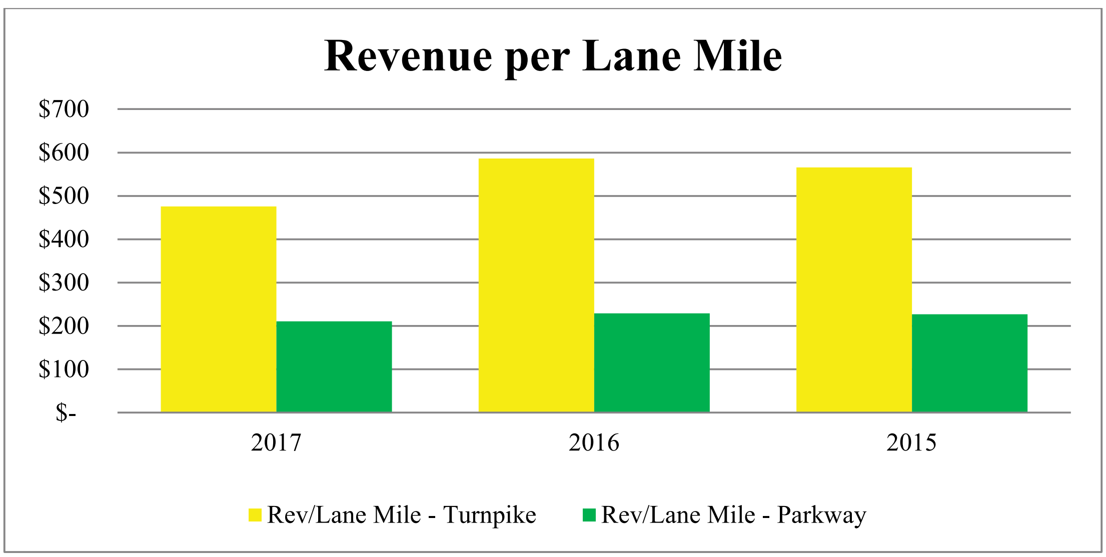
		Turnpike	Parkway	Total
2017	$	$1,151,738	428,158	1,579,896
2016	$	$1,144,558	426,104	1,570,662
2015	$	$1,106,268	416,865	1,523,133
% change from 2016 to 2017		0.6%	0.5%	0.6%
% change from 2015 to 2016		3.5%	2.2%	3.1%



(Dollars shown in thousands)

Revenue per Lane Mile – Revenue has increased each year (from 2016 to 2017 and from 2015 to 2016) on both the Turnpike and Parkway due to the milder weather conditions, favorable economic conditions, comparatively stable gas prices and the impacts of the widening programs on both roadways. Despite the increase in the toll revenue from 2016 to 2017, revenue per lane mile decreased due to a significant increase in the lane miles in 2017 from the addition of shoulder lane miles on both the roadways. Toll revenue per lane mile increased in 2016 as compared to 2015, mainly due to increase in the toll revenue, despite a slight increase in the lane miles on both the roadways in 2016 as compared with 2015.

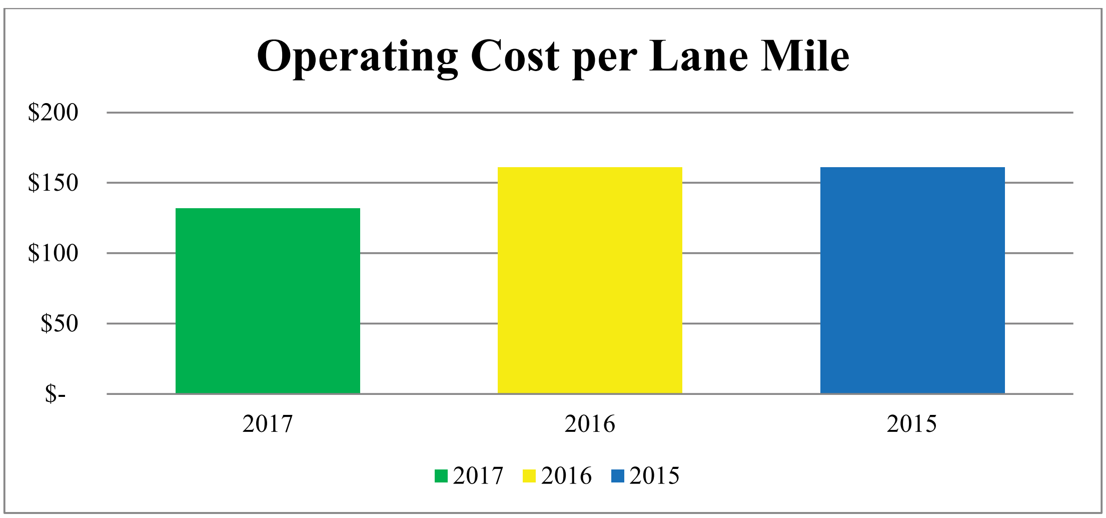
		2017	2016	2015
Toll Revenue - Turnpike	$	1,151,738	1,144,558	1,106,268
Toll Revenue - Parkway		428,158	426,104	416,865
Total Toll Revenue	$	1,579,896	1,570,662	1,523,133
Lane Miles (actual) - Turnpike		2,418	1,953	1,953
Lane Miles (actual) - Parkway		2,028	1,861	1,840
Total Lane Miles (actual)		4,446	3,814	3,793
Revenue per Lane Mile - Turnpike	$	476	586	566
Revenue per Lane Mile - Parkway	$	211	229	227
Revenue per Lane Mile - Authority	$	355	412	402



(Dollars shown in thousands)

Operating Cost per Lane Mile – Operating expenses shown below include maintenance, toll collection, state police and traffic control, technology and general administrative expenses, but excludes depreciation. From 2016 to 2017, there was a decrease in the operating cost per lane mile which can be attributed to the decrease in total operating expenses in 2017 by $30,589 and also due to the increase in lane miles in 2017 from the addition of shoulder lane miles on both the roadways (see page 19 for further breakout of operating costs). From 2015 to 2016, operating cost per lane mile remained unchanged due to marginally higher operating expenses and marginally higher lane miles in 2016 as compared to 2015.

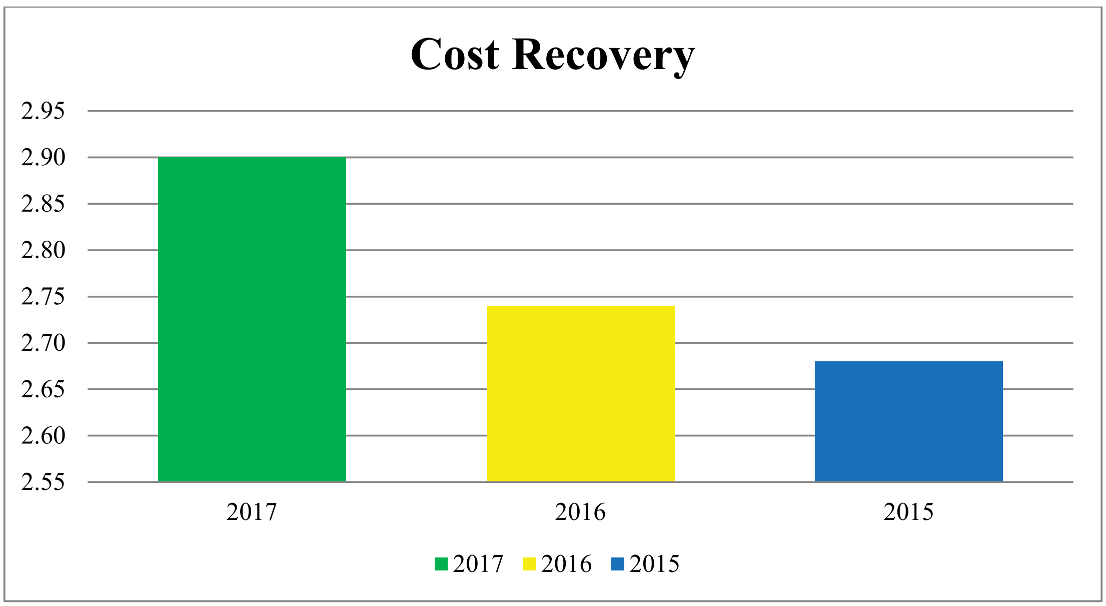
		2017	2016	2015
Total operating expenses	$	584,880	615,469	609,550
Lane Miles (actual) - Turnpike		2,418	1,953	1,953
Lane Miles (actual) - Parkway		2,028	1,861	1,840
Total Lane Miles		4,446	3,814	3,793
Operating cost Excluding Depreciation/Lane Mile - Authority	$	132	161	161



(Dollars shown in thousands)

Cost Recovery – The cost recovery ratio is calculated by dividing operating revenues by operating expenses. Therefore, a ratio 1.0 or above is a positive sign as it indicates operating expenses are being fully recouped by operating revenues. The cost recovery ratio was over 2.0 in each of the years 2015 – 2017, which is a strong indicator of the Authority's ability to meet its operating expenses with its operating revenues. From 2016 to 2017, the cost recovery ratios increased due to marginally higher operating revenue and comparatively lower operating expenses. In 2017 operating revenue was nearly three times higher than operating expenses. From 2015 to 2016, the ratio increased slightly due to an increase in operating revenue in 2016 that exceeded the increase in operating expenses.

		2017	2016	2015
Operating Revenue	$	1,698,593	1,689,353	1,632,023
Operating Expenses (excluding depreciation)	$	584,880	615,469	609,550
Cost Recovery		2.90	2.74	2.68



Financial Management Principles and Guidelines

In December 2012, the Authority adopted its "Financial Management Principles and Guidelines" (the Guidelines). Among the policies established, the Authority will manage its toll rates, expense budget and debt issuance program to achieve minimum senior debt service coverage of 1.40x and total requirement coverage of 1.20x. The Authority will also manage its cash flow and total expenditure levels such that it maintains average unrestricted cash balance in the General Reserve Fund equal to at least $75,000. The Guidelines were amended in November 2015 to increase the minimum unrestricted cash balance in the General Reserve Fund to $100,000. In January 2017, the Authority once again amended its Guidelines with respect to the minimum General Reserve Fund Balance requirement. The amended Guidelines increase the unrestricted cash balance in the General Reserve fund as follows:

(1) a minimum balance of $125,000 at 12/31/17;
(2) a minimum balance of $150,000 at 12/31/18;
(3) a minimum balance of $175,000 at 12/31/19;
(4) beginning in 2020, by December 31st of each year, a minimum balance equal to 10% of that year's budgeted total annual revenue.

The Guidelines are implemented at the discretion of the Authority and are not a legal covenant with bondholders. Such Guidelines can be changed or eliminated at any time at the discretion of the Authority. As specified in the Guidelines, the Authority also adopted an Interest Rate Swap Management Plan in April 2013 which was amended in November 2015, an Investment Policy in September 2013, and a Debt Management Policy in January 2014. These documents may be found on the Authority's website at http://www.njta.com/investor-relations/about-investor-relations.

Debt Administration

The issuance of new bonds is conducted in accordance with the New Jersey Turnpike Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented and the Turnpike Revenue Bond Resolution adopted on August 20, 1991, as amended, restated and supplemented. The issuance of new bonds requires the approval of the Board of Commissioners and prior approval in writing from the Governor and from either or both the State Treasurer and the Director of the Division of Budget and Accounting of the Department of Treasury, payable solely from tolls and other revenues of the Authority. Detailed information on the Bonds activity during 2017 and 2016 can be found in note 6.

(Dollars shown in thousands)

Bonds payable are shown below:

Series		2017	2016	2015
1991 Series (C)	$	—	—	67,160
2000 Series (B-G)		—	400,000	400,000
2003 Series (B)		—	—	70,005
2004 Series (B, C2)		132,850	132,850	301,496
2005 Series (A-B, D1-D4)		414,885	414,885	414,885
2009 Series (A-B, E-I)		1,430,820	2,193,945	2,193,945
2010 Series (A)		1,850,000	1,850,000	1,850,000
2012 Series (A-B, G)		819,435	945,690	945,690
2013 Series (A-G)		602,330	1,986,305	2,116,295
2014 Series (A, B1-3, C)		1,201,860	1,251,860	1,301,860
2015 Series (A-H)		1,125,585	1,125,585	1,125,585
2016 Series (A-D)		325,035	325,035	—
2017 Series (A-G)		3,080,305	—	—
Premium and discount, net		627,624	444,966	464,242
Total outstanding bonds	$	11,610,729	11,071,121	11,251,163

2017 – 2016

On April 11, 2017, the Authority issued $600,000 of Series 2017A Turnpike Revenue Bonds. The purpose of the Series 2017A Bonds was to (i) continue to fund projects under the $7 Billion CIP, (ii) make a deposit to the Debt Reserve Fund and (iii) pay the costs of issuance of the Series 2017A Bonds.

On August 3, 2017, the Authority issued $646,765 of the Series 2017B Turnpike Revenue Bonds to fully refund and, defease the Series 2009E Bonds, and to partially refund and defease the Series 2009H Bonds, the Series 2009I Bonds and the Series 2013A Bonds.

On October 26, 2017, the Authority issued $579,375 of Series 2017C1-6 and Series 2017D1-4 Turnpike Revenue Bonds. The Series 2017C1-6 was issued to fully refund the Series 2000B-G Bonds. The Series 2017D1-4 was issued to fully refund the Series 2013D-3, the Series 2013E-3 and the Series 2014B-3 Bonds in order to meet the mandatory tender date on the refunded bonds to avoid interest rate escalations. At the same time the Authority entered into an amendment on its existing Series 2000B-G Interest Rate Swap agreement and re-identified it to the Series 2017C1-6 Bonds.

On December 14, 2017, the Authority issued $527,525 of Series 2017E and Series 2017F Turnpike Revenue Bonds to fully refund and defease the Series 2009I Bonds and to partially refund and defease the Series 2009H Bonds, the Series 2012A Bonds and the Series 2013A Bonds.

On December 21, 2017, the Authority issued $726,640 of Series 2017G Turnpike Revenue Bonds to partially refund and defease the Series 2012A Bonds and the Series 2013A Bonds.

Moody's Investors Services, Inc., S&P Global Ratings and Fitch Ratings assigned the ratings A2, A+ and A, respectively, to each of the Series 2017 Turnpike Revenue Bonds.

2016 – 2015

In accordance with its refunding plan, on February 2, 2016, the Authority issued $149,995 of Series 2016A Turnpike Revenue Bonds to fully refund and defease the Series 2004B Bonds.

On December 21, 2016, the Authority issued $175,040 of Series 2016B, 2016C and 2016D Floating Rate Bonds to fully refund the Series 2013D-2, 2013E-2 and 2014B-2 Bonds, respectively.

Moody's Investors Services, Inc., S&P Global Ratings and Fitch Ratings assigned the ratings A2, A+ and A, respectively, to each of the Series 2016 Turnpike Revenue Bonds.

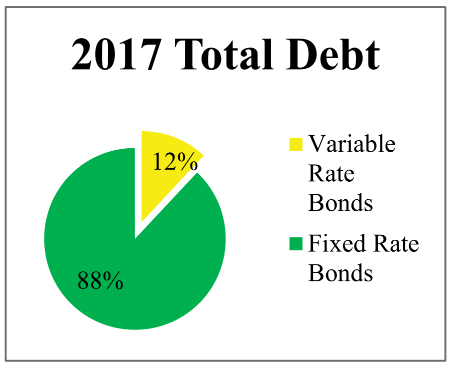
Build America Bond Subsidy Payments

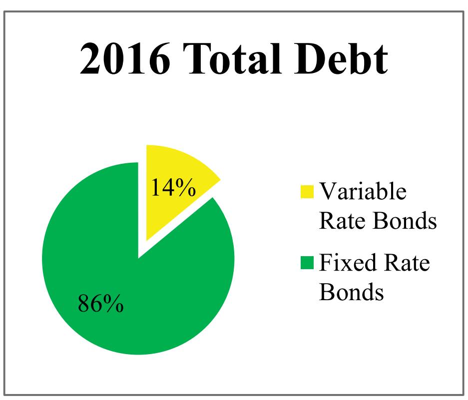
The Authority's Series 2009F and Series 2010A Turnpike Revenue Bonds were issued as Build America Bonds (BAB). The BAB program was authorized by the American Recovery and Reinvestment act enacted in February 2009 to encourage local spending on new construction. Under the program, the U.S. Treasury makes a direct payment to the Authority originally equal to 35% of the interest expense for eligible bonds.

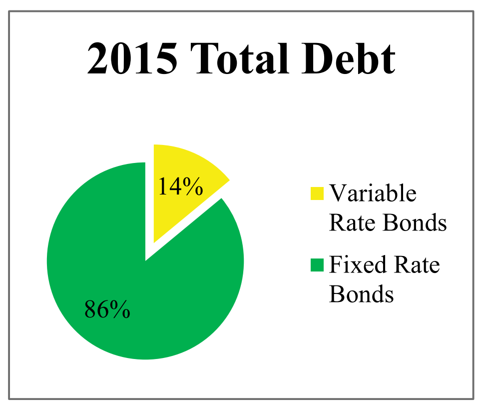
The Budget Control Act of 2011 reduced the amount of the subsidy paid by the Federal Government through automatic federal spending cuts commonly known as sequestration. The payment to the Authority received in June 2015 (for July 1, 2015 interest payment) was reduced by 7.3%, or $2,980. The payment received in December 2015 (for January 1, 2016) was reduced by $2,777 or 6.8%, the payment received in June 2016 (for July 1, 2016) was reduced by $2,777 or 6.8%, the payment received in December 2016 (for January 1, 2017) was reduced by $2,817 or 6.9%, the payment received April 2017 (for July 1, 2017) was reduced by $2,817 or 6.9%, and the payment received in December 2017 (for January 1, 2018) was reduced by $2,695 or 6.6%. The Internal Revenue Service has reported that the Authority's payment due on July 1, 2018 will also have a 6.6% reduction. There is uncertainty as to whether or not the Federal Government will make further cuts to the program.

Debt Portfolio

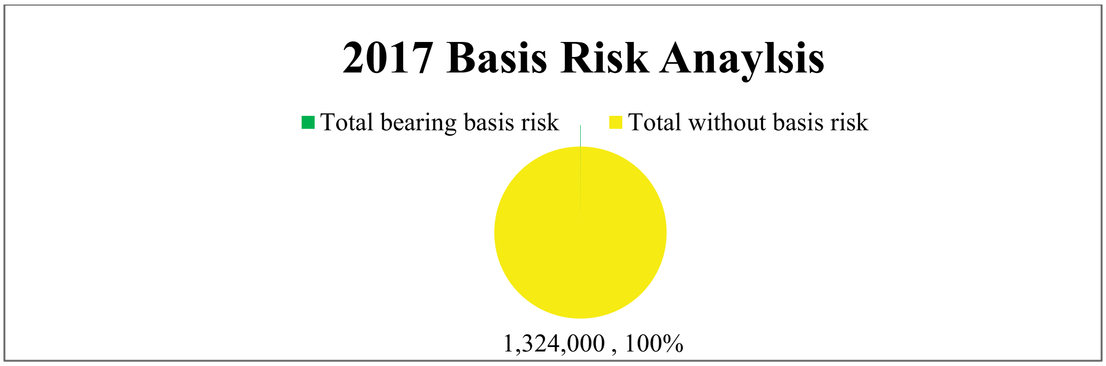
The Authority's bond portfolio at December 31, 2017 had a par value outstanding of $10,983,105 as compared to $10,626,155 at December 31, 2016 and $10,786,921 at December 31, 2015. The par value of bonds increased in 2017 as compared to 2016 due to the continued issuance of Turnpike Revenue Bonds to finance the $7 Billion CIP, partially offset by scheduled principle payments. While the overall total debt outstanding has increased since 2015, the percentage of fixed rate versus variable rate bonds has declined, as the Authority has solely issued fixed rate debt to finance the $7 Billion CIP to avoid the risks associated with variable rate debt. As of December 31, 2017, total debt includes 88% of fixed rate bonds and only 12% of variable rate bonds, as compared to 86% of fixed rate bonds and 14% of variable rate bonds as of December 31, 2016 and 2015. These percentages are within the Authority's Guidelines, which limit variable rate bonds to 20% of total bonds outstanding.

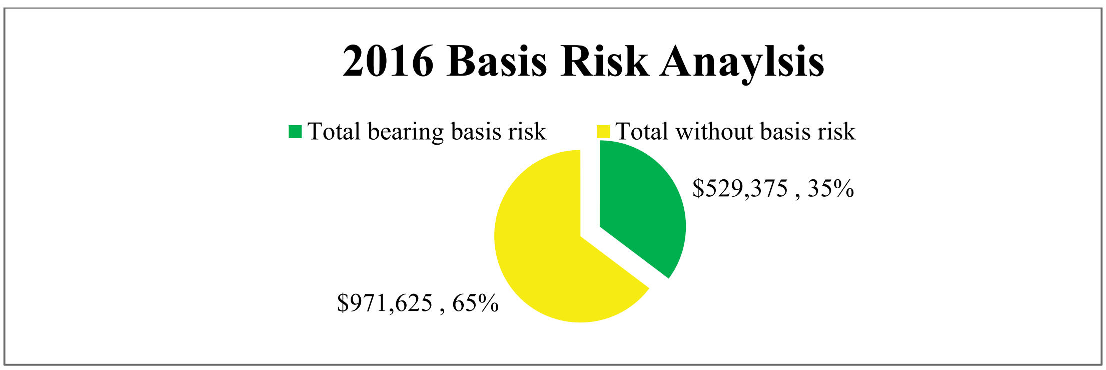


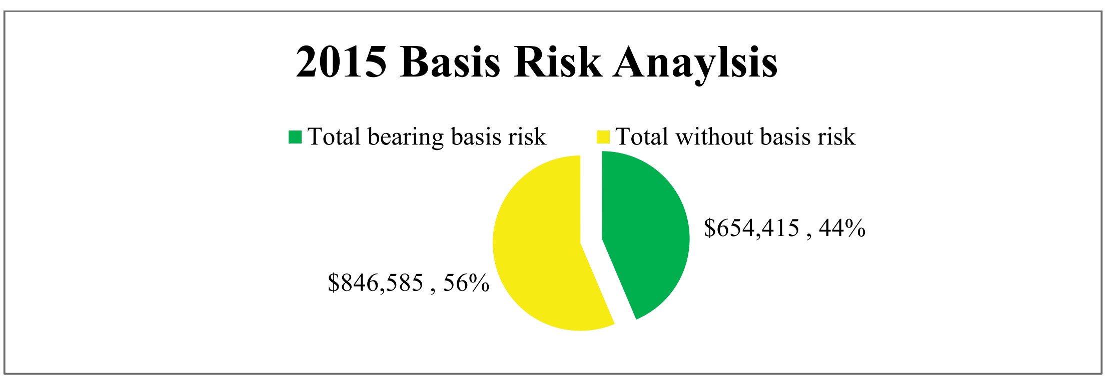




The Authority has been actively reducing the basis risk on its interest rate swap portfolio when possible over the past several years. Basis risk includes those variable rate bonds which have an interest rate index (either SIFMA or LIBOR) used to determine interest payments on the bonds which is different from the interest rate index (either SIFMA or LIBOR) used to calculate the variable payment received on the associated interest rate swap. At December 31, 2017, the Authority is not exposed to basis risk, as the Authority amended all interest rate swaps that had basis risk to receive a variable rate based on the same rate or index as the hedged variable rate debt. At December 31, 2016, the percentage of variable rate bonds bearing basis risk was reduced to 35% from 44% at December 31, 2015.







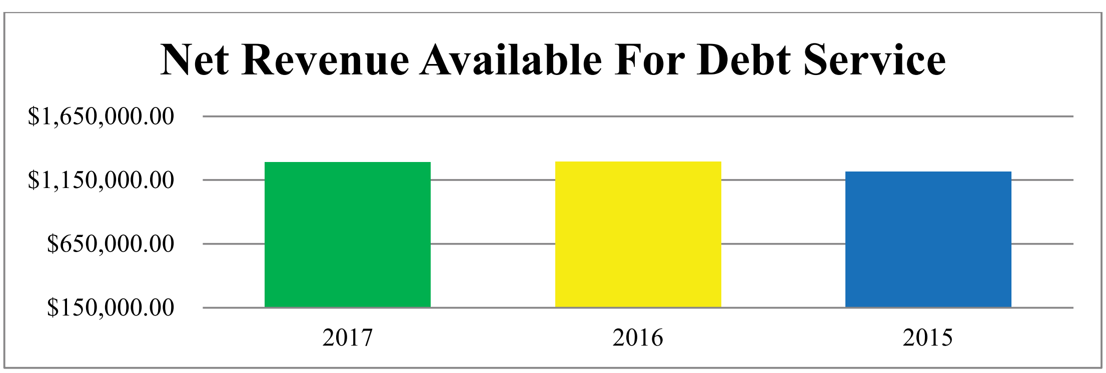
(Dollars shown in thousands)

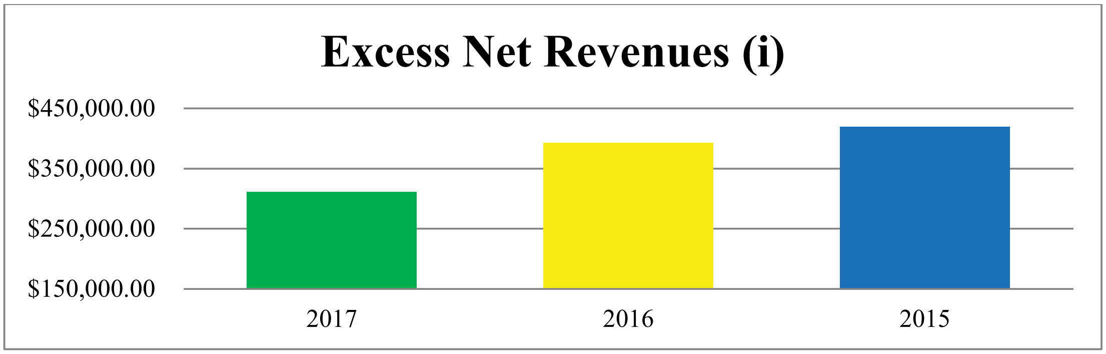
Debt Service Coverage

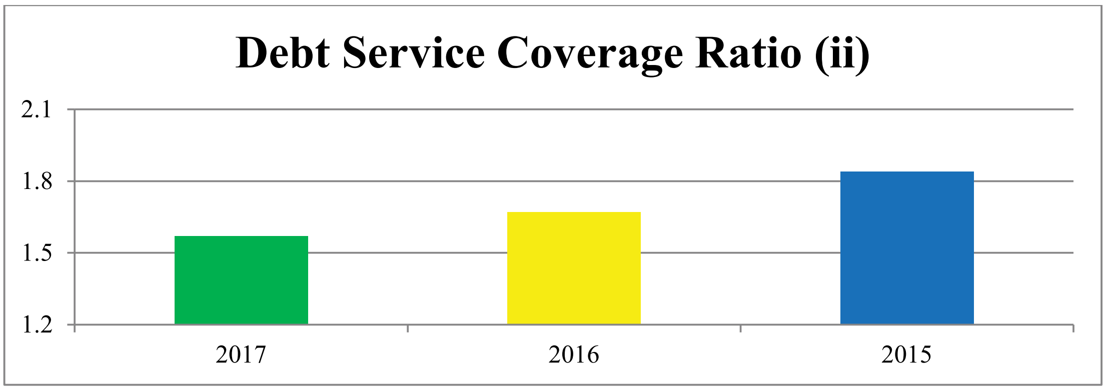
The Revenue Requirement under Section 713(b) of the Turnpike Revenue Bond Resolution states that in each calendar year, Net Revenues shall at least equal the Net Revenue Requirement for such year. The Net Revenue Requirement means with respect to any period of time, "an amount equal to the greater of (i) the sum of 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."

	2017	2016	2015
(i)			
Net revenue available for debt service	$ 1,290,374	1,294,591	1,218,845
Less net revenue requirements (the sum of aggregate debt service, maintenance reserve, special project reserve and charges funds payments)	(979,546)	(901,460)	(799,320)
Excess net revenues	$ 310,828	393,131	419,525
(ii)			
Net revenue available for debt service	$ 1,290,374	1,294,591	1,218,845
Less net revenue requirements computed under test (120% of aggregate debt service requirements)	(987,581)	(927,694)	(793,711)
Excess net revenues	$ 302,793	366,897	425,134

	2017	2016	2015
Net revenue available for debt service	$ 1,290,374	1,294,591	1,218,845
Debt service requirements	$ 822,984	773,078	661,426
Debt service coverage ratio	1.57	1.67	1.84





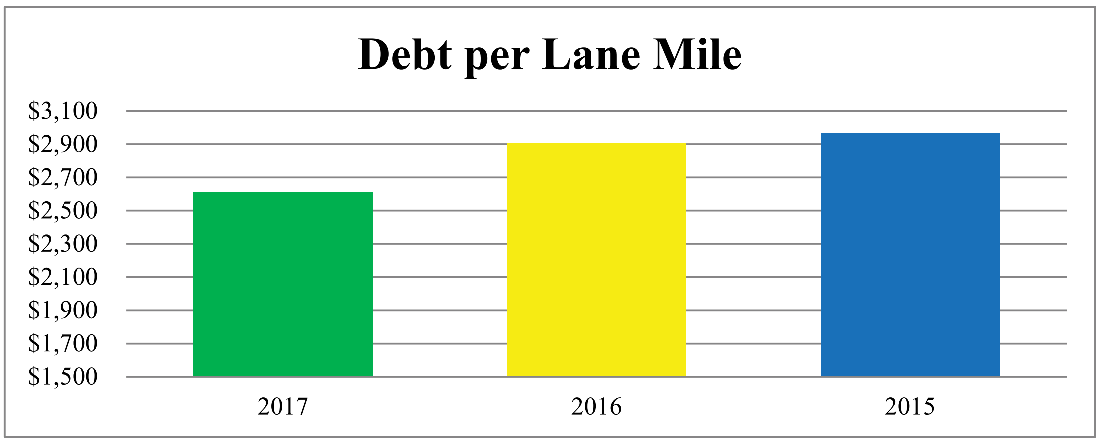


Net revenue available for debt service has slightly decreased in 2017 by $4,217 to $1,290,374 from $1,294,591 in 2016. The primary reason for this decrease is an increase in operating expenses in 2017 primarily related to an increased spending on snow and severe weather events. The increase in operating expenses in 2017 is partially offset by the decrease in toll collection expense and increase in pledged revenues resulting in a marginal decrease in the net revenue available for debt service. Net revenue available for debt service significantly increased in 2016 by $75,746 primarily due to the growth in toll revenue and the control of operating expenses. Excess net revenue and the debt service coverage ratio have gone down slightly in 2017 as compared to 2016, due mostly to an expected increase in the debt service requirements as a result of the higher interest costs from the continued financing of the Authority's $7 Billion CIP. The slight decrease in the debt service coverage ratio had been projected, and the debt service coverage ratio in each of the three years 2015 – 2017 remains well above the 1.20x requirement of the Bond Resolution and the 1.40x target of the Guidelines.

(Dollars shown in thousands)

Debt per Lane Mile – Debt per lane mile decreased by $291 to $2,612 in 2017 from $2,903 in 2016 in spite of increase in bonds outstanding due to significant increase in the lane miles on both the roadways in 2017, from the addition of shoulder lane miles. The debt per lane mile decreased in 2016 to $2,903 from $2,966 in 2015 due to decrease in bonds outstanding on account of principal payments made in January 2016 on the Series 1991C, Series 2003B and Series 2013A Turnpike Revenue Bonds.

		2017	2016	2015
Bond indebtedness, net	$	11,610,729	11,071,121	11,251,163
Lane Miles (actual) – Turnpike		2,418	1,953	1,953
Lane Miles (actual) – Parkway		2,028	1,861	1,840
Total Lane Miles (actual)		4,446	3,814	3,793
Debt per Lane Mile – Authority	$	2,612	2,903	2,966



Contacting Authority's Financial Management

The purpose of this narrative and the attached exhibits was to assist the readers in obtaining a general overview of the Authority's business and finances. If you should have any questions about this report or need clarification on its contents, please contact the Chief Financial Officer of the New Jersey Turnpike Authority, P.O. Box 5042, Woodbridge, New Jersey 07095-5042 or via email at info@turnpike.state.nj.us.

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Statements of Net Position

December 31, 2017 and 2016

(In thousands)

Assets		**2017**	**2016**
Current assets:			
Cash	$	183,707	202,305
Restricted cash		59,495	117,334
Investments		729,752	674,006
Restricted investments		733,905	645,411
Receivables, net of allowance		67,860	73,736
Inventory		23,075	22,692
Due from State of New Jersey		2,693	448
Restricted deposits		30,206	30,189
Prepaid expenses		9,079	4,650
Total current assets		1,839,772	1,770,771
Noncurrent assets:			
Restricted investments		759,208	440,753
Capital assets, net of accumulated depreciation		11,841,066	11,455,725
Total noncurrent assets		12,600,274	11,896,478
Total assets	$	14,440,046	13,667,249
Deferred Outflows			
Deferred outflows:			
Deferred amounts on refunding and derivative instruments	$	281,059	132,231
Deferred amount relating to pensions		110,378	156,574
Total deferred outflows	$	391,437	288,805
Liabilities			
Current liabilities:			
Accounts payable and accrued expenses	$	151,458	172,155
Funds held in trust		233,344	239,720
Due to State of New Jersey		2,843	2,758
Accrued interest payable		247,828	268,050
Unearned revenue		15,320	30,466
Current portion of bonds payable		218,475	197,740
Current portion of hybrid instrument borrowing		24,649	21,546
Current portion of other long-term liabilities		5,949	6,209
Total current liabilities		899,866	938,644
Noncurrent liabilities:			
Bonds payable, net		11,392,254	10,873,381
Hybrid instrument borrowing		118,397	67,756
Other long-term liabilities		113,893	120,668
Other postemployment benefits liability		494,098	432,545
Interest rate swap liabilities		20,914	29,190
Net pension liability		438,493	561,453
Total noncurrent liabilities		12,578,049	12,084,993
Total liabilities	$	13,477,915	13,023,637
Deferred Inflows			
Deferred inflows:			
Accumulated increase in fair value of hedging derivatives	$	6,288	2,035
Deferred amount relating to pensions		99,267	12,073
Total deferred inflows	$	105,555	14,108
Net Position			
Net position:			
Net investment in capital assets	$	1,379,079	1,064,121
Restricted under trust agreements		242,544	221,811
Unrestricted		(373,610)	(367,623)
Total net position	$	1,248,013	918,309

See accompanying notes to basic financial statements.

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Statements of Revenues, Expenses, and Changes in Net Position

Years ended December 31, 2017 and 2016

(In thousands)

	2017	2016
Operating revenues:		
Toll revenue	$ 1,579,896	1,570,662
E-ZPass fees	60,505	61,053
Concession revenue	35,591	38,192
Miscellaneous revenue	22,601	19,446
Total operating revenues	1,698,593	1,689,353
Operating expenses:		
Maintenance of roadway, buildings, and equipment	261,301	255,506
Toll collection	160,381	183,184
State police and traffic control	82,493	84,784
Technology	26,794	41,413
General administrative costs	53,911	50,582
Depreciation	304,989	301,120
Total operating expenses	889,869	916,589
Operating income	808,724	772,764
Nonoperating revenues (expenses):		
Build America Bonds subsidy	76,153	76,071
Federal and State reimbursements	2,764	9,287
Payments to the State of New Jersey	(232,500)	(294,000)
Interest expense, Turnpike Revenue Bonds	(421,913)	(319,192)
Other bond expenses	(7,584)	(1,043)
Loss on disposal of capital assets	—	(164)
Investment income	87,529	12,217
Arts Center	4,061	4,079
Total nonoperating revenues (expenses), net	(491,490)	(512,745)
Change in net position, before capital contribution	317,234	260,019
Capital contributions	12,470	—
Change in net position	329,704	260,019
Net position – beginning of year	918,309	658,290
Net position – end of year	$ 1,248,013	918,309

See accompanying notes to basic financial statements.

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Statements of Cash Flows

Years ended December 31, 2017 and 2016

(In thousands)

		2017	2016
Cash flows from operating activities:			
Receipts from customers and other operating activities	$	1,706,840	1,692,162
Payments to suppliers		(298,750)	(273,787)
Payments to employees		(178,187)	(157,809)
Payments for self-insured health benefit claims		(76,113)	(76,081)
Net cash provided by operating activities		1,153,790	1,184,485
Cash flows from noncapital financing activities:			
Receipts from Federal and State reimbursements		204	2,709
Payments to State of New Jersey		(232,500)	(294,000)
Proceeds from Arts Center		4,061	4,079
Net cash used in noncapital financing activities		(228,235)	(287,212)
Cash flows from capital and related financing activities:			
Proceeds acquired from new capital debt		3,217,519	344,312
Purchases and sales of capital assets, net		(592,719)	(801,089)
Principal paid on capital debt		(197,740)	(142,115)
Refunded capital debt		(2,525,615)	(343,686)
Proceeds from Build America Bonds subsidy		76,153	76,071
Interest paid on capital debt		(624,731)	(586,732)
Payments for bond expenses		(7,584)	(1,043)
Proceeds from capital contributions		12,470	—
Net cash used in capital and related financing activities		(642,247)	(1,454,282)
Cash flows from investing activities:			
Purchases of investments		(10,600,796)	(9,458,263)
Sales and maturities of investments		10,223,001	9,983,087
Interest received		18,050	14,704
Net cash (used in) provided by investing activities		(359,745)	539,528
Net decrease in cash		(76,437)	(17,481)
Cash and restricted cash – beginning of year		319,639	337,120
Cash and restricted cash – end of year	$	243,202	319,639
Reconciliation of operating income to net cash provided by operating activities:			
Operating income	$	808,724	772,764
Adjustments to reconcile operating income to net cash provided by operating activities:			
Depreciation expense		304,989	301,120
Changes in assets and liabilities:			
Receivables		6,191	15,241
Inventory		(383)	(2,587)
Prepaid expenses		(4,442)	(573)
Accounts payable and accrued expenses		(8,022)	19,407
Unearned revenue		(15,146)	(11,881)
Other liabilities		(8,251)	3,511
Other postemployment benefit liability		61,551	56,681
Net pension liability		(122,960)	126,438
Deferred outflows of resources related to pension		46,196	(91,148)
Deferred inflows of resources related to pension		87,194	(1,582)
Pollution remediation liability		(1,851)	(2,906)
Net cash provided by operating activities	$	1,153,790	1,184,485

See accompanying notes to basic financial statements.

(1) Organization

The New Jersey Turnpike Authority (the Authority) is a body corporate and politic organized and existing 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). The Authority is a public instrumentality exercising essential governmental functions. The Act authorizes the Authority to construct, maintain, repair, and operate transportation projects at locations established by law or by the Authority. 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. On May 27, 2003, the Act was amended. The amendment empowered the Authority, effective at the Transfer Date, which was July 9, 2003, to assume all powers, rights, obligations and duties of the New Jersey Highway Authority (the Highway Authority), which owned and operated the Garden State Parkway (the Parkway) and the PNC Bank Arts Center. As a result, the assets and liabilities of the Authority and the Highway Authority are now combined under the ownership and operation of the Authority and the Turnpike and Parkway now constitute the Turnpike System.

The Act also authorizes the Authority to fix and establish tolls for the use of the Turnpike System, and to issue Turnpike revenue bonds or notes of the Authority, subject to prior approval in writing from the Governor and from either or both the State Treasurer and the Director of the Division of Budget and Accounting of the Department of the Treasury, payable solely from tolls and other revenues of the Authority. Under the provisions of the Act, the Turnpike bonds or notes and the interest thereon shall not be deemed to constitute a debt or liability or a pledge of the faith and credit of the State or any political subdivision thereof.

The Authority has no stockholders or equity holders and all bond proceeds, revenues or other cash received must be applied for specific purposes in accordance with the provisions of the above Act and the Turnpike Revenue Bond Resolution of 1991 as amended, restated and supplemented (the Bond Resolution) for security of the bondholders. The Authority's Board of Commissioners is comprised of eight members as follows: the Commissioner of the New Jersey Department of Transportation, ex officio, or the Commissioner's designee; five members appointed by the Governor with the advice and consent of the Senate, and two members appointed by the Governor, one upon the recommendation of the President of the Senate and one upon the recommendation of the Speaker of the General Assembly. The Governor designates the chairman and vice chairman, who serve in these positions at the pleasure of the Governor and until their successors have been designated. As of December 31, 2017 and 2016, one seat was vacant.

Five members constitute a quorum and the vote of five members is necessary for any action taken by the Authority. The Act provides that the Governor shall have the right to veto any action of the Authority; however the Act prohibits the Governor or legislature from taking any actions that would impair the rights of Authority bondholders.

(2) Summary of Significant Accounting Policies

(a) Reporting Entity

The Governmental Accounting Standards Board (GASB) establishes the criteria used in determining which organizations should be included in these financial statements. The GASB's Codification of Governmental Accounting and Financial Reporting Standards, Section 2100, requires the inclusion of government organizations for which the Authority is financially accountable. Financial accountability is defined as:

1) appointment of a voting majority of the component unit's board and either (a) the ability to impose will by the primary government or (b) the possibility that the component unit will provide a financial benefit to or impose a financial burden on the primary government; or 2) fiscal dependency on the primary government.

The Garden State Arts Foundation, Inc. (the Foundation) (see note 14) is included in the financial statements presented in accordance with accounting principles generally accepted in the United States of America as a blended component unit. Although legally separate from the Authority, the Foundation's members include the Commissioners of the Authority, who represent a voting majority of the Foundation's members. The Authority can impose its will upon the Foundation by virtue of the fact that the entirety of the Foundation's Board is comprised solely of Authority Board members.

Additionally, the Authority is a component unit of the State of New Jersey, and its financial statements are included in the State of New Jersey's Comprehensive Annual Financial Report as a discrete component unit.

(b) Basis of Accounting

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 revenues recorded when earned and expenses recorded at the time liabilities are incurred.

The Authority follows accounting principles generally accepted in the United States of America as prescribed by GASB.

(c) Capital Assets

Capitalization Policy

The cost to construct, acquire or replace an existing asset (or otherwise prolong the useful life of an existing asset) is capitalized under the Authority's capitalization policy. The capitalization threshold is $50 and includes equipment valued over $50 or any purchase related to a capital project whose project value exceeds $50.

Capital assets are reported at cost, including all ancillary charges necessary to place the assets in their intended location and condition for use. If land is purchased, the capitalized amount includes the purchase price plus costs such as legal fees, filling, and excavation costs incurred to put the land in condition for its intended use. The capitalized amounts for building include both acquisition and capital improvement costs and net construction period interest.

An asset is deemed substantially complete when the structure or project is ready for the purpose for which it was constructed.

(Dollars shown in thousands)

Depreciation Policy

In 2016, the Authority performed a study of the useful lives and revised the useful lives of certain asset categories on a prospective basis. Capital assets are depreciated using straight-line method over their estimated useful lives as follows:

Roadways:	
Road Bed	100 yrs
Road Surface	10 yrs
Sound Barriers	35 yrs
Retaining Walls	75 yrs
Concrete Surfaces and Barrier Curb	40 yrs
Bridges:	
Piers and Abutments	75 yrs
Deck	40-50 yrs
Spans	40-50 yrs
Major Bridge Repairs	20 yrs
Buildings	35-50 yrs
Equipment	3-50 yrs

(d) Investments

Investments are reported at fair value based on quoted market prices or other fair value measurement methods allowed by GASB Statement No. 72, *Fair Value Measurements and* Application (GASB 72). All investment income, including changes in the fair value of investments, is reported as non-operating revenue. For interest rate swap agreements which are considered ineffective under GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments* (GASB 53) and classified as investments, investment income (loss) includes the fixed interest rate swap payments made to the counterparties, net of the variable payment received, and includes the changes in the fair value of the interest rate swap agreements

Investment Objectives

All investment decisions will meet the following requirements:

1. Safeguard and preserve the principal amount of invested funds.
2. Manage and maintain adequate liquidity to meet cash flow requirements, including bond payments.
3. Maintain demand bank balances at minimum levels consistent with sound operations.
4. Maximize the total rate of return on invested funds.

Authorized Investments – Investment Policy

The investment policies of the Authority are established in conformity with the Investment Policy adopted by the Board of Commissioners on September 24, 2013, which defines investment securities to mean any of the following securities legal for investment of the Authority's funds at the time of the purchase thereof:

(a) Federal securities, which are (i) any direct and general obligations of, or any obligations guaranteed by, the United States of America, including but not limited to interest obligations of the Resolution Funding Corporation or any successor thereto, (ii) any obligations of any state or political subdivision of a state which bonds are fully secured as to principal and interest by an irrevocable pledge of moneys or direct and general obligations of, or obligations guaranteed by the United States of America, which moneys or obligations are segregated in trust and pledged for the benefit of the holders of the bonds, (iii) certificates of ownership of the principal or interest of direct and general obligations of, or obligations guaranteed by, the United States of America, which obligations are held in trust by a commercial bank which is a member of the Federal Reserve System,

(b) Bonds, debentures, notes or other evidences of indebtedness issued by any agency or instrumentality of the United States to the extent such obligations are guaranteed by the United States or by another such agency the obligations (including guarantees) of which are guaranteed by the United States,

(c) Bonds, debentures, notes or other evidences of indebtedness issued by any of the following agencies:

- Government National Mortgage Association (GNMA)
- Federal Home Loan Mortgage Corporation (FHLMC)
- Federal National Mortgage Association (FNMA)
- Federal Home Loan Banks (FHLB)
- Federal Land Banks
- Federal Intermediate Credit Banks
- Banks for Cooperatives
- Tennessee Valley Authority
- United States Postal Service
- Farmers Home Administration
- Export-Import Bank
- Federal Financing Bank
- Student Loan Marketing Association (SLMA);

(d) Negotiable or non-negotiable certificates of deposit issued by any bank, trust company or national banking association, which certificates of deposit shall be continuously secured or collateralized by obligations described in subparagraphs (a), (b), and (c) above, which shall have a market value (exclusive of accrued interest) at all times at least equal to the principal amount of such certificates of deposit and shall be lodged with the Trustee, as custodian, by the bank, trust company or national banking association issuing such certificates of deposit.

(e) Uncollateralized negotiable or non-negotiable certificates of deposit issued by any bank, trust company or national banking association, the unsecured obligations of which are rated in one of the two highest rating categories, without regard to rating sub-categories, by Moody's Investors Service (Moody's) and Standard & Poor's (S&P).

(f) Repurchase agreements collateralized by obligations described in subparagraphs (a), (b), and (c) above with any registered broker/dealer subject to the Securities Investors Protection Corporation jurisdiction, which has an uninsured, unsecured and unguaranteed obligation rated "Prime-1" or "A3" or better by Moody's and "A-1" or "A" or better by S&P, or any commercial bank with the above ratings provided:

(i) a master repurchase agreement or specific written repurchase agreement governs the transaction, which characterizes the transaction as a purchase and sale of securities.

(ii) the securities are held free and clear of any lien, by the Trustee or an independent third party acting solely as agent for the Trustee, and such third party is (i) a Federal Reserve Bank, (ii) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus, and undivided profits of not less than $75,000, or (iii) a bank approved in writing for such purpose by each Credit Issuer, if any, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee,

(iii) a perfected first security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 CFR 306.1 et seq. or 31 CFR 350.0 et seq. or a successor provision in such securities is created for the benefit of the Trustee,

(iv) the repurchase agreement has a term of six month or less, or the Authority will value the collateral securities no less frequently than monthly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within two business days of such valuation,

(v) the repurchase agreement matures on or before a debt service payment date (or other appropriate liquidation period), and

(vi) the fair market value of the securities in relation to the amount of the repurchase obligation is equal to at least 100%.

(g) Banker's acceptances, Eurodollar deposits and certificates of deposit (in addition to the certificates of deposit provided for by subparagraphs (d) and (e) above) of the domestic branches of foreign banks having a capital and surplus of $1,000,000, or more, or any bank or trust company organized under the laws of the United States of America or Canada, or any state or province thereof, having capital and surplus, in the amount of $1,000,000; provided that the aggregate maturity value of all such banker's acceptances and certificates of deposit held at an times as investment of funds under the Bond Resolution with respect to any particular bank, trust company or national association shall not exceed 5% of its capital and surplus; and provided further that any such bank, trust company, or national association shall be rated in one of the two highest rating categories, without regard to rating sub-categories, by both Moody's and S&P.

(h) Other obligations of the United States of America or any agency thereof which may then be purchased with funds belonging to the State of New Jersey or which are legal investments for savings banks in the State of New Jersey.

(i) Deposits in the New Jersey Cash Management Fund.

(j) Obligations of any state, commonwealth or possession of the United States or a political subdivision thereof or any agency or instrumentality of such a state, commonwealth, possession or political subdivision, provided that at the time of their purchase such obligations are rated in either of the two highest rating categories by both Moody's and S&P.

(k) Commercial paper with a maturity date not in excess of 270 days rated A1+ and P-1 by Moody's at the time of such investment, issued by an entity incorporated under the laws of the United States or any state thereof.

(e) Accounts Receivable

Accounts receivable consist primarily of toll revenue due from commercial companies and other agencies, Federal Emergency Management Agency (FEMA) disaster assistance, charges and amounts due from individuals, and revenues receivable from operators of food and fuel concessions at the service plazas. Toll revenue accounts receivable from E-Z Pass postpaid commercial accounts are collateralized by either a surety bond or cash. Toll revenue accounts receivable from other E-Z Pass agencies are guaranteed under an E-Z Pass Group Agency Agreement (formerly known as Interagency Group Reciprocity Agreement). A reserve for uncollectible accounts receivable is established based on specific identification and historical experience.

(Dollars shown in thousands)

Accounts receivable and allowance for doubtful accounts consist of the following as of December 31, 2017 and 2016:

		December 31	
		2017	**2016**
E-ZPass Group Agencies	$	35,411	37,696
FEMA		9,051	6,491
New Jersey E-Zpass Agencies		554	3,212
Total Government Receivables	$	45,016	47,399
NJ E-Zpass Customers (1)	$	5,622	29,706
Postpaid E-Zpass Customers (2)		13,653	7,160
Property Damage Claims		1,515	647
Accounts Receivable - Other		4,661	2,227
Allowance for Doubtful Accounts		(2,607)	(13,403)
Total Non-Governmental Receivables, Net		22,844	26,337
Total Accounts Receivables, Net	$	67,860	73,736

(1) New Jersey E-ZPass customer accounts receivable are collateralized by cash deposits totaling $901 at December 31, 2017 and $10,096 at December 31, 2016.

(2) Postpaid E-ZPass customer accounts receivable are collateralized by cash and/or surety bonds totaling $22,229 at December 31, 2017 and $22,349 at December 31, 2016.

(f) Supplies Inventory

Inventories are reported on an average cost basis. Inventories consist of rock salt/calcium chloride, operating supplies (materials to maintain the roadway and vehicles), E-Z Pass transponders, and fuel (gas and diesel).

Inventory consists of the following as of December 31, 2017 and 2016:

		December 31	
		2017	**2016**
Rock Salt - Calcium Chloride	$	9,187	10,883
Operating Supplies		6,945	8,058
E-ZPass Transponders		6,353	3,286
Fuel		590	465
	$	23,075	22,692

(g) Deposits

Deposits consist mainly of collateral deposits for owner controlled insurance programs for general liability and workers compensation claims related to the Authority's $7 Billion Capital Improvement Program, deposits for various land acquisitions under eminent domain, and deposits for the Authority's self-funded health insurance.

(h) Net Capitalized Interest

Net Interest Costs on funds borrowed to finance the construction or acquisition of certain capital assets, during the period of construction or acquisition, are capitalized and depreciated over the life of the related assets placed in service. The Authority capitalized net interest expense of $113,512 and $211,694 during the years ended December 31, 2017 and 2016, respectively.

(i) Bonds Payable

Bonds payable consist of the total amount of outstanding bonds plus unamortized premiums and less unamortized discounts.

(j) Compensated Absences

The Authority accrues employees' unused sick leave and vacation time to be used at a later date or paid in cash upon termination or retirement from the Authority. The liability for sick leave is based on application dates and limits vary based upon the employee's specific contract and effective dates. The liability for unused vacation is calculated based on years of service, and the terms of the relevant labor agreement. The liability for both amounts is calculated based on the pay and salary rates in effect at the statement of net position date and was fully funded in 2017.

(k) Funds Held in Trust

Included in the December 31, 2017 and 2016 statements of net position is approximately $26,139 and $26,795, respectively, for amounts retained from contractors and engineers and approximately $203,800 and $210,300, respectively, received primarily from New Jersey E-Z Pass customers for E-Z Pass tag deposits and toll prepayments.

(l) Unearned Revenue

The Authority recognizes revenue when earned. Amounts received in advance of the periods in which related services are rendered are recorded as a liability. Unearned revenue includes advance payments from the Pennsylvania Turnpike Commission for its share of maintenance work on a jointly owned facility, and prepayment of rent by customers for the use of the Authority's fiber optic lines and communication towers.

(m) Deferred Outflows and Deferred Inflows of Resources

Deferred outflows include deferred amount on refunding and deferred amount relating to pensions. Deferred outflows of resources are a consumption of net position that is applicable to a future reporting period.

Deferred inflows include change in fair value of hedging derivatives and deferred amount relating to pensions. Deferred inflows of resources are an increase in net position that is applicable to a future reporting period.

Accumulated decrease in fair value of hedging derivatives is resulting from the change due to deferred gain or loss and amortization of deferred gain or loss on interest rate swaps. Deferred amount on refunding is resulting from a loss in refinancing of debts due to a difference between the reacquisition price and the net carrying amount of the old debt and is amortized over the life of the related debt. Deferred outflows and deferred inflows of resources relating to pensions are reported for differences between expected or projected results compared to actual results related to the Authority's proportionate share in the cost sharing pension plan as well as changes in the Authority's proportion of the plan from the prior period.

(n) Net Position

Net position is displayed in three components as follows:

Net investment in capital assets – This consists of capital assets, net of accumulated depreciation, less the outstanding balances of any bonds, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets.

Restricted under trust agreements – This consists of net position that is legally restricted by outside parties or by law through constitutional provisions or enabling legislation. When both restricted and unrestricted resources are available for use, generally it is the Authority's policy to use restricted resources first, and then unrestricted resources when they are needed.

Unrestricted – This consists of net position that does not meet the definition of "restricted" or "net investment in capital assets."

(o) Toll Revenue

Revenues from tolls are recognized in the period earned except for tolls collected through the violation enforcement process which are recognized when received. Pursuant to the provisions of the Bond Resolution, the Authority has covenanted to charge and collect such tolls as are required in order that in each calendar year net revenue shall at least equal the net revenue requirement under the aforementioned resolution. The Act authorizes the Authority to set tolls subject to prior approval in writing from the Governor and from either or both the State Treasurer and the Director of Budget and Accounting of the Department of the Treasury. The Act further provides that the powers conferred upon the Governor and the Treasurer of the State described shall be exercised with due regard for the rights of the holders of bonds of the Authority at any time outstanding, and nothing in, or done pursuant to, the Act shall in any way limit, restrict or alter the obligation or powers of the Authority or officer of the Authority to carry out and perform in every detail each and every covenant, agreement or contract at any time made or entered into by or on behalf of the Authority with respect to its bonds or for the benefit, protection or security of the holders thereof.

(p) E-Z Pass Fees

E-Z Pass fees consist of the Authority's share of fees and charges generated from the operation of the New Jersey E-Z Pass Customer Service Center. This Customer Service

Center is currently operated on behalf of the New Jersey Turnpike Authority, South Jersey Transportation Authority, Delaware River Port Authority, Delaware River Bay Authority, the Burlington County Bridge Commission and the Delaware River Joint Toll Bridge Commission by Conduent Inc., (formerly known as Xerox State and Local Solutions, Inc.). The fees and charges consist primarily of the monthly membership fee charged to New Jersey E-Z Pass account holders and the administrative fee collected from toll evaders. In addition, other fees are charged to E-Z Pass account holders for such items as monthly statement delivery, transponders sales, lost and stolen transponders and returned checks. Revenue is also generated from allowing certain parking lots to accept E-Z Pass as payment and interest on prepaid and tag deposit account balances. For financial reporting purposes, fees and charges are recognized when earned for all but administrative fees which are recognized when received from the patrons.

(q) Classification of Revenues over Expenses

The Authority has classified its revenues and expenses as either operating or non-operating.

Operating revenues include activities that have the characteristics of exchange transactions including tolls, E-Z Pass fees, rental fees received from concessionaires, and miscellaneous operating revenues. Non-operating revenue includes activities that have the characteristics of non-exchange transactions, such as the Build America Bonds subsidy and investment income.

Operating expenses include the costs of operating and maintaining the toll roads, administrative expenses, and depreciation on capital assets. All expenses not meeting this definition, including interest expense, are reported as non-operating expenses.

(r) Income Taxes

The Authority is exempt from federal income taxes under the Internal Revenue Code Section 115 and from state income taxes under N.J.S.A. 27:25-16. Accordingly, no provision is recorded for federal and state income taxes.

(s) Pension and Other Postemployment Benefits

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* (GASB 68), establishes standards for the measurement and reporting of the proportionate share of the net pension liability and pension expense. For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pension expense, information about the fiduciary net position of the State of New Jersey Public Employees' Retirement System (PERS) and additions to/deductions from PERS fiduciary net position have been determined on the same basis as they are reported by PERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value (note 11).

GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions* (GASB 45), establishes standards for the measurement, recognition, and display of OPEB and related liabilities (assets), note disclosures, and, if applicable, required supplementary information in the financial reports of state and local governmental employers. OPEB includes postemployment healthcare, as well as other forms of postemployment benefits (e.g., life insurance) when provided separately from a pension plan (note 12).

(t) Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(u) Capital Contributions

Capital contributions include funding from outside sources, including state and local governments, agencies and authorities for highway, bridge and other capital improvement projects. In 2017, the Authority received $12,470 as capital contributions from outside sources as partial funding for capital projects. These projects primarily include improvements to the roadway infrastructure in the area of Interchange 125 on the Parkway, noise barrier construction in the vicinity of State Highway Route 18 near Turnpike Interchange 9 and or improvements to the shoulders of the Newark Bay Hudson County Extension on the Turnpike. In 2016, there were no capital contributions.

(v) Accounting Pronouncements Issued but Not Yet Effective

In June 2015, the GASB issued Statement No 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75). This statement addresses accounting and financial reporting for other postemployment benefits (OPEB) that are provided to the employees of state and local governmental employers. GASB 75 establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expenses related to OPEB in the basic financial statements, in addition to requiring more extensive disclosures and required supplementary information. GASB 75 will be effective for periods beginning after June 15, 2017, which for the Authority is the year ended December 31, 2018. The Authority is currently evaluating the impact of this new statement.

(w) Reclassification

Certain prior year amounts have been reclassified to conform with the current year's presentation.

(3) Cash and Investments

The New Jersey Turnpike Authority is authorized to engage in investment activity pursuant to the Act, and the Bond Resolution. Specific investment policies and practices are set forth in certain sections of the Authority's Investment Policy adopted on September 24, 2013. These guidelines are adhered to by the Authority's Finance Department when making day-to-day investment decisions. The Authority principally invests in securities of United States agencies, highly rated commercial paper, demand accounts, certificates of deposit, and repurchase agreements. According to management, the Authority is not in violation of any provisions of its Investment Policy.

(a) Cash

All moneys held under the Bond Resolution, except amounts held by the Trustee or amounts which constitute investment securities, shall be continuously and fully secured by pledging, as collateral security, direct obligations of or obligations guaranteed by the United States of America having a fair value not less than the amount of such moneys.

The total cash carrying amount as of December 31, 2017 and 2016 is $243,202 and $319,639, respectively. The actual amount of cash on deposit in all bank accounts as of December 31, 2017 and 2016 was $219,922 and $302,880, respectively. Authority accounts had a book balance as of December 31, 2017 and 2016 of $242,576 and $318,839, respectively, actual cash on deposit of $219,141 and $302,065, respectively, and are collateralized by pledged securities totaling $233,489 and $312,567, respectively, held in the Authority's name by the Authority's financial institutions or its agents. The Foundation's cash balance as of December 31, 2017 and 2016 includes a book balance of $626 and $800, respectively. The actual amount of cash on deposit in the Foundation's bank accounts as of December 31, 2017 and 2016 was $781 and $815, respectively, of which $510 and $610, respectively, was insured by the Federal Deposit Insurance Corporation (FDIC) and $271 and $205, respectively, which was not insured or collateralized.

(b) Investments

All securities, other than securities held by the respective trustees for the benefit of the bondholders, are held by the Authority. All investment transactions are recorded on a transaction date basis.

Fair Value Measurement

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the financial statement measurement date. The fair value hierarchy categorizes the inputs to valuation techniques used to measure fair value into three levels as follows:

- Level 1 – unadjusted quoted prices for identical assets or liabilities in active markets that a government can access at the measurement date
- Level 2 – quoted prices other than those included within Level 1 and other inputs that are observable for an asset or liability, either directly or indirectly
- Level 3 – unobservable inputs for an asset or liability

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3. When the fair value of an asset or a liability is measured using inputs from more than one level of the fair value hierarchy, the measurement is considered to be based on the lowest priority level that is significant to the entire measurement.

While the Authority believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

(Dollars shown in thousands)

The following is a description of the valuation methodologies used for instruments measured at fair value:

- Certificates of deposit - The fair value of certificates of deposits and repurchase agreements are based on matrix pricing based on the securities' relationship to benchmark quoted prices.
- Commercial paper and Time deposit - The fair value is based on model-derived pricing based on the securities' purchase cost and date.
- Federal agency notes and U.S. Treasury bills – The fair value of federal agency notes and U.S. treasury bills are based on quoted prices for identical securities in markets that are not active or quoted prices for similar securities in active markets.
- Derivative instruments - The Authority's interest rate swaps are recorded at fair value and are classified as Level 2 of the fair value hierarchy. The swaps are valued using a market approach which calculates the discounted future net settlement payments based on current forward rates implied by the yield curve on the valuation date. The fair values of the swaps reflect the effect of nonperformance risk which includes, but may not be limited to the Authority's own credit risk. As of December 31, 2017, the derivative instrument is considered effective and is no longer reported within the investment balance of the Authority.

The Authority's investments as of December 31, 2017 and 2016 are summarized in the following tables by their fair value hierarchy:

December 31, 2017

		Total	Level 1	Level 2
Investments measured at fair value:				
Certificates of deposit	$	490,897	—	490,897
Commercial paper		658,242	—	658,242
Federal agency notes		710,954	200,155	510,799
U.S. Treasury bills		312,412	312,412	—
Time deposit		50,360	—	50,360
Total investments	$	2,222,865	512,567	1,710,298

(Dollars shown in thousands)

December 31, 2016				
		Total	Level 1	Level 2
Investments measured at fair value:				
Certificates of deposit	$	490,778	—	490,778
Commercial paper		301,988	—	301,988
Federal agency notes		869,573	158,300	711,273
U.S. Treasury bills		177,768	177,768	—
Derivative instrument		(79,937)	—	(79,937)
Total investments	$	1,760,170	336,068	1,424,102

Investment Maturity

The Authority's Investment Policy specifies maximum maturity limits by Bond Resolution Fund and by type of investment. At the time of purchase, the maturity of each security in the portfolio may not exceed the following maximum timeframes for the respective fund in which the investment is made. The maximum maturity will take into account any call, put, prepayment or other features that may impact maturity. All investments mature no later than necessary to provide moneys when needed for payments to be made from such funds.

- Revenue Funds – 1 year (by Bond Resolution)
- Construction Funds – 5 years (by Authority Policy)
- Maintenance Reserve Fund – 2 years (by Bond Resolution)
- Special Projects Reserve Fund – 2 years (by Bond Resolution)
- General Reserve Fund – 3 years (by Bond Resolution)
- Debt Service Fund – 1 year (by Authority Policy)
- Charges Fund – 3 months (by Authority Policy)
- Debt Reserve Fund – 5 years (by Bond Resolution)

The Authority's Investment Policy limits the maturity of commercial paper investments to 270 days. There is no other specific maturity limit for other types of Investment Securities; however the maturities are limited by Bond Resolution Fund as noted above.

Investments are generally purchased with the intent of holding to maturity, but the Chief Financial Officer, or designee, has the flexibility to restructure and rebalance portfolio holdings to manage risk and take advantage of market opportunities.

(Dollars shown in thousands)

As of December 31, 2017 and 2016 the Authority had the following investments by their maturity date range:

		December 31, 2017			
			Investment maturities		
Investment type		**Fair value**	**Less than 1 year**	**1–5 years**	**Over 5 years**
Investments:					
Certificates of deposit	$	50,329	50,329	—	—
Commercial paper		371,200	371,200	—	—
Federal agency notes		182,379	182,379	—	—
U.S. Treasury bills		125,844	125,844	—	—
Total investments		729,752	729,752	—	—
Restricted investments held by trustee:					
Certificates of deposit		344,760	11,164	333,596	—
Commercial paper		137,452	137,452	—	—
Federal agency notes		348,361	348,361	—	—
U.S. Treasury bills		186,568	186,568	—	—
Time deposit		50,360	50,360	—	—
Total restricted investments held by trustee		1,067,501	733,905	333,596	—
Restricted investments held by Authority:					
Certificates of deposit		95,808	95,808	—	—
Commercial paper		149,590	149,590	—	—
Federal agency notes		180,214	180,214	—	—
Total restricted investments held by Authority		425,612	425,612	—	—
Total investments	$	2,222,865	1,889,269	333,596	—

Note: Table includes $7,901 of accrued interest, and Federal agency notes include $173 in unrealized loss for the year ended December 31, 2017.

(1) Included in investments above at December 31, 2017 is $10,747 the Authority has designated as reserved for national toll interoperability requirements under Federal Law P.L. 112-131, the Moving Ahead for Progress in the 21st Century Act (Map-21) ($10,500), and emergency maintenance work ($247). In 2017, the amount reserved for the $7 Billion Capital Improvement Program was spent resulting in a reduction in investments of $20,000.

(Dollars shown in thousands)

	December 31, 2016			
		Investment maturities		
Investment type	**Fair value**	**Less than 1 year**	**1–5 years**	**Over 5 years**
Investments:				
Certificates of deposit	$ 80,313	80,313	—	—
Commercial paper	150,909	150,909	—	—
Federal agency notes	277,011	277,011	—	—
U.S. Treasury bills	165,773	165,773	—	—
Total investments	674,006	674,006	—	—
Restricted investments held by trustee:				
Certificates of deposit	335,361	27,539	307,822	—
Commercial paper	151,079	151,079	—	—
Federal agency notes	571,567	466,793	104,774	—
Total restricted investments held by trustee	1,058,007	645,411	412,596	—
Restricted investments held by Authority:				
Certificates of deposit	75,104	75,104	—	—
Federal agency notes	20,995	20,995	—	—
U.S. Treasury bills	11,995	11,995	—	—
Total restricted investments held by Authority	108,094	108,094	—	—
Restricted investments:				
Derivative instruments	(79,937)	—	—	(79,937)
Total investments	$ 1,760,170	1,427,511	412,596	(79,937)

Note: Table includes $3,112 of accrued interest, and $0.4 of unamortized premium and discount on investments for the year ended December 31, 2016. Federal agency notes include $347 in unrealized loss for the year ended December 31, 2016.

(1) Included in investments above at December 31, 2016 is $32,288 the Authority has designated as reserved for national toll interoperability requirements under Federal Law P.L. 112-131, the Moving Ahead for Progress in the 21st Century Act (Map-21) ($10,500), the $7 billion capital program ($20,000) and emergency maintenance work ($1,788). In 2016 the Grover Cleveland Service Area project was completed, resulting in a reduction in investments by $5,075.

During 2017, the Authority amended the variable rate received on its derivative instrument previously considered an investment under GASB 53. Since the variable rate received is now based on the same index as the interest rate on the hedged bonds, the derivative instrument is now considered effective under GASB 53 and is no longer reported within the investment balance of the Authority (note 7).

The Authority's investment portfolio is subject to the following risks:

(Dollars shown in thousands)

Interest rate risk: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. As a means of limiting its exposure to fair value losses arising from rising interest rates, the Authority's Investment.

Policy sets maximum maturity limits for investments and requires that investment maturities are matched to the Authority's liquidity needs. At the time of purchase, the maturity of each security in the portfolio may not exceed the following maximum timeframes for the respective fund in which the investment is made in accordance with the Bond Resolution or Authority policy.

Credit risk: Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Authority's investment guidelines and policies are designed to protect principal by limiting credit risk. This is accomplished through ratings, and collateral requirements that vary according to the type of investment as defined in the Authority's Investment Policy. The Authority's Investment Policy states that all investments ratings shall be based on security ratings at the time of purchase. In the event of a downgrade in rating, the Chief Financial Officer, or designee, will determine whether to sell or hold the investment. The Authority will not make an investment in an issuer who has a negative outlook associated with their credit rating, except for US Treasury or Federal Agencies. The portfolio's average credit quality should be rated Aa3/AA- or better by Moody's/S&P. In addition, certain investment securities require collateral posting requirements as outlined in note 2.

As of December 31, 2017 and 2016, the Authority's investment quality ratings as rated by Standard & Poor's and Moody's were as follows:

	December 31, 2017			
	Standard and Poor's/Moody's ratings			
	A-1+/P-1	**A-1/P-1	AA+/Aaa	Totals
Commercial paper	$ 639,869	18,373	—	658,242
Federal agency notes	606,006	—	104,948	710,954
U.S. Treasury bills	312,412	—	—	312,412
	$ 1,558,287	18,373	104,948	1,681,608

**At the time of the purchase, GE Capital (the Issuer) was rated A-1+/P-1 in accordance with the Authority's Bond Resolution. In December 2017, the Issuer was downgraded to A-1/P-1. The investment for this Issuer matured on January 2, 2018.

	December 31, 2016		
	Standard and Poor's/Moody's ratings		
	A-1+/P-1	AA+/Aaa	Totals
Commercial paper	$ 301,988	—	301,988
Federal agency notes	764,800	104,773	869,573
U.S. Treasury bills	177,768	—	177,768
	$ 1,244,556	104,773	1,349,329

Custodial credit risk: For investments, custodial credit risk is the risk that in the event of the failure of the counterparty, the Authority will not be able to recover the value of its investments that are in the possession of the outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Authority, and are held by either the counterparty or the counterparty's trust department or agent but not in the name of the Authority.

The Authority manages custodial credit risk by limiting its investments to highly rated institutions, having its investments registered in its name, and requiring high quality collateral be held by the counterparty in the name of the Authority for certain investment securities. As of December 31, 2017 and 2016, the Authority was not exposed to custodial credit risk on its investment securities.

Concentration of credit risk: Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer that exceeds 5% or more of its total investments. Concentrations limits are established in the Authority's Investment Policy as follows:

There are no limitations on investments carrying the full faith and credit of the United States Government, including repurchase agreements collateralized by such investments;

(a) Investments in any single Federal Agency not carrying the full faith and credit of the United States Government are limited to 40% of the portfolio;

(b) Investments in Certificates of Deposit are limited to 30% of the portfolio;

(c) Investments made in Commercial Paper are limited to 30% of the total portfolio;

(d) Investments in Municipal securities are limited to 30% of the total portfolio;

(e) Investments in any one single issuer (excluding US Treasury and Federal Agency securities) are limited to 5% of the portfolio.

The Investment Policy authorizes the management to deviate from the policy if it is in the general best interest of the Authority. At December 31, 2017, the Authority exceeded its concentration limits for a single issuer with U.S. Bank and Toyota Motor Credit Corp. due to a scarcity of highly rated investments available in current market conditions. At December 31, 2016, the Authority exceeded its concentration limits for a single issuer with U.S. Bank, Toyota Motor Credit Corp. and Toronto Dominion Bank N.A. due to a scarcity of highly rated investments available in current market conditions. More than 5% of the Authority's investments are concentrated in the following issuers as of December 31, 2017 and 2016, respectively:

(Dollars shown in thousands)

Issuer	December 31 2017	December 31 2016
U.S. Bank	9.9%	11.6%
Federal National Mortgage Association	N/A	6.4
Federal Home Loan Mortgage Corp	6.8	10.2
Federal Home Loan Bank	17.4	32.8
Toyota Motor Credit Corp.	6.8	8.8
U.S. Treasury	14.4	10.1
Toronto Dominion Bank N.A.	N/A	5.9

(4) Capital Assets

Capital assets consist of land, construction in progress, infrastructure, buildings, and equipment. Infrastructure assets are typically items that are immoveable, such as highways and bridges. These assets are capitalized as per the Authority's capitalization policy and depreciated as per the depreciation policy. The schedule below shows a summary of changes in the capital assets as of December 31, 2017 and 2016 is as follows:

Classification	December 31, 2016	Additions	Retirements/ transfers	December 31, 2017
Nondepreciable capital assets:				
Land	$ 830,612	1,848	—	832,460
Construction-in-progress	1,258,316	688,484	(384,840)	1,561,960
Total nondepreciable capital assets	2,088,928	690,332	(384,840)	2,394,420
Depreciable capital assets:				
Roadways	5,668,995	84,786	—	5,753,781
Bridges	4,967,830	121,791	—	5,089,621
Buildings	761,004	80,244	—	841,248
Equipment	1,434,250	98,019	—	1,532,269
Total depreciable capital assets	12,832,079	384,840	—	13,216,919
Total capital assets	14,921,007	1,075,172	(384,840)	15,611,339
Less accumulated depreciation:				
Roadways	(1,487,714)	(122,835)	—	(1,610,549)
Bridges	(1,159,339)	(100,455)	—	(1,259,794)
Buildings	(265,902)	(15,858)	—	(281,760)
Equipment	(552,327)	(65,843)	—	(618,170)
Total accumulated depreciation	(3,465,282)	(304,991)	—	(3,770,273)
Capital assets, net	$ 11,455,725	770,181	(384,840)	11,841,066

(Dollars shown in thousands)

Classification		December 31, 2015	Additions	Retirements/ transfers	December 31, 2016
Nondepreciable capital assets:					
Land	$	824,797	5,979	(164)	830,612
Construction-in-progress		2,521,406	949,939	(2,213,029)	1,258,316
Total nondepreciable capital assets		3,346,203	955,918	(2,213,193)	2,088,928
Depreciable capital assets:					
Roadways		4,578,349	1,090,646	—	5,668,995
Bridges		4,297,766	670,064	—	4,967,830
Buildings		504,279	256,725	—	761,004
Equipment		1,238,656	195,594	—	1,434,250
Total depreciable capital assets		10,619,050	2,213,029	—	12,832,079
Total capital assets		13,965,253	3,168,947	(2,213,193)	14,921,007
Less accumulated depreciation:					
Roadways		(1,366,754)	(120,960)	—	(1,487,714)
Bridges		(1,060,124)	(99,215)	—	(1,159,339)
Buildings		(254,563)	(11,339)	—	(265,902)
Equipment		(482,721)	(69,606)	—	(552,327)
Total accumulated depreciation		(3,164,162)	(301,120)	—	(3,465,282)
Capital assets, net	$	10,801,091	2,867,827	(2,213,193)	11,455,725

(Dollars shown in thousands)

(5) Accounts Payable and Accrued Expenses

Accounts payable consist of amounts owed to vendors for goods and services related to the operation and maintenance of the Turnpike System, and amounts owed to vendors related to work performed and materials supplied for capital projects. Accrued expenses include accrued pension expense related to the State of New Jersey PERS plan, representing the pension expense for 18 months (July 1, 2016 – December 31, 2017) which by under the current funding method has not yet been invoiced by PERS, accrued salaries and benefits earned by employees, and other accrued expenses which primarily include the inventory receipt accruals.

A summary of the accounts payable and accrued expenses as of December 31, 2017 and 2016 is as follows:

		December 31	
		2017	**2016**
Vendors – operations and maintenance	$	42,054	53,979
Vendors – capital expenditures		69,919	81,625
Accrued expenses – pension		25,667	24,753
Accrued salaries and benefits		11,933	9,998
Accrued expenses - other		1,885	1,800
Total	$	151,458	172,155

(Dollars shown in thousands)

(6) Bond Indebtedness

As of December 31, 2017 and 2016, bond indebtedness consisted of the following:

	Interest rate	Maturity	December 31 2017	December 31 2016
Turnpike revenue bonds:				
Series 2000B-G, subject to mandatory redemption Jan. 1, 2021 and Jan. 1, 2030 and optional redemption prior to maturity in whole or part at redemption price of 100% plus accrued interest	Variable rate not to exceed 10.00% (1.26% to 1.49% at Dec. 31, 2016);	Jan. 1, 2030	$ —	400,000
Series 2004C-2, not subject to optional redemption prior to maturity	5.50%	Jan. 1, 2025	132,850	132,850
Series 2005A, not subject to optional redemption prior to maturity	5.25%	Jan. 1, 2026 through Jan. 1, 2030	173,650	173,650
Series 2005B, (Federally Taxable), not subject to optional redemption prior to maturity	4.81%	Jan. 1, 2019	32,500	32,500
Series 2005D1-D4, (Federally Taxable Converting to Tax-Exempt) convertible to tax-exempt on Jan. 1, 2009 through Jan. 1, 2013, not subject to optional redemption	5.25%	Jan. 1, 2026	208,735	208,735
Series 2009E, subject to optional redemption prior to maturity on/after Jan. 1, 2019 in whole or in part	5.25%	Jan. 1, 2040	—	300,000
Series 2009F, Term Bond, Federally redemption prior to maturity at make-whole redemption price, subject to mandatory redemption on Jan. 1, 2037 through Jan. 1, 2040	7.41%	Jan. 1, 2040	1,375,000	1,375,000
Series 2009G, not subject to redemption prior to maturity	5.00%	Jan. 1, 2018	19,125	34,770
Series 2009H, subject to optional redemption prior to maturity on/after Jan. 1, 2019 in whole or part at redemption price plus 100% accrued interest	5.00% and 4.25%	Jan. 1, 2020	36,695	306,170

(Dollars shown in thousands)

	Interest rate	Maturity	December 31 2017	December 31 2016
Series 2009I, subject to optional redemption prior to maturity on/after Jan. 1, 2020 in whole or part at redemption price plus 100% accrued interest	5.00%	Jan. 1, 2031	$ —	32,215
Subject to optional redemption prior to maturity on/after Jan. 1, 2020 in whole or part at redemption price plus 100% accrued interest, subject to mandatory redemption on Jan. 1, 2032 through Jan. 1, 2035	5.00%	Jan. 1, 2035	—	145,790
Series 2010A, Federally Taxable – Issuer Subsidy Build America Bonds, subject to optional redemption prior to maturity at make-whole redemption price. Subject to mandatory redemption on Jan. 1, 2035 through Jan. 1, 2041	7.10%	Jan. 1, 2041	1,850,000	1,850,000
Series 2012A, subject to optional redemption prior to maturity on/after Jan. 1, 2022 in whole or in part	3.63% to 5.00%	Jan. 1, 2031 & Jan. 1, 2033	15,000	80,740
Subject to mandatory redemption on Jan. 1, 2034 and 2035	5.00%	Jan. 1, 2035	—	60,515
Series 2012B, not subject to optional redemption prior to Jan. 1, 2023	5.00%	Jan. 1, 2019 through Jan. 1, 2023	329,250	329,250
Subject to optional redemption in whole or in part on any date on/after Jan. 1, 2023	3.50% to 5.00%	Jan. 1, 2024 through Jan. 1, 2030	475,185	475,185
Series 2013A, not subject to optional redemption prior to Jan. 1, 2023	3.00% to 5.00%	Jan. 1, 2016 through Jan. 1, 2023	31,805	73,365
subject to optional redemption on/after Jul. 1, 2022	3.00% to 5.00%	Jan. 1, 2024 through Jan. 1, 2043	285,645	1,321,685
Series 2013B, not subject to optional redemption prior to maturity	Variable 1.61% at Dec 31, 2017 1.06% at Dec 31, 2016	Jan. 1, 2018	52,500	100,000
Series 2013C, not subject to optional redemption prior to maturity	Variable 1.20% at Dec 31, 2016	Jan. 1, 2017	—	129,500
	2.26% at Dec 31, 2017 1.27% at Dec 31, 2016	Jan. 1, 2018	141,500	141,500
Series 2013D-3, subject to optional redemption Jul. 1, 2017 and mandatory tender Jan. 1, 2018	Variable 1.40% at Dec 31, 2016	Jan. 1, 2024	—	77,625

(Dollars shown in thousands)

	Interest rate	Maturity	December 31 2017	December 31 2016
Series 2013E-3, subject to optional redemption Jul. 1, 2017 and mandatory tender Jan. 1, 2018	Variable 1.40% at Dec 31, 2016	Jan. 1, 2024	$ —	51,750
Series 2013F, subject to optional redemption prior to maturity on/after Jan. 1, 2023 in whole or part	3.00% to 5.00%	Jan. 1, 2026 through Jan. 1, 2035	90,880	90,880
Series 2014A, subject to optional redemption prior to maturity on/after July. 1, 2024 in whole or part	4.00% to 5.00%	Jan. 1, 2027 through Jan. 1, 2035	1,000,000	1,000,000
Series 2014B-3, subject to optional redemption Jul. 1, 2017 and mandatory tender Jan. 1, 2018 mandatory redemption 2022, 2023, 2024	Variable 0.98% at Dec 31, 2016	Jan. 1, 2024	—	50,000
Series 2014C, not subject to optional redemption prior to maturity	5.00%	Jan. 1, 2019 through Jan. 1, 2025	201,860	201,860
Series 2015A, subject to optional redemption in whole or part, on/after Jan. 1, 2016	Variable 1.69 at Dec. 31, 2017 1.19 at Dec. 31, 2016	Jan. 1, 2024	92,500	92,500
Series 2015B, subject to optional redemption in whole or part, on/after Feb. 1, 2017, mandatory tender Jan. 1, 2020	Variable 1.47% at Dec. 31, 2017 0.91% at Dec. 31, 2016	Jan. 1, 2024	50,000	50,000
Series 2015C, subject to optional redemption in whole or part, on/after Jan. 1, 2017	Variable 1.61% at Dec 31, 2017 1.11% at Dec 31, 2016	Jan. 1, 2024	43,750	43,750
Series 2015D, subject to optional redemption in whole or part, on/after Jan. 1, 2017	Variable 1.61% at Dec 31, 2017 1.11% at Dec 31, 2016	Jan. 1, 2024	43,750	43,750
Series 2015E, subject to optional redemption prior to maturity on/after Jan. 1, 2025 in whole or part	3.375% to 5.00%	Jan. 1, 2031 through Jan. 1, 2045	750,000	750,000
Series 2015F, subject to optional redemption in whole or part, on/after Jan. 1, 2017	Variable 1.77% at Dec 31, 2017 1.17% at Dec 31, 2016	Jan. 1, 2022	72,350	72,350
Series 2015G, subject to optional redemption in whole or part, on/after Jan. 1, 2017	Variable 1.69% at Dec 31, 2017 1.14% at Dec 31, 2016	Jan. 1, 2024	25,000	25,000
Series 2015H, subject to optional redemption in whole or part, on/after Jan. 1, 2017	Variable 1.65% at Dec 31, 2017 1.15% at Dec 31, 2016	Jan. 1, 2022	48,235	48,235
Series 2016A, subject to optional redemption in whole or part, on/after	3.13% to 5.00%	Jan. 1, 2031 through Jan. 1, 2035	149,995	149,995

(Dollars shown in thousands)

	Interest rate	Maturity	December 31 2017	December 31 2016
Series 2016B, subject to optional redemption in whole or part, on/after Jan. 1, 2018	Variable 1.73% at Dec 31, 2017 1.17% at Dec 31, 2016	Jan. 1, 2023	$ 75,025	75,025
Series 2016C, subject to optional redemption in whole or part, on/after Jan. 1, 2018	Variable 1.73% at Dec 31, 2017 1.17% at Dec 31, 2016	Jan. 1, 2023	50,015	50,015
Series 2016D, subject to optional redemption in whole or part, on/after Jan. 1, 2018	Variable 1.74% at Dec 31, 2017 1.18% at Dec 31, 2016	Jan. 1, 2024	50,000	50,000
Series 2017A, subject to optional redemption prior to maturity on/after Jan. 1, 2027 in whole or part	3.50% to 5.00%	Jan. 1, 2027 through Jan. 1, 2036	600,000	—
Series 2017B, subject to optional redemption in whole or part, on/after Jan. 1, 2028	4.00% to 5.00%	Jan. 1, 2025 through Jan. 1, 2040	646,765	—
Series 2017C1-6, not subject to redemption prior to maturity	Variable (1.29% to 1.70% at Dec. 31, 2017);	Jan. 1, 2021 through Jan. 1, 2024	134,875	—
Subject to optional redemption prior on/after Jul. 1, 2020 in whole or part mandatory tender Jan. 1, 2021		Jan. 1, 2028	150,000	—
Subject to optional redemption prior on/after Jul. 1, 2022 in whole or part mandatory tender Jan. 1, 2023		Jan. 1, 2030	115,125	—
Series 2017D1-4, not subject to redemption prior to maturity	Variable (1.43% to 1.65% at Dec. 31, 2017);	Jan. 1, 2022 through Jan. 1, 2024	179,375	—
Series 2017E, subject to optional redemption in whole or part, on/after Jan. 1, 2028	5.00%	Jan. 1, 2024 through Jan. 1, 2033	359,680	—
Series 2017F, subject to optional redemption in whole or part, on any date	2.14% to 3.729%	Jan. 1, 2019 through Jan. 1, 2036	167,845	—
Series 2017G, subject to optional redemption in whole or part, on/after Jan. 1, 2028	3.25% to 5.00%	Jan. 1, 2033 through Jan. 1, 2043	726,640	—
			10,983,105	10,626,155
Bond premium-Net			633,615	455,066
Bond discount-Net			(5,991)	(10,100)
			627,624	444,966
			$ 11,610,729	11,071,121

On April 11, 2017, the Authority issued $600,000 of Series 2017A Turnpike Revenue Bonds. The bonds bear interest at fixed rates from 3.50% to 5.0%, and mature from January 1, 2027 to January 1, 2036. The interest on the Series 2017A bonds is paid semi-annually. The purpose of the Series 2017A Turnpike Revenue Bonds was to pay the costs of construction of various projects which are part of the Authority's $7 Billion CIP.

In accordance with its refunding plan, on August 3, 2017, the Authority issued $646,765 of Series 2017B Turnpike Revenue Bonds. The bonds bear interest at fixed rates from 4.00% to 5.00%, and mature from January 1, 2025 to January 1, 2040. The interest on the Series 2017B Bonds is paid semi-annually. The Authority issued the Series 2017B Turnpike Bonds and used the proceeds to fully refund and defease the Series 2009E Bonds, and to partially refund and defease the Series 2009H, the Series 2009I and the Series 2013A Bonds.

The aggregate savings on the Series 2017B bonds were approximately $148,204 with a net present value of $96,189 when compared to the future interest costs on the refunded bonds. The refunding resulted in a loss on defeasance of $49,399 in 2017, which is being amortized over the life of the new bonds.

On October 26, 2017, the Authority issued $579,375 of the Series 2017C1-6 and the Series 2017D1-4 Turnpike Revenue Bonds. The Series 2017C1-6 and the Series 2017D1-4 Floating Rate Bonds bear interest at 70% of one month LIBOR, plus a certain spread for each Series. The interest on the Series 2017C1-6 and the Series 2017D1-4 Floating Rate Bonds is paid monthly. The Series 2017C1-6 and the Series 2017D1-4 Bonds mature from January 1, 2021 to January 1, 2030. The Authority issued the Series 2017C1-6 Bonds and used the proceeds to fully refund the Series 2000B-G Bonds. The Authority issued the Series 2017D1-4 Floating Rate Bonds and used the proceeds to fully refund the Series 2013D-3, the Series 2013E-3 and the Series 2014B-3 Bonds in order to meet the mandatory tender date on the refunded bonds to avoid interest rate escalations. At the same time the Authority entered into an amendment on its existing Series 2000B-G Interest Rate Swap agreement and re-identified it to the Series 2017C1-6 Bonds. The new fixed swap rate is 4.172% and the floating rate is 70% of one month LIBOR. The Series 2017C1-6 refunding resulted in additional present value savings of $26,122. The Series 2013D-3 Swap agreement was re-identified to the Series 2017D-1 Bonds. The fixed swap rate remains the same at 3.4486% and the floating rate is 73.2% of one month LIBOR. The Series 2013E-3 Swap agreement was also re-identified to the Series 2017D-1 Bonds. The fixed swap rate remains the same at 3.4486% and the floating rate is 63% of one month LIBOR plus 20bp. The Series 2014B-3 Swap agreement was re-identified to the Series 2017D2-4 Bonds. The fixed swap rate remains the same at 3.35% and the floating rate is 67% of one month LIBOR.

On December 14, 2017 the Authority issued $527,525 of Series 2017E and Series 2017F Turnpike Revenue Bonds. The bonds bear interest at fixed rates from 2.14% to 5.00%, and mature from January 1, 2024 to January 1, 2036. The interest on the Series 2017E and Series 2017F Bonds is paid semi-annually. The Authority issued the Series 2017E and Series 2017F Turnpike Bonds and used the proceeds to fully refund and defease the Series 2009I Bonds, and partially refund and defease the Series 2009H, the Series 2012A and the Series 2013A Bonds.

The aggregate savings on the Series 2017E and the Series 2017F bonds were approximately $51,688 with a net present value of $40,300 when compared to the future interest costs on the refunded bonds. The refunding resulted in a loss on defeasance of $16,791 in 2017, which is being amortized over the life of the new bonds.

On December 21, 2017 the Authority issued $726,640 of Series 2017G Turnpike Revenue Bonds. The bonds bear interest at fixed rates from 3.25% to 5.00%, and mature from January 1, 2033 to January 1, 2043. The interest on the Series 2017G Bonds is paid semi-annually. The Authority issued the Series 2017G Bonds and used the proceeds to partially refund and defease the Series 2012A and the Series 2013A Bonds.

The aggregate savings on the Series 2017G bonds were approximately $67,467 with a net present value of $53,217 when compared to the future interest costs on the refunded bonds.

The refunding resulted in a loss on defeasance of $32,059 in 2017, which is being amortized over the life of the new bonds.

(a) Bond Insurance

For the Series 2000B-G (as of December 31, 2016 only), Series 2004C and Series 2005A-D Bonds, principal and interest payments are insured on the stated maturity and interest payment dates through municipal bond insurance which totaled $547,735 and $947,735 as of December 31, 2017 and 2016, respectively. The municipal bond insurance total for 2017 does not include the Series 2000B-G Bonds as the Series was fully refunded on October 26, 2017.

In order to meet the Debt Reserve Requirement under the Bond Resolution, the Authority must deposit cash and investments in the Debt Reserve Fund. In lieu of cash and investments, the Authority may maintain a surety bond or insurance policy payable to the Trustee. The Debt Reserve Requirement of $596,504 as of December 31, 2017 was met through investments in the Debt Reserve Fund with a fair market value of $600,788 and insurance policies payable to the Trustee with a payment limit of $322,019. The Debt Reserve Requirement of $588,991 as of December 31, 2016 was met through investments in the Debt Reserve Fund with a fair market value of $591,214 and insurance policies payable to the Trustee with a payment limit of $322,019. Although the insurance policies are still in effect at December 31, 2017, according to the terms of the insurance policies, cash and investments in the Debt Reserve Fund must be drawn upon first to satisfy any payments required from the Debt Reserve Fund. As of December 31, 2017 and December 31, 2016, the fair market value of the cash and investments in the Debt Reserve Fund meets the Debt Reserve Requirement in its entirety.

(b) Interest Payments – Fixed Rate Debt

Interest payments on all fixed rate debt are payable semi-annually on July 1 and January 1 except for Capital Appreciation Bonds.

(c) Variable Rate Debt

Interest rates on variable rate debt, except for the Auction Rate Securities (see below) are reset weekly. Interest is paid monthly.

(d) Auction Rate Bond Interest

The Series 2000B-G Bonds were issued as auction rate bonds with interest rates not to exceed 10%. The auction date for the Series 2000B-G Bonds generally occurs every seven days. Interest on the auction rate bonds accrues for each auction interest period and is payable in arrears on each succeeding interest payment date. An interest auction period begins on, and includes, an interest payment date and ends on (but excludes) the next succeeding interest payment date. The Series 2000B-G Bonds were refunded on October 26, 2017. As of December 31, 2017 the Authority does not have any auction rate bonds outstanding.

(e) Build America Bonds

The Series 2009F Bonds and the Series 2010A Bonds are designated as Federally Taxable, Issuer Subsidy Build America Bonds for purposes of the American Recovery and Reinvestment Act of 2009. The Authority receives a cash subsidy from the United States Treasury originally equal to 35% of the interest payable on the Bonds. The Budget Control Act of 2011 reduced the amount of the subsidy paid by the Federal Government through automatic federal spending cuts commonly known as sequestration. The payment to the Authority received for the July 1, 2017 interest payment was reduced by 6.9%, and the payment received in December 2017 (for January 1, 2018 interest payment) was reduced by 6.6%. The Internal Revenue Service has reported that the Authority's payment due on July 1, 2018 will also have a 6.6% reduction. There can be no certainty the Federal Government will not make further cuts to the program. These cash payments constitute pledged revenues under the Authority's bond resolution. The Series 2009F Bonds and the Series 2010A Bonds are subject to redemption prior to maturity at the make-whole redemption price which is equal to the greater of (i) 100% of the principal amount of the Bonds to be redeemed plus accrued and unpaid interest and (ii) the sum of the present value of the remaining scheduled payments of principal and interest, discounted to the date on which the Bonds are to be redeemed on a semi-annual basis, assuming a 360 day year consisting of twelve 30 day months, at the adjusted Treasury Rate plus 50 basis points for the Series 2009F Bonds and 40 basis points for the Series 2010A Bonds, plus accrued and unpaid interest. The Bonds are also subject to redemption prior to their maturity at the option of the Authority upon a material adverse change to Section 54AA or 6431 of the Internal Revenue Code of 1986 pursuant to which the Authority's 35% cash subsidy payment is reduced or eliminated. In this case the redemption price is equal to the greater of (i) 100% of principal amount of the Bonds to be redeemed plus accrued and unpaid interest and (ii) the sum of the present value of the remaining scheduled payments of principal and interest, discounted to the date on which the Bonds are to be redeemed on a semi-annual basis, assuming a 360 day year consisting of twelve 30 day months, at the adjusted Treasury Rate plus 100 basis points, plus accrued and unpaid interest. The Series 2009F Bonds are subject to mandatory redemption on January 1, 2037 through January 1, 2040 at 100% of the principal amount plus accrued interest. The Series 2010A Bonds are subject to mandatory redemption on January 1, 2035 through January 1, 2041 at 100% of the principal amount plus accrued interest.

(Dollars shown in thousands)

(f) Floating Rate Bonds and SIFMA Index Bonds

The following table summarizes the terms of the Authority's direct placement of Floating Rate Bonds, SIFMA Index Bonds, and publicly offered Floating Rate Bonds as of December 31, 2017:

Series of bonds	Tax exempt or federally taxable	Final maturity date		Par amount	Floating rate	Interest rate reset	Mandatory tender date
2013B	Tax-Exempt	1/1/2018	$	52,500	75% of the sum of 1-month LIBOR + 79bp	Monthly	-
2013C2	Tax-Exempt	1/1/2018		141,500	SIFMA + 55 bp	Weekly	-
2015A	Tax-Exempt	1/1/2024		92,500	67% 1 month LIBOR + 78 bp	Monthly	-
2015B	Tax-Exempt	1/1/2024		50,000	75% 1 month LIBOR + 45 bp	Monthly	1/1/2020
2015C	Tax-Exempt	1/1/2024		43,750	67% 1 month LIBOR + 70 bp	Monthly	-
2015D	Tax-Exempt	1/1/2024		43,750	67% 1 month LIBOR + 70 bp	Monthly	-
2015F	Tax-Exempt	1/1/2022		72,350	75% 1 month LIBOR + 59.5 bp	Weekly	-
2015G	Tax-Exempt	1/1/2024		25,000	69.75% 1 month LIBOR + 60 bp	Weekly	-
2015H	Tax-Exempt	1/1/2022		48,235	67% 1 month LIBOR + 74 bp	Monthly	-
2016B	Tax-Exempt	1/1/2023		75,025	70% 1 month LIBOR + 63 bp	Weekly	-
2016C	Tax-Exempt	1/1/2023		50,015	70% 1 month LIBOR + 63 bp	Weekly	-
2016D	Tax-Exempt	1/1/2024		50,000	70% 1 month LIBOR + 64 bp	Weekly	-
2017C1	Tax-Exempt	1/1/2021		31,050	70% 1 month LIBOR + 34 bp	Monthly	-
2017C2	Tax-Exempt	1/1/2022		32,775	70% 1 month LIBOR + 48 bp	Monthly	-
2017C3	Tax-Exempt	1/1/2023		34,575	70% 1 month LIBOR + 60 bp	Monthly	-
2017C4	Tax-Exempt	1/1/2024		36,475	70% 1 month LIBOR + 70 bp	Monthly	-
2017C5	Tax-Exempt	1/1/2028		150,000	70% 1 month LIBOR + 46 bp	Monthly	1/1/2021
2017C6	Tax-Exempt	1/1/2030		115,125	70% 1 month LIBOR + 75 bp	Monthly	1/1/2023
2017D1	Tax-Exempt	1/1/2024		129,375	70% 1 month LIBOR + 70 bp	Monthly	-
2017D2	Tax-Exempt	1/1/2022		16,075	70% 1 month LIBOR + 48 bp	Monthly	-
2017D3	Tax-Exempt	1/1/2023		16,675	70% 1 month LIBOR + 60 bp	Monthly	-
2017D4	Tax-Exempt	1/1/2024		17,250	70% 1 month LIBOR + 70 bp	Monthly	-

The Series 2013B, Series 2015A, Series 2015B, Series 2015C, Series 2015D, Series 2015F, Series 2015G, Series 2015H, Series 2016B, Series 2016C and Series 2016D Bonds are direct placements of Floating Rate Bonds. The Series 2017C1-6 and Series 2017D1-4 Bonds are publically offered Floating Rate Bonds. Pursuant to the terms of the Series 2013B, Series 2015A, Series 2015B, Series 2015C, Series 2015D, Series 2015F, Series 2015G, Series 2015H, Series 2016B, Series 2016C and Series 2016D Bonds, in addition to being subject to mandatory tender for purchase on the Mandatory Tender Date or maturity date set forth in the chart above, upon the occurrence of certain enumerated extraordinary mandatory purchase events, the respective Series of Bonds may also be subject to mandatory tender for purchase at the option of the applicable bank that is the holder of such Series of Bonds prior to the occurrence of such Mandatory Tender Date. In the event that the Authority cannot pay the purchase price for all or a portion of such Series of Bonds on the Mandatory Tender Date or any such extraordinary mandatory purchase date, (i) 50% of the principal amount of any unpurchased Bonds will be subject to mandatory redemption on the date that is one year after such Mandatory Tender Date or extraordinary mandatory purchase date, at a Redemption Price equal to 100% of the principal amount of such Bonds to be redeemed plus accrued interest to the redemption date, and (ii) the entire remaining aggregate principal amount of such unpurchased Bonds will be subject to mandatory redemption on the date that is two years after such Mandatory Tender Date or extraordinary mandatory purchase date, at a Redemption Price equal to 100% of the principal amount of such Bonds to be redeemed plus accrued interest to the redemption date.

(Dollars shown in thousands)

(g) Security

All bonds outstanding under the Bond Resolution, together with amounts owed under the interest rate swap agreements, are secured on a parity by a pledge of net revenues of the Authority senior in priority to any other Authority obligations secured by such net revenues.

(h) Future Payments of Debt Service

The following table sets forth as of December 31, 2017, payments of principal (through sinking fund installments) and interest to be made to the Debt Service Fund from the Revenue Fund on all outstanding bonds of the Authority for the next five years and thereafter. Interest on variable-rate debt and interest rate swaps in the following table is based upon the variable-rates as of December 31, 2017.

		Principal	Interest	Interest rate swaps, net	Total
December 31:					
2018	$	218,475	543,561	59,251	821,287
2019		201,025	541,699	48,543	791,267
2020		228,205	529,825	48,543	806,573
2021		249,395	522,088	45,759	817,242
2022		278,700	517,325	40,599	836,624
2023–2027		1,714,980	2,498,145	87,251	4,300,376
2028–2032		2,168,920	2,096,402	14,267	4,279,589
2033–2037		2,672,829	1,519,872	—	4,192,701
2038–2042		2,861,826	605,359	—	3,467,185
2043–2046		388,750	32,816	—	421,566
	$	10,983,105	9,407,092	344,213	20,734,410

(Dollars shown in thousands)

(i) Interest Expense

Interest expense was comprised of the following:

		Year ended December 31	
		2017	**2016**
Turnpike Revenue Bonds, Series 2000B – G	$	14,790	17,098
Turnpike Revenue Bonds, Series 2004B		—	1,447
Turnpike Revenue Bonds, Series 2004C		7,307	7,307
Turnpike Revenue Bonds, Series 2005A		9,117	9,117
Turnpike Revenue Bonds, Series 2005B		1,563	1,563
Turnpike Revenue Bonds, Series 2005D		10,959	10,959
Turnpike Revenue Bonds, Series 2009E		9,188	15,750
Turnpike Revenue Bonds, Series 2009F		101,943	101,943
Turnpike Revenue Bonds, Series 2009G		956	1,739
Turnpike Revenue Bonds, Series 2009H		12,978	15,193
Turnpike Revenue Bonds, Series 2009I		5,225	8,900
Turnpike Revenue Bonds, Series 2010A		131,387	131,387
Turnpike Revenue Bonds, Series 2012A		6,894	6,894
Turnpike Revenue Bonds, Series 2012B		39,772	39,772
Turnpike Revenue Bonds, Series 2013A		65,100	67,821
Turnpike Revenue Bonds, Series 2013B–F		20,783	37,214
Turnpike Revenue Bonds, Series 2014A(1)		48,890	48,890
Turnpike Revenue Bonds, Series 2014B		1,618	3,787
Turnpike Revenue Bonds, Series 2014C		10,093	10,093
Turnpike Revenue Bonds, Series 2015A		3,362	3,340
Turnpike Revenue Bonds, Series 2015B		1,898	1,893
Turnpike Revenue Bonds, Series 2015C		1,732	1,728
Turnpike Revenue Bonds, Series 2015D		1,733	1,729
Turnpike Revenue Bonds, Series 2015E		36,413	36,413
Turnpike Revenue Bonds, Series 2015F		2,944	2,911
Turnpike Revenue Bonds, Series 2015G		989	976
Turnpike Revenue Bonds, Series 2015H		1,957	1,939
Turnpike Revenue Bonds, Series 2016A		7,312	6,683
Turnpike Revenue Bonds, Series 2016B		3,020	84
Turnpike Revenue Bonds, Series 2016C		1,982	55
Turnpike Revenue Bonds, Series 2016D		2,020	56
Turnpike Revenue Bonds, Series 2017A		21,240	—
Turnpike Revenue Bonds, Series 2017B		12,866	—
Turnpike Revenue Bonds, Series 2017C		3,265	—
Turnpike Revenue Bonds, Series 2017D		1,264	—
Turnpike Revenue Bonds, Series 2017E		849	—
Turnpike Revenue Bonds, Series 2017F		254	—
Turnpike Revenue Bonds, Series 2017G		847	—
		604,510	594,681
Less amortization of bond premium and discount		(30,876)	(25,587)
Less GASB Statement No. 53 interest expense adjustment (2)		(32,932)	(35,693)
Less interest expense capitalized to projects		(118,789)	(214,209)
Net interest expense	$	421,913	319,192

(1) Includes $19,199 in capitalized interest expense paid from bond proceeds in 2016

(2) For the Series 2000B-G, 2013B-D, 2013G, 2015A-D, 2015F and 2016B Bonds

(Dollars shown in thousands)

(j) Defeased Bonds

As of December 31, 2017 and 2016, the Authority has approximately $1,981,000 and $204,000, respectively, of bonds outstanding which have been previously defeased in substance and are secured by investments held by various escrow agents. The escrow accounts are invested in obligations of U.S. government agencies and are not controlled by the Authority. The bonds are considered extinguished and accordingly, the assets and obligations are not reflected on the financial statements of the Authority.

(7) Derivative Instruments

The fair value balances and notional amounts of derivative instruments outstanding as of December 31, 2017 and 2016, classified by type, and the changes in fair value of such derivative instruments for the year then ended as reported in the accompanying financial statements are as follows:

	Changes in fair value for year ended December 31, 2017		Fair value as of December 31, 2017		
	Classification	**Amount**	**Classification**	**Amount**	**Notional**
Cash flow hedges:					
Pay-fixed, receive-variable interest rate swaps [(1)]	Deferred outflow	$ (4,027)	Interest rate swap liabilities	$ (20,914)	1,319,000

	Changes in fair value for year ended December 31, 2016		Fair value as of December 31, 2016		
	Classification	**Amount**	**Classification**	**Amount**	**Notional**
Cash flow hedges:					
Pay-fixed, receive-variable interest rate swaps [(1)]	Deferred inflow	$ 11,009	Interest rate swap liabilities	$ (29,190)	1,096,000
Investment derivatives:					
Pay-fixed, receive-variable interest rate swaps	Investment income	13,238	Restricted investments	(79,937)	400,000

(1) Includes fair value of at-the-market interest rate swaps from hybrid instruments

The fair values of the interest rate swaps were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swaps.

Objective and Terms of Derivative Instruments

The following tables display the objective and terms of the Authority's derivative instruments outstanding as of December 31, 2017 and 2016, along with the credit rating of the associated counterparty (amounts in thousands):

	December 31, 2017						
Type	**Objective**		**Notional amount**	**Effective date**	**Maturity date**	**Terms**	**Counterparty credit rating**
Hedging derivative instruments:							
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2013B bonds	$	52,500	Mar. 14, 2011	Jan. 1, 2018	Pay 5.5728%, receive 75% of 1 month of USD-LIBOR-BBA	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2013C1 bonds		63,500	Mar. 14, 2011	Jan. 1, 2018	Pay 5.6346%, receive USD-SIFMA Municipal Swap Index	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2013C2 bonds		78,000	Mar. 14, 2011	Jan. 1, 2018	Pay 5.6089%, receive USD-SIFMA Municipal Swap Index	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015A bonds		87,500	Apr. 1, 2016	Jan. 1, 2024	Pay 2.98%, receive 67% of 1 month USD-LIBOR-BBA	A1/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015B bonds		50,000	Feb. 11, 2009	Jan. 1, 2024	Pay 3.331%, receive 75% of 1 month USD-LIBOR-BBA	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015C bonds		43,750	Feb. 11, 2009	Jan. 1, 2024	Pay 3.2488%, receive 67% of 1 month USD-LIBOR-BBA	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015D bonds		43,750	Feb. 11, 2009	Jan. 1, 2024	Pay 3.2525%, receive 67% of 1 month USD-LIBOR-BBA	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015F bonds		72,350	May. 21, 2013	Jan. 1, 2022	Pay 3.4486%, receive until 73.2% of 1 month USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015G bonds		25,000	Sep. 1, 2015	Jan. 1, 2024	Pay 3.35%, receive 67% of 1 month USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015H bonds		48,235	Sep. 1, 2015	Jan. 1, 2022	Pay 3.305%, receive 67% of 1 month USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2016B bonds		75,025	May. 21, 2013	Jan. 1, 2023	Pay 3.4486%, receive 73.2% of 1 month of USD-LIBOR-BBA	Aa2/AA-/AA-

(Dollars shown in thousands)

December 31, 2017

Type	Objective	Notional amount	Effective date	Maturity date	Terms	Counterparty credit rating
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2016C bonds	50,015	Sep. 1, 2015	Jan. 1, 2023	Pay 3.4486%, receive 63% of 1 month plus 20bp USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2016D bonds	50,000	Sep. 1, 2015	Jan. 1, 2024	Pay 3.35%, receive 67% of 1 month USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2017C bonds	240,000	Sep. 1, 2015	Jan. 1, 2030	Pay 4.172%, receive 70% of 1 month of USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2017C bonds	160,000	May. 21, 2013	Jan. 1, 2030	Pay 4.172%, receive 70% of 1 month of USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2017D1 bonds	77,625	May. 21, 2013	Jan. 1, 2030	Pay 3.4486%, receive 73.2% of 1 month of USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2017D1 bonds	51,750	Sep. 1, 2015	Jan. 1, 2030	Pay 3.4486%, receive 63% of 1 month plus 20bp USD-LIBOR-BBA	Aa2/AA-/AA-
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2017D2-4 bonds	50,000	Aug. 4, 2014	Jan. 1, 2024	Pay 3.35%, receive 67% of 1 month USD-LIBOR-BBA	A1/A+/A+

December 31, 2016

Type	Objective	Notional amount	Effective date	Maturity date	Terms	Counterparty credit rating
Hedging derivative instruments:						
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2013B bonds	$ 100,000	Mar. 14, 2011	Jan. 1, 2018	Pay 5.5728%, receive 75% of 1 month of USD-LIBOR-BBA	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2013C1 bonds	121,000	Mar. 14, 2011	Jan. 1, 2018	Pay 5.6346%, receive USD-SIFMA Municipal Swap Index	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2013C2 bonds	150,000	Mar. 14, 2011	Jan. 1, 2018	Pay 5.6089%, receive USD-SIFMA Municipal Swap Index	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2013D bonds	77,625	May. 21, 2013	Jan. 1, 2024	Pay 3.4486%, receive 73.2% of 1 month of USD-LIBOR-BBA	Aa2/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2013E bonds	51,750	Sep. 1, 2015	Jan. 1, 2024	Pay 3.4486%, receive 63% of 1 month plus 20bp USD-LIBOR-BBA	Aa2/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2014B3 bonds	50,000	Aug. 4, 2014	Jan. 1, 2024	Pay 3.35%, receive 67% of 1 month USD-LIBOR-BBA	A1/A+/A+
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015A bonds	87,500	Apr. 1, 2016	Jan. 1, 2024	Pay 2.98%, receive 67% of 1 month USD-LIBOR-BBA	A1/AA-/AA A1/A-/A

(Dollars shown in thousands)

	December 31, 2016					
Type	**Objective**	**Notional amount**	**Effective date**	**Maturity date**	**Terms**	**Counterparty credit rating**
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015B bonds	50,000	Feb. 11, 2009	Jan. 1, 2024	Pay 3.331%, receive 75% of 1 month USD-LIBOR-BBA	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015C bonds	43,750	Feb. 11, 2009	Jan. 1, 2024	Pay 3.2488%, receive 67% of 1 month USD-LIBOR-BBA	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015D bonds	43,750	Feb. 11, 2009	Jan. 1, 2024	Pay 3.2525%, receive 67% of 1 month USD-LIBOR-BBA	A1/A-/A
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015F bonds	72,350	May. 21, 2013	Jan. 1, 2022	Pay 3.4486%, receive until 73.2% of 1 month USD-LIBOR-BBA	Aa2/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015G bonds	25,000	Sep. 1, 2015	Jan. 1, 2024	Pay 3.35%, receive 67% of 1 month USD-LIBOR-BBA	Aa2/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2015H bonds	48,235	Sep. 1, 2015	Jan. 1, 2022	Pay 3.305%, receive 67% of 1 month USD-LIBOR-BBA	Aa2/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2016B bonds	75,025	May. 21, 2013	Jan. 1, 2023	Pay 3.4486%, receive 73.2% of 1 month of USD-LIBOR-BBA	Aa2/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2016C bonds	50,015	Sep. 1, 2015	Jan. 1, 2023	Pay 3.4486%, receive 63% of 1 month plus 20bp USD-LIBOR-BBA	Aa2/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2016D bonds	50,000	Sep. 1, 2015	Jan. 1, 2024	Pay 3.35%, receive 67% of 1 month USD-LIBOR-BBA	Aa2/AA-/AA
Investment derivative instruments:						
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2000 B-G bonds	$ 240,000	Sep. 1, 2015	Jan. 1, 2030	Pay 4.312%, receive 64.459% of 5-year LIBOR	Aa2/AA-/AA
Pay-fixed, receive-variable interest rate swap	Hedge of interest rate risk on the Series 2000 B-G bonds	160,000	May. 21, 2013	Jan. 1, 2030	Pay 4.312%, receive 64.459% of 5-year LIBOR	Aa2/AA-/AA

On October 26, 2017, the Authority issued the Series 2017C1-6 and Series 2017D1-4 Bonds in accordance with its refunding plan. Concurrently, the Authority entered into an amendment on its existing Series 2000B-G Interest Rate Swap agreements with Wells Fargo Bank, N.A. The Series 2000B-G Interest Rate Swap agreement was re-identified to the Series 2017C1-6 Bonds. As part of the amendment to the Swap agreements, the variable rate received by the Authority was changed from 64.459% of 5 year LIBOR to 70% of 1 month LIBOR on the $240,000 notional value Swap agreement, and 70% of 1 month LIBOR on the $160 million notional value Swap agreement. Because of this change in variable rate received, the swaps as of December 31, 2017 are considered effective under GASB 53. The interest rate swap agreement relating to the Series 2013D-3 and Series 2013E-3 Bonds with Wells Fargo Bank, N.A. was re-identified to the Series 2017D-1 Bonds and the interest rate swap agreement relating to the Series 2014B-3 Bonds with Citibank, N.A. was re-identified to the Series 2017D2-4 Bonds.

(a) Risks

Credit risk: The Authority is exposed to credit risk on derivative instruments that are in asset positions. To minimize its exposure to loss related to credit risk, it is the Authority's policy to require counterparty collateral posting provisions in its derivative instruments. These terms require full collateralization of the fair value of derivative instruments in asset positions (net of the effect of applicable netting arrangements) should the counterparty's credit rating fall below BBB-as issued by Standard & Poor's or Baa3 as issued by Moody's Investors Service. Collateral posted is to be in the form of U.S. Treasury securities held by a third-party custodian. All of the Authority's derivative investments provide for the netting of the value of asset and liability positions with the same counterparty upon termination. There were no derivative instruments in asset positions as of December 31, 2017 and 2016, respectively.

Basis risk: The Authority as of December 31, 2017 is not exposed to basis risk. During 2017, the Authority amended all interest rate swaps that had basis risk to receive a variable rate based on the same rate or index as the hedged variable rate debt. The Authority was exposed to basis risk as of December 31, 2016 on its pay-fixed, receive-variable interest rate swaps that hedge its Series 2000B-G, 2013D, 2013E and 2015F Bonds because the variable-rate payments received by the Authority on these hedging derivative instruments generally are based on a rate or index other than interest rates the Authority pays on its hedged variable-rate debt, which is remarketed every 7 days. As of December 31, 2016 , the weighted average interest rate on the Authority's hedged variable-rate debt is 1.37%, while 64.459% of USD five-year LIBOR is 1.24%, 73.2% of one-month LIBOR is 0.51%, and 63% of one-month LIBOR plus 20 basis points is 0.64%.

Termination risk: The Authority or its counterparties may terminate a derivative instrument if the other party fails to perform under the terms of the contract. If at the time of termination, a hedging derivative instrument is in a liability position, the Authority would be liable to the counterparty for a payment equal to the liability, subject to netting arrangements.

(b) Contingencies

All of the Authority's derivative instruments, except for the $25,000, $48,235, $50,015, $50,000 and $101,750 notional value swaps that hedge the Series 2015G, 2015H, 2016C, 2016D and 2017D Bonds, respectively, include provisions that require the Authority to post collateral in the event its credit rating falls below BBB as issued by Standard & Poor's or Baa2 as issued by Moody's Investors Service. For the Series 2015G, 2015H, 2016C, 2016D and 2017D Swap Agreements only, the rating on the respective Series 2015G, 2015H, 2016C, 2016D and 2017D Bonds would have to drop below A2 from Moody's, below A from S&P and below A from Fitch for any collateral posting requirements to be imposed upon the Authority under such agreements. The collateral posted is to be in the form of U.S. Treasury securities in the amount of the fair value of derivative instruments in liability positions. If the Authority does not post collateral, the derivative instrument may be terminated by the counterparty. As of December 31, 2017 and 2016, the aggregate fair value of all derivative instruments in liability positions with these collateral posting provisions, based on their stated fixed rates, is approximately $131,687 and $166,582, respectively. If the collateral posting requirements were triggered as of December 31, 2017 and 2016, the Authority would be required to post $131,687 and $166,582, respectively, in collateral to its counterparties. The Authority's credit rating is A2 Moody's, A+ S&P and A Fitch; therefore, no collateral has been posted as of December 31, 2017 or 2016, respectively.

(Dollars shown in thousands)

(c) Hybrid Instrument Borrowings

The interest rate swaps hedging the series noted below include fixed rates that were off-market at the execution of the interest rate swaps or current hedging relationship. For financial reporting purposes these interest rate swaps are considered hybrid instruments and are allocated between borrowings with an aggregate original amount of $209,431 and $134,179 as of December 31, 2017 and 2016, respectively, reflecting the difference between the fair value of the instrument at execution and an interest rate swap with a fixed rate that was considered at-the-market at execution. Activity for the hybrid instrument borrowings for the years ended December 31, 2017 and 2016 was as follows:

	December 31, 2016	Reidentifications	Additions/ Reductions	December 31, 2017	Current portion
Hybrid instrument borrowings:					
Series 2013 B	$ 9,090	—	(4,534)	4,556	4,556
Series 2013 C1	11,088	—	(5,531)	5,557	5,555
Series 2013 C2	13,758	—	(6,862)	6,896	6,895
Series 2013D	9,956	(8,715)	(1,241)	—	—
Series 2015A	9,606	—	(866)	8,740	1,213
Series 2015B	5,966	—	(718)	5,248	726
Series 2015C	5,129	—	(620)	4,509	626
Series 2015D	5,137	—	(620)	4,517	626
Series 2015F	10,618	—	(1,717)	8,901	1,737
Series 2016B	8,954	—	(40)	8,914	1,432
Series 2017C1 (1)	—	45,888	—	45,888	246
Series 2017C2 (1)	—	30,605	—	30,605	622
Series 2017D1	—	8,715	—	8,715	415
	$ 89,302	76,493	(22,749)	143,046	24,649

(1) During 2017, the Authority amended the variable rate received on its derivative instruments previously considered investments under GASB 53. Since the variable rate received is now based on the same index as the interest rate on the hedged bonds, the derivative instruments are now considered effective under GASB 53 and are reported within the hybrid instrument borrowing balance for the Authority.

	December 31, 2015	Reidentifications	Additions/ Reductions	December 31, 2016	Current portion
Hybrid instrument borrowings:					
Series 2013 B	$ 13,601	—	(4,511)	9,090	4,534
Series 2013 C1	16,594	—	(5,506)	11,088	5,531
Series 2013 C2	20,588	—	(6,830)	13,758	6,862
Series 2013D	22,192	(8,954)	(3,282)	9,956	38
Series 2015A	10,654	—	(1,048)	9,606	866
Series 2015B	6,621	—	(655)	5,966	718
Series 2015C	5,306	—	(177)	5,129	620
Series 2015D	5,314	—	(177)	5,137	620
Series 2015F	10,656	—	(38)	10,618	1,717
Series 2016B	—	8,954	—	8,954	40
	$ 111,526	—	(22,224)	89,302	21,546

(Dollars shown in thousands)

The following table sets forth as of December 31, 2017, payments of principal and interest on the hybrid instrument borrowings for the next five years and thereafter. The total payments generally reflect the difference between the stated fixed rate of the hybrid instrument and the at-the-market fixed rate at the execution of the instrument or current hedging relationship.

		Principal	Interest	Total
December 31:				
2018	$	24,649	795	25,444
2019		13,547	1,731	15,278
2020		13,735	1,543	15,278
2021		13,926	1,352	15,278
2022		14,119	1,159	15,278
2023–2027		42,843	3,333	46,176
2028–2030		20,227	648	20,875
	$	143,046	10,561	153,607

(8) Debt Compliance

The Revenue Requirement under Section 713(b) of the Turnpike Revenue 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 said 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 means with respect to any period of time, "an amount equal to the greater of (i) the sum of 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 the purposes of clause (ii) only, any payment due and payable by the Authority under a Qualified Swap upon an early termination thereof)."

The net revenue requirement was met under test (i) and (ii) above for 2017 and 2016 as follows:

		2017	2016
(i):			
Net revenue available for Debt Service	$	1,290,374	1,294,591
Less net revenue requirements computed under test (the sum of aggregate debt service, maintenance reserve, special project reserve and charges fund payments)		(979,546)	(901,460)
Excess net revenue	$	310,828	393,131
(ii):			
Net revenue available for Debt Service	$	1,290,374	1,294,591
Less net revenue requirements computed under test (120% x aggregate debt service requirements of $822,984 and $773,078 in 2017 and 2016, respectively)		(987,581)	(927,694)
Excess net revenue	$	302,793	366,897

(Dollars shown in thousands)

The debt service coverage ratio (Net Revenue divided by Debt Service) was 1.57 and 1.67 in 2017 and 2016, respectively.

(9) Changes in Long-Term Liabilities

Long term liabilities primarily include bonds payable, hybrid instrument borrowing, other long term obligations, other post-employment benefit liability, interest rate swap liabilities and net pension liability. Bond payable (note 6) and hybrid instrument borrowing (note 7) are detailed in their respective footnotes. Other long term obligations include pollution remediation liability (note 10), self-insurance liability (note 13), reserve for E-Z Pass tag swap to cover the costs of a program which periodically replaces New Jersey E-Z Pass customer transponders that have reached the end of their useful lives, reserves which mainly include reserves for future self-insured claim settlements, and working capital. The liability for compensated absences which cover employees accrued sick and vacation banks, and other liabilities which include FICA tax liability on the accrued sick and vacation banks, arbitrage liability and other reserves. The other post-employment benefits liability is recorded as per GASB 45 (note 12), the interest rate swap liability is recorded as per GASB 53 (note 7), and finally the net pension liability is recorded as per GASB 68 (note 13).

The chart below shows the additions to and reductions from the above mentioned categories of long term liabilities and the balances as of December 31, 2017 and 2016, respectively.

	December 31, 2016	Additions	Reductions	December 31, 2017	Current portion
Bonds payable, net	$ 11,071,121	3,315,064	(2,775,456)	11,610,729	218,475
Hybrid instrument borrowing	89,302	85,208	(31,464)	143,046	24,649
Other long-term obligations:					
Pollution remediation liability	25,790	308	(2,160)	23,938	2,376
Self-insurance	42,516	2,322	(3,496)	41,342	—
Reserve for E-ZPass tag swap	20,035	3,500	(6,196)	17,339	—
Reserves	17,563	9,435	(8,574)	18,424	—
Compensated absences	18,219	19,040	(21,032)	16,227	3,573
Other liabilities	2,754	2	(184)	2,572	—
Other postemployment benefits	432,545	104,486	(42,933)	494,098	—
Interest rate swap liabilities	29,190	10,908	(19,184)	20,914	—
Net pension liability	561,453	—	(122,960)	438,493	—
Total	$ 12,310,488	3,550,273	(3,033,639)	12,827,122	249,073

	December 31, 2015	Additions	Reductions	December 31, 2016	Current portion
Bonds payable, net	$ 11,251,163	350,446	(530,488)	11,071,121	197,740
Hybrid instrument borrowing	111,526	8,954	(31,178)	89,302	21,546
Other long-term obligations:					
Pollution remediation liability	28,696	1,106	(4,012)	25,790	2,790
Self-insurance	59,345	23,208	(40,037)	42,516	—
Reserve for E-ZPass tag swap	21,099	5,500	(6,564)	20,035	—
Reserves	14,576	4,491	(1,504)	17,563	—
Compensated absences	18,688	17,776	(18,245)	18,219	3,419
Other liabilities	2,786	15	(47)	2,754	—
Other postemployment benefits	375,864	100,182	(43,501)	432,545	—
Interest rate swap liabilities	40,199	11,961	(22,970)	29,190	—
Net pension liability	435,015	126,438	—	561,453	—
Total	$ 12,358,957	650,077	(698,546)	12,310,488	225,495

(Dollars shown in thousands)

(10) Pollution Remediation Obligations

The Authority accounts for its pollution remediation obligations (PRO) in accordance with GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations* (GASB 49). As a result, the Authority has recorded in the statements of net position a PRO liability in the amount of $23,938 and $25,790 as of December 31, 2017 and 2016, respectively. The Authority's PRO liability is measured based on the expected costs of future activities, estimating a reasonable range of potential outlays and multiplying those outlays by their probability of occurring. The estimate of the liability does not include cost components that are not yet reasonably measurable.

The Authority owns numerous properties with environmental issues that meet the criteria for "obligating events" and disclosure under GASB 49. The matters relate to soil and groundwater contamination at various facilities along the New Jersey Turnpike and Garden State Parkway including maintenance districts, toll facilities, service areas and other Authority owned facilities. The following table summarizes the Authority's expected outlays and payments for pollution remediation as of December 31:

		2017	2016
Right of Way	$	13,450	13,350
Service areas		9,252	10,725
Maintenance districts		748	890
Toll facilities		373	675
Other facilities		115	150
Liability for pollution obligations remediation	$	23,938	25,790

(11) Pension and Deferred Compensation

1) Plan description

Permanent full-time employees of the Authority are covered by the State of New Jersey Public Employees' Retirement System (PERS), a plan that has been characterized for financial accounting purposes as a cost-sharing multiple-employer defined benefit pension plan. PERS is a contributory defined-benefit plan established in January 1955, under the provisions of N.J.S.A. 43:15A to provide coverage to substantially all full-time employees of the State of New Jersey or any county, municipality, school district or public agency, provided the employee is not a member of another State administered retired system. Membership is mandatory and vesting occurs after ten years of service, except for medical benefits, which vest after 25 years of service or under the disability provisions of PERS.

The risks of participating in a cost-sharing multiple-employer plan are different from those of participating in a single-employer plan in the following aspects:

- Assets contributed to the multiple-employer plan by one employer may be used to provide benefits to employees of other participating employers.
- If a participating entity stops contributing to the multiple-employer plan, the unfunded obligations of the plan may be borne by the remaining participating entities.
- If an entity petitions to stop participating in the multiple-employer plan, the entity may be required to pay the plan a withdrawal liability based on the funded status of the plan.

These aspects of cost-sharing multiple-employer plan participation are consistent with the manner of administration of the PERS. These aspects are not required by law but are part of the PERS administrative practices. Neither the financial accounting treatment of the PERS, nor their administrative practices, nor this note shall be deemed a representation that the PERS are subject to any laws that require the multiple-employer plan attributes that are set forth above.

(Dollars shown in thousands)

2) Benefits provided

A summary of the PERS eligibility requirements is as follows:

	TIER 1 (Enrolled before July 1, 2007)	TIER 2 (Eligible for enrollment on or after July 1, 2007 and before November 2, 2008)	TIER 3 (Eligible for enrollment on or after November 2, 2008 and on or before May 22, 2010)	TIER 4 (Eligible for enrollment after May 22, 2010 and before June 28, 2011)	TIER 5 (Eligible for enrollment on or after June 28, 2011)
ELIGIBILITY	Minimum base salary of $1,500 required for PERS Tier 1 enrollment. IRS Annual Compensation Limit on maximum salary generally apply ($270 for 2017; $265 for 2016; $265 for 2015).	Minimum base salary of $2 required for PERS Tier 2 enrollment. PERS salary limited to Social Security maximum wage ($127 for 2017; $118 for 2016; $118 for 2015). PERS members are eligible for participation in the Defined Contribution Retirement Program (DCRP) for salary over the maximum wage limit.	Minimum base salary required for PERS Tier 3 enrollment. ($8 for 2017 and 2016; $8 for 2015). Employees with base salary between $5,000 and current minimum PERS Tier 3 salary are eligible for participation in the Defined Contribution Retirement Program (DCRP). PERS salary limited to Social Security maximum wage ($127 for 2017, $118 for 2016; $118 for 2015). PERS members are eligible for participation in the DCRP for salary over the maximum wage limit.	PERS Tier 4 enrollment requires a minimum of 35 hours per week for State Employees, or 32 hours per week for Local Government or Local Education Employees. No minimum salary requirement. Employees who do not work the minimum required hours but who earn base salary of at least $5 are eligible for participation in the Defined Contribution Retirement Program (DCRP). PERS salary limited to Social Security maximum wage ($127 for 2017; $118 for 2016; $118 for 2015). PERS members are eligible for participation in the DCRP for salary over the maximum wage limit.	PERS Tier 5 enrollment requires a minimum of 35 hours per week for State Employees, or 32 hours per week for Local Government or Local Education Employees. No minimum salary requirement. Employees who do not work the minimum required hours but who earn base salary of at least $5 are eligible for participation in the Defined Contribution Retirement Program (DCRP). PERS salary limited to Social Security maximum wage ($127 for 2017; $118 for 2016; $118 for 2015). PERS members are eligible for participation in the DCRP for salary over the maximum wage limit.
SERVICE RETIREMENT	Minimum age of 60, no minimum service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary.	Minimum age of 60, no minimum service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary.	Minimum age of 62, no minimum service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary.	Minimum age of 62, no minimum service required. Annual Benefit = Years of Service ÷ 60 X Final Average (5 yrs.) Salary.	Minimum age of 65, no minimum service required. Annual Benefit = Years of Service ÷ 60 X Final Average (5 yrs.) Salary.
DEFERRED RETIREMENT	Collectible at age 60, at least 10 years of service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary	Collectible at age 60, at least 10 years of service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary.	Collectible at age 62, at least 10 years of service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary.	Collectible at age 62, at least 10 years of service required. Annual Benefit = Years of Service ÷ 60 X Final Average (5 yrs.) Salary.	Collectible at age 65, at least 10 years of service required. Annual Benefit = Years of Service ÷ 60 X Final Average (5 yrs.) Salary.
EARLY RETIREMENT	At least 25 years of service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary. No minimum age; however, if under age of 55, the benefit is reduced 3 percent per year (1/4 of 1 percent per month) for each year under age 55.	At least 25 years of service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary. No minimum age; however, if under age of 60, the benefit is reduced 1 percent per year (1/12 of 1 percent per month) for each year under age 60 but over age 55; and 3 percent per year (1/4 of 1 percent per month) for each year under age 55	At least 25 years of service required. Annual Benefit = Years of Service ÷ 55 X Final Average (3 yrs.) Salary. No minimum age; however, if under age of 62, the benefit is reduced 1 percent per year (1/12 of 1 percent per month) for each year under age 62 but over age 55; and 3 percent per year (1/4 of 1 percent per month) for each year under age 55	At least 25 years of service required. Annual Benefit = Years of Service ÷ 60 X Final Average (5 yrs.) Salary. No minimum age; however, if under age of 62, the benefit is reduced 1 percent per year (1/12 of 1 percent per month) for each year under age 62 but over age 55; and 3 percent per year (1/4 of 1 percent per month) for each year under age 55.	At least 30 years of service required. Annual Benefit = Years of Service ÷ 60 X Final Average (5 yrs.) Salary. No minimum age; however, if under age of 65, the benefit is reduced 3 percent per year (1/4 of 1 percent per month) for each year under age 65.
VETERAN RETIREMENT	At least 25 years of service at age 55 or older; or at least 20 years of service at age 60 or older. Annual Benefit = 54.5 percent X last year or highest 12 months of salary; or At least 35 years of service at age 55 or older. Annual Benefit = Years of Service ÷ 55 X Highest 12 Months of Salary.	At least 25 years of service at age 55 or older; or at least 20 years of service at age 60 or older. Annual Benefit = 54.5 percent X last year or highest 12 months of salary; or At least 35 years of service at age 55 or older. Annual Benefit = Years of Service ÷ 55 X Highest 12 Months of Salary.	At least 25 years of service at age 55 or older; or at least 20 years of service at age 60 or older. Annual Benefit = 54.5 percent X last year or highest 12 months of salary; or At least 35 years of service at age 55 or older. Annual Benefit = Years of Service ÷ 55 X Highest 12 Months of Salary.	At least 25 years of service at age 55 or older; or at least 20 years of service at age 60 or older. Annual Benefit = 54.5 percent X last year or highest 12 months of salary; or At least 35 years of service at age 55 or older. Annual Benefit = Years of Service ÷ 55 X Highest 12 Months of Salary.	At least 25 years of service at age 55 or older; or at least 20 years of service at age 60 or older. Annual Benefit = 54.5 percent X last year or highest 12 months of salary; or At least 35 years of service at age 55 or older. Annual Benefit = Years of Service ÷ 55 X Highest 12 Months of Salary.
ORDINARY DISABILITY RETIREMENT	If approved: Annual benefit = 43.6 percent X Final Average (3 yrs.) Salary.	If approved: Annual benefit = 43.6 percent X Final Average (3 yrs.) Salary.	If approved: Annual benefit = 43.6 percent X Final Average (3 yrs.) Salary.	PERS Tier 4 members may be eligible for Disability Insurance Coverage.	PERS Tier 5 members may be eligible for Disability Insurance Coverage.
ACCIDENTAL DISABILITY RETIREMENT	If approved: Annual Benefit = 72.7 percent X Annual Salary at time of accident.	If approved: Annual Benefit = 72.7 percent X Annual Salary at time of accident.	If approved: Annual Benefit = 72.7 percent X Annual Salary at time of accident.	Not Applicable	Not Applicable

3) Contributions

The contribution policy for PERS is set by N.J.S.A. 15A and requires contributions by active members and contributing employers. State legislation has modified the amount that is contributed by the State. The State's pension contribution is based on an actuarially determined amount, which includes the employer portion of the normal cost and an amortization of the unfunded accrued liability. Funding for noncontributory group insurance benefits is based on actual claims paid. For fiscal year 2017 and 2016, the State's pension contribution was less than the actuarial determined amount. The local employers' contribution amounts are based on an actuarially determined rate, which includes the normal cost and unfunded accrued liability. Chapter 19, P.L. 2009 provided an option for local employers of PERS to contribute 50% of the normal and accrued liability contribution amounts certified for payments due in State fiscal year 2009. Such employers will be credited with the full payment and any such amounts will not be included in their unfunded liability. The actuaries will determine the unfunded liability of those retirement systems, by employer, for the reduced normal and accrued liability contributions provided under this law. This unfunded liability will be paid by the employer in level annual payments over a period of 15 years beginning with the payments due in the fiscal year ended June 30, 2012 and will be adjusted by the rate of return on the actuarial value of assets.

Covered Authority employees are required to contribute a percentage of their salary toward their pension benefits. P.L. 2011, c78, effective June 28, 2011, increased the active member contribution rate from 5.5% of annual compensation to 6.5% plus an additional 1% phased in over 7 years. The payment of automatic cost of living adjustment (COLA) additional increases to current and future retirees and beneficiaries was suspended. COLA increases may be reactivated at a future date as permitted by this law. Employee contributions were $9,478 and $9,271 for the years ended December 31, 2017 and 2016, respectively. The percentage of employee's contribution rate as a percentage of covered payroll for 2017 and 2016 was 7.27%, and 7.13%, respectively. The payroll subject to pension for the Authority's employees covered by PERS was approximately $130,400 and $130,000 for the years ended December 31, 2017 and 2016. The Authority's total payroll for the years ended December 31, 2017 and 2016 was approximately $162,000 and $158,000, respectively.

The Authority is required by statute to contribute to the employee's pension benefits based on an annual actuarial calculation. The valuation is a determination of the financial condition of the retirement system. The PERS employer pension contribution rates were 12.91% and 12.46% for the years ended December 31, 2017 and 2016, respectively. The Authority's required annual contributions to the PERS were $17,450 and $16,841 for the years ended December 31, 2017 and 2016, respectively. The percentage of employer's contribution rate as a percentage of total payroll for 2017 and 2016 was 10.77% and 10.66%, respectively. The Authority's required annual contributions represent less than 2% of total contributions by municipalities and local groups to the PERS.

Pension expense recognized in accordance with the requirements of GASB 68 was $28,185 and $50,639 at December 31, 2017 and 2016, respectively.

(Dollars shown in thousands)

4) Net Pension Liability and Deferred Outflows/Inflows of Resources Related to Pensions

December 31, 2017 and 2016, the Authority reported a liability of $438,493 and $561,453, respectively, for its proportionate share of the collective PERS net pension liability. The net pension liability was measured as of June 30, 2017 and June 30, 2016, respectively, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of July 1, 2016 and July 1, 2015, respectively with amounts rolled forward to the measurement date using update procedures. For purposes of measuring the net pension liability, the plan's fiduciary net position has been determined on the same basis as they are reported for PERS. Benefit payments are recognized when due and payable in accordance with the benefit terms and investments are measured at their fair value. At June 30, 2017, the Authority's proportion of the total plan was 1.19%, which was a decrease of 0.13% from 1.32% which was the Authority's proportion measured as of June 30, 2016. The employer allocation percentages are based on the ratio of the contributions of an individual employer to the total contributions to PERS during the measurement period. At December 31, 2017 and 2016, respectively, the Authority reported deferred outflows and deferred inflows of resources related to pensions from the following sources:

	2017		2016	
	Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Differences between expected and actual experience	$ 10,325	—	10,441	—
Net difference between projected and actual earnings on pension plan investments	2,986	—	21,409	—
Changes in employer proportion	—	11,249	—	12,073
Changes in assumptions	88,341	88,018	116,303	—
Employer contribution made subsequent to the measurement date	8,726	—	8,421	—
Total	$ 110,378	99,267	156,574	12,073

Included in deferred outflows of resources related to pensions at December 31, 2017 and 2016 is $8,726 and $8,421, respectively, from contributions made by the Authority subsequent to the respective measurement date that will be recognized as a reduction of the net pension liability in the following fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

(Dollars shown in thousands)

		2017
Year ended June 30:		
2018	$	6,880
2019		12,134
2020		6,639
2021		(13,889)
2022		(9,379)
Total	$	2,385

5) Significant Assumptions and Other Inputs Used to Measure Total Pension Liability

The collective total pension liability for the June 30, 2017 and 2016 measurement date was determined by an actuarial valuation as of July 1, 2016 and 2015, respectively, which was rolled forward to June 30, 2017 and 2016. The respective actuarial valuations used the following actuarial assumptions.

	2017	2016
Inflation rate	2.25%	3.08%
Salary increases:		
Through 2026	1.65–4.15% based on age	1.65–4.15% based on age
Thereafter	2.65–5.15% based on age	2.65–5.15% based on age
Investment rate of return	7.00%	7.65%

For the July 1, 2016 and 2015 valuations, preretirement mortality rates were based on the RP-2000 Employee Preretirement Mortality Table for male and female active participants. For State employees, mortality tables are set back 4 years for males and females. For local employees, mortality tables are set back 2 years for males and 7 years for females. In addition, the tables provide for future improvements in mortality from the base year of 2013 using a generational approach based on the plan actuary's modified MP-2014 projection scale. Post-retirement mortality rates were based on the RP-2000 Combined Healthy Male and Female Mortality Tables (set back 1 year for males and females) for service retirements and beneficiaries of former members and a one-year static projection based on mortality improvement Scale AA. In addition, the tables for service retirements and beneficiaries of former members provide for future improvements in mortality from the base year of 2013 using a generational approach based on the plan actuary's modified MP-2014 projection scale. Disability retirement rates used to value disabled retirees were based on the RP-2000 Disabled Mortality Table (set back 3 years for males and set forward 1 year for females).

The actuarial assumptions used in the July 1, 2016 and 2015 valuations were based on the results of an actuarial experience study for the period July 1, 2011 to June 30, 2014. It is likely that future experience will not exactly conform to these assumptions. To the extent that actual experience deviates from these assumptions, the emerging liabilities may be higher or lower than anticipated. The more the experience deviates, the larger the impact on the future financial statements.

(Dollars shown in thousands)

(a) Long-Term Expected Rate of Return

The long-term expected rate of return was 7.00% and 7.65% for the June 30, 2017 and 2016 valuations, respectively. The long-term expected rate of return was determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in PERS's target asset allocation as of June 30, 2017 and 2016 are summarized in the following table:

	2017			2016	
Asset class	Target allocation	Long-term expected real rate of return	Asset class	Target allocation	Long-term expected real rate of return
Absolute return/risk mitigation	5.00%	5.51%	Cash	5.00%	0.87%
Cash equivalents	5.50	1.00	U.S. treasuries	1.50	1.74
U.S. Treasuries	3.00	1.87	Investment grade credit	8.00	1.79
Investment grade credit	10.00	3.78	Mortgages	2.00	1.67
Public high yield	2.50	6.82	High yield bonds	2.00	4.56
Global diversified credit	5.00	7.10	Inflation-indexed bonds	1.50	3.44
Credit oriented hedge funds	1.00	6.60	Broad U.S. equities	26.00	8.53
Debt related private equity	2.00	10.63	Developed foreign equities	13.25	6.83
Debt related real estate	1.00	6.61	Emerging market equities	6.50	9.95
Private real asset	2.50	11.83	Private equity	9.00	12.40
Equity related real estate	6.25	9.23	Hedge funds/absolute return	12.50	4.68
U.S. equity	30.00	8.19	Real estate (property)	2.00	6.91
Non-U.S. developed markets equity	11.50	9.00	Commodities	0.50	5.45
Emerging markets equity	6.50	11.64	Global debt ex US	5.00	(0.25)
Buyouts/venture capital	8.25	13.08	REIT	5.25	5.63

(Dollars shown in thousands)

(b) Discount Rate

2017

The discount rate used to measure the total pension liability was 5.00% as of June 30, 2017. This single blended discount rate was based on the long-term expected rate of return on pension plan investments of 7.00% and a municipal bond rate of 3.58% as of June 30, 2017 based on the Bond Buyer GO 20-Bond Municipal Bond Index, which includes tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from employers will be made based on the contribution rate in the most recent fiscal year. The State employer contributed 40% of the actuarially determined contributions and the local employers contributed 100% of their actuarially determined contributions. Based on those assumptions, the plan's fiduciary net positon was projected to be available to make projected future benefit payments of current plan members through 2040. Therefore, the long-term expected rate of return on plan investments was applied to projected benefit payments through 2040 and the municipal bond rate was applied to projected benefit payments after that date in determining the total pension liability.

2016

The discount rate used to measure the total pension liability was 3.98% as of June 30, 2016. This single blended discount rate was based on the long-term expected rate of return on pension plan investments of 7.65% and a municipal bond rate of 2.85% as of June 30, 2016 based on the Bond Buyer GO 20-Bond Municipal Bond Index, which includes tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from employers will be made based on the contribution rate in the most recent fiscal year. The State employer contributed 30% of the actuarially determined contributions and the local employers contributed 100% of their actuarially determined contributes. Based on those assumptions, the plan's fiduciary net position was projected to be available to make projected future benefit payments of current plan members through 2034. Therefore, the long-term expected rate of return on plan investments was applied to projected benefit payments through 2034 and the municipal bond rate was applied to projected benefit payments after that date in determining the total pension liability.

(c) Sensitivity of the Authority's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the Authority's proportionate share of the net pension liability of the participating employers as of June 30, 2017 and 2016, respectively, calculated using the discount rate as disclosed above as well as what the proportionate net pension liability would be if it was calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current rate:

	1% Decrease	**Current discount rate**	**1% Increase**
2017 (4.00%, 5.00%, and 6.00%)	543,981	438,493	350,609
2016 (2.98%, 3.98%, and 4.98%)	687,995	561,453	456,982

PERS issues a stand-alone financial report that is available to the public. The report may be accessed via the State of New Jersey's website at: http://www.state.nj.us/treasury/pensions/documents/financial/gasb/gasb68-pers18.pdf

Deferred Compensation Plan

The Authority adopted the New Jersey Turnpike Authority Employees' Deferred Compensation Plan (Deferred Compensation Plan) effective as of January 1, 1999, in accordance with the provisions of Section 27:23-1, et seq., of the New Jersey Revised Statutes and as provided in Section 457 of the Internal Revenue Code of 1986, as amended (Code). The Deferred Compensation Plan was amended and restated effective as of January 1, 2011. All permanent employees are eligible to participate in the plan, which permits participants to defer annually a portion of their salary. The Authority does not make any contributions to the plan. Employees of the South Jersey Transportation Authority and the Burlington County Bridge Commission are also eligible to participate in the plan. All amounts of compensation deferred under the plan, all property and rights purchased with these amounts, and all income attributable to these amounts, property, or rights are solely the property of the employees.

(12) Other Postemployment Benefits

The Authority provides medical, prescription drug, vision, dental and Medicare Part B reimbursement to retirees and their covered dependents, in accordance with the terms of the applicable collective bargaining agreements or Authority personnel policies for non-bargaining unit members. The Authority maintains single-employer, self-funded health plans administered by third party claims administrators. All active employees who retire from the New Jersey Turnpike Authority and meet the eligibility criteria will receive these benefits. The plan does not issue a stand-alone report.

The Authority currently funds the cost to provide postemployment benefits on a pay-as-you-go basis. For the years ended December 31, 2017 and 2016, approximately 245 and 213 retirees, respectively, contributed to their healthcare cost, in accordance with the provisions of agreements in effect at the time of their retirement and P.L. 2011, c.78, effective June 28, 2011.

The Authority establishes and has the power to amend benefits and contribution obligations, subject to collective negotiations agreements to the extent they do not conflict with P.L. 2012, c. 78 mandated by the State of New Jersey.

As required by the accounting standards of GASB 45, the Authority must report costs associated with "other postemployment benefits" (OPEB). OPEB costs are actuarially calculated based on benefits that current and retired employees have accrued as a result of years of service. The Standard sets the method for determining the Authority's postemployment benefits accrual, the Annual Required Contribution (ARC), to include both the value of benefits earned during the year (Normal Cost) and an amortizing of the unfunded actuarial accrued liability over a period not to exceed thirty years. The unfunded actuarial accrued liability is amortized using a level percentage of payroll for a period of 30 years with assumed payroll increases of 3% per year.

(Dollars shown in thousands)

The following table shows the components of the Authority's annual OPEB cost as of December 31, 2017 and 2016:

		December 31	
		2017	2016
Annual required contribution (ARC)	$	104,375	100,099
Interest on net OPEB obligation		17,302	12,796
Adjustment to annual required contribution		(17,191)	(12,713)
Total annual OPEB cost (AOC)		104,486	100,182
Contributions made		42,933	43,501
Increase in net OPEB obligation		61,553	56,681
Net OPEB obligation, beginning of year		432,545	375,864
Net OPEB obligation, end of year	$	494,098	432,545

The Authority's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan and the net OPEB obligation (NOO) the for years ending December 31, 2017, 2016 and 2015, respectively, were as follows:

Year ending		Annual OPEB cost	Percentage of annual OPEB cost contributed*		Net OPEB obligation
December 31, 2017	$	104,486	41.1 %	$	494,098
December 31, 2016		100,182	43.4		432,545
December 31, 2015		100,182	44.1		375,864

* Based on expected benefit payments plus Retiree Drug Subsidy for the applicable year end.

The covered payroll (annual payroll of active employees covered by the plan) as of January 1, 2017 was $121,717, and the ratio of the UAAL to covered payroll was 1208%.

At January 1, 2017, the actuarial accrued liability (AAL) for postemployment benefits earned was approximately $1,470,000, based on certain actuarial methods and assumptions. Since this liability has not been pre-funded as of the valuation date, the unfunded actuarial accrued liability (UAAL) was approximately $1,470,000. The AAL represents approximately 74% of the present value of all projected benefits.

The actuarial valuation date is January 1, 2017. Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events in the future. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. The required schedule of funding progress presented as required supplementary information provides multiyear trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

Actuarial Methods and Assumptions

Projections of benefits are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits in force at the valuation date and the pattern of sharing benefit costs between the employer and the plan members to that point. Actuarial calculations reflect a long-term perspective and employ methods and assumptions that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets.

For the most recent actuarial valuation dated January 1, 2017, the projected unit credit cost method was used as the actuarial cost method. The actuarial assumptions included an investment rate of return of 4% (inclusive of an inherent inflation rate of 2%), and an annual healthcare cost trend rate of 9.5% medical and grading down to an ultimate rate of 5% after 9 years. For prescription drug benefits, the initial trend rate is negative 5%, increasing to a 10.5% and again declining to 5% as a long-term trend rate after 11 years. For Medicare Part B reimbursement and for dental benefits the trend rate is 5.0% and for vision benefits the trend is 3.0%. The amortization method used was the level percentage of payroll, for a period of 30 years open, with an assumption that payroll increases by 3% per year.

The unfunded actuarial accrued liability (UAAL) as of January 1, 2017 is $1,470,359, an increase of $45,088 from the prior valuation UAAL of $1,425,271. This increase is due to the demographic changes since last valuation dated January 1, 2015, and the changes in valuation assumptions such as per capita health costs and revisions of the premium rates on which the retiree contributions are based.

The required schedule of funding progress immediately following the notes to the financial statements presents multi-year trend information as of January 1, 2017 and whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

At the January 28, 2014 Board of Commissioners Meeting, the Authority approved a plan to establish an Internal Revenue Code (IRC) Section 115 Trust to hold employer contributions for other post-retirement benefits (OPEB) obligations. The plan approved by the Board of Commissioners includes (1) the establishment of an OPEB Committee comprised of Authority personnel, (2) the issuance of Request For Proposals for an institutional trustee and an investment manager/advisor for the plan assets, (3) the development of an OPEB Trust agreement with outside counsel, (4) obtaining a private letter ruling from the Internal Revenue Service, and (5) obtaining all necessary legal opinions from outside general counsel and bond counsel. As of December 31, 2017, the trust has not been established.

(13) Risk Management and Self-Insurance

The Authority maintains a comprehensive insurance program, which affords various coverages including but not limited to, excess liability (general, automobile, and police professional), excess workers compensation, property insurance (including bridge and non-bridge properties and business interruption insurance), employee medical benefits insurance, public officials and employment practices liability insurance, commercial crime and cyber liability insurance, and owner controlled insurance programs (OCIPs). During the year 2017, the Authority increased the limits on a few of its insurance lines, specifically Property insurance, Cyber insurance and Fiduciary insurance coverage. Bridge and Property insurance coverage was enhanced with a higher limit for terrorism. Cyber insurance policies were also upgraded with additional enhancements.

(Dollars shown in thousands)

The OCIPs provided general liability and workers compensation coverage, as well as other insurance coverages for construction contracts included in the Authority's $7 Billion Capital Improvement Program for the benefit of the Authority and its contractors, subcontractors, consultants and sub-consultants for claims related to various construction contracts at customary ranges of coverage limits and self-insured retentions and/or deductibles. The Authority ceased enrolling new contracts in the OCIP in April 2014. Additionally, the OCIPs ceased providing coverage after July 15, 2017, but the OCIP program remains in place to administer general liability, workers compensation and other claims.

The following chart provides additional information as to risks insured for the protection of the Authority, general limits of coverage and applicable deductibles/self-insured retentions. Certain defined risks are subject to sub-limits and more specific deductibles/self-insured retentions and all insurances are subject to terms and conditions as set forth in the policies.

Type of insurance coverage	Deductible/retention	
Excess Liability (general liability)	$ 2,000	per occurrence ($3,000 aggregate)
Excess Liability (automobile liability)	5,000	per occurrence
Excess Liability (State police)	2,000	per occurrence
Bridge and Property (1)	2,000	per occurrence
Commercial Crime	50	per occurrence
Cyber Insurance	250	per occurrence
Employee Medical Benefits	350	per claimant
Public Official and Employment Practices Liability	500	per occurrence
Professional Liability Insurance Architects & Engineers	100	for project values up to $500,000 and
	250	for project values greater than $500,000
Excess Workers Compensation	1,250	per occurrence
OCIP (Interchange 6–9 Widening Project – general and workers compensation)	500	per occurrence
OCIP (other construction projects – general and workers compensation)	500	per occurrence

(1) Bridge and property insurance includes business interruption insurance which is subject to a two day waiting period with respect to approximately 42% of the pro-rata share of the primary policy insurers and a five day waiting period with respect to approximately 58% of the pro rata share of the primary policy insurers. In the event a covered loss continues beyond the respective waiting periods, coverage starts from the first day of the loss, subject to the $2,000 deductible.

On January 20, 2017, the Delaware River Turnpike Bridge between New Jersey and Pennsylvania, which permits traffic on the Authority's Pearl Harbor Memorial Turnpike Extension to connect with the Pennsylvania Turnpike, was fully closed for emergency repairs. After the completion of certain repairs and extensive examination and testing, the bridge was fully reopened to traffic on March 9, 2017. In December 2017, the Authority filed a claim for $21,411 under its Bridge and Property Insurance, including business interruption insurance, for all physical damage costs, related extra expenses and lost revenue due to the damage and subsequent closure of the Delaware River Turnpike Bridge.

(Dollars shown in thousands)

Claim liabilities are recorded when it is probable that a loss occurred and the amount of that loss can be reasonably estimated. The liabilities include a provision for case reserves as well as incurred but not reported and future development of known cases. The following tables present the changes in claims liabilities for the years ended December 31, 2017 and 2016:

		December 31, 2016	Change in estimate	Payments	December 31, 2017
General liability	$	4,061	2,522	(2,335)	4,248
Auto liability		1,091	671	(601)	1,161
Workers' compensation		21,645	4,788	(4,173)	22,260
Owner controlled insurance program (OCIP)		15,719	35,316	(37,362)	13,673
Total	$	42,516	43,297	(44,471)	41,342

		December 31, 2015	Change in estimate	Payments	December 31, 2016
General liability	$	3,356	874	(169)	4,061
Auto liability		777	860	(546)	1,091
Workers' compensation		25,814	858	(5,027)	21,645
Owner controlled insurance program (OCIP)		29,398	20,616	(34,295)	15,719
Total	$	59,345	23,208	(40,037)	42,516

(14) Blended Component Unit – Garden State Arts Foundation, Inc.

The Garden State Arts Foundation, Inc. (formerly known as the Garden State Arts Center Foundation) was established in 1984 pursuant to the provisions of Title 15A, Corporations-Non-Profit, of the New Jersey State Statutes. The purpose of the Foundation is to receive contributions from the public or other entities, engage in such fundraising activities as the members deem appropriate, fund and administer an annual scholarship program to provide scholarships to students pursuing an undergraduate degree with a performing arts concentration at four-year New Jersey colleges and universities, support the study of performing arts in New Jersey and support educational and charitable activities. The Foundation provides free entertainment at the PNC Bank Arts Center and various outreach locations throughout the State of New Jersey for New Jersey's senior citizens, school children, and other deserving residents. The Foundation's members include the Commissioners of the New Jersey Turnpike Authority. The Foundation is qualified as a tax-exempt organization as defined by Section 501(c) (3) of the Internal Revenue Code.

(Dollars shown in thousands)

The condensed statements of net position and statements of revenues, expenses, and changes in net position of the Foundation as of and for the years ended December 31, 2017 and 2016 are as follows:

Summary of Net Position

Assets		**2017**	**2016**
Current assets	$	735	805
Total assets	$	735	805
Liabilities			
Current liabilities	$	16	7
Total liabilities	$	16	7
Net Position			
Net position:			
Unrestricted	$	719	798
Total net position	$	719	798

Summary of Revenues, Expenses, and Changes in Net Position

		2017	**2016**
Operating revenues	$	628	627
Operating expenses		713	571
Operating income (loss)		(85)	56
Nonoperating revenues		6	5
Increase (decrease) in net position		(79)	61
Net position as of beginning of year		798	737
Net position as of end of year	$	719	798

(15) Litigation

The Authority is a party to various legal actions and regulatory reviews arising in the ordinary course of its operations which includes investigation, remediation of existing and projected action level environmental conditions. The Authority is contingently liable under pending lawsuits and claims, relating principally to construction programs and personal injury claims, in which the Authority is named a defendant. The Authority is also subject to regulatory directives or environmental claims by third parties to investigate and/or remediate suspected or known contamination that is claimed to be the Authority's responsibility. The Authority believes the aggregate liability of the Authority under such actions, even if adversely determined, would not have a material adverse effect on the financial position of the Authority; and sufficient funds are expected to be available to satisfy any payments required in connection therewith.

On May 24, 2017, a Petition for Rule Change seeking to have the Authority revoke its rule imposing a $50 administrative fee in connection with collecting unpaid tolls from toll violators of the Turnpike System was filed with the Authority. In the Petition, the petitioners argue that the administrative fee is unreasonable and therefore not authorized by the Act. The Petition also includes a demand for a refund of the administrative fees collected by the

Authority to the extent unreasonable, which amount the petitioners claim is nearly $200,000. In October 2017, the Authority denied the Petition. On December 1, 2017, the petitioners filed an appeal of that denial with the Appellate Division of the Superior Court of the State of New Jersey. The Authority is currently waiting for the Appellate Division to issue a briefing schedule. In connection with such appeal, the Authority intends to vigorously defend its conclusion that the $50 administrative fee is reasonable and consistent with the Act. Additionally, the Authority believes that in the unlikely event that a court should ultimately rule that some portion of the $50 administrative fee is not reasonable and must be refunded by the Authority, the aggregate amount required to be refunded would be substantially less than the amount claimed by the petitioners given the total aggregate amount of administrative fees collected by the Authority since the fee was raised to $50 is substantially less than $200,000.

On December 1, 2017, the law firm representing the petitioners also filed a class action lawsuit in the United States District Court for the District of New Jersey alleging, among other things, that the $50 administrative fee violates the Fair Debt Collections Practices Act (the "FDCPA") and the Eighth Amendment to the United States Constitution. On January 17, 2018, the Federal Court entered an order that stayed the class action lawsuit pending a decision in the Appeal discussed above. If and when the class action lawsuit is restored to active status, the Authority intends to vigorously defend its conclusion that the $50 administrative fee does not violate the FDCPA or the United States Constitution.

The Authority is also defending several lawsuits arising from its operations of the State Police assigned to provide police services on the Turnpike and Garden State Parkway pursuant to the Authority's contract with the New Jersey State Police, which includes an indemnification provision requiring the Authority to defend and indemnify the State troopers individually as well as the State Police and the State against claims related to their conduct in the course of their duties. The Authority, under the indemnification provisions of the contract, may be responsible for a State trooper's liability for negligent acts, but not for intentional wrongful acts or acts beyond the scope of employment. The Authority believes the aggregate liability of the Authority under such actions, even if adversely determined, would not have a material adverse effect on the financial position of the Authority and sufficient funds are expected to be available to satisfy any payments required in connection therewith.

Soil and/or groundwater contamination found on off-site properties and waterway contamination that resulted from or is inferred to be the result of operations conducted at roadway facilities has led to litigation by others against the Authority and may lead to additional litigation in the future. Claims for reimbursement of remediation costs filed by the parties undertaking remediation activities at these properties may be forthcoming. In some cases the Authority may be required to undertake, fund or reimburse others for remediation activities at properties where the contamination has been discovered. The ultimate cost, if any, of these potential liabilities is unknown at this time.

(Dollars shown in thousands)

(16) Related Parties

Under the regular course of operations, the Authority enters into various agreements with the State of New Jersey (the State). A summary of transactions with the State in 2017 and 2016 is as follows:

		December 31	
		2017	2016
Due from the State - Project reimbursements	$	2,693	448
Due to the State - Potential unemployment claims	$	2,843	2,758
Payments to the State - Operating expenses			
State police services	$	60,808	62,460
PERS billing		17,450	16,841
Other State payments		668	504
Payments to the State - Nonoperating expenses			
Transportation Trust Fund Agreement	$	22,000	22,000
State Transportation Projects Funding Agreement (2011-2016)		—	162,000
State Transportation Projects Funding Agreement (2016-2021)		204,000	102,000
Feeder Road Maintenance Agreement		6,500	8,000
Total payments to the State - Nonoperating expenses	$	232,500	294,000
Payments to the State - Capitalized expenses			
State police services	$	5,625	8,186

From time to time the Authority enters into various memorandums of agreement with the State that cover cost-sharing or cost-reimbursement work, for various construction projects, including a pass-through of Federal funding. These agreements generally require the Authority to invoice the State for its share of the construction or engineering work performed under the agreements.

The Authority is a participating employer in the State's Unemployment Insurance program and reimburses the State for unemployment claims made by its eligible former employees.

The Authority has an agreement with the State of New Jersey Department of Law and Public Safety (State Police) to patrol the Turnpike and the Parkway. As per this agreement the Authority makes payments for the State Police services received. These payments include, but are not limited to salary and overtime expenses, travel expenses, training costs, health benefit costs, fringe benefits and other indirect costs. A portion of these payments made to the State Police are charged back to capital projects based on the State Police services used for the capital and construction projects.

The Authority is a participating employer in the State's PERS plan and annually contributes the employer's portion as billed by the State (note 11).

Under the terms of an agreement dated April 27, 1984 and amendments dated August 1, 1995 and March 27, 2000, the Authority makes annual payments to the State of New Jersey to assist in transportation purposes. These payments are $22,000 annually and are due until all obligations of the New Jersey Transportation Trust Fund Authority, as set forth in the 2000

Amendment, are paid for or such payment has been provided for. The payments are made from the General Reserve Fund and are subordinate to debt service payments on all outstanding bonds and all other obligations under the Authority's General Bond Resolution.

Under the terms of a State Transportation Projects Funding Agreement dated September 30, 2011, the Authority made annual payments to the State of New Jersey for the development of State transportation purposes. These payments totaled $324,000 in 2015 and $162,000 in 2016. The agreement terminated on June 30, 2016.

On June 28, 2016, the Authority entered into a new State Transportation Funding Agreement with the Treasurer of the State of New Jersey. Under this new Funding Agreement, the Authority will make payments to the State of New Jersey to be used for statewide transportation purposes for a five year period which began on July 1, 2016 and ends on June 30, 2021. The Authority has and will make annual payments, payable quarterly, of $204,000 per year in the State fiscal years June 30, 2017 and 2018, and $129,000 per year in the State fiscal years 2019, 2020, and 2021. The total payments over the five-year period will be $795,000. The payments totaled $204,000 in calendar year 2017. The payments are made from the General Reserve Fund and are subordinate to debt service payments on all outstanding bonds and all other obligations under the Authority's General Bond Resolution.

The Authority also made annual payments to the State totaling $6,500 in 2017 and $8,000 in 2016 for feeder road maintenance provided by the New Jersey Department of Transportation. The Authority entered into a Feeder Road Maintenance and Cost Sharing Agreement with the State for the period July 1, 2016 through June 30, 2023, a term of seven years. Under the terms of the Feeder Road Agreement, the State will continue to reconstruct, maintain and repair 280 miles of feeder roads leading to 20 interchanges on the New Jersey Turnpike and 36 interchanges on the Garden State Parkway. The Authority will reimburse the State on an annual basis, payable quarterly, $8,000 in the State fiscal year 2017, $5,000 in the State fiscal year 2018, $4,000 in the State fiscal year 2019, $2,750 in the State fiscal year 2020, and $2,500 in State fiscal year 2021, 2022 and 2023, for a total of $27,250 over the seven year term. This Feeder Road Agreement replaced a prior agreement for the period July 1, 2016 – June 30, 2016 under which the Authority made an annual payment of $8,000, payable quarterly, for feeder road maintenance work performed by the State.

(17) Commitments

The Authority has open commitments related to construction contracts totaling approximately $469,876 and $742,045 as of December 31, 2017 and 2016, respectively. This work relates to the Authority's $7 Billion Capital Improvement Program and will be completed over the next several years.

On December 7, 2017, the Authority entered into a 25 year lease agreement with Live Nation Worldwide, Inc. (Tenant), which commences on January 1, 2018, to lease the Amphitheater located at PNC Bank Arts Center. As per the agreement, the tenant is responsible to pay the greater of the minimum fixed rent or minimum percentage rental amount for each lease year. In addition the tenant has agreed to fund capital improvements to the Amphitheater in the amount of $11,000 payable in the equal installments starting March 1, 2018 and ending on March 1, 2021. As per the agreement, the Authority is committed to deposit an equal amount within 30 days after the tenant makes the payment towards capital improvements.

(18) Service Area Agreements

On September 12, 2017, the Authority entered into a 27 year agreement with HMS Host Tollroads Inc. (HMS) and a 25 year agreement with Sunoco Retail LLC (Sunoco) for the operation and remodeling of service areas along the Turnpike and the Parkway. On the Turnpike, HMS operates the food concessions at all 12 service areas and Sunoco provides gasoline, diesel fuel and minor repair services at all service areas. On the Parkway, HMS operates 5 service areas. The agreement allows HMS to provide food services at the Authority service areas in exchange for the greater of a minimum annual guaranteed payment or a percentage of gross sales, and a significant additional contribution to rebuild 8 new restaurant buildings and refurbish 6 existing restaurant buildings. The HMS agreement also provides for it to make annual contributions over the life of the contract for ongoing maintenance and capital improvements to the restaurant facilities. The agreement with Sunoco allows it to provide fuel services at the Authority service areas in exchange for the greater of a minimum annual guaranteed payment or a percentage of gross sales, and a significant additional contribution to rebuild/remodel 20 fuel service facilities over the next 7 years. Sunoco will also provide an annual contribution over the life of the agreement for ongoing maintenance and capital improvements to the fuel service facilities. Construction is expected to begin in 2018 on the Thomas Edison Service Area on the Turnpike and the Monmouth location on the Parkway. All locations are expected to be completed by 2024.

(19) Subsequent Events

The Authority evaluated events subsequent to December 31, 2017 and through June 26, 2018, the date on which the financial statements were approved for issuance and determined that no additional matters required disclosure.

Schedule 1

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Required Supplementary Information (Unaudited)

Schedule of Funding Progress – Other Postemployment Benefits Plan

December 31, 2017

(In thousands)

Valuation date		Actuarial value of assets (a)	Actuarial accrued liability – projected unit credit (b)	Unfunded actuarial accrued liability (b)–(a)	Funded ratio (a)/(b)	Covered payroll (c)	Unfunded actuarial accrued liability as a percentage of covered payroll ((b) – (a))/(c)
01/01/2013	$	—	1,091,162	1,091,162	—	110,791	985%
01/01/2015		—	1,425,271	1,425,271	—	128,816	1,106
01/01/2017		—	1,470,359	1,470,359	—	121,717	1,208

See accompanying independent auditors' report.

Schedule 2

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Required Supplementary Information (Unaudited)

Schedules of Proportionate Share, Employer Contributions and Notes

State of New Jersey Public Employees' Retirement System

December 31, 2017

(In thousands)

Schedule of Proportionate Share of Net Pension Liability at June 30 (measurement date)

		2017	2016	2015	2014	2013
Proportion of net pension liability – Local Group		1.8837%	1.8957%	1.9379%	1.9564%	1.9846%
Proportion of net pension liability – Total Plan		1.1904	1.3225	1.5352	1.6194	1.4164
Proportionate share of net pension liability	$	438,493	561,453	435,015	366,300	379,299
Covered-employee payroll (approximate)		130,400	130,000	130,000	132,600	134,600
Proportionate share of net pension liability as a percentage of covered-employee payroll		336.27%	431.89%	334.63%	276.24%	281.80%
Plan fiduciary net position as a percentage of total pension liability		36.78%	31.20%	38.21%	42.74%	40.71%

Schedule of Employer Contributions for the year ended December 31

		2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Contractually required contributions	$	17,450	16,841	16,660	16,129	14,954	18,395	17,923	14,169	12,991	9,693
Contributions in relation to the contractually required contributions		17,450	16,841	16,660	16,129	14,954	18,395	17,923	14,169	12,991	9,693
Contribution deficiency (excess)	$	—	—	—	—	—	—	—	—	—	—
Covered-employee payroll (approximate)		130,400	130,000	130,000	132,600	134,600	135,000	147,000	166,000	164,881	161,925
Contributions as a percentage of covered-employee payroll		13.38%	12.95%	12.82%	12.16%	11.11%	13.63%	12.19%	8.54%	7.88%	5.99%

Notes

Changes in benefit terms – There were no significant changes in benefits for any of the actuarial valuations used to determine required contributions.
Changes in assumptions – There were no significant changes in assumptions except for the annual change in the discount rate as follows:
June 30, 2017: 5.00%
June 30, 2016: 3.98%
June 30, 2015: 4.90%
June 30, 2014: 5.39%
June 30, 2013: 5.55%

See accompanying independent auditors' report.

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NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Net Position – Reconciliation of Bond Resolution to GAAP

December 31, 2017
(With summarized comparative financial information as of December 31, 2016)

(In thousands)

Assets	Revenue	Construction	Maintenance reserve	Special project reserve	General reserve	Charges	Debt service	Debt reserve	Total bond resolution	Garden State Arts Foundation	GAAP Adjustments	Total 2017 GAAP Financials	Total 2016 GAAP Financials
Current assets:													
Cash	$ 171,793	—	1,078	3,606	6,604	—	—	—	183,081	626	—	183,707	202,305
Restricted cash	—	59,466	—	—	—	—	29	—	59,495	—	—	59,495	117,334
Investments (1)	298,192	—	66,256	73,574	291,730	—	—	—	729,752	—	—	729,752	674,006
Restricted investments	—	—	—	—	—	—	466,713	267,192	733,905	—	—	733,905	645,411
Receivables, net of allowance	67,305	—	—	148	299	—	—	—	67,752	108	—	67,860	73,736
Inventory	23,075	—	—	—	—	—	—	—	23,075	—	—	23,075	22,692
Due from State of New Jersey	377	—	—	—	2,316	—	—	—	2,693	—	—	2,693	448
Restricted deposits	2,435	3,702	—	—	24,069	—	—	—	30,206	—	—	30,206	30,189
Prepaid expenses	9,078	—	—	—	—	—	—	—	9,078	1	—	9,079	4,650
Interfund	(195,612)	6,891	(810)	584	191,344	—	(439)	(1,958)	—	—	—	—	—
Total current assets	376,643	70,059	66,524	77,912	516,362	—	466,303	265,234	1,839,037	735	—	1,839,772	1,770,771
Noncurrent assets:													
Restricted investments	—	425,612	—	—	—	—	—	333,596	759,208	—	—	759,208	440,753
Capital assets, net of accumulated depreciation	—	11,103,029	434,928	88,282	201,154	—	—	—	11,827,393	—	13,673	11,841,066	11,455,725
Total noncurrent assets	—	11,528,641	434,928	88,282	201,154	—	—	333,596	12,586,601	—	13,673	12,600,274	11,896,478
Total assets	$ 376,643	11,598,700	501,452	166,194	717,516	—	466,303	598,830	14,425,638	735	13,673	14,440,046	13,667,249
Deferred Outflows													
Deferred outflows:													
Deferred amounts on refunding and derivative instruments	$ —	—	—	—	—	—	—	—	—	—	281,059	281,059	132,231
Deferred amount relating to pensions	—	—	—	—	—	—	—	—	—	—	110,378	110,378	156,574
Total deferred outflows	$ —	—	—	—	—	—	—	—	—	—	391,437	391,437	288,805
Liabilities													
Current liabilities:													
Accounts payable and accrued expenses	$ 64,676	45,633	12,790	4,852	6,644	—	—	—	134,595	16	16,847	151,458	172,155
Funds held in trust	205,118	24,465	1,578	1,507	676	—	—	—	233,344	—	—	233,344	239,720
Due to State of New Jersey	2,843	—	—	—	—	—	—	—	2,843	—	—	2,843	2,758
Accrued interest payable	—	—	—	—	—	—	247,828	—	247,828	—	—	247,828	268,050
Unearned revenue	4,628	—	—	—	10,692	—	—	—	15,320	—	—	15,320	30,466
Current portion of bonds payable	—	218,475	—	—	—	—	—	—	218,475	—	—	218,475	197,740
Current portion of hybrid instrument borrowing	—	—	—	—	—	—	—	—	—	—	24,649	24,649	21,546
Current portion of other long-term liabilities	3,573	—	—	—	8	—	—	—	3,581	—	2,368	5,949	6,209
Total current liabilities	280,838	288,573	14,368	6,359	18,020	—	247,828	—	855,986	16	43,864	899,866	938,644
Noncurrent liabilities:													
Bonds payable, net	—	11,392,254	—	—	—	—	—	—	11,392,254	—	—	11,392,254	10,873,381
Hybrid instrument borrowing	—	—	—	—	—	—	—	—	—	—	118,397	118,397	67,756
Other long-term obligations	42,929	—	—	—	24,077	—	—	—	67,006	—	46,887	113,893	120,668
Other postemployment benefit liability	—	—	—	—	91,325	—	—	—	91,325	—	402,773	494,098	432,545
Interest rate swaps liabilities	—	—	—	—	—	—	—	—	—	—	20,914	20,914	29,190
Net pension liability	—	—	—	—	—	—	—	—	—	—	438,493	438,493	561,453
Total noncurrent liabilities	42,929	11,392,254	—	—	115,402	—	—	—	11,550,585	—	1,027,464	12,578,049	12,084,993
Total liabilities	$ 323,767	11,680,827	14,368	6,359	133,422	—	247,828	—	12,406,571	16	1,071,328	13,477,915	13,023,637
Deferred Inflows													
Deferred inflows:													
Accumulated increase in fair value of hedging derivatives	$ —	—	—	—	—	—	—	—	—	—	6,288	6,288	2,035
Deferred amount relating to pensions	—	—	—	—	—	—	—	—	—	—	99,267	99,267	12,073
Total deferred inflows	$ —	—	—	—	—	—	—	—	—	—	105,555	105,555	14,108
Net Position													
Net position:													
Net investment in capital assets	$ —	(82,127)	434,928	88,282	201,154	—	—	598,830	1,241,067	—	138,012	1,379,079	1,064,121
Restricted under trust agreements	—	—	—	—	24,069	—	218,475	—	242,544	—	—	242,544	221,811
Unrestricted	52,876	—	52,156	71,553	358,871	—	—	—	535,456	719	(909,785)	(373,610)	(367,623)
Total net position	$ 52,876	(82,127)	487,084	159,835	584,094	—	218,475	598,830	2,019,067	719	(771,773)	1,248,013	918,309

(1) Included in investments above at December 31, 2017 is $10,747 the Authority has designated as reserved for national toll interoperability requirements under Federal Law P.L. 112-131, the Moving Ahead for Progress in the 21st Century Act (Map-21) $(10,500), and emergency maintenance work $(247). In 2017 the amount reserved for the $7 Billion CIP was spent resulting in a reduction in investments of $20,000.

See accompanying independent auditors' report.

Schedule 4

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Revenues, Expenses, and Changes in Net Position – Reconciliation of Bond Resolution to GAAP

Year ended December 31, 2017
(With summarized comparative financial information for the year ended December 31, 2016)

(In thousands)

	Revenue	Construction	Maintenance reserve	Special project reserve	General reserve	Charges	Debt service	Debt reserve	Total bond resolution	Garden State Arts Foundation	GAAP Adjustments	Total 2017 GAAP Financials	Total 2016 GAAP Financials
Operating revenues:													
Toll revenue	$ 1,579,896	—	—	—	—	—	—	—	1,579,896	—	—	1,579,896	1,570,662
E-ZPass fees	60,505	—	—	—	—	—	—	—	60,505	—	—	60,505	61,053
Concession revenue	35,591	—	—	—	—	—	—	—	35,591	—	—	35,591	38,192
Miscellaneous revenue	21,973	—	—	—	—	—	—	—	21,973	628	—	22,601	19,446
Total operating revenues	1,697,965	—	—	—	—	—	—	—	1,697,965	628	—	1,698,593	1,689,353
Operating expenses:													
Maintenance of roadway, buildings and equipment	215,130	—	9,981	9,313	16,150	—	—	—	250,574	—	10,727	261,301	255,506
Toll collection	146,150	—	—	—	4,502	—	—	—	150,652	—	9,729	160,381	183,184
State police and traffic control	79,232	—	—	798	1,056	—	—	—	81,086	—	1,407	82,493	84,784
Technology	21,722	—	—	1,547	1,444	—	—	—	24,713	—	2,081	26,794	41,413
General administrative costs	45,891	—	—	21	5,171	—	—	—	51,083	713	2,115	53,911	50,582
Depreciation	—	250,572	32,864	8,866	12,687	—	—	—	304,989	—	—	304,989	301,120
Total operating expenses	508,125	250,572	42,845	20,545	41,010	—	—	—	863,097	713	26,059	889,869	916,589
Operating income (loss)	1,189,840	(250,572)	(42,845)	(20,545)	(41,010)	—	—	—	834,868	(85)	(26,059)	808,724	772,764
Nonoperating revenues (expenses):													
Build America Bonds subsidy	76,153	—	—	—	—	—	—	—	76,153	—	—	76,153	76,071
Federal and State reimbursements	2,764	—	—	—	—	—	—	—	2,764	—	—	2,764	9,287
Payments to the State of New Jersey	—	—	—	—	(232,500)	—	—	—	(232,500)	—	—	(232,500)	(294,000)
Interest expense, Turnpike Revenue Bonds	—	46,326	—	—	—	—	(604,509)	—	(558,183)	—	136,270	(421,913)	(319,192)
Other bond expenses	—	(6,064)	—	—	(1,403)	(117)	—	—	(7,584)	—	—	(7,584)	(1,043)
Loss on disposal of capital assets	—	—	—	—	—	—	—	—	—	—	—	—	(164)
Investment income	1,264	5,277	612	643	3,193	—	2,403	9,615	23,007	6	64,516	87,529	12,217
Arts Center	4,061	—	—	—	—	—	—	—	4,061	—	—	4,061	4,079
Total nonoperating revenues (expenses), net	84,242	45,539	612	643	(230,710)	(117)	(602,106)	9,615	(692,282)	6	200,786	(491,490)	(512,745)
Income before capital contribution and interfund transfers	1,274,082	(205,033)	(42,233)	(19,902)	(271,720)	(117)	(602,106)	9,615	142,586	(79)	174,727	317,234	260,019
Capital contributions	—	—	—	—	12,470	—	—	—	12,470	—	—	12,470	—
Income before interfund transfers	1,274,082	(205,033)	(42,233)	(19,902)	(259,250)	(117)	(602,106)	9,615	155,056	(79)	174,727	329,704	260,019
Interfund transfers	(1,274,082)	164,922	116,139	39,053	307,634	115	622,841	(110)	(23,488)	—	23,488	—	—
Net change in fund balance/change in net position	—	(40,111)	73,906	19,151	48,384	(2)	20,735	9,505	131,568	(79)	198,215	329,704	260,019
Net position (deficit) – beginning of year	52,876	(42,016)	413,178	140,684	535,710	2	197,740	589,325	1,887,499	798	(969,988)	918,309	658,290
Net position (deficit) – end of year	$ 52,876	(82,127)	487,084	159,835	584,094	—	218,475	598,830	2,019,067	719	(771,773)	1,248,013	918,309

See accompanying independent auditors' report.

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Cash Flows – Reconciliation of Bond Resolution to GAAP

Year ended December 31, 2017
(With summarized comparative financial information for the year ended December 31, 2016)

(In thousands)

	Revenue	Construction	Maintenance reserve	Special project reserve	General reserve	Charges	Debt service	Debt reserve	Total bond resolution	Garden State Arts Foundation	GAAP Adjustments	Total 2017 GAAP Financials	Total 2016 GAAP Financials
Cash flows from operating activities:													
Receipts from customers and other operating activities	$ 1,706,316	—	—	—	—	—	—	—	1,706,316	524	—	1,706,840	1,692,162
Payments to suppliers	(249,740)	—	(9,981)	(11,351)	(26,974)	—	—	—	(298,046)	(704)	—	(298,750)	(273,787)
Payments to employees	(178,187)	—	—	—	—	—	—	—	(178,187)	—	—	(178,187)	(157,809)
Payments for self insured health benefits claims	(76,113)	—	—	—	—	—	—	—	(76,113)	—	—	(76,113)	(76,081)
Net cash provided by (used in) operating activities	1,202,276	—	(9,981)	(11,351)	(26,974)	—	—	—	1,153,970	(180)	—	1,153,790	1,184,485
Cash flows from noncapital financing activities:													
Receipts from Federal and State reimbursements	204	—	—	—	—	—	—	—	204	—	—	204	2,709
Payments to State of New Jersey	—	—	—	—	(232,500)	—	—	—	(232,500)	—	—	(232,500)	(294,000)
Proceeds from Arts Center	4,061	—	—	—	—	—	—	—	4,061	—	—	4,061	4,079
Net cash provided by (used in) noncapital financing activities	4,265	—	—	—	(232,500)	—	—	—	(228,235)	—	—	(228,235)	(287,212)
Cash flows from capital and related financing activities:													
Proceeds acquired from new capital debt	—	3,354,519	—	—	—	—	—	—	3,354,519	—	(137,000)	3,217,519	344,312
Purchases and sales of capital assets, net	—	(539,650)	(84,727)	(18,060)	(63,794)	—	—	—	(706,231)	—	113,512	(592,719)	(801,089)
Principal paid on capital debt	—	(197,740)	—	—	—	—	—	—	(197,740)	—	—	(197,740)	(142,115)
Principal paid on defeased capital debt	—	(2,525,615)	—	—	—	—	—	—	(2,525,615)	—	—	(2,525,615)	(343,686)
Proceeds from Build America Bonds subsidy	76,153	—	—	—	—	—	—	—	76,153	—	—	76,153	76,071
Interest paid on capital debt	—	—	—	—	—	—	(624,731)	—	(624,731)	—	—	(624,731)	(586,732)
Payments for bond expenses	—	(6,064)	—	—	(1,403)	(117)	—	—	(7,584)	—	—	(7,584)	(1,043)
Proceeds from capital contributions	—	—	—	—	12,470	—	—	—	12,470	—	—	12,470	—
Interfund Transfers related to capital and related financing activities	(1,229,231)	169,062	117,568	38,153	258,747	54	622,200	(41)	(23,488)	—	23,488	—	—
Net cash (used in) provided by capital and related financing activities	(1,153,078)	254,512	32,841	20,093	206,020	(63)	(2,531)	(41)	(642,247)	—	—	(642,247)	(1,454,282)
Cash flows from investing activities:													
Purchases of investments	(3,855,091)	(1,608,275)	(410,918)	(498,658)	(2,874,607)	(664)	(988,266)	(364,317)	(10,600,796)	—	—	(10,600,796)	(9,458,263)
Sales and maturities of investments	3,802,156	1,293,567	384,553	481,146	2,916,269	727	989,597	354,986	10,223,001	—	—	10,223,001	9,983,087
Interest received	1,115	2,468	499	561	2,940	—	1,089	9,372	18,044	6	—	18,050	14,704
Net cash (used in) provided by investing activities	(51,820)	(312,240)	(25,866)	(16,951)	44,602	63	2,420	41	(359,751)	6	—	(359,745)	539,528
Net decrease in cash	1,643	(57,728)	(3,006)	(8,209)	(8,852)	—	(111)	—	(76,263)	(174)	—	(76,437)	(17,481)
Cash and restricted cash – beginning of year	170,150	117,194	4,084	11,815	15,456	—	140	—	318,839	800	—	319,639	337,120
Cash and restricted cash – end of year	$ 171,793	59,466	1,078	3,606	6,604	—	29	—	242,576	626	—	243,202	319,639
Reconciliation of operating income (loss) to net cash provided by (used in) operating activities:													
Operating income (loss)	$ 1,189,840	(250,572)	(42,845)	(20,545)	(41,010)	—	—	—	834,868	(85)	(26,059)	808,724	772,764
Adjustments to reconcile operating income (loss) to net cash provided by (used in) operating activities:													
Depreciation expense	—	250,572	32,864	8,866	12,687	—	—	—	304,989	—	—	304,989	301,120
Changes in assets and liabilities:													
Receivables	8,428	—	—	(148)	(1,986)	—	—	—	6,294	(103)	—	6,191	15,241
Inventory	(383)	—	—	—	—	—	—	—	(383)	—	—	(383)	(2,587)
Prepaid expenses	(4,442)	—	—	—	—	—	—	—	(4,442)	—	—	(4,442)	(573)
Accounts payable and accrued expenses	(1,094)	—	—	170	799	—	—	—	(125)	8	(7,905)	(8,022)	19,407
Unearned revenue	(77)	—	—	—	(15,069)	—	—	—	(15,146)	—	—	(15,146)	(11,881)
Other liabilities	10,004	—	—	306	197	—	—	—	10,507	—	(18,758)	(8,251)	3,511
Other postemployment benefit liability	—	—	—	—	17,500	—	—	—	17,500	—	44,051	61,551	56,681
Net pension liability	—	—	—	—	—	—	—	—	—	—	(122,960)	(122,960)	126,438
Deferred outflows of resources related to pension	—	—	—	—	—	—	—	—	—	—	46,196	46,196	(91,148)
Deferred inflows of resources related to pension	—	—	—	—	—	—	—	—	—	—	87,194	87,194	(1,582)
Pollution remediation liability	—	—	—	—	(92)	—	—	—	(92)	—	(1,759)	(1,851)	(2,906)
Net cash provided by (used in) operating activities	$ 1,202,276	—	(9,981)	(11,351)	(26,974)	—	—	—	1,153,970	(180)	—	1,153,790	1,184,485

See accompanying independent auditors' report.

Schedule 6

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Net Revenue Requirement

Years ended December 31, 2017 and 2016

(In thousands)

	2017	2016
Test 1:		
Total operating revenues - bond resolution	$ 1,697,965	1,688,726
Build America Bonds subsidy	76,153	76,071
Federal and State reimbursements	2,764	9,287
Less Federal and State reimbursement - construction fund	—	(2,709)
Total investment income - bond resolution	23,007	15,290
Less earnings on construction investments	(5,277)	(2,514)
Fair market value adjustments	(174)	(414)
Arts center	4,061	4,079
Total pledged revenues	1,798,499	1,787,816
Less revenue operating expenses - revenue fund	(508,125)	(493,225)
Net revenue available for debt service	1,290,374	1,294,591
Less net revenue requirements:		
Interest expense – debt service	(604,509)	(575,338)
Principal payment – debt service	(218,475)	(197,740)
Revenue transfer to charges	(115)	(94)
Revenue transfer to maintenance reserve	(116,751)	(89,370)
Revenue transfer to special project reserve	(39,696)	(38,918)
Excess net revenues	$ 310,828	393,131
Test 2:		
Total operating revenues - bond resolution	$ 1,697,965	1,688,726
Build America Bonds subsidy	76,153	76,071
Federal and State reimbursements	2,764	9,287
Less Federal and State reimbursement - construction fund	—	(2,709)
Total investment income - bond resolution	23,007	15,290
Less earnings on construction investments	(5,277)	(2,514)
Fair market value adjustments	(174)	(414)
Arts center	4,061	4,079
Total pledged revenues	1,798,499	1,787,816
Less revenue operating expenses - revenue fund	(508,125)	(493,225)
Net revenue available for debt service	1,290,374	1,294,591
Less 1.2 times aggregate debt service	(987,581)	(927,694)
Excess net revenues	$ 302,793	366,897
Debt service coverage ratio	1.57	1.67

See accompanying independent auditors' report.

Schedule 7A

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Investments

December 31, 2017

(In thousands)

	Interest rate	Maturity	Par value	Carrying value	
Revenue:					
Certificate of deposit	1.51%	7/27/2018	$ 50,000	50,329	
Commercial paper	1.24-1.81	1/4/18-6/27/18	86,609	86,441	
Federal agency note	1.12-1.50	1/4/18-6/26/18	108,350	108,079	
U.S. Treasury bill	1.00-1.19	1/4/18-1/25/18	53,348	53,343	
			298,307	298,192	
Construction:					
Certificate of deposit	1.24%-1.40%	2/8/18-5/21/18	95,000	95,808	
Commercial paper	1.34-1.64	1/5/18/6/14/18	150,000	149,590	
Federal agency note	1.04-1.41	1/5/18-6/7/18	180,687	180,214	
			425,687	425,612	
Maintenance reserve:					
Commercial paper	1.19%-1.22%	1/23/18-2/6/18	11,700	11,689	
Federal agency note	1.05-1.27	1/5/18-4/24/18	29,932	29,875	
U.S. Treasury bill	1.11-1.30	1/25/18-5/24/18	24,778	24,692	
			66,410	66,256	
Special project reserve:					
Commercial paper	1.20%-1.80%	1/16/18-4/26/18	43,230	43,117	
Federal agency note	1.11-1.34	1/5/18-5/4/18	16,500	16,470	
U.S. Treasury bill	1.08	2/1/2018	14,000	13,987	
			73,730	73,574	
General reserve:					
Commercial paper	1.35%-1.90%	1/16/18-6/29/18	231,262	229,953	
Federal agency note	1.08-1.35	1/4/18-5/23/18	27,985	27,955	
U.S. Treasury bill	1.02-1.46	1/4/18-6/28/18	34,000	33,822	
			293,247	291,730	
Debt service:					
Commercial paper	1.21%-1.28%	1/2/2018	36,734	36,732	
Federal agency note	0.68-1.09	1/2/2018	243,420	243,413	
U.S. Treasury bill	1.00-1.13	1/2/2018	186,573	186,568	
			466,727	466,713	
Debt reserve:					
Certificate of deposit	1.30%-2.00%	4/11/18-12/15/2020	344,084	344,759	
Federal agency note	1.05	4/25/2018	104,919	104,948	
Commercial paper	1.44	1/1/2018	100,000	100,721	(1)
Time deposit	1.44	1/1/2018	50,000	50,360	(1)
			599,003	600,788	
Total			$ 2,223,111	2,222,865	

Above is the detail of investments listed on the Schedule of Net Position – Reconciliation of Bond Resolution to GAAP (Schedule 3) for Total Bond Resolution.

(1) Under a $150,000 notional value forward delivery agreement, Deutsche Bank delivers investment securities to the Debt Reserve Fund held by the Co-Trustee, U.S.Bank, and pays the Authority a fixed interest rate of 1.44%. The agreement expires on July 1, 2019. The actual investment securities delivered by Deutsche Bank to U.S.Bank for deposit into the Debt Reserve Fund are held in the Authority's name and are reflected as the actual securities held in the schedule above.

See accompanying independent auditors' report.

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Investments

December 31, 2016

(In thousands)

	Interest rate	Maturity		Par value	Carrying value	
Revenue:						
Certificate of deposit	1.15%–1.21%	3/24/17–7/28/17	$	80,000	80,313	
Commercial paper	0.43–0.65	1/5/2017		5,000	5,000	
Federal agency note	0.27–0.45	1/5/17–2/17/17		39,775	39,770	
U.S. Treasury bill	0.20–0.42	1/5/17–2/16/17		120,043	120,026	
				244,818	245,109	
Construction:						
Certificate of deposit	0.63%–0.86%	1/4/17–1/18/17		75,000	75,104	
Federal agency note	0.35–0.41	1/23/2017		21,000	20,995	
U.S. Treasury bill	0.43	2/2/2017		12,000	11,995	
				108,000	108,094	
Maintenance reserve:						
Commercial paper	0.50%	2/3/2017		2,002	2,001	
Federal agency note	0.23–0.47	1/3/17–2/21/17		35,788	35,780	
U.S. Treasury bill	0.39	2/16/2017		2,000	1,999	
				39,790	39,780	
Special project reserve:						
Commercial paper	0.40%–0.80%	1/3/17–2/28/17		32,000	31,981	
Federal agency note	0.25–0.43	1/10/17–3/2/17		14,000	13,995	
U.S. Treasury bill	0.34–0.50	1/26/17–2/16/17		10,000	10,004	
				56,000	55,980	
General reserve:						
Commercial paper	0.60%–1.05%	1/13/17–3/10/17		112,000	111,927	
Federal agency note	0.32–0.55	1/5/17–6/20/17		187,660	187,466	
U.S. Treasury bill	0.25–0.50	1/5/17–3/9/17		33,746	33,744	
				333,406	333,137	
Charges:						
Federal agency note	0.40%	1/3/2017		63	63	
				63	63	
Debt service:						
Federal agency note	0.15%–0.60%	1/3/2017		466,737	466,730	
				466,737	466,730	
Debt reserve:						
Certificate of deposit	1.11%–2.00%	11/10/17 – 12/15/20		334,754	335,361	
Commercial paper	1.44	1/1/2017		149,999	151,079	(1)
Federal agency note	1.05	4/25/2018		104,919	104,774	
				589,672	591,214	
Total			$	1,838,486	1,840,107	

Above is the detail of investments listed on the Schedule of Net Position – Reconciliation of Bond Resolution to GAAP (Schedule 3) for Total Bond Resolution.

(1) Under a $150,000 notional value forward delivery agreement, Deutsche Bank delivers investment securities to the Debt Reserve Fund held by the Co-Trustee, U.S.Bank, and pays the Authority a fixed interest rate of 1.44%. The agreement expires on July 1, 2019. The actual investment securities delivered by Deutsche Bank to U.S.Bank for deposit into the Debt Reserve Fund are held in the Authority's name and are reflected as the actual securities held in the schedule above.

See accompanying independent auditors' report.

NEW JERSEY TURNPIKE AUTHORITY

(A Component Unit of the State of New Jersey)

Schedule of Depositories

December 31, 2017 and 2016

(In thousands)

	2017 Book balance	2017 Bank balance	2017 Market value of securities pledged to secure deposits	2016 Book balance	2016 Bank balance	2016 Market value of securities pledged to secure deposits
JP Morgan Chase:						
Revenue	$ 141,429	118,847	—	115,018	97,788	—
Construction	13,516	13,516	—	79,470	81,039	—
Maintenance reserve	1,078	1,078	—	4,084	4,194	—
	156,023	133,441	143,697	198,572	183,021	189,398
Bank of America:						
Revenue	22,032	22,565	—	34,359	35,526	—
	22,032	22,565	24,139	34,359	35,526	36,690
Wells Fargo:						
Revenue	7,695	5,143	—	20,085	17,610	—
Special project reserve	3,606	3,736	—	11,815	12,028	—
General reserve	6,586	7,136	—	15,361	15,392	—
	17,887	16,015	20,533	47,261	45,030	48,211
Bank of New York Mellon:						
Revenue	15	25	—	80	126	—
	15	25	463	80	126	549
TD Bank, NA:						
Revenue	250	419	—	250	455	—
	250	419	984	250	455	1,000
Investors Bank						
Construction	44,265	44,265	—	35,093	35,093	—
	44,265	44,265	43,673 (1)	35,093	35,093	36,719
Total Subject to Pledged Securities	240,472	216,730	$ 233,489	315,615	299,251	$ 312,567
Bank of New York Mellon – Trust:						
Construction:	1,685	2,373		2,631	2,631	
General reserve	18	18		95	95	
Debt service	29	20		140	88	
	1,732	2,411 (2)		2,866	2,814 (2)	
Toll collection and other imprest funds:						
Revenue	372	—		358		
	372 (3)	—		358 (3)	—	
Total subject to bond resolution	242,576	219,141		318,839	302,065	
TD Bank, NA:						
Garden State Arts Center Foundation	4	76		132	147	
	4	76 (4)		132	147 (4)	
Investors Bank:						
Garden State Arts Center Foundation	438	521		455	455	
	438	521 (4)		455	455 (4)	
Northfield Bank:						
Garden State Arts Center Foundation	184	184		213	213	
	184	184 (4)		213	213 (4)	
	$ 243,202	219,922		319,639	302,880	

(1) As of December 31, 2017, the market value of the securities was below the book/bank balance of deposits. On January 5, 2018, additional collateral was posted so that once again the market value of the pledged securities exceeded the book/bank balance.

(2) Funds held by Trustee are not subject to collateral requirements, under the Bond Resolution.

(3) Cash on hand, not at bank.

(4) Garden State Arts Foundation bank account balances are not subject to the collateral posting requirements of the Bond Resolution.

See accompanying independent auditors' report.

Schedule 9

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Cost of Investment in Facilities

December 31, 2017
(With summarized comparative financial information for the year ended December 31, 2016)

(In thousands)

	Completed construction funds	$7 Billion Capital Improvement Program	Construction funded by revenue	Maintenance reserve	Special project reserve	General reserve	GAAP Adjustments	2017 Total	2016 Total
Land	$ 660,554	163,778	—	—	—	8,128	—	832,460	830,612
Construction-In-Progress	—	1,503,580	468	6,998	7,762	29,479	13,673	1,561,960	1,258,316
Roadways	3,185,140	2,324,785	—	223,936	2,288	17,632	—	5,753,781	5,668,995
Bridges	1,910,857	2,815,853	—	330,669	64	32,178	—	5,089,621	4,967,830
Buildings	375,089	362,895	—	—	20,608	82,656	—	841,248	761,004
Equipment	577,829	720,620	—	—	119,352	114,468	—	1,532,269	1,434,250
Cost of investment in facilities	6,709,469	7,891,511	468	561,603	150,074	284,541	13,673	15,611,339	14,921,007
Accumulated depreciation	(2,950,509)	(547,910)	—	(126,675)	(61,792)	(83,387)	—	(3,770,273)	(3,465,282)
Capital assets, net of accumulated depreciation	$ 3,758,960	7,343,601	468	434,928	88,282	201,154	13,673	11,841,066	11,455,725

Completed construction funds:	
Original turnpike extensions and additional lanes	$ 59,657
Revenues invested in facilities	38,561
1966 Turnpike Improvement	153,178
1971 Turnpike Improvement	15,780
1973 Improvement and Funding Program	26,264
1985-1990 Widening Project	309,822
Business Plan for the 90's	751,694
Former NJHA Construction	508,389
2000 Construction Fund	1,241,278
2003 Construction Fund	15,858
2004 Construction Fund	401,967
2005 Construction Fund	75,357
2008/2009 Bond anticipation note	161,155
	$ 3,758,960

See accompanying independent auditors' report.

Schedule 10A

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Bond Indebtedness

December 31, 2017

(In thousands)

	Amount outstanding December 31, 2016	Refunded or acquired and canceled in current year	Mandatory redemption/ sinking fund installments	Debt issuance	Amortization of premiums and discounts	Amount outstanding December 31, 2017
Turnpike revenue bonds:						
Series 2000B-G	$ 400,000	(400,000)	—	—	—	—
Series 2004C-2	132,850	—	—	—	—	132,850
Series 2005A	173,650	—	—	—	—	173,650
Series 2005B	32,500	—	—	—	—	32,500
Series 2005D1-D4	208,735	—	—	—	—	208,735
Series 2009E	300,000	(300,000)	—	—	—	—
Series 2009F	1,375,000	—	—	—	—	1,375,000
Series 2009G	34,770	—	(15,645)	—	—	19,125
Series 2009H	306,170	(269,475)	—	—	—	36,695
Series 2009I	178,005	(178,005)	—	—	—	—
Series 2010A	1,850,000	—	—	—	—	1,850,000
Series 2012A	141,255	(126,255)	—	—	—	15,000
Series 2012B	804,435	—	—	—	—	804,435
Series 2013A	1,395,050	(1,072,505)	(5,095)	—	—	317,450
Series 2013B	100,000	—	(47,500)	—	—	52,500
Series 2013C	271,000	—	(129,500)	—	—	141,500
Series 2013D	77,625	(77,625)	—	—	—	—
Series 2013E	51,750	(51,750)	—	—	—	—
Series 2013F	90,880	—	—	—	—	90,880
Series 2014A	1,000,000	—	—	—	—	1,000,000
Series 2014B-3	50,000	(50,000)	—	—	—	—
Series 2014C	201,860	—	—	—	—	201,860
Series 2015A	92,500	—	—	—	—	92,500
Series 2015B	50,000	—	—	—	—	50,000
Series 2015C	43,750	—	—	—	—	43,750
Series 2015D	43,750	—	—	—	—	43,750
Series 2015E	750,000	—	—	—	—	750,000
Series 2015F	72,350	—	—	—	—	72,350
Series 2015G	25,000	—	—	—	—	25,000
Series 2015H	48,235	—	—	—	—	48,235
Series 2016A	149,995	—	—	—	—	149,995
Series 2016B	75,025	—	—	—	—	75,025
Series 2016C	50,015	—	—	—	—	50,015
Series 2016D	50,000	—	—	—	—	50,000
Series 2017A	—	—	—	600,000	—	600,000
Series 2017B	—	—	—	646,765	—	646,765
Series 2017C	—	—	—	400,000	—	400,000
Series 2017D	—	—	—	179,375	—	179,375
Series 2017E	—	—	—	359,680	—	359,680
Series 2017F	—	—	—	167,845	—	167,845
Series 2017G	—	—	—	726,640	—	726,640
	10,626,155	(2,525,615)	(197,740)	3,080,305	—	10,983,105
Premiums and discounts, net	444,966	—	—	234,758	(52,100)	627,624
	$ 11,071,121	(2,525,615)	(197,740)	3,315,063	(52,100)	11,610,729

See accompanying independent auditors' report.

Schedule 10B

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Bond Indebtedness

December 31, 2016

(In thousands)

	Amount outstanding December 31, 2015	Refunded or acquired and canceled in current year	Mandatory redemption/ sinking fund installments	Debt issuance	Amortization of premiums and discounts	Amount outstanding December 31, 2016
Turnpike revenue bonds:						
Series 1991C	$ 67,160	—	(67,160)	—	—	—
Series 2000B-G	400,000	—	—	—	—	400,000
Series 2003B	70,005	—	(70,005)	—	—	—
Series 2004B	168,646	(168,646)	—	—	—	—
Series 2004C-2	132,850	—	—	—	—	132,850
Series 2005A	173,650	—	—	—	—	173,650
Series 2005B	32,500	—	—	—	—	32,500
Series 2005D1-D4	208,735	—	—	—	—	208,735
Series 2009E	300,000	—	—	—	—	300,000
Series 2009F	1,375,000	—	—	—	—	1,375,000
Series 2009G	34,770	—	—	—	—	34,770
Series 2009H	306,170	—	—	—	—	306,170
Series 2009I	178,005	—	—	—	—	178,005
Series 2010A	1,850,000	—	—	—	—	1,850,000
Series 2012A	141,255	—	—	—	—	141,255
Series 2012B	804,435	—	—	—	—	804,435
Series 2013A	1,400,000	—	(4,950)	—	—	1,395,050
Series 2013B	100,000	—	—	—	—	100,000
Series 2013C	271,000	—	—	—	—	271,000
Series 2013D	152,650	(75,025)	—	—	—	77,625
Series 2013E	101,765	(50,015)	—	—	—	51,750
Series 2013F	90,880	—	—	—	—	90,880
Series 2014A	1,000,000	—	—	—	—	1,000,000
Series 2014B-2	50,000	(50,000)	—	—	—	—
Series 2014B-3	50,000	—	—	—	—	50,000
Series 2014C	201,860	—	—	—	—	201,860
Series 2015A	92,500	—	—	—	—	92,500
Series 2015B	50,000	—	—	—	—	50,000
Series 2015C	43,750	—	—	—	—	43,750
Series 2015D	43,750	—	—	—	—	43,750
Series 2015E	750,000	—	—	—	—	750,000
Series 2015F	72,350	—	—	—	—	72,350
Series 2015G	25,000	—	—	—	—	25,000
Series 2015H	48,235	—	—	—	—	48,235
Series 2016A	—	—	—	149,995	—	149,995
Series 2016B	—	—	—	75,025	—	75,025
Series 2016C	—	—	—	50,015	—	50,015
Series 2016D	—	—	—	50,000	—	50,000
	10,786,921	(343,686)	(142,115)	325,035	—	10,626,155
Premiums and discounts, net	464,242	—	—	25,411	(44,687)	444,966
	$ 11,251,163	(343,686)	(142,115)	350,446	(44,687)	11,071,121

See accompanying independent auditors’ report.

Schedule 10C

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

Schedule of Refunded Bond and Note Indebtedness

December 31, 2017
(With summarized comparative financial information as of December 31, 2016)

(In thousands)

Note:
As of December 31, 2017 and 2016, refunded bond and note indebtedness which is still outstanding in fully collateralized escrow accounts is as follows:

Refunded series		Refunded amount	Matured/ redeemed	2017 outstanding	2016 outstanding
Parkway revenue bonds:					
Series 1989, Serial bonds 5.75% Redemption January 1, 2018 through January 1, 2019	$	35,080	—	35,080	35,080
Turnpike revenue bonds:					
Series 2004B Turnpike Revenue Bonds, redemption January 1, 2017		168,646	(168,646)	—	168,646
Series 2009E Turnpike Revenue Bonds, redemption January 1, 2019		300,000	—	300,000	—
Series 2009H Turnpike Revenue Bonds, redemption January 1, 2019		269,475	—	269,475	—
Series 2009I Turnpike Revenue Bonds, redemption January 1, 2020		178,005	—	178,005	—
Series 2012A Turnpike Revenue Bonds, redemption January 1, 2022		126,255	—	126,255	—
Series 2013A Turnpike Revenue Bonds, redemption January 1, 2020 through July 1, 2022		1,072,505	—	1,072,505	—
Total	$	2,149,966	(168,646)	1,981,320	203,726

See accompanying independent auditors' report.

Schedule 11A

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

NEW JERSEY TURNPIKE

Schedule of Toll Revenue

Years ended December 31, 2017 and 2016

(Unaudited)

(In thousands)

			2017		2016	
Class	**Description**		**Toll revenue**	**Number of vehicles**	**Toll revenue**	**Number of vehicles**
1	Passenger car, motorcycle, taxi or hearse, light truck	$	797,953	227,978	789,477	223,634
2	Vehicles having two axles other than type described under Class 1		64,460	8,676	63,453	8,489
3	Vehicle (vehicles), single or in combination, having three axles		29,672	3,632	28,942	3,532
4	Vehicle (vehicles), single or in combination, having four axles		35,639	2,877	34,626	2,763
5	Vehicle (vehicles), single or in combination, having five axles		233,919	15,345	230,812	15,034
6	Vehicle (vehicles), single or in combination, having six or more axles		7,783	411	6,671	352
7	Buses having two axles		2,334	448	2,224	428
8	Buses having three axles		14,026	1,298	13,753	1,261
	Nonrevenue vehicles		—	1,559	—	1,571
			1,185,786	262,224	1,169,958	257,064
	Nonrevenue vehicles		—	(1,559)	—	(1,571)
	Toll adjustments and discounts		(4,237)	—	(3,520)	—
	Net Uncollected Tolls		(29,811)	—	(21,880)	—
		$	1,151,738	260,665	1,144,558	255,493

See accompanying independent auditors’ report.

NEW JERSEY TURNPIKE AUTHORITY
(A Component Unit of the State of New Jersey)

GARDEN STATE PARKWAY

Schedule of Toll Revenue

Years ended December 31, 2017 and 2016

(Unaudited)

(In thousands)

			2017		2016	
Class	**Description**		**Toll revenue**	**Number of vehicles**	**Toll revenue**	**Number of vehicles**
1	Passenger car, motorcycle, taxi or hearse, light truck	$	420,385	387,787	416,990	384,586
2	Vehicles having two axles other than type described under Class 1		1,938	830	2,202	925
3	Vehicle (vehicles), single or in combination, having three axles		3,469	1,144	3,376	1,106
4	Vehicle (vehicles), single or in combination, having four axles		3,830	888	3,502	817
5	Vehicle (vehicles), single or in combination, having five axles		2,778	583	2,692	564
6	Vehicle (vehicles), single or in combination, having six or more axles		126	21	130	22
7	Buses having two axles		1,788	687	1,638	634
8	Buses having three axles		2,589	956	2,588	956
	Nonrevenue vehicles		—	1,532	—	1,458
			436,903	394,428	433,118	391,068
	Nonrevenue vehicles		—	(1,532)	—	(1,458)
	Toll adjustments and discounts		(318)	—	(286)	—
	Net Uncollected Tolls		(8,427)	—	(6,728)	—
		$	428,158	392,896	426,104	389,610

See accompanying independent auditors' report.

APPENDIX B

REPORT OF TRAFFIC ENGINEER

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New Jersey Turnpike System 2018 Traffic and Toll Revenue Forecast Study

Final Report

September 21, 2018

NJ TURNPIKE

GARDEN STATE PARKWAY

CDM Smith

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Tables

Figures

Follows Page

Chapter 1

Introduction

This study presents the traffic and toll revenue forecasts from 2018 through 2028 developed by CDM Smith for the New Jersey Turnpike (Turnpike), the Garden State Parkway (Parkway), and the Total System (the Turnpike and Parkway). This investment grade study was undertaken at the request of the New Jersey Turnpike Authority (NJTA) for use in future bond issuances. CDM Smith forecasts have been used by the NJTA for more than 30 years in support of the issuance of bond financing and for internal financial planning. In light of the current economic climate, it is more important than ever to have up-to-date traffic and toll revenue forecasts based on the most currently available information.

CDM Smith last completed a detailed investment grade traffic and toll revenue study for the NJTA in May 2014. Since that time two “draw down” letters have been developed to update the forecast presented in the 2014 study. The first draw down letter was presented to the NJTA on October 2, 2015 and the second on March 8, 2017. The purpose of a draw down letter is to update actual traffic and revenue experience since the last study and to adjust short term (two- to five-year) forecasts based on recent trends. Detailed economic analyses are not conducted as part of a draw down letter and therefore, longer term forecasts are not adjusted from those originally developed as part of the prior investment grade study.

This current investment grade study presents a new ten-year forecast of traffic and toll revenue for the Turnpike and Parkway. The traffic and revenue forecasts were based on a detailed analysis of the past relationship between actual Turnpike and Parkway transactions and actual socio-economic data. The development of the new forecasts relied on the most currently available socio-economic forecasts, historic traffic and toll revenue trends through July 2018, and the NJTA’s most recent assumptions regarding future toll schedules, discount programs, and future capital improvements. No toll increases or discount program changes are planned during the projection period. In addition, the estimated E-ZPass market share was developed for the forecast period based on historical trends and on future toll schedule assumptions. Meetings with local Metropolitan Planning Organizations (MPOs) and other agencies were conducted in order to complete the analysis of the potential growth in traffic and toll revenue on the Turnpike and Parkway. This study resulted in a new ten-year forecast of traffic and toll revenue for the Turnpike and the Parkway.

Report Structure

This report is comprised of five chapters, including the following:

Chapter 1 (Introduction) provides an introduction to the study, outlines the report structure and presents the basic study methodology.

Chapter 2 (Current Turnpike System Characteristics) introduces the NJTA Turnpike System and provides information on current Turnpike and Parkway characteristics, including per-mile toll rates and toll discount programs, current E-ZPass market shares, and vehicle class compositions on the two facilities. Also included are mainline traffic volumes and recent monthly and daily variations at select mainline locations.

Chapter 3 (Historical Traffic and Toll Revenue Trends) reviews annual and monthly transaction and toll revenue trends on the Turnpike and Parkway. Data are provided for passenger cars and commercial vehicles on the Turnpike and total vehicles on the Parkway. Information is provided on historical changes in the toll schedule and discount programs. Also included are historical E-ZPass market share trends and trends in vehicle composition.

Chapter 4 (Corridor Growth Analysis) summarizes the methodology that was employed to estimate future growth in toll transactions on the Turnpike and Parkway. This includes a description of the econometric model that was utilized as well as the meetings with local MPOs and other regional or local government agencies. A socioeconomic analysis was conducted to identify potentially explanatory factors that may influence future toll transactions. A discussion of the factors, including population, employment, unemployment, retail sales, and gross regional product trends and forecasts is provided in Chapter 4. The ultimate product of the corridor growth analysis is a set of estimated annual normal growth rates for Turnpike passenger cars and commercial vehicles, and Parkway total vehicles. These estimated growth rates are presented in Chapter 4 along with a discussion of the explanatory factors.

Chapter 5 (Estimated Annual Toll Transactions and Gross Toll Revenue) presents a summary of the planned roadway improvement program on the Turnpike, the Parkway, and other roads in the study corridor. Estimates of future E-ZPass market shares are described. Lastly, estimated annual toll transactions and gross toll revenue are provided from 2018 through 2028. The annual estimates are provided for Turnpike passenger cars and commercial vehicles, and for total Parkway vehicles.

Chapter 2

Current Turnpike System Characteristics

This chapter describes the two toll facilities that comprise the NJTA System, the Turnpike and Parkway, and presents current characteristics of the two facilities. The characteristics include the current toll collection system, toll rates, and accepted methods of payment. The proportion of 2017 toll transactions and toll revenue by each facility is provided. Other characteristics include the current E-ZPass market share and the vehicle class composition. Average daily mainline traffic volumes are presented for calendar year 2017, along with a presentation of monthly and daily traffic variations at select mainline locations. It should be noted that gross toll revenue is defined in this report as toll revenue including all toll adjustments and discounts, but not accounting for maintenance and operating costs.

Facility Descriptions

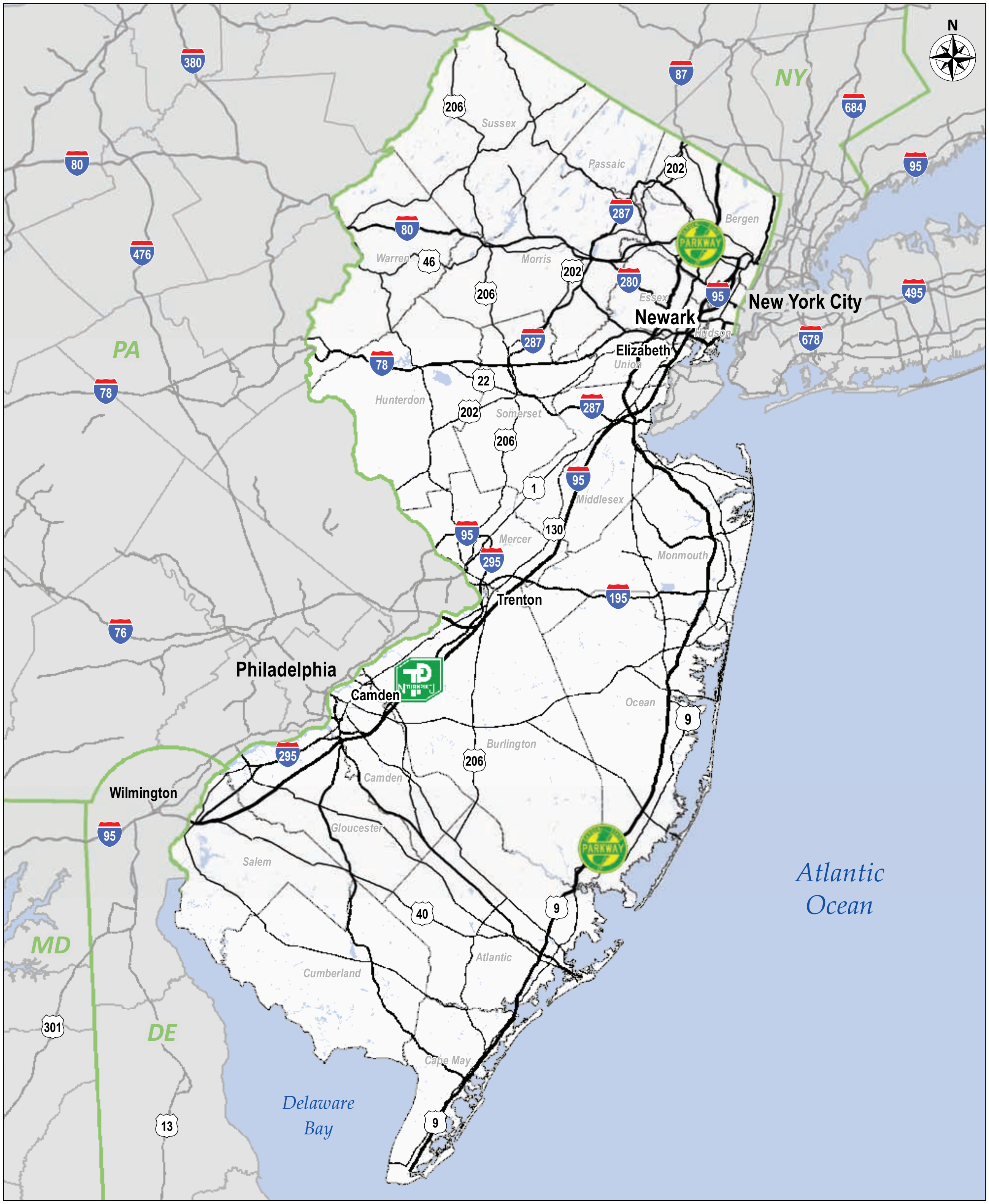
The NJTA toll road facilities are comprised of the New Jersey Turnpike and the Garden State Parkway. **Figure 2-1** shows the location of these two toll roads. Interchange locations in northern and southern New Jersey are shown in **Figures 2-2** and **2-3**, respectively.

The New Jersey Turnpike

The Turnpike consists of a 122-mile mainline and two extensions, the 8.2-mile Newark Bay-Hudson County Extension (which crosses Newark Bay and connects the cities of Newark with Bayonne and Jersey City), and the 5.7-mile Pearl Harbor Memorial Turnpike Extension (which connects the Turnpike to the Pennsylvania Turnpike, I-276, via a bridge over the Delaware River). The Turnpike mainline is a principal north-south roadway in New Jersey linking major economic centers of the east coast, including Boston, New York City, Philadelphia, and Washington, D.C. Within New Jersey, the Turnpike provides access to a major seaport in Newark and Elizabeth, and to a major airport (Newark International Airport).

Interchanges on the Turnpike are numbered sequentially from the southern terminus to the northern, ranging from Interchange 1 to 18W/18E. At its southern terminus the Turnpike connects, via a short section of US Route 40, with the Delaware Memorial Bridge, the only crossing between New Jersey and Delaware. At its northern terminus, the Turnpike feeds into the George Washington Bridge, one of the most heavily traveled bridges in the world. North of Interchange 6, the Turnpike carries the I-95 designation.

The Turnpike currently provides two travel lanes per direction between Interchange 1 (Delaware Memorial Bridge) to Interchange 4 (Camden-Philadelphia), and three travel lanes per direction between Interchange 4 to Interchange 6 (Pennsylvania Turnpike). Between Interchange 6 to just north of Interchange 14 (Newark), the Turnpike has an inner roadway and an outer roadway in each direction (four separate roads). Under normal operations, the outer roadway permits truck, bus and passenger-car traffic, while the inner roadway permits only passenger-car traffic. This system of inner and outer roadways is called the “dual/dual” roadway. Between Interchanges 6 and 14 there are six lanes per direction; three outer lanes and three inner lanes.



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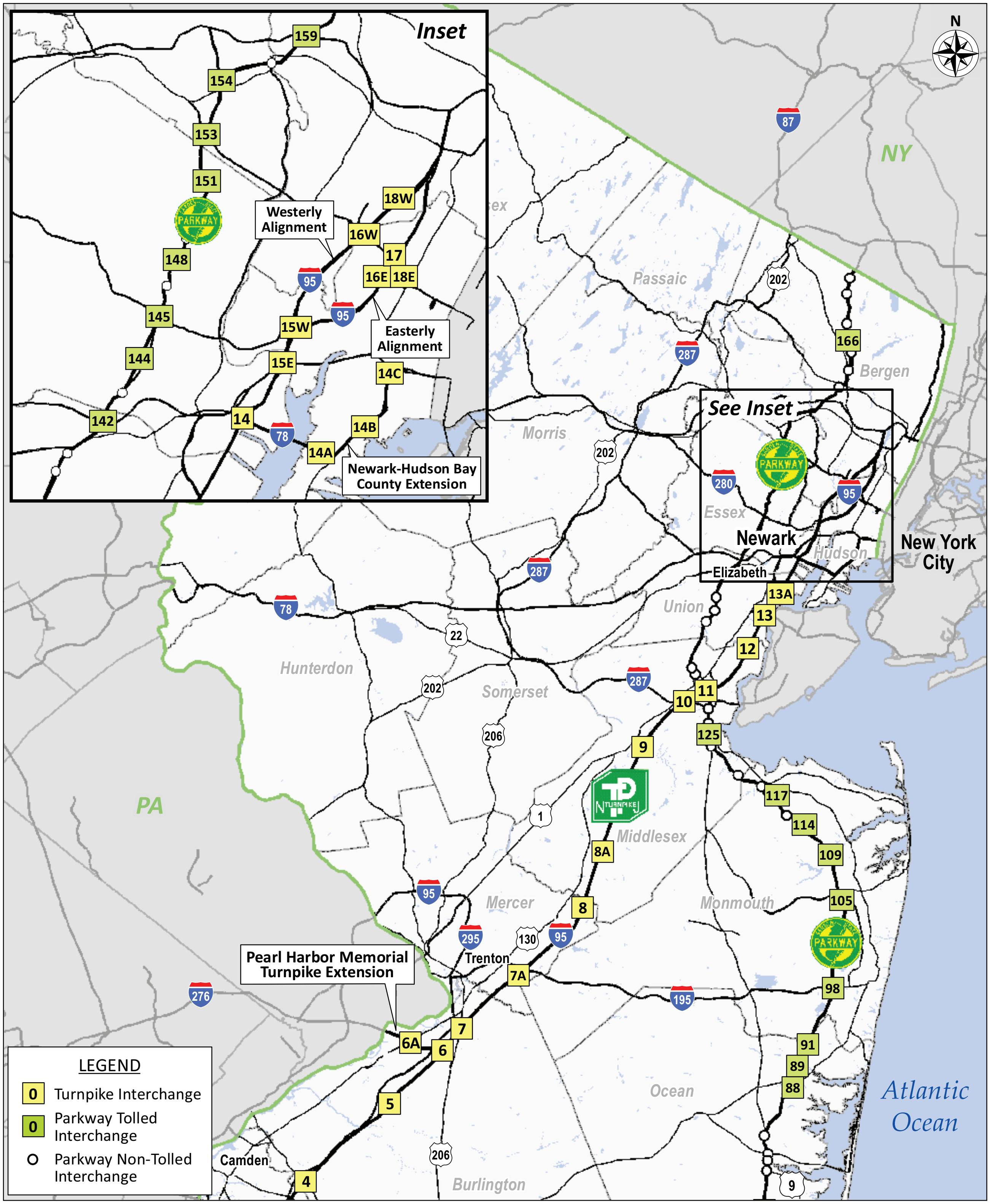
CDM Smith

NJTA TOLL ROAD FACILITIES

FIGURE 2-1



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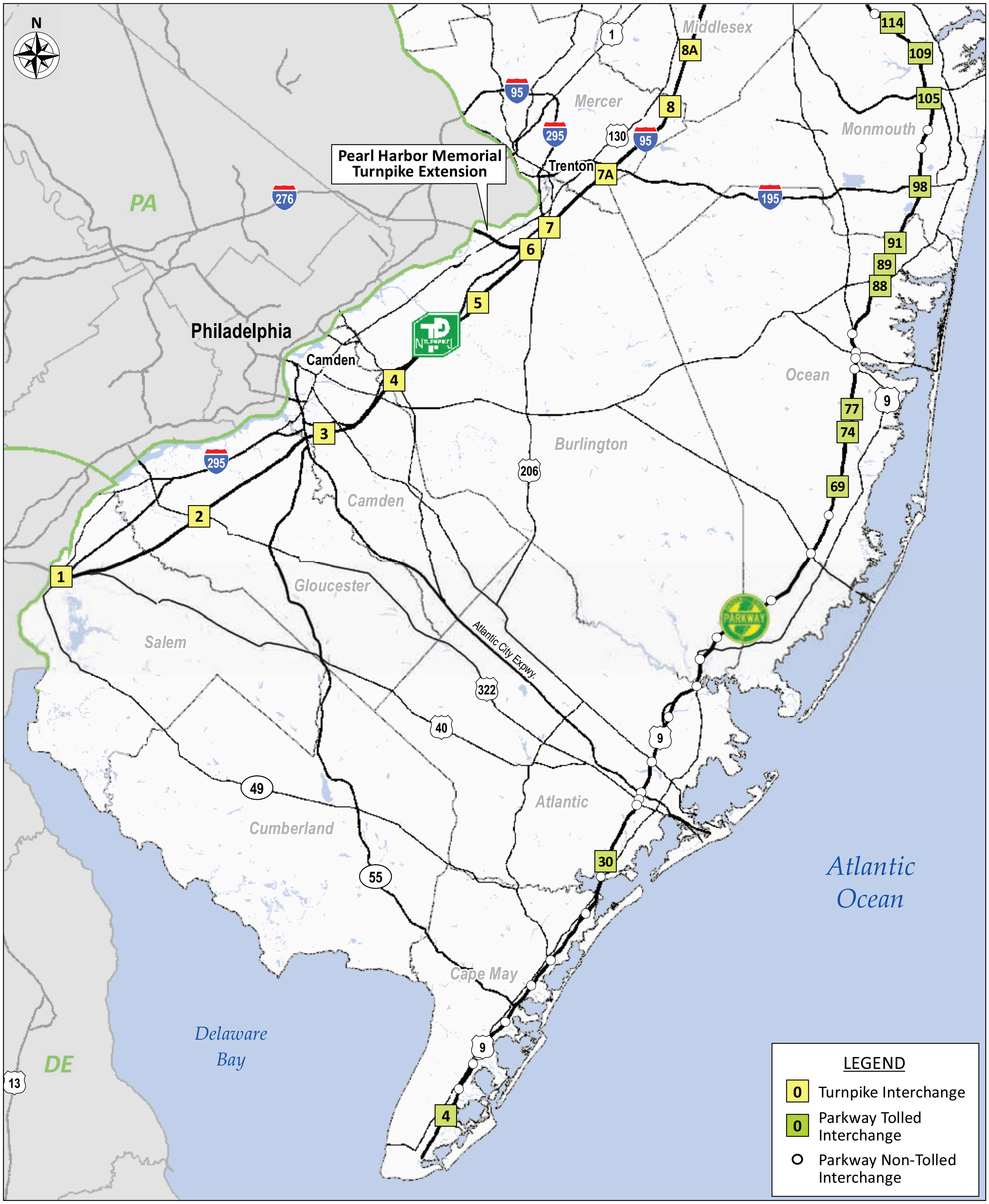
CDM Smith

DETAIL MAP OF NORTHERN NEW JERSEY

FIGURE 2-2



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CDM Smith

DETAIL MAP OF SOUTHERN NEW JERSEY

FIGURE 2-3

The NJTA has recently completed the Interchange 6 to 9 Widening Program, resulting in three outer and three inner lanes per direction between Interchange 6 to Interchange 14. This construction project was initiated in 2009 and was completed in late 2014. North of Interchange 14, the inner and outer roadways merge together and then split into two alignments, a westerly alignment west of the Hackensack River and an easterly alignment on the east side of the river. Each alignment serves both northbound and southbound traffic. The westerly alignment provides three travel lanes per direction north to Interchange 16W (NJ Route 30), and two travel lanes per direction between Interchange 16W and the merge with the easterly alignment. The easterly alignment provides three travel lanes per direction.

The Newark Bay-Hudson County Extension is a four-lane, 8.2-mile roadway that extends from Interchange 14 and provides access to Bayonne, Jersey City, and the Holland Tunnel via Interchanges 14A, 14B, and 14C, respectively. This extension is designated as I-78 on its entire length. The Pearl Harbor Memorial Turnpike Extension is a six-lane, 5.7-mile roadway that provides a connection between the Turnpike mainline and the Pennsylvania Turnpike (I-276/I-76). There is only one Interchange on this extension (Interchange 6A).

The Garden State Parkway

The Parkway is a 173-mile roadway that follows the New Jersey coastline from its southern terminus in Cape May northward to Woodbridge where the Parkway crosses the Turnpike and continues in a northerly direction further inland, passing through Newark and Clifton before reaching the NJ/NY State line. The Parkway connects to the New State Thruway (Interstate 87) just north of the NJ/NY State line. Interchanges on the Parkway are numbered by milepost from south to north beginning with Interchange 0 in Cape May and ending with Interchange 171 in northern New Jersey. The Parkway provides access to the Atlantic City Expressway; Interstate Routes 195, 287, 95, 78, 280, and 80; the New Jersey Turnpike; and various U.S. and state highways.

Both commuters and tourists are served by the Parkway. Commuter and business traffic is high in the northern sections of the Parkway, as it passes through Bergen, Passaic, Essex, Union, and Middlesex counties near the New Jersey cities of New Brunswick, Newark, Jersey City, and New York City, NY. The proportion of tourist and recreational trips increases on the southern Parkway through Monmouth, Ocean, Atlantic, and Cape May counties. While commercial traffic does occur on the Parkway, heavy commercial vehicles (registered as 10,000 lbs. or more, or those having six tires or three-or-more axles) are prohibited from using the Parkway north of Interchange 105 in Monmouth County.

Two travel lanes per direction are provided on the Parkway from Interchange 0 (Cape May) to Interchange 6 in the northbound travel lanes and to Interchange 9 in the southbound lanes. The Parkway then has three lanes per direction until just north of Interchange 11. The Parkway maintains two lanes per direction until Interchange 36 (Fire Road in Atlantic County). Three travel lanes per direction are provided northward to Interchange 91 (Route 549 in Monmouth County), four lanes per direction through Interchange 102 (Neptune in Monmouth County), and five lanes per direction through Interchange 117 (Route 35 in Monmouth County). Six travel lanes per direction are provided between Interchanges 117 and 127 (I-287 in Union County), and five lanes per direction are provided northward through Interchange 140 in Union County. Four travel lanes per direction exist northward to Interchange 145 (I-280 in Essex County), six lanes per direction continue northward to Interchange 168 in Bergen County, and four lanes per direction continue to the New York State border.

The NJTA recently completed its third and final phase of a widening program to add an additional lane and full width shoulders between interchanges 35 and 80 on the Parkway, creating a total of three travel lanes in both directions. The widening project was completed and opened to traffic north of Interchange 36 in 2018. This project is discussed in further detail in Chapter 5 of this report.

Toll Collection

This section presents information on the current toll collection system, the toll schedule and accepted methods of payment, and discount programs.

Toll Collection Systems

There are two toll collection systems on the Turnpike System: a ticket system on the Turnpike (with the exception of two barrier toll plazas described below) and an open-barrier system on the Parkway.

On the Turnpike, motorists pick up a ticket upon entering the Turnpike and pay for the trip upon exiting the Turnpike. The toll rate is based on the trip entrance and exit (the trip distance), the vehicle class, the time of day, and the method of payment. There are no toll-free movements on the ticket system. There are two barrier plazas that are part of the Turnpike, but not part of the ticket system. These are located at Interchanges 6A (Florence) and 17 (Lincoln Tunnel, Secaucus). At these two locations, motorists pay a fixed toll for passing through the toll plaza. Tolls are collected in the northbound direction at Interchange 17 and in the eastbound direction at Interchange 6A. There are 28 interchanges on the Turnpike.

On the Parkway, motorists pay a fixed toll at mainline and ramp barrier toll plazas. The toll is based on the type of barrier (mainline or ramp), vehicle class, the time of day, and method of payment. One trip may pass through multiple toll barriers. There are 11 mainline barrier locations, and 23 interchanges that have ramp barrier toll plazas. Out of the 11 mainline barriers, only one, Toms River at milepost 85, support toll collection in both the northbound and southbound directions. The ten other mainline barriers were all gradually converted from two-way to one-way toll collection (either northbound or southbound) to create greater efficiencies in the toll collection system and reduce motorist delay.

Toll Schedule and Methods of Payment

Both the Turnpike and the Parkway accept cash and E-ZPass for toll payments. Peak periods are defined by the NJTA as 7:00 to 9:00 AM and 4:30 to 6:30 PM Monday through Friday, and all-day Saturday and Sunday for both toll road facilities. Both toll roads have a separate toll schedule for the following vehicle classes:

- 2-axle passenger cars;
- 2-axle trucks;
- 3-axle trucks;
- 4-axle trucks;
- 5-axle trucks;
- 6-or-more axle trucks;

- 2-axle buses; and
- 3-axle buses.

The NJTA offers automatic discounted toll rates on both toll roads to vehicles equipped with a NJ E-ZPass transponder. The eligibility for the discount is based on time of day, vehicle class, and other factors. Other discount programs which require enrollment are offered on one or both toll roads. These programs include a Senior Citizen Discount and a Green Pass Discount (eligible low-emissions vehicles) among others.

The current toll schedule was implemented on January 1, 2012. Currently, the toll rate for a passenger car paying with cash or E-ZPass to travel the entire length of the Turnpike during a peak period is $13.85, which is equivalent to 11.4 cents per mile. The toll rate for a through trip on the Parkway is $8.25 or 4.8 cents per mile for a passenger car paying with either cash or E-ZPass.

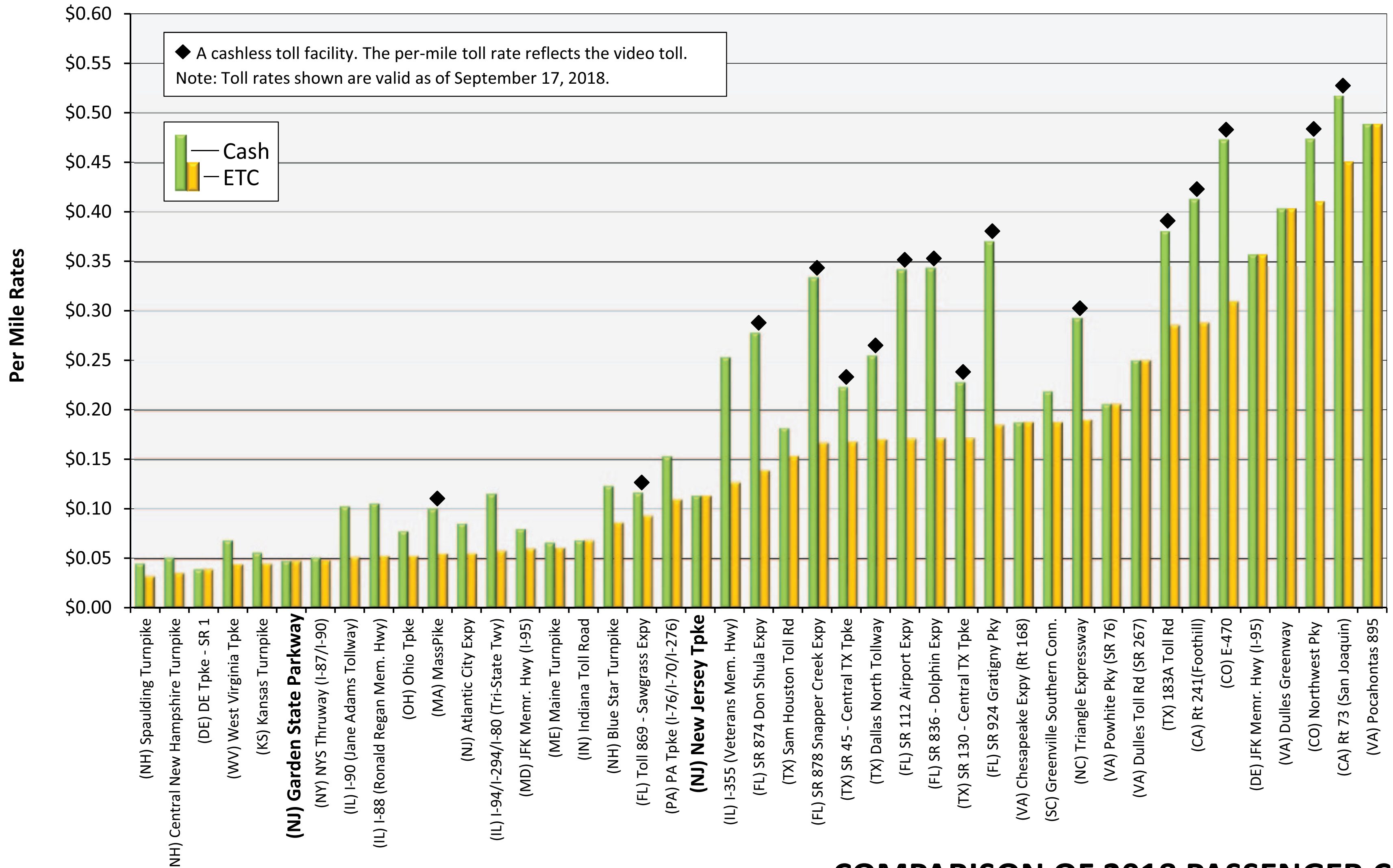
For five-axle vehicles on the Turnpike, a through trip toll for a cash customer costs $49.75, or 40.8 cents per mile. The same trip for a peak period E-ZPass customer costs $45.45, or 37.3 cents per mile. Just as for passenger cars, five-axle per-mile toll rates on the Parkway are much less. A round trip on the Parkway for a five-axle vehicle between Milepost 0 and 105 (trucks are prohibited north of Milepost 105) costs $45.00 for both cash and peak period E-ZPass customers. This amounts to a per-mile rate of 21.1 cents.

Figures 2-4 and **2-5** help to put these per-mile toll rates in perspective. Figure 2-4 graphically shows the passenger car cash and ETC per-mile toll rates for both the New Jersey Turnpike and Parkway, along with the passenger car per-mile rates for other toll facilities throughout the United States. Figure 2-5 shows the same information for five-axle vehicles. In both figures, the toll facilities are placed in order of their ETC per-mile rate, from lowest on the left to highest on the right. As evident in these two figures, Parkway per-mile rates are very low compared to those on the other facilities. Even though the Turnpike's rank is more toward the middle of the two figures, its per-mile rates are still relatively low, especially when considering that it serves some of the highest income populations in the country.

2017 Toll Transactions and Gross Toll Revenue by Facility

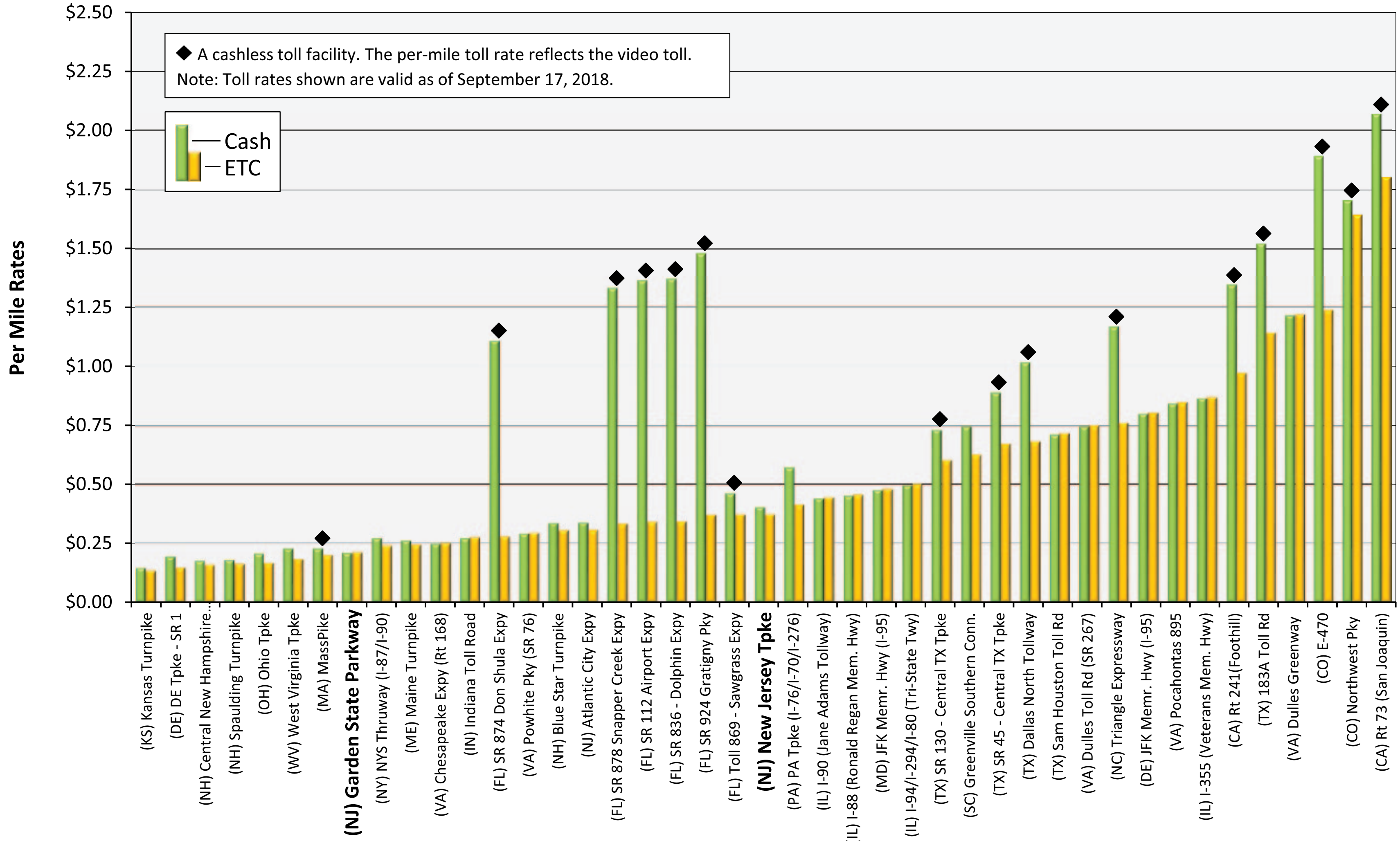
As presented in **Figure 2-6**, approximately 72.9 percent of the systemwide 2017 annual gross toll revenue was collected on the Turnpike compared to 27.1 percent on the Parkway. This reflects the higher per-mile toll rate structure on the Turnpike compared to the Parkway. In 2017, the Turnpike generated $1,152 million in gross toll revenue compared to $428 million for the Parkway.

In contrast, the Turnpike generated only 39.9 percent of the total 2017 toll transactions compared to 60.1 percent generated by the Parkway. The Turnpike generates fewer toll transactions because one transaction accounts for the entire trip while multiple transactions may occur on a Parkway trip. In 2017, the Turnpike generated approximately 261 million toll transactions compared to 393 million toll transactions for the Parkway.



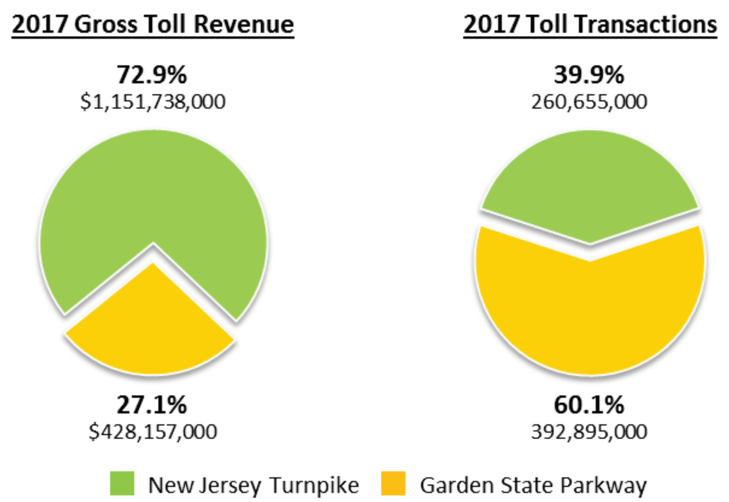
COMPARISON OF 2018 PASSENGER CAR PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2-4



COMPARISON OF 2018 FIVE-AXLE VEHICLE PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2-5



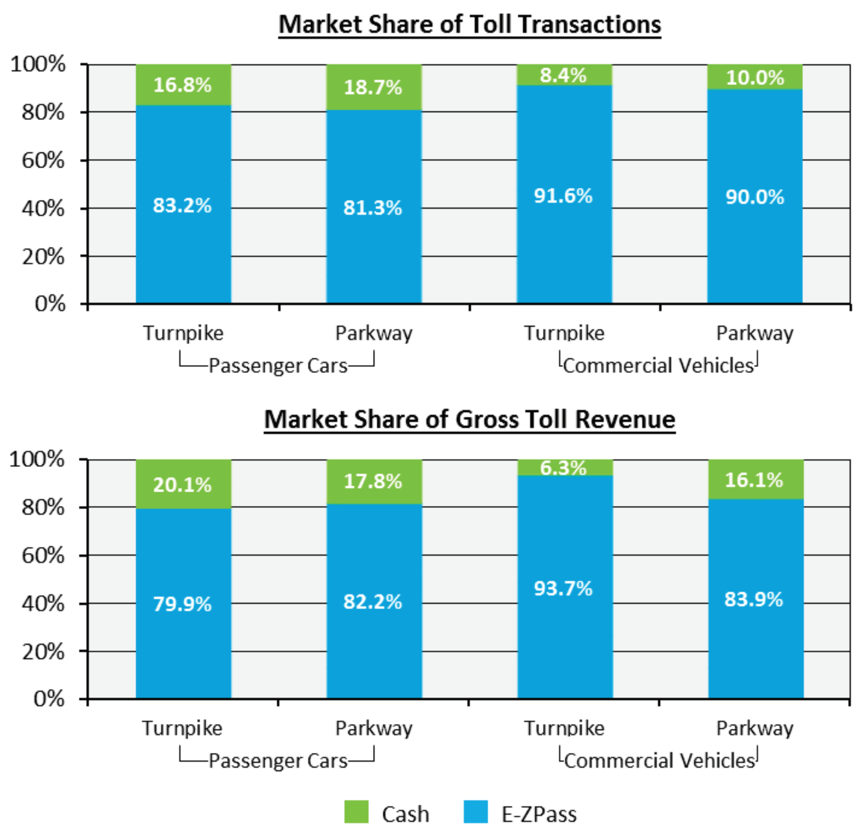
TOLL TRANSACTIONS AND GROSS TOLL REVENUE DISTRIBUTION BY FACILITY

FIGURE 2-6

2017 E-ZPass Market Share

E-ZPass is the preferred method of payment on both the Turnpike and the Parkway. The market share of E-ZPass in 2017 for the Turnpike and Parkway is presented in **Figure 2-7**. E-ZPass comprised 83.2 percent of all Turnpike and 81.3 percent of all Parkway passenger-car toll transactions. The E-ZPass market share was even higher for commercial vehicles, totaling 91.6 percent of all commercial-vehicle transactions on the Turnpike and 90.0 percent on the Parkway.

The market share of gross toll revenue generated by E-ZPass compared to cash was very similar to the market share by transactions. About 79.9 percent of passenger-car gross toll revenue was generated by E-ZPass on the Turnpike and 82.2 percent on the Parkway. About 93.7 percent of commercial-vehicle gross toll revenue was generated by E-ZPass on the Turnpike and 83.9 percent on the Parkway.



2017 E-ZPass MARKET SHARE

FIGURE 2-7

2017 Vehicle Class Distribution

Passenger-car transactions comprised the vast majority of total toll transactions on both the Turnpike and the Parkway. The vehicle class distribution in 2017 is presented in **Table 2-1**. Passenger cars comprised 87.2 percent of all Turnpike transactions, and 98.7 percent of Parkway transactions. On the Turnpike, five-axle trucks totaled 5.9 percent of total transactions.

Table 2-1
2017 Vehicle Class Distribution
By Toll Transactions and Gross Toll Revenue
(Percent Distribution)

		2017 Toll Transactions			2017 Gross Toll Revenue		
Vehicle Class	**Description**	Turnpike	Parkway	Total System	Turnpike	Parkway	Total System
1	Passenger Cars	87.2	98.7	94.1	69.1	96.2	76.4
2	2-Axle Trucks	3.3	0.2	1.5	5.1	0.4	3.9
3	3-Axle Trucks	1.4	0.3	0.7	2.3	0.8	1.9
4	4-Axle Trucks	1.1	0.2	0.6	2.8	0.9	2.3
5	5-Axle Trucks	5.9	0.1	2.4	18.3	0.6	13.5
6	6-or-More Axle Trucks	0.2	0.0	0.1	0.6	0.0	0.5
B2	2-Axle Buses	0.2	0.2	0.2	0.2	0.4	0.3
B3	3-Axle Buses	0.8	0.2	0.4	1.5	0.6	1.3
Total		100.0	100.0	100.0	100.0	100.0	100.0
Passenger Cars (Class 1)		87.2	98.7	94.1	69.1	96.2	76.4
Commercial Vehicles (Classes 2-6, B2,B3)		12.8	1.3	5.9	30.9	3.8	23.6

Source: NJTA

On the revenue side, Turnpike passenger cars generated 69.1 percent of the 2017 annual gross toll revenue and five-axle trucks generated 18.3 percent. Parkway passenger cars generated 96.2 percent of the 2017 annual gross toll revenue.

2017 Mainline Traffic Volumes

The Turnpike and Parkway each serve a vast number of motorists every day. **Table 2-2** presents annual average daily traffic (AADT) volumes on mainline sections of the Turnpike in 2017 and shows the percent trucks of the total volume. The AADTs are for both directions of travel. On the Turnpike Mainline, AADTs ranged from 49,800 at the southern terminus (between Interchanges 1 and 2) to a high of 269,500 between Interchanges 13 (Elizabeth) and 13A (Newark Airport – Elizabeth Seaport). AADTs peaked at 138,200 on the Easterly Alignment and 137,100 on the Westerly Alignment in 2017. Annual average daily traffic volumes ranged from 78,100 to 105,300 in 2017 on the Newark Bay-Hudson County Extension, and from 36,700 to 40,200 on the Pearl Harbor Memorial Extension.

Mainline traffic data on the Parkway is only available where there is a mainline barrier toll plaza. There are 11 mainline barrier toll plazas on the Parkway, and only one of them (Toms River) operates in both the northbound and southbound directions. 2017 mainline AADTs on the Parkway are shown

Table 2-2
2017 Annual Average Daily Traffic Volumes On Mainline Segments
New Jersey Turnpike
(Both Directions)

Mainline Section Between Interchanges: Interchange	Interchange	2017 AADT (1)	Percent Commercial Vehicles
Mainline			
1	2	49,800	12.4
2	3	53,400	12.4
3	4	64,300	12.3
4	5	84,000	12.3
5	JCT. (2)	89,900	12.2
JCT. (2)	7	119,000	13.1
7	7A	132,300	14.1
7A	8	150,200	15.1
8	8A	155,600	14.7
8A	9	175,700	14.4
9	10	206,500	13.1
10	11	193,400	13.4
11	12	231,600	13.8
12	13	247,900	14.2
13	13A	269,500	14.8
13A	14	227,200	15.1
14	M (3)	249,300	15.3
Mainline Easterly Alignment			
M (3)	15E	124,300	14.0
15E	JE (4)	121,100	14.0
JE (4)	15X	138,200	13.2
15X	16E/18E	127,900	12.6
17	N (5)	67,700	15.0
Mainline Westerly Alignment			
M (3)	JW (6)	125,000	16.4
JW (6)	15W	137,100	17.7
15W	16W	130,300	16.6
16W	18W	92,100	17.4
Newark Bay-Hudson County Extension			
14	14A	105,300	8.7
14A	14B	81,200	5.9
14B	14C	78,100	5.4
Pearl Harbor Memorial Turnpike Extension			
JCT (2)	6	36,700	15.0
6	Bridge (7)	40,200	15.9

(1) Annual Average Daily Traffic
(2) JCT = the interchange between the Turnpike Mainline and the Pearl Harbor Memorial Turnpike Extension.
(3) M = The point where the dual-dual lanes terminate and merge into the easterly and westerly alignments.
(4) JE = southernmost access point on the easterly alignment.
(5) N = mainline section north of Interchange 17.
(6) JW = southernmost access point on the westerly alignment.
(7) Bridge = the bridge over the Delaware River that ties into I-276 in PA.into the easterly and westerly alignments.
Source: NJTA

in **Table 2-3** at the mainline barrier plazas. Actual AADTs are shown in the tolled direction and estimated two-directional AADTS are shown based on doubling the traffic volume in the tolled direction. Mainline 2017 AADTs ranged from 31,600 at the southernmost plaza (Cape May) to 229,600 at the Raritan Plaza.

Table 2-3
2017 Annual Average Daily Traffic Volumes
At Mainline Toll Plazas
Garden State Parkway
(By Direction)

		2017 Annual Average Daily Traffic		
Milepost	Mainline Toll Plaza	NB (1)	SB (2)	Both (3)
166	Pascack Valley *	na	42,300	84,600
161	Bergen*	74,100	na	148,200
151	Essex*	na	76,800	153,600
142	Union*	105,700	na	211,400
124	Raritan*	na	114,800	229,600
104	Asbury Park*	79,600	na	159,200
85	Toms River	50,600	47,300	97,900
69	Barnegat*	na	33,500	67,000
54	New Gretna*	19,000	na	38,000
29	Great Egg*	na	20,100	40,200
19	Cape May*	15,500	na	31,000

(1) NB = northbound
(2) SB = southbound
(3) These are estimated AADTs based on doubling the reported traffic in the tolled direction.

* These mainline toll plazas have one-way toll collection. Traffic volumes are not available in the non-tolled direction.

Source: NJTA

2017 Mainline Monthly and Daily Traffic Volumes

This section presents 2017 monthly and daily traffic variations on select Turnpike and Parkway mainline segments. Recall that mainline traffic volume data is only available at mainline toll barriers on the Parkway, in the tolled direction. The following mainline sections were selected to illustrate the range of conditions on the facilities from the southern to the northern locations:

Turnpike mainline segments:

- Interchange 1 (Delaware Memorial Bridge) to 2 (Swedesboro-Chester);
- Interchange 7 (Bordentown-Trenton) to 7A (Allentown-Trenton);
- Interchange 9 (New Brunswick) to 10 (Edison); and
- Interchange 16W (NJ 3-Sportsplex) to 18W (George Washington Bridge).

Parkway mainline segments:

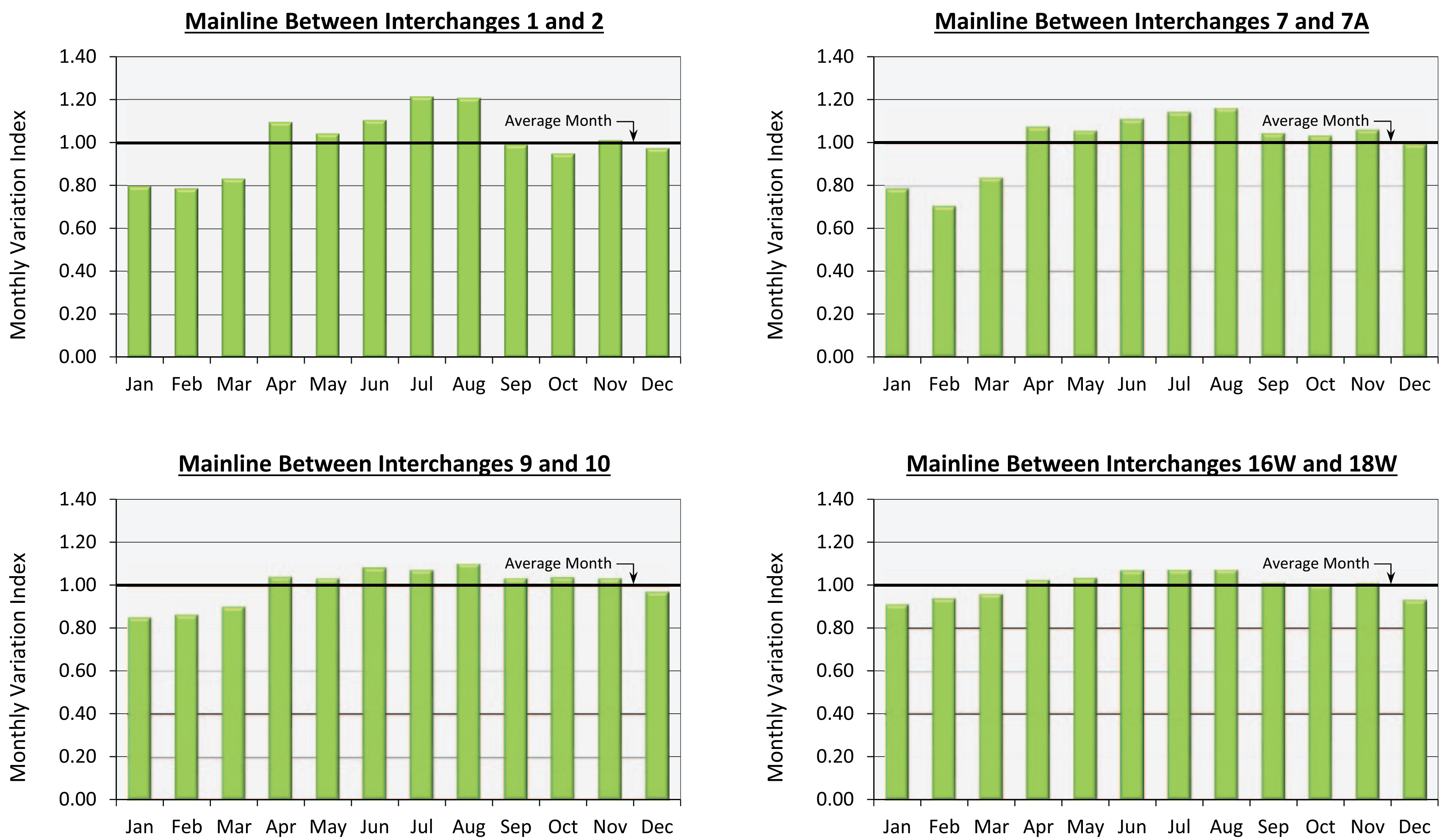
- Cape May Mainline Plaza – northbound (milepost 19);
- Toms River Mainline Plaza – northbound (milepost 85);
- Union Mainline Plaza – northbound (milepost 142); and
- Bergen Mainline Plaza – northbound (milepost 161).

The Turnpike characteristics are based on the total two-way traffic on each link, and the Parkway characteristics are based on northbound traffic.

Monthly Traffic Variations

Based on the four selected Turnpike mainline locations, the 2017 monthly traffic variations were greatest in the southern, more rural locations and less pronounced in the northern, more urban locations. These variations are shown in **Figure 2-8**. The traffic variations are based on average daily traffic (ADT) per month, and an index of 1.00 represents the "average month". In general, daily traffic volumes peaked during the summer months and reached their low point in January or February. As shown in Figure 2-8, average daily traffic on the southernmost Turnpike link, Interchange 1 – 2, in July was 21 percent higher than the average month, while the ADT in February was 79 percent of the average month. This represents a 42-percentage point spread in monthly ADTs. The total spread at mainline sections between Interchanges 7 – 7A was 46 percentage points. In contrast, the total spread decreased to 25 and 16 percentage points at mainline sections between Interchanges 9 – 10, and 16W and 18W, respectively. June, July, and August traffic were all only 7 percent higher than the average month, and January traffic was 91 percent of the average month on the mainline between Interchanges 16W and 18W.

Monthly traffic variations for the Parkway are presented in **Figure 2-9**. The variations are shown for northbound traffic at the selected mainline barrier toll plazas. Similar to the Turnpike, monthly ADTs peaked in the summer months, and reached the lowest level in January. Average daily traffic on the southern mainline section that contains the Cape May toll plaza was 75 percent greater than the average month in both July and August, and January traffic was only 59 percent of the average month. This represents a 116-percentage point spread between the lowest and highest traffic month. The total percentage point spread in monthly variations decreased to 40 points at the Toms River mainline barrier (milepost 85), and to 19 and 17 percentage points at the Union and Bergen mainline barriers, respectively. At the Bergen mainline barrier, June daily traffic was 6 percent greater than the average month, and January daily traffic was 89 percent of the average month.

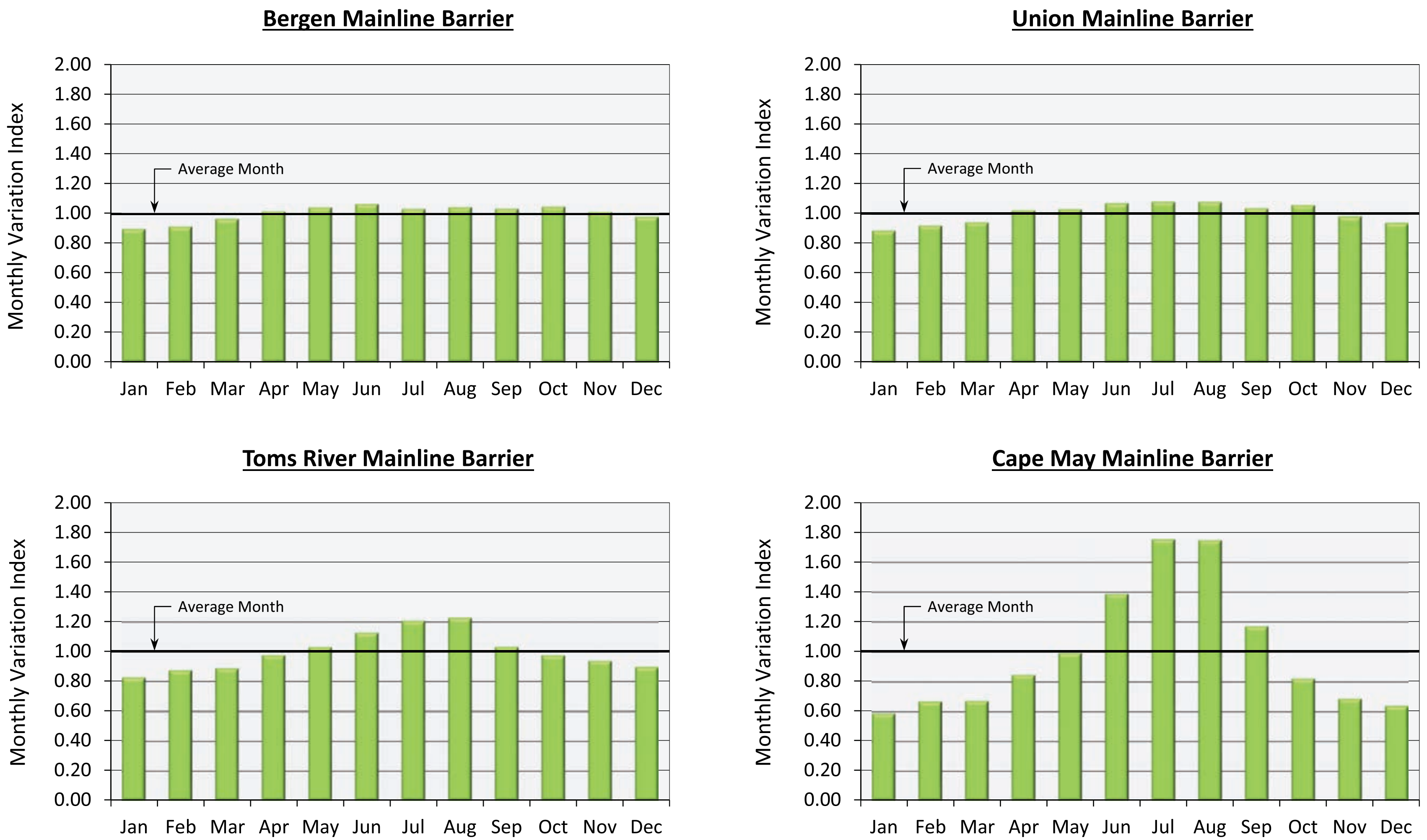


Note: Based on Two-Way Traffic Volumes.
Source: NJTA

CDM Smith

TURNPIKE: 2017 MONTHLY TRAFFIC VARIATIONS

FIGURE 2-8



Note: Based on Northbound Traffic Volumes.
Source: NJTA

PARKWAY: 2017 MONTHLY TRAFFIC VARIATIONS

FIGURE 2-9

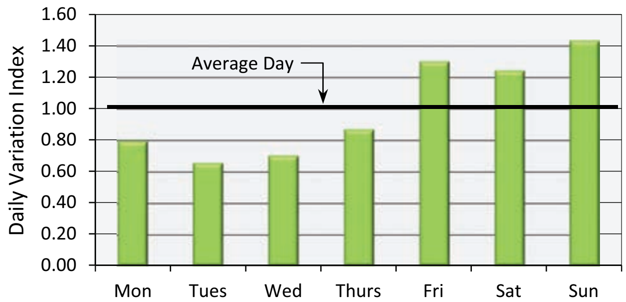
Daily Traffic Variations

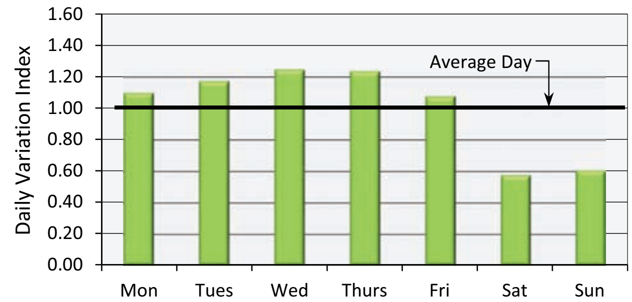
A sample of daily mainline traffic volumes at the select mainline locations was provided by the NJTA. The sample consisted of a week of traffic data in April 2018. The daily variations on the Turnpike are presented in **Figure 2-10** for passenger cars and commercial vehicles. As anticipated, commercial-vehicle traffic volumes were very consistent throughout the weekdays, and declined on Saturday and Sunday. Daily passenger-car traffic volumes were most consistent on the northern, more urban sections, and showed more daily variation in the southern sections of the Turnpike. On the northern portion of the Turnpike, between Interchanges 16W and 18W, Saturday passenger-car traffic was 14 percent greater than the average day, and Monday passenger-car traffic was 91 percent of the average day. On the southern mainline section between Interchanges 1 and 2, Sunday passenger-car traffic was 43 percent greater than the average day, and Tuesday passenger-car traffic was 66 percent of the average day. In general, Turnpike passenger-car traffic peaked on Saturday or Sunday and reached its lowest volume on a Monday or Tuesday.

Daily traffic variations for the Parkway are shown in **Figure 2-11**. The daily variations are shown for total traffic, as the percentage of trucks is very small. At the two more northerly locations (Bergen and Union mainlines) the daily traffic volumes peaked on Friday and reached the lowest volume on Sunday. At the Toms River location, the daily traffic volumes also peaked on Friday and reached the lowest volume on Sunday. At the southernmost Cape May location, daily traffic volumes peaked on Sunday and reached the lowest volume on Monday. This is indicative of the higher proportion of tourist and recreational traffic on the southern sections of the Parkway.

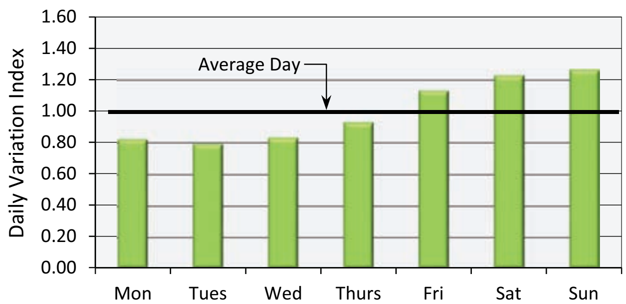
Passenger Cars | **Commercial Vehicles**

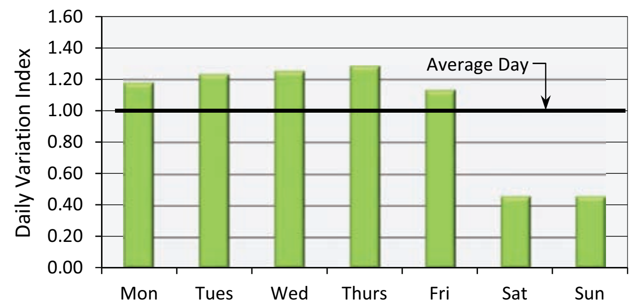
Mainline Between Interchanges 1 and 2



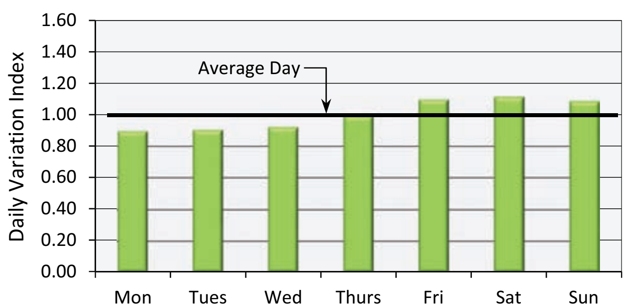


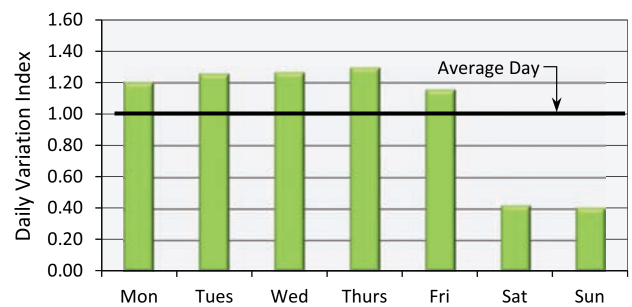
Mainline Between Interchanges 7 and 7A



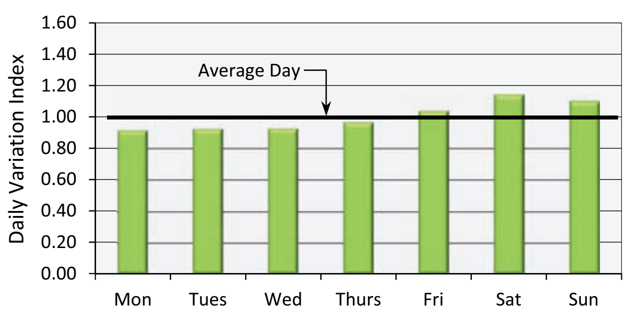


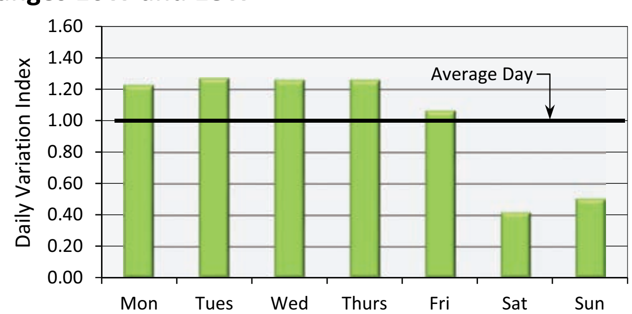
Mainline Between Interchanges 9 and 10





Mainline Between Interchanges 16W and 18W

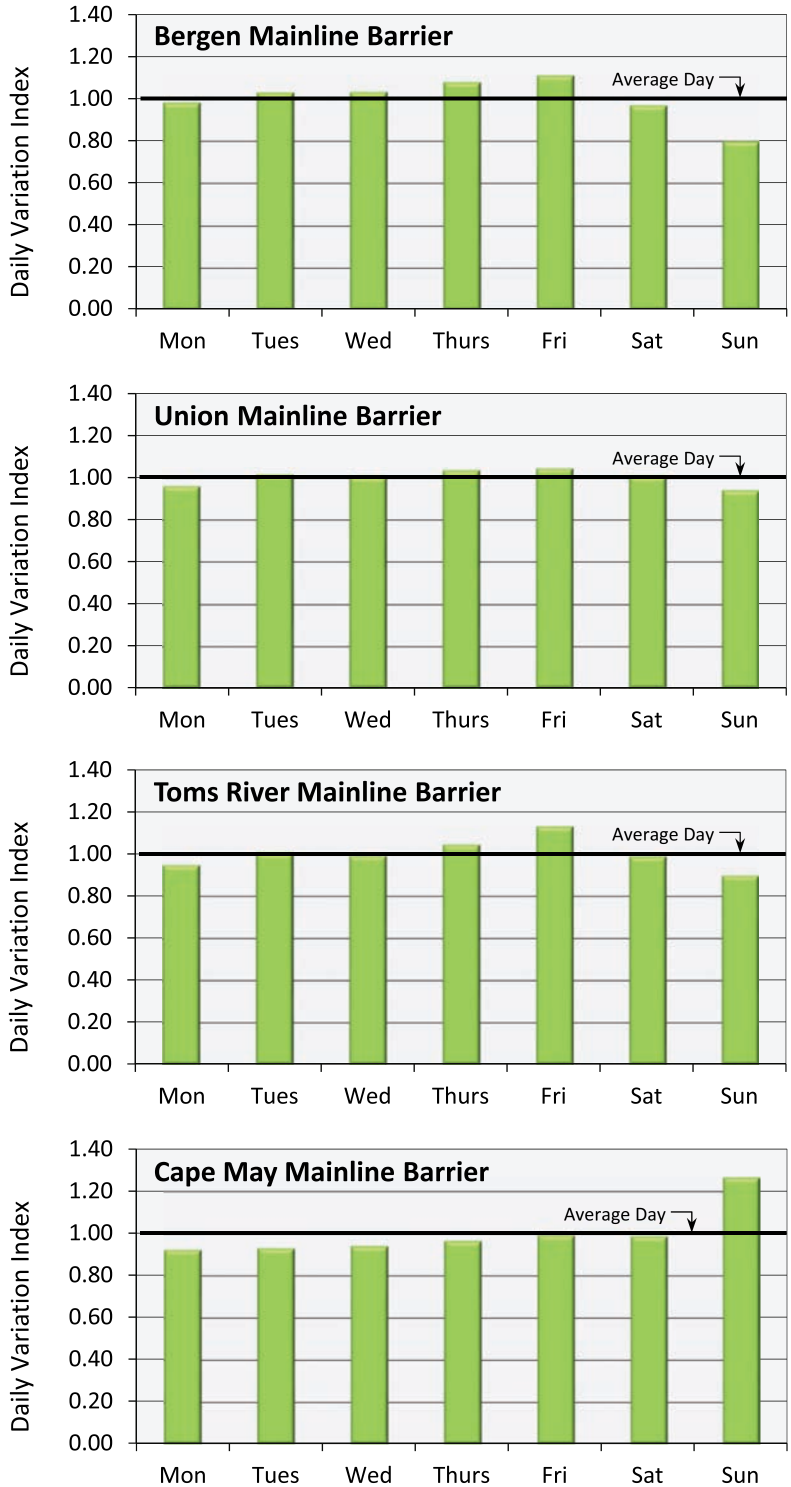




Note: Based on Two-Way Traffic Volumes.
Source: NJTA

TURNPIKE: APRIL 2018 DAILY TRAFFIC VARIATIONS

FIGURE 2-10



Note: Based on Northbound Traffic Volumes.
Source: NJTA

PARKWAY: APRIL 2018 DAILY TRAFFIC VARIATIONS

FIGURE 2-11

Chapter 3

Historical Transaction and Toll Revenue Trends

This chapter presents historical toll transaction and toll revenue trends that have occurred on the Turnpike and Parkway and their relationships to changes in the toll rate schedule, the conversion of toll plazas on the Parkway to one-way tolling (from two-way tolling), and the economy. Both annual and monthly trend data are presented and analyzed. Annual trends in the E-ZPass market share and the vehicle class composition are also presented. Chapter 4 (Corridor Growth Analysis) will describe how the trend data was incorporated into the development of future-year growth rate estimates for toll transactions.

Historical Changes in the Toll Schedule and Toll Collection

Toll rates were increased five times on the Turnpike and twice on the Parkway since 1991. In addition, ten mainline toll plazas on the Parkway were converted from two-way tolling to one-way tolling between 2004 and 2012. Toll collection was discontinued at four ramp toll plazas on the Parkway as part of the conversion to one-way toll collection.

Changes in the Toll Schedule

Table 3-1 presents historical toll schedule increases and discount program modifications on the Turnpike since 1991. The changes are shown for passenger cars and commercial vehicles, by cash and E-ZPass, and by peak and off-peak time periods. **Table 3-2** presents the same information for the Parkway. Of most significance in recent years were the toll rate increases implemented in December 2008 (a 40-percent increase on the Turnpike and a 43-percent toll increase on the Parkway) and January 2012 (a 53-percent increase on the Turnpike and a 50-percent toll increase on the Parkway). The 2008 toll rate increase had a negative impact on transactions and a positive impact on toll revenue. Similarly, the 2012 toll rate increase had a negative impact on toll transactions, and a positive impact on toll revenue.

Conversion to One-Way Tolling

Table 3-3 identifies the Parkway toll plaza locations that were affected as part of the conversion to one-way toll collection. When any toll plaza was converted from two-way to one-way tolling, toll collection was discontinued in the non-tolled direction and the toll rate was doubled in the tolled direction. The following are the general impacts on toll transactions and toll revenue due to the one-way toll conversion:

- The total number of tolled transactions at the affected toll plazas decreased by approximately half due to the discontinuation of tolling in the non-tolled direction;
- The toll rate was doubled in the remaining tolled direction at the affected toll plazas; and
- The net impact was a small reduction in total gross toll revenue due to a small reduction in toll transactions in the remaining tolled direction. The reduction in transactions in the tolled direction was due to the doubling of the toll rate.

Table 3-1
Historical Toll Schedule Changes
New Jersey Turnpike

Date	Time Period (1)	Percent Change in Toll Rates: Passenger Cars Cash	Passenger Cars E-ZPass	Commercial Vehicles Cash	Commercial Vehicles E-ZPass
Scheduled Toll Increases					
3/17/1991	All	70	na	100	na
9/30/2000 (2)	Peak	20	8	13	8
	Off-peak	20	0	13	8
1/1/2003	Peak	17	10	13	8
	Off-peak	17	5	13	8
12/1/2008	All	40	40	40	40
1/1/2012	All	53	53	53	53
Discount Program Modifications					
1/1/2006 (3)	Peak	0	15	0	15
	Off-peak	0	0	0	0
7/1/2011 (4)	Peak	0	0	0	0
	Off-peak	0	33	0	0

(1) Peak hours are 7:00 - 9:00 AM and 4:30 - 6:30 PM through Friday and all day Saturday and Sunday. Off-peak hours are all other hours.
(2) E-ZPass and variable pricing were implemented on the Turnpike. A toll differential was implemented between cash and E-ZPass. Peak and off-peak hours were defined, and a toll differential implemented for E-ZPass between peak and off-peak periods.
(3) The E-ZPass discount was eliminated for cars and trucks that traveled during peak hours.
(4) The E-ZPass discount was eliminated for passenger-car non-NJ E-ZPass accounts.

Source: NJTA

Table 3-2
Historical Toll Schedule Changes
Garden State Parkway

		Percent Change in Toll Rates					
	Time	Passenger Cars			Commercial Vehicles		
Date	**Period (1)**	Cash	Token (2)	E-ZPass	Cash	Token (2)	E-ZPass
Scheduled Toll Increases							
12/1/2008	All	43	0	43	43	0	43
1/1/2012	All	50	na	50	50	na	50
Discount Program Modifications							
11/19/2001 (3)	All	0	0	(6)	0	0	(6)
11/18/2002 (4)	All	0	0	6	0	0	6
12/1/2008 (5)	Peak	0	0	0	0	0	0
	Off-peak	0	0	0	0	0	(5)
1/1/2009 (6)	All	0	6	0	0	6	0

(1) Peak Hours are 7:00 - 9:00 AM and 4:30 - 6:30 PM Monday through Friday and all day Saturday and Sunday. Off-peak hours are all other hours.
(2) Tokens no longer sold after January 2002, although they were still accepted for toll
(3) E-ZPass dscounts were implemented on 11/19/2001. Prior to this, cash and E-ZPass rates were the same.
(4) The E-ZPass discount was discontinued.
(5) An E-ZPass discount was implemented for commercial vehicles during off-peak time periods.
(6) Tokens were no longer accepted. Customers who previously used tokens incurred a 6 percent toll increase if they paid cash.

Source: NJTA

Table 3-3
Toll Plaza Locations Impacted By
The Conversion To One-Way Toll Collection
Garden State Parkway

Year	Month	Milepost	Location (1)
2004	September	124	Raritan - northbound mainline
2004	September	105	Eatontown Ramp - southbound exit
2004	September	104	Asbury Park - southbound mainline
2005	March	142	Union Ramp - southbound exit
2005	March	142	Union - southbound mainline
2005	July	151	Essex - northbound mainline
2005	December	161	Bergen - southbound mainline
2005	December	159	Saddle Brook Ramp - southbound entry
2006	January	54	New Gretna - southbound mainline
2006	January	30	Somers Point Ramp - northbound entry
2006	January	29	Great Egg - northbound mainline
2006	January	19	Cape May - southbound mainline
2007	March	69	Barnegat - northbound mainline
2010	February	166	Pascack Valley - northbound mainline
2018	July	145	East Orange - northbound exit

(1) The direction identified at each location is now the toll-free direction.

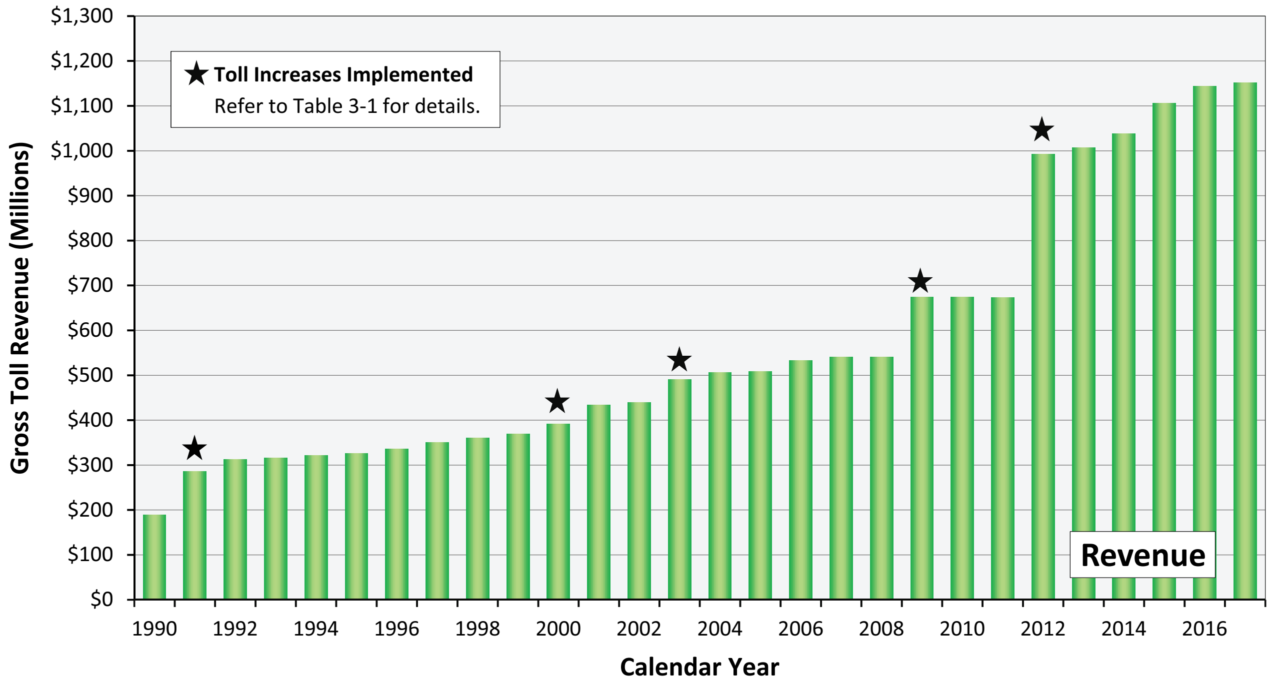
Source: NJTA

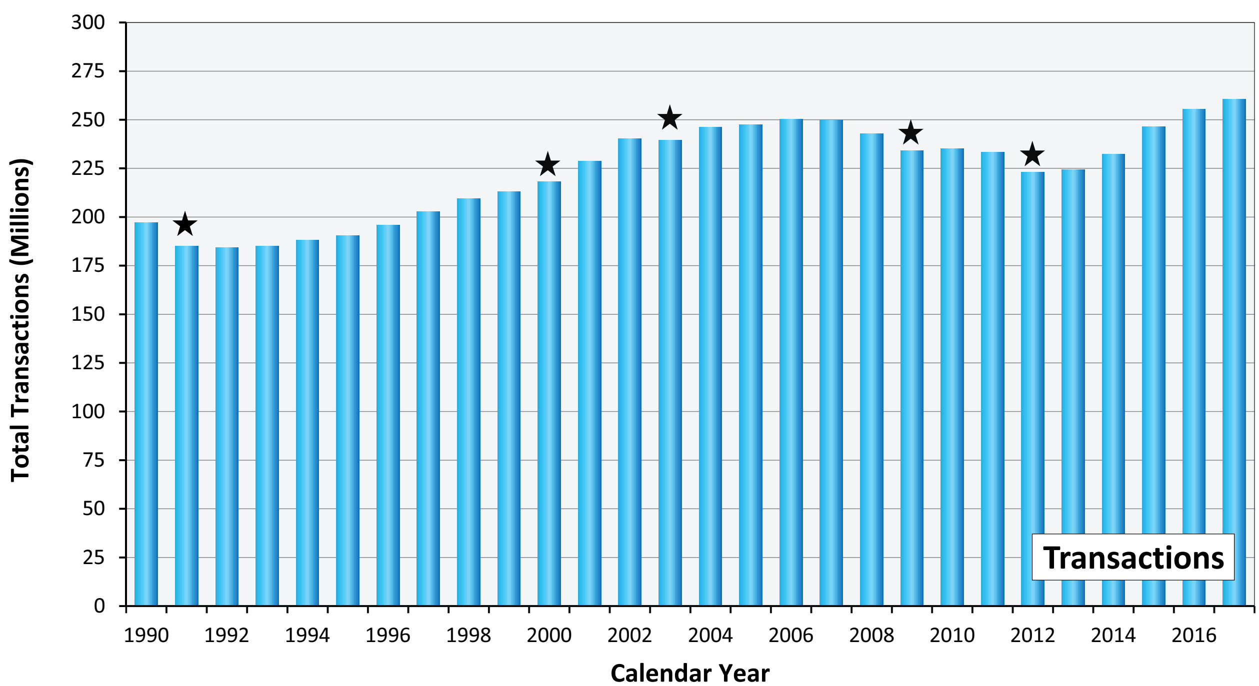
Annual Toll Transaction and Toll Revenue Trends

Annual toll transaction and toll revenue data were obtained from the NJTA. Data was provided from 1990 through 2017 for the Turnpike and from 1993 through 2017 for the Parkway. Turnpike data was provided by passenger car and commercial vehicle, while the Parkway data was aggregated to total vehicles as the percentage of commercial vehicles is very small. The annual trend data was analyzed to help determine the impacts associated with toll increases, the economy, roadway improvements, and other variables. This section reviews the annual trend data for the two toll facilities.

Turnpike Trends

Turnpike transactions and gross toll revenue trends are shown in **Tables 3-4 and 3-5**, and **Figure 3-1**. As shown in Table 3-4 and Figure 3-1, total toll transactions generally increased from 1992 to 2006 despite a toll increase in 2000 and 2003. Annual transactions decreased by 0.2 percent in 2007 and 2.8 percent in 2008 largely due to the economy, and by 3.6 percent in 2009 due to the combined effects of the economy and the 40 percent toll increase implemented on December 1, 2008. Transaction growth remained relatively flat through 2011 due to slow economic recovery. The 53-percent toll increase in January 2012 resulted in a 4.3 percent decrease in total toll transactions.





TURNPIKE: ANNUAL TOLL TRANSACTION AND TOLL REVENUE TRENDS

FIGURE 3-1

Table 3-4
Annual Toll Transaction Trends
(Thousands of Vehicles)

		New Jersey Turnpike							Garden State Parkway		Total System	
Calendar Year		Cars	Percent Change Over Prior Year	Commercial Vehicles	Percent Change Over Prior Year	Total	Percent Change Over Prior Year		All Vehicles	Percent Change Over Prior Year	All Vehicles	Percent Change Over Prior Year
1990		171,993		25,574		197,167			na		na	
1991	(1)	162,177	(5.7)	23,016	(10.0)	185,193	(6.1)		na		na	
1992		161,766	(0.3)	22,620	(1.7)	184,386	(0.4)		na		na	
1993		162,458	0.4	22,609	(0.0)	185,067	0.4		516,423		701,490	
1994		164,724	1.4	23,556	4.2	188,280	1.7		515,244	(0.2)	703,524	0.3
1995		166,734	1.2	23,641	0.4	190,375	1.1		529,420	2.8	719,795	2.3
1996		171,318	2.7	24,513	3.7	195,831	2.9		536,026	1.2	731,857	1.7
1997		177,268	3.5	25,584	4.4	202,852	3.6		557,697	4.0	760,549	3.9
1998		182,911	3.2	26,497	3.6	209,408	3.2		576,186	3.3	785,594	3.3
1999		185,556	1.4	27,595	4.1	213,151	1.8		583,348	1.2	796,499	1.4
2000	(2)	189,617	2.2	28,666	3.9	218,283	2.4		597,870	2.5	816,153	2.5
2001		199,318	5.1	29,453	2.7	228,771	4.8		609,551	2.0	838,322	2.7
2002		209,855	5.3	30,510	3.6	240,365	5.1		620,905	1.9	861,270	2.7
2003	(3)	208,472	(0.7)	31,151	2.1	239,623	(0.3)		628,287	1.2	867,910	0.8
2004		214,095	2.7	32,104	3.1	246,199	2.7	(5)	610,085	(2.9)	856,284	(1.3)
2005		214,687	0.3	32,701	1.9	247,388	0.5	(5)	502,575	(17.6)	749,963	(12.4)
2006		217,306	1.2	32,999	0.9	250,305	1.2	(5)	427,197	(15.0)	677,502	(9.7)
2007		216,625	(0.3)	33,163	0.5	249,788	(0.2)	(5)	417,464	(2.3)	667,252	(1.5)
2008	(4)	210,926	(2.6)	31,943	(3.7)	242,869	(2.8)	(4)	407,032	(2.5)	649,901	(2.6)
2009		205,366	(2.6)	28,737	(10.0)	234,103	(3.6)		396,269	(2.6)	630,372	(3.0)
2010		205,687	0.2	29,393	2.3	235,080	0.4	(5)	382,475	(3.5)	617,555	(2.0)
2011		203,627	(1.0)	29,601	0.7	233,228	(0.8)		377,891	(1.2)	611,119	(1.0)
2012	(6)	194,508	(4.5)	28,633	(3.3)	223,141	(4.3)	(6)	366,157	(3.1)	589,298	(3.6)
2013		195,208	0.4	29,277	2.2	224,485	0.6		368,915	0.8	593,400	0.7
2014		202,348	3.7	29,896	2.1	232,244	3.5		370,351	0.4	602,595	1.5
2015		215,358	6.4	31,238	4.5	246,596	6.2		379,282	2.4	625,878	3.9
2016		223,634	3.8	31,860	2.0	255,494	3.6		389,609	2.7	645,103	3.1
2017		227,979	1.9	32,686	2.6	260,665	2.0		392,895	0.8	653,560	1.3
Average Annual Percent Change:												
2012 - 2017 (5 years)			3.2		2.7		3.2			1.4		2.1
2007 - 2017 (10 years)			0.5		(0.1)		0.4			(0.6)		(0.2)
2002 - 2017 (15 years)			0.6		0.5		0.5			(3.0)		(1.8)
1997 - 2017 (20 years)			1.3		1.2		1.3			(1.7)		(0.8)
1993 - 2017 (24 years)			1.4		1.5		1.4			(1.1)		(0.3)

(1) Toll increase effective 3/17/1991. Refer to Table 3-1 for the details.
(2) Toll increase effective 9/30/2000. Refer to Table 3-1 for the details.
(3) Toll increase effective 1/1/2003. Refer to Table 3-1 for the details.
(4) Toll increase effective 12/1/2008. Refer to Tables 3-1 and 3-2 for the details.
(5) Toll transactions were negatively impacted due to the phased conversion to one-way tolling. Refer to Table 3-3 for a detailed schedule.
(6) Toll increase effective 1/1/2012. Refer to Tables 3-1 and 3-2 for the details.

Source: NJTA

Table 3-5
Annual Gross Toll Revenue Trends
(Thousands of Dollars)

		New Jersey Turnpike							Garden State Parkway		Total System	
Calendar Year		Cars	Percent Change Over Prior Year	Commercial Vehicles	Percent Change Over Prior Year	Total	Percent Change Over Prior Year		All Vehicles	Percent Change Over Prior Year	All Vehicles	Percent Change Over Prior Year
1990		$124,364		$64,366		$188,730			na		na	
1991	(1)	186,046	49.6	99,592	54.7	285,638	51.3		na		na	
1992		202,825	9.0	109,710	10.2	312,535	9.4		na		na	
1993		204,098	0.6	112,422	2.5	316,520	1.3		$167,618		$484,138	
1994		205,138	0.5	116,653	3.8	321,791	1.7		166,891	(0.4)	488,682	0.9
1995		209,739	2.2	116,564	(0.1)	326,303	1.4		171,528	2.8	497,831	1.9
1996		215,223	2.6	121,118	3.9	336,341	3.1		172,940	0.8	509,281	2.3
1997		223,575	3.9	126,862	4.7	350,437	4.2		178,923	3.5	529,360	3.9
1998		230,585	3.1	130,247	2.7	360,832	3.0		183,927	2.8	544,759	2.9
1999		234,949	1.9	134,548	3.3	369,497	2.4		185,782	1.0	555,279	1.9
2000	(2)	246,107	4.7	145,928	8.5	392,035	6.1		190,916	2.8	582,951	5.0
2001		280,108	13.8	153,656	5.3	433,764	10.6		196,085	2.7	629,849	8.0
2002		288,100	2.9	150,942	(1.8)	439,042	1.2		194,851	(0.6)	633,893	0.6
2003	(3)	321,357	11.5	168,833	11.9	490,190	11.6		202,655	4.0	692,845	9.3
2004		329,734	2.6	177,122	4.9	506,856	3.4	(5)	208,729	3.0	715,585	3.3
2005		327,228	(0.8)	180,783	2.1	508,011	0.2	(5)	203,824	(2.3)	711,835	(0.5)
2006		348,039	6.4	185,360	2.5	533,399	5.0	(5)	203,880	0.0	737,279	3.6
2007		345,249	(0.8)	196,042	5.8	541,291	1.5	(5)	204,629	0.4	745,920	1.2
2008	(4)	345,394	0.0	195,288	(0.4)	540,682	(0.1)	(4)	206,055	0.7	746,737	0.1
2009		449,897	30.3	224,738	15.1	674,635	24.8		277,783	34.8	952,418	27.5
2010		446,045	(0.9)	227,848	1.4	673,893	(0.1)	(5)	278,273	0.2	952,166	(0.0)
2011		447,434	0.3	225,716	(0.9)	673,150	(0.1)		275,730	(0.9)	948,880	(0.3)
2012	(6)	667,987	49.3	324,034	43.6	992,021	47.4	(6)	401,639	45.7	1,393,660	46.9
2013		672,828	0.7	333,892	3.0	1,006,720	1.5		407,044	1.3	1,413,764	1.4
2014		695,128	3.3	342,615	2.6	1,037,743	3.1		408,005	0.2	1,445,748	2.3
2015		745,008	7.2	361,259	5.4	1,106,267	6.6		416,862	2.2	1,523,129	5.4
2016		776,337	4.2	368,220	1.9	1,144,557	3.5		426,104	2.2	1,570,661	3.1
2017		800,478	3.1	351,260	(4.6)	1,151,738	0.6		428,157	0.5	1,579,895	0.6
Average Annual Percent Change:												
2012 - 2017 (5 years)			3.7		1.6		3.0			1.3		2.5
2007 - 2017 (10 years)			8.8		6.0		7.8			7.7		7.8
2002 - 2017 (15 years)			7.1		5.8		6.6			5.4		6.3
1997 - 2017 (20 years)			6.6		5.2		6.1			4.5		5.6
1993 - 2017 (24 years)			5.9		4.9		5.5			4.0		5.1

(1) Toll increase effective 3/17/1991. Refer to Table 3-1 for the details.
(2) Toll increase effective 9/30/2000. Refer to Table 3-1 for the details.
(3) Toll increase effective 1/1/2003. Refer to Table 3-1 for the details.
(4) Toll increase effective 12/1/2008. Refer to Tables 3-1 and 3-2 for the details.
(5) Toll transactions were negatively impacted due to the phased conversion to one-way tolling. Refer to Table 3-3 for a detailed schedule.
(6) Toll increase effective 1/1/2012. Refer to Tables 3-1 and 3-2 for the details.

Source: NJTA

Since the 2012 toll increase, toll transaction growth has been positive in all years through 2017. The average annual growth rate has averaged 3.2 percent over the last five years. In 2016, total transactions reached 255.5 million, surpassing, for the first time, the previous highest number of transactions that was reached ten years earlier (prior to the Great Recession) in 2006. Total 2017 transactions reached 260.7 million, the highest level ever for the Turnpike.

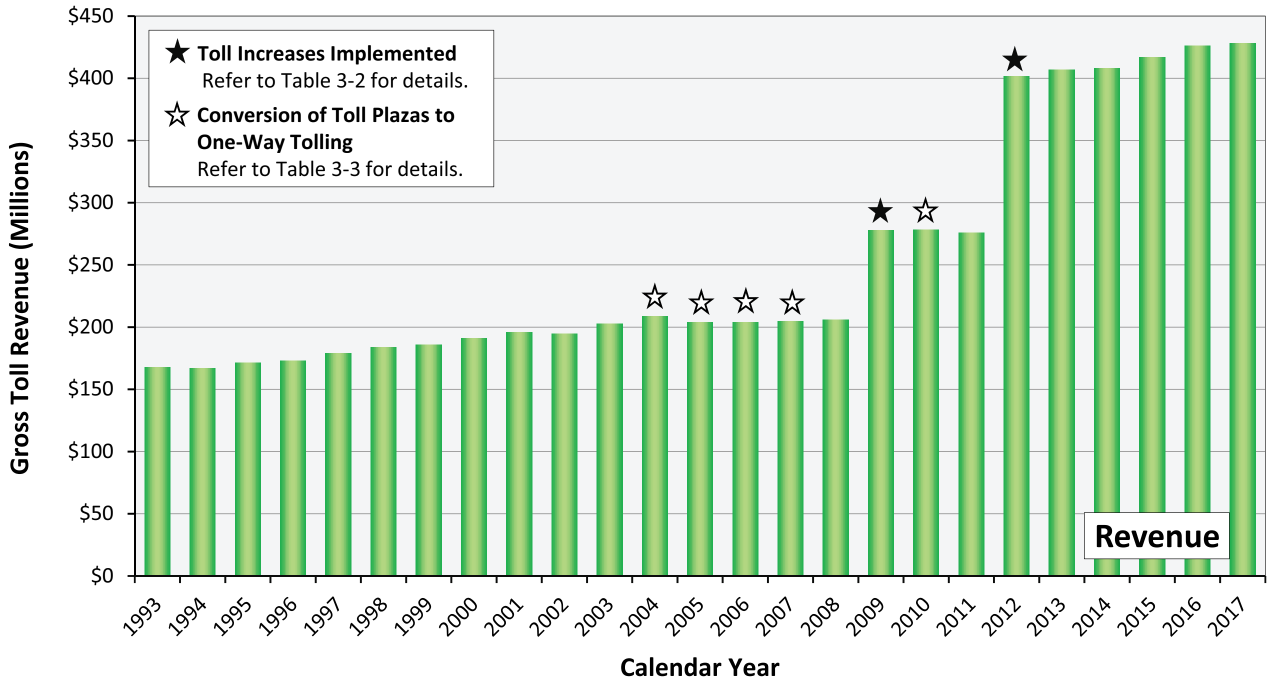
Turnpike toll revenue trends are shown in Table 3-5 and Figure 3-1. Annual Turnpike toll revenues increased every year from 1990 to 2007 due to generally increasing toll transactions and toll increases in 1991, 2000, and 2003. In 2008 toll revenue decreased by 0.1 percent due largely to the economy. Toll revenue increased by 24.8 percent in 2009 in response to the 2008 toll increase implemented on December 1, 2008. In 2010 and 2011, toll revenue decreased by 0.1 percent each year because of low or negative growth in transactions due to the economy, severe winter weather in both years, and Hurricane Irene in August 2011. Turnpike revenue increased by 47.4 percent in 2012 primarily as a result of the toll increase implemented January 1, 2012. Annual toll revenue growth since 2012 has largely mirrored similar toll transaction growth. Since 2012 revenue growth has been positive in every year through 2017, averaging 3.0 percent per year.

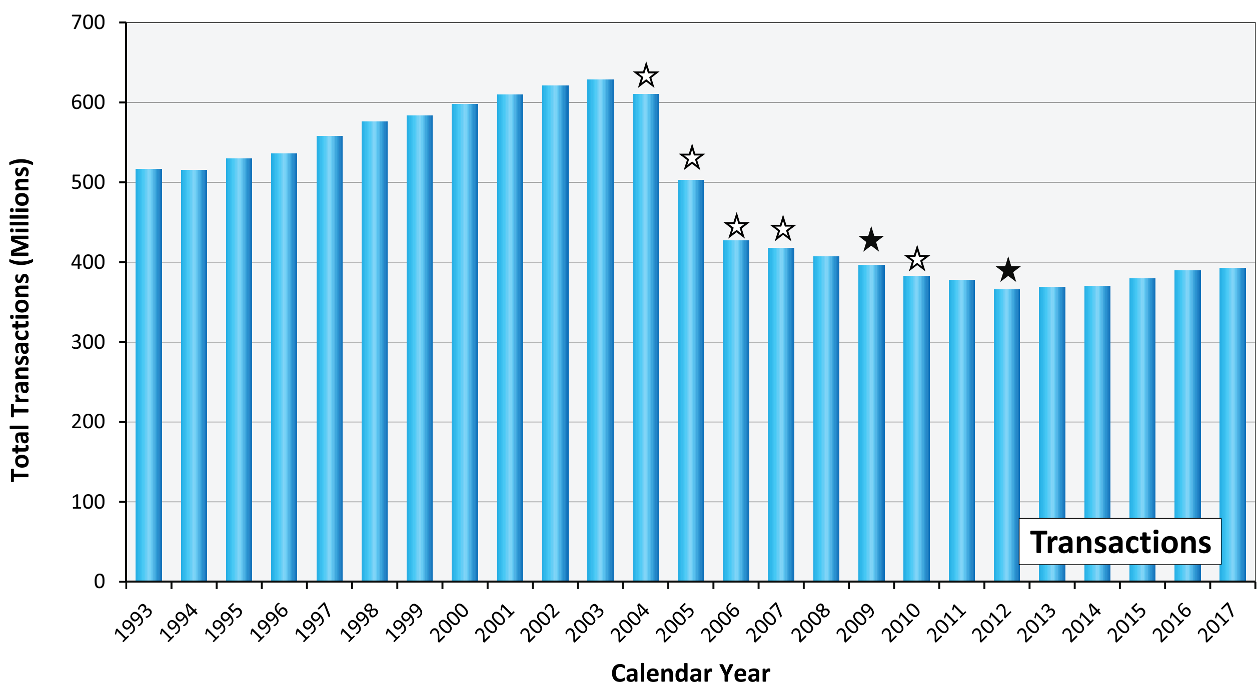
It should be noted that a retroactive revenue recognition change was implemented for the Turnpike in March 2018; it impacted nearly all of 2017 revenue data. This affected the mix of passenger car versus commercial vehicle revenue, while holding total toll revenue unchanged. This explains the divergence between positive commercial transaction growth (+2.6 percent) and negative revenue growth (-4.6 percent) between 2016 and 2017. Total revenue, however, remains a valid comparison. Toll transactions were not affected by this change.

Parkway Trends

Parkway trend data is shown in Tables 3-4 and 3-5, and **Figure 3-2**. Annual toll transactions increased each year from 1994 to 2003. Beginning in 2004, annual toll transactions decreased every year through 2012. These decreases were due to the impacts of the conversion to one-way tolling in 2004, 2005, 2006, 2007, and 2010; a 43-percent toll increase implemented on December 1, 2008; the economic recession of 2007; severe winter events in 2010 and 2011; Hurricane Irene in 2011; and the 50-percent toll increase in 2012. The largest impacts of the one-way toll conversion were felt in 2005 and 2006, when annual transactions decreased by 17.6 percent and 15.0 percent, respectively. Toll transaction growth has been positive every year since the toll increase in 2012; the average annual growth rate between 2012 and 2017 has been 1.4 percent.

Parkway revenue growth has only been negative in three years between 1994 and 2017 (-0.6 percent in 2002, -2.3 percent in 2005, and -0.9 percent in 2011). These were the result of either one-way toll conversion or economic slowdowns. The positive impacts of the December 2008 and January 2012 toll increases are clear; toll revenue increased by 34.8 percent in 2009 and by 45.7 percent in 2012. Annual revenue growth has been positive in every year since the 2012 toll increase, averaging 1.3 percent growth through 2017.





PARKWAY: ANNUAL TOLL TRANSACTION AND TOLL REVENUE TRENDS

FIGURE 3-2

Total System Trends

The Total System trends reflect the activities on the Turnpike and the Parkway. Total System trend data is shown in Tables 3-4 and 3-5, and **Figure 3-3**. Total annual transactions increased each year from 1993 through 2003 and decreased each year from 2004 through 2012 largely due to the impacts on the Parkway associated with conversion to one-way tolling, the 2008 and 2012 toll increases implemented on the Turnpike and the Parkway, the poor economic conditions that began in 2007, and severe weather events in 2010 and 2011. Total annual transaction growth has been positive every year since 2012. Over the last five years (2012 through 2017), the rate of annual growth has averaged 2.1 percent for the Total System.

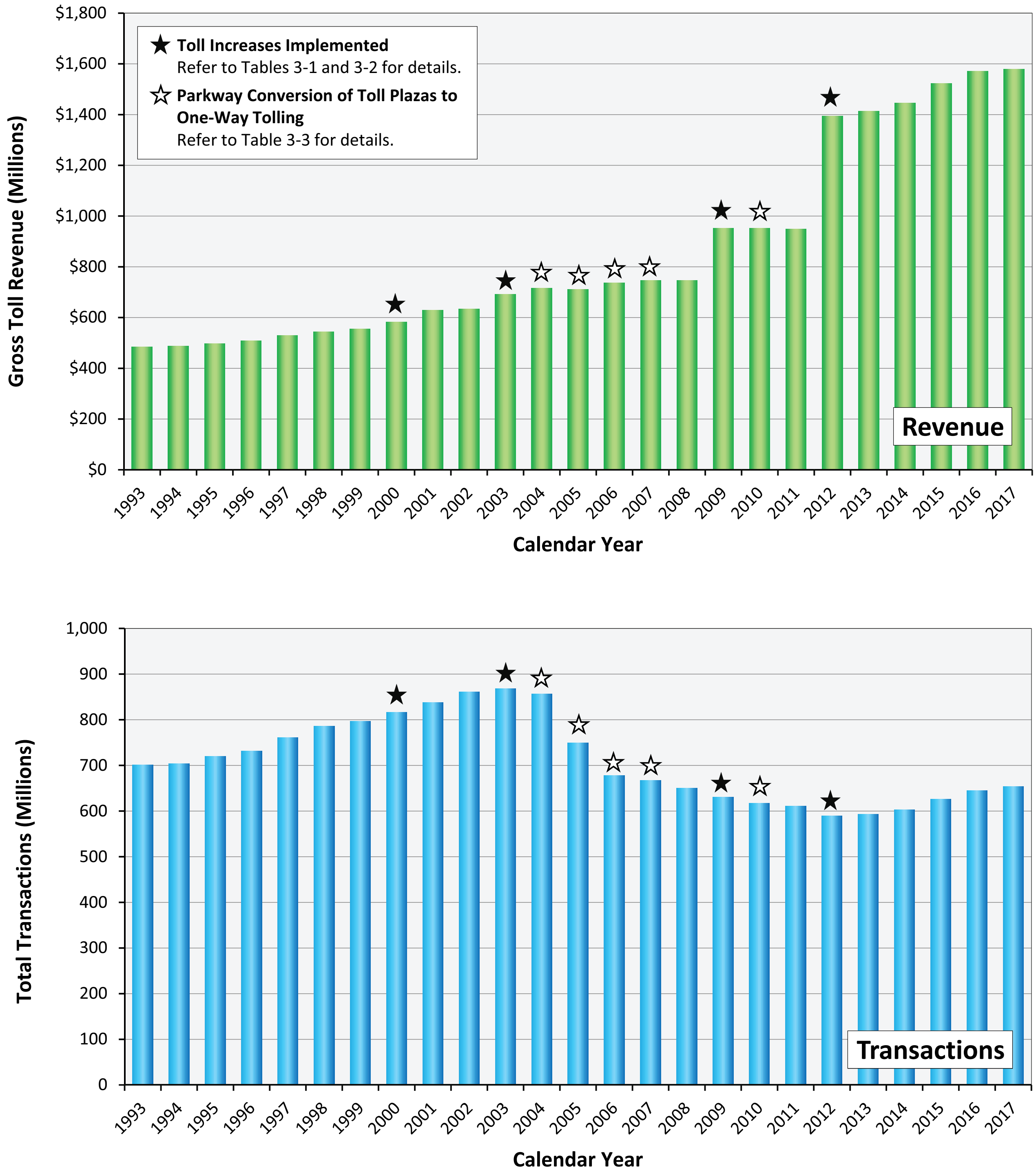
Total System annual toll revenue increased every year from 1994 through 2009, except for 2005, when the annual toll revenue decreased by 0.5 percent. Annual toll revenue increased by 27.5 percent in 2009, primarily due to the systemwide toll increase implemented on December 1, 2008, when Turnpike toll rates increased by 40 percent and Parkway toll rates increased by 43 percent. Annual toll revenue decreased in 2010 by less than one tenth of a percent and decreased again in 2011 by 0.3 percent. These decreases were associated with the slow economy, the impact of the conversion to one-way tolling at the Pascack Valley mainline toll plaza on the Parkway, severe winter weather in 2011, and Hurricane Irene in 2011. Toll revenue increased by 46.9 percent in 2012 primarily due to the toll increases implemented on January 1, 2012. Since 2012, toll revenue has increased every year, averaging 2.5 percent through 2017.

Monthly Toll Transaction and Toll Revenue Trends

Monthly toll transaction and toll revenue trends have been summarized from January 2013 through July 2018, by passenger car and commercial vehicles for both the Turnpike and the Parkway. The monthly trend data was used to refine the near-term toll transaction estimates developed for the Turnpike and Parkway.

Turnpike Trends

Monthly transaction and toll revenue trends for the New Jersey Turnpike from January 2013 through July 2018 are shown in **Tables 3-6 and 3-7**, respectively. Various events had noticeable impacts on Turnpike transactions and toll revenue in recent years. Significant winter weather events in February 2013, the first quarter of 2014, and in March 2017 reduced transactions and toll revenue below their normal levels. Lane closures on the Pulaski Skyway positively impacted both passenger-car transactions and toll revenues on the Turnpike beginning in April 2014. The closure of the Delaware River Turnpike Bridge (DRTB), from January 20, 2017 through March 9, 2017, had negative impacts on both transactions and toll revenue.



TOTAL SYSTEM: ANNUAL TOLL TRANSACTION AND TOLL REVENUE TRENDS

FIGURE 3-3

Table 3-6
Historical Toll Transaction Trends By Month
New Jersey Turnpike
(Thousands of Vehicles)

Passenger Car Transactions

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	14,855	(4.4)	14,202 (2)	4.9	14,894 (2,7)	6.4	15,850 (7)	6.8	16,928 (7,8)	0.2	16,960 (7)
February	13,414 (2)	(4.3)	12,832 (2)	12.0	14,371 (2,7)	12.2	16,127 (1,7)	(3.9)	15,493 (7,8)	4.9	16,252 (7)
March	16,022	0.6	16,119 (6)	5.4	16,990 (2,7)	8.3	18,402 (7)	(2.7)	17,908 (2,7,8)	1.9	18,244 (7)
April	16,210	4.9	17,008 (7)	6.5	18,108 (7)	1.8	18,426 (7)	3.9	19,148 (7)	0.7	19,287 (7)
May	17,109	6.0	18,136 (7)	5.2	19,072 (7)	1.6	19,378 (7)	3.3	20,023 (7)	1.9	20,395 (7)
June	16,874	7.0	18,053 (7)	4.4	18,856 (7)	4.3	19,662 (7)	3.0	20,249 (7)	0.9	20,434 (7)
July	17,409	4.8	18,251 (7)	7.9	19,696 (7)	1.2	19,925 (7)	2.2	20,366 (7)	0.6	20,481 (7)
August	18,151	2.5	18,608 (7)	6.1	19,748 (7)	2.6	20,270 (7)	2.9	20,859 (7)		
September	16,369	5.0	17,183 (7)	5.6	18,144 (7)	3.9	18,853 (7)	2.3	19,288 (7)		
October	17,172	4.5	17,950 (7)	5.9	19,003 (7)	2.1	19,411 (7)	3.2	20,029 (7)		
November	15,887	5.3	16,736 (7)	7.9	18,061 (7)	3.2	18,634 (7)	2.3	19,067 (7)		
December	15,736	9.7	17,270 (7)	6.6	18,415 (7)	1.5	18,696 (7)	(0.4)	18,621 (7)		
TOTAL	195,208	3.7	202,348	6.4	215,358	3.8	223,634	1.9	227,979		132,053
Subtotal Jan. - July	111,893	2.4	114,601	6.4	121,987	4.7	127,770	1.8	130,115	1.5	132,053

Commercial Vehicle Transactions (5)

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	2,415	(4.0)	2,318 (2)	(0.9)	2,296 (2)	0.8	2,315	8.7	2,517 (8)	6.0	2,668
February	2,148 (2)	(4.2)	2,057 (2)	7.7	2,216 (2)	8.6	2,406 (1)	(5.8)	2,266 (8)	9.7	2,485
March	2,371	3.7	2,458 (6)	5.5	2,593 (2)	5.6	2,737	(1.6)	2,694 (2,8)	1.7	2,740
April	2,492	1.8	2,536	4.2	2,642	(2.2)	2,584	0.9	2,608	7.6	2,805
May	2,567	0.7	2,586	2.1	2,641	1.3	2,675	8.5	2,903	3.9	3,015
June	2,379	8.4	2,578	8.3	2,793	0.6	2,809	3.7	2,912	1.4	2,954
July	2,554	3.5	2,644	5.5	2,789	(4.6)	2,660	1.5	2,701	8.8	2,940
August	2,593	(2.7)	2,522	5.2	2,654	9.0	2,893	1.3	2,930		
September	2,430	6.0	2,577	4.1	2,682	0.9	2,706	0.3	2,715		
October	2,688	1.9	2,739	2.0	2,793	(1.9)	2,741	7.9	2,958		
November	2,308	1.9	2,351	8.0	2,538	4.7	2,658	5.3	2,799		
December	2,333	8.4	2,530	2.8	2,601	2.9	2,676	0.3	2,683		
TOTAL	29,278	2.1	29,896	4.5	31,238	2.0	31,860	2.6	32,686		19,607
Subtotal Jan. - July	16,926	1.5	17,177	4.6	17,970	1.2	18,186	2.3	18,601	5.4	19,607

Total Transactions

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	17,270	(4.3)	16,520 (2)	4.1	17,190 (2,7)	5.7	18,165 (7)	7.0	19,445 (7,8)	0.9	19,628 (7)
February	15,562 (2)	(4.3)	14,889 (2)	11.4	16,587 (2,7)	11.7	18,533 (1,7)	(4.2)	17,759 (7,8)	5.5	18,737 (7)
March	18,393	1.0	18,577 (6)	5.4	19,583 (2,7)	7.9	21,139 (7)	(2.5)	20,602 (2,7,8)	1.9	20,984 (7)
April	18,702	4.5	19,544 (7)	6.2	20,750 (7)	1.3	21,010 (7)	3.6	21,756 (7)	1.5	22,092 (7)
May	19,676	5.3	20,722 (7)	4.8	21,713 (7)	1.6	22,053 (7)	4.0	22,926 (7)	2.1	23,410 (7)
June	19,253	7.2	20,631 (7)	4.9	21,649 (7)	3.8	22,471 (7)	3.1	23,161 (7)	1.0	23,388 (7)
July	19,963	4.7	20,895 (7)	7.6	22,485 (7)	0.4	22,585 (7)	2.1	23,067 (7)	1.5	23,421 (7)
August	20,744	1.9	21,130 (7)	6.0	22,402 (7)	3.4	23,163 (7)	2.7	23,789 (7)		
September	18,799	5.1	19,760 (7)	5.4	20,826 (7)	3.5	21,559 (7)	2.1	22,003 (7)		
October	19,860	4.2	20,689 (7)	5.4	21,796 (7)	1.6	22,152 (7)	3.8	22,987 (7)		
November	18,195	4.9	19,087 (7)	7.9	20,599 (7)	3.4	21,292 (7)	2.7	21,866 (7)		
December	18,069		19,800 (7)	6.1	21,016 (7)	1.7	21,372 (7)	(0.3)	21,304 (7)		
TOTAL	224,486	3.5	232,244	6.2	246,596	3.6	255,494	2.0	260,665		151,660
Subtotal Jan. - July	128,819	2.3	131,778	6.2	139,957	4.3	145,956	1.9	148,716	2.0	151,660

(1) Leap year - February had 29 days.
(2) Severe winter weather events.
(3) A 53% toll increase was implemented on January 1, 2012.
(4) Superstorm Sandy, October 29-30, 2012
(5) Consists of Classes 2 through 6, and B2 and B3.
(6) Abnormally cold weather.
(7) Construction on the Pulaski Skyway positively impacted passenger car traffic on the Turnpike.
(8) Delaware River Turnpike Bridge was closed to all traffic from January 20, 2017 through March 9, 2017.
Source: NJTA

Table 3-7
Historical Gross Toll Revenue Trends By Month
New Jersey Turnpike
(Thousands of Dollars)

Passenger Car Toll Revenue

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$49,246	(4.9)	$46,857 (2)	5.9	$49,627 (2,7)	6.9	$53,075 (7)	9.0	$57,833 (7,8)	(1.2)	$57,145 (7)
February	44,132 (2)	(4.5)	42,128 (2)	11.6	46,995 (2,7)	14.1	53,615 (1,7)	(2.7)	52,166 (7,8)	5.9	55,233 (7)
March	54,997	(1.7)	54,042 (6)	4.7	56,593 (2,7)	10.5	62,543 (7)	(3.3)	60,489 (2,7,8)	4.3	63,077 (7)
April	55,132	6.1	58,468 (7)	7.1	62,592 (7)	2.1	63,923 (7)	7.1	68,434 (7)	(1.4)	67,506 (7)
May	59,351	5.3	62,514 (7)	7.4	67,110 (7)	1.4	68,030 (7)	3.5	70,429 (7)	0.9	71,045 (7)
June	59,327	5.2	62,389 (7)	4.7	65,346 (7)	5.1	68,664 (7)	4.3	71,606 (7)	0.6	72,069 (7)
July	62,242	3.7	64,569 (7)	10.0	71,042 (7)	3.1	73,258 (7)	2.6	75,184 (7)	(0.5)	74,787 (7)
August	65,468	3.7	67,897 (7)	6.7	72,439 (7)	1.2	73,343 (7)	4.0	76,268 (7)		
September	55,977	4.0	58,214 (7)	7.0	62,285 (7)	4.0	64,768 (7)	4.8	67,851 (7)		
October	57,502	5.0	60,366 (7)	7.0	64,572 (7)	3.0	66,531 (7)	3.6	68,897 (7)		
November	54,808	6.4	58,294 (7)	7.7	62,788 (7)	2.4	64,293 (7)	1.7	65,398 (7)		
December	54,646	8.7	59,390 (7)	7.1	63,619 (7)	1.1	64,294 (7)	2.5	65,923 (7)		
TOTAL	$672,828	3.3	$695,128	7.2	$745,008	4.2	$776,337	3.1	$800,478		$460,862
Subtotal Jan. - July	$384,427	1.7	$390,967	7.2	$419,305	5.7	$443,108	2.9	$456,141	1.0	$460,862

Commercial Vehicle Toll Revenue (5)

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$26,662	(1.7)	$26,216 (2)	1.2	$26,519 (2)	0.6	$26,687	3.0	$27,490 (8)	5.8	$29,077
February	24,384 (2)	(4.7)	23,232 (2)	10.3	25,619 (2)	8.1	27,691 (1)	(11.4)	24,525 (8)	9.6	26,876
March	26,989	3.6	27,952 (6)	5.5	29,502 (2)	7.5	31,726	(8.4)	29,068 (2,8)	2.6	29,831
April	29,159	(0.5)	29,012	6.2	30,799	(3.0)	29,862	(4.8)	28,438	7.0	30,426
May	29,243	0.4	29,352	6.1	31,136	1.2	31,502	0.6	31,679	3.1	32,669
June	26,996	7.8	29,112	9.9	31,994	1.3	32,415	(3.6)	31,234	1.6	31,725
July	28,641	2.7	29,417	8.9	32,035	(3.6)	30,870	(6.2)	28,964	9.5	31,720
August	29,367	(3.9)	28,208	8.7	30,650	7.6	32,980	(4.8)	31,408		
September	28,313	6.2	30,068	2.4	30,789	0.7	30,990	(5.4)	29,321		
October	30,403	8.1	32,867	(1.9)	32,253	(1.3)	31,821	(3.5)	30,698		
November	27,164	3.3	28,062	5.5	29,617	4.6	30,981	(5.2)	29,361		
December	26,571	9.6	29,117	4.2	30,346	1.2	30,695	(5.3)	29,074		
TOTAL	$333,892	2.6	$342,615	5.4	$361,259	1.9	$368,220	(4.6)	$351,260		$212,324
Subtotal Jan. - July	$192,074	1.2	$194,293	6.9	$207,604	1.5	$210,753	(4.4)	$201,398	5.4	$212,324

Total Toll Revenue

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$75,908	(3.7)	$73,073 (2)	4.2	$76,146 (2,7)	4.7	$79,762 (7)	7.0	$85,323 (7,8)	1.1	$86,222 (7)
February	68,516 (2)	(4.6)	65,360 (2)	11.1	72,614 (2,7)	12.0	81,306 (1,7)	(5.7)	76,691 (7,8)	7.1	82,109 (7)
March	81,986	0.0	81,994 (6)	5.0	86,095 (2,7)	9.5	94,269 (7)	(5.0)	89,557 (2,7,8)	3.7	92,908 (7)
April	84,291	3.8	87,480 (7)	6.8	93,391 (7)	0.4	93,785 (7)	3.3	96,872 (7)	1.1	97,932 (7)
May	88,594	3.7	91,866 (7)	6.9	98,246 (7)	1.3	99,532 (7)	2.6	102,108 (7)	1.6	103,714 (7)
June	86,323	6.0	91,501 (7)	6.4	97,340 (7)	3.8	101,079 (7)	1.7	102,840 (7)	0.9	103,794 (7)
July	90,883	3.4	93,986 (7)	9.7	103,077 (7)	1.0	104,128 (7)	0.0	104,148 (7)	2.3	106,507 (7)
August	94,835	1.3	96,105 (7)	7.3	103,089 (7)	3.1	106,323 (7)	1.3	107,676 (7)		
September	84,290	4.7	88,282 (7)	5.4	93,074 (7)	2.9	95,758 (7)	1.5	97,172 (7)		
October	87,905	6.1	93,233 (7)	3.9	96,825 (7)	1.6	98,352 (7)	1.3	99,595 (7)		
November	81,972	5.3	86,356 (7)	7.0	92,405 (7)	3.1	95,274 (7)	(0.5)	94,759 (7)		
December	81,217		88,507 (7)	6.2	93,965 (7)	1.1	94,989 (7)	0.0	94,997 (7)		
TOTAL	$1,006,720	3.1	$1,037,743	6.6	$1,106,267	3.5	$1,144,557	0.6	$1,151,738		$673,186
Subtotal Jan. - July	$576,501	1.5	$585,260	7.1	$626,909	4.3	$653,861	0.6	$657,539	2.4	$673,186

(1) Leap year - February had 29 days.
(2) Severe winter weather events.
(3) A 53% toll increase was implemented on January 1, 2012.
(4) Superstorm Sandy, October 29-30, 2012
(5) Consists of Classes 2 through 6, and B2 and B3.
(6) Abnormally cold weather.
(7) Construction on the Pulaski Skyway positively impacted passenger car revenue on the Turnpike.
(8) Delaware River Turnpike Bridge was closed to all traffic from January 20, 2017 through March 9, 2017.
Source: NJTA

The following summarizes the major events that took place between calendar years, from January 2013 through July 2018, that impacted transaction and toll revenue trends on the New Jersey Turnpike.

- **2013-2014**: Growth in transactions and toll revenue increased in 2014 compared to the prior year. Passenger-car transactions grew 3.7 percent with a corresponding increase of 3.3 percent in toll revenue. This growth was fueled in part by positive impacts associated with construction on the Pulaski Skyway that diverted some passenger-car traffic onto the New Jersey Turnpike. Construction work started in April 2014 and continued through the remainder of the year. Commercial-vehicle transactions grew 2.1 percent with a corresponding toll revenue increase of 2.6 percent. In total, transactions and toll revenue increased by 3.5 percent and 3.1 percent respectively on the Turnpike.

- **2014-2015**: Strong growth in transactions and toll revenue occurred in 2015 compared to 2014. This growth was due to decreasing fuel prices, an improving economy, and continuing positive impacts on passenger-car transactions associated with traffic diverted from the Pulaski Skyway due to ongoing construction. Passenger-car transactions increased 6.4 percent with a corresponding toll revenue increase of 7.2 percent. Commercial-vehicle transactions increased 4.5 percent and toll revenue increased 5.4 percent. Total transactions grew 6.2 percent and total toll revenue grew 6.6 percent compared to 2014.

- **2015-2016**: Passenger-car transactions and toll revenue increased 3.8 percent and 4.2 percent respectively, and commercial-vehicle transactions and toll revenue increased 2.0 and 1.9 percent respectively. In total, transactions grew by 3.6 percent and toll revenue grew by 3.5 percent compared to 2015. The growth reflected low fuel prices and an extra day for Leap Year. Construction work continued on the Pulaski Skyway.

- **2016-2017**: Passenger-car transactions and toll revenue increased 1.9 percent and 3.1 percent respectively. Commercial-vehicle transactions increased 2.6 percent while toll revenue decreased 4.6 percent. As discussed above, a retroactive revenue recognition change was implemented in March 2018; it impacted nearly all of 2017 revenue data. This affected the mix of passenger car versus commercial vehicle revenue, while holding total toll revenue unchanged. This explains the divergence between positive commercial transaction growth and negative revenue growth between 2016 and 2017. Total revenue, however, remains a valid comparison. Toll transactions were not affected by this change. Overall, transactions increased by 2.0 percent and toll revenue increased by 0.6 percent compared to 2016. The first three months of 2017 were negatively impacted by the temporary closure of the Delaware River Turnpike Bridge (DRTB) which connects the New Jersey Turnpike to the Pennsylvania Turnpike. The closure extended from Friday, January 20, 2017 through Thursday, March 9, 2017. The closure was due to a fracture in the bridge superstructure beneath the westbound lanes, which has been fully repaired.

- **2017-2018**: Year to date, from January through July, passenger-car transactions increased by 1.5 percent and toll revenue grew 1.0 percent compared to the same period in 2017. Similarly, commercial-vehicle transactions and toll revenue both increased by 5.4 percent. In total, transactions grew 2.0 percent and toll revenue increased by 2.4 percent in the first seven months of 2018 compared to the same period in 2017.

Parkway Trends

Monthly transaction and toll revenue trends for the Garden State Parkway from January 2013 to July 2018 are shown in **Tables 3-8 and 3-9**, respectively. It should be noted that given the commercial-vehicle restrictions on the Parkway and the resulting low commercial-vehicle volumes (less than 1.5 percent of total transactions), very small changes in commercial-vehicle transactions have relatively big percentage impacts. This will be evident in the commercial-vehicle transaction and revenue growth rates shown in Tables 3-8 and 3-9 for the Parkway.

Many of the events that impacted Turnpike transactions and toll revenue also impacted Parkway transactions and toll revenue. In addition, several casino closures in the Atlantic City area negatively impacted transactions and toll revenue on the Parkway beginning in 2014. The following summarizes the major events, from January 2013 through July 2018, that impacted transaction and toll revenue trends on the Garden State Parkway.

- **2013-2014**: Transactions and toll revenue increased in 2014 compared to the prior year. Passenger-car transactions grew 0.4 percent with a corresponding increase of 0.6 percent in toll revenue. Commercial-vehicle transactions decreased 0.8 percent with a corresponding toll revenue decrease of 9.1 percent. In total, Parkway transactions and toll revenue increased by 0.4 percent and 0.2 percent respectively. The low or negative growth in transactions and toll revenue primarily reflect the impacts associated with the closure of three casinos in Atlantic City in January, August, and September, combined with negative impacts due to severe winter weather in the first quarter of 2014. In addition, much of the decrease in commercial-vehicle toll revenue is attributable to an NJTA accounting change initiated in 2013.

- **2014-2015**: Moderate growth in transactions and toll revenue occurred in 2015 compared to 2014. This growth was due in part to decreasing fuel prices and an improving economy. Passenger-car transactions increased 2.4 percent with a corresponding toll revenue increase of 2.1 percent. Commercial-vehicle transactions increased 3.5 percent and toll revenue increased 4.8 percent. Total transactions grew by 2.4 percent and total toll revenue grew by 2.2 percent compared to 2014.

- **2015-2016**: Passenger-car transactions and toll revenue increased 2.8 percent and 2.4 percent respectively, and commercial-vehicle transactions and toll revenue decreased 3.2 percent and 2.6 percent respectively. Total transactions grew by 2.7 percent and toll revenue grew by 2.2 percent compared to 2015. The overall growth reflected an extra day for Leap Year in 2016.

- **2016-2017**: Passenger-car transactions and toll revenue increased 0.8 percent and 0.4 percent, respectively, compared to 2016. Commercial-vehicle transactions and toll revenue increased 1.7 percent and 1.4 percent, respectively. In total, transactions grew 0.8 percent and toll revenue increased by 0.5 percent in 2017 compared to 2016.

- **2017-2018**: Year to date (January through July), passenger-car transactions and toll revenue increased 0.5 percent and 0.8 percent, respectively, compared to the same period in 2017. Commercial-vehicle transactions and toll revenue increased 4.8 percent and 3.6 percent, respectively. In total, transactions grew 0.6 percent and toll revenue increased by 0.9 percent in the first seven months of 2018 compared to the same period in 2017.

Table 3-8
Historical Toll Transaction Trends By Month
Garden State Parkway
(Thousands of Vehicles)

Passenger Car Transactions

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	27,372	(6.2)	25,676 (2,7)	0.6	25,831 (2)	4.9	27,091	5.0	28,442	(0.3)	28,370
February	24,733 (2)	(4.7)	23,563 (2)	4.5	24,629 (2)	12.0	27,586 (1)	(2.2)	26,977	1.7	27,443
March	29,064	(0.1)	29,022 (6)	(0.8)	28,779 (2)	8.5	31,218	(3.0)	30,292 (2)	(1.1)	29,971
April	29,719	1.2	30,073	1.5	30,531	1.5	31,004	1.9	31,604	0.2	31,659
May	31,979	2.1	32,642	1.6	33,180	0.4	33,299	1.5	33,795	1.6	34,338
June	32,355	3.0	33,336	0.1	33,376	4.5	34,886	1.0	35,232	0.8	35,525
July	34,601	1.8	35,228	3.4	36,442	0.5	36,610	0.4	36,746	0.6	36,967
August	35,439	1.2	35,878 (7)	2.7	36,838	0.8	37,123	0.4	37,266		
September	30,764	1.1	31,100 (7)	4.1	32,374	0.8	32,644	1.1	33,002		
October	31,126	0.1	31,155	1.9	31,751	1.0	32,068	2.7	32,945		
November	28,710	(1.3)	28,339	4.9	29,722	2.3	30,409	1.9	30,981		
December	28,002	4.7	29,326	4.5	30,640	0.0	30,648	(0.5)	30,504		
TOTAL	363,864	0.4	365,338	2.4	374,093	2.8	384,586	0.8	387,786		224,273
Subtotal Jan. - July	209,823	(0.1)	209,540	(15.9)	176,326	25.7	221,694	0.6	223,088	0.5	224,273

Commercial Vehicle Transactions (5)

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	364	(4.9)	346 (2,7)	(6.6)	323 (2)	6.2	343	5.2	361	6.9	386
February	329 (2)	(1.2)	325 (2)	(0.9)	322 (2)	7.8	347 (1)	(5.5)	328	6.4	349
March	367	(1.4)	362 (6)	5.2	381 (2)	9.7	418	(7.2)	388 (2)	2.3	397
April	432	(4.2)	414	3.6	429	5.1	451	(11.1)	401	8.2	434
May	502	(4.4)	480	0.4	482	1.0	487	1.2	493	4.5	515
June	470	2.3	481	2.1	491	(2.6)	478	2.5	490	2.4	502
July	503	0.8	507	1.4	514	(10.7)	459	4.8	481	4.2	501
August	488	(2.3)	477 (7)	2.5	489	(4.9)	465	5.2	489		
September	428	3.3	442 (7)	2.9	455	(7.7)	420	5.0	441		
October	449	1.6	456	3.9	474	(11.6)	419	7.9	452		
November	378	(3.2)	366	21.0	443	(14.2)	380	6.1	403		
December	344	3.8	357	8.1	386	(7.8)	356	7.3	382		
TOTAL	5,054	(0.8)	5,013	3.5	5,189	(3.2)	5,023	1.7	5,109		3,084
Subtotal Jan. - July	2,967	(1.8)	2,915	0.9	2,942	1.4	2,983	(1.4)	2,942	4.8	3,084

Total Transactions

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	27,736	(6.2)	26,022 (2,7)	0.5	26,154 (2)	4.9	27,434	5.0	28,803	(0.2)	28,756
February	25,062 (2)	(4.7)	23,888 (2)	4.4	24,951 (2)	12.0	27,933 (1)	(2.2)	27,305	1.8	27,792
March	29,431	(0.2)	29,384 (6)	(0.8)	29,160 (2)	8.5	31,636	(3.0)	30,680 (2)	(1.0)	30,368
April	30,151	1.1	30,487	1.6	30,960	1.6	31,455	1.7	32,005	0.3	32,093
May	32,481	2.0	33,122	1.6	33,662	0.4	33,786	1.5	34,288	1.6	34,853
June	32,825	3.0	33,817	0.1	33,867	4.4	35,364	1.0	35,722	0.9	36,027
July	35,104	1.8	35,735	3.4	36,956	0.3	37,069	0.4	37,227	0.6	37,468
August	35,927	1.2	36,355 (7)	2.7	37,327	0.7	37,588	0.4	37,755		
September	31,192	1.1	31,542 (7)	4.1	32,829	0.7	33,064	1.1	33,443		
October	31,575	0.1	31,611	1.9	32,225	0.8	32,487	2.8	33,397		
November	29,088	(1.3)	28,705	5.1	30,165	2.1	30,789	1.9	31,384		
December	28,346	4.7	29,683	4.5	31,026	(0.1)	31,004	(0.4)	30,886		
TOTAL	368,918	0.4	370,351	2.4	379,282	2.7	389,609	0.8	392,895		227,357
Subtotal Jan. - July	212,790	(17.0)	176,720	22.1	215,710	4.2	224,677	0.6	226,030	0.6	227,357

(1) Leap year - February had 29 days.
(2) Severe winter weather events.
(3) A 50% toll increase was implemented on January 1, 2012.
(4) Superstorm Sandy, October 29-30, 2012.
(5) Consists of Classes 2 through 6, and B2 and B3. Heavy trucks, registered as 10,000 lbs or more (6 tires or 3-or-more-axles), are prohibited north of Interchange 105.
(6) Abnormally cold weather.
(7) Casino closures: Atlantic Club in January, Showboat in August, and Revel and Trump Plaza in September.

Source: NJTA

Table 3-9
Historical Gross Toll Revenue Trends By Month
Garden State Parkway
(Thousands of Dollars)

Passenger Car Toll Revenue

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$28,919	(5.4)	$27,357 (2,8)	0.1	$27,396 (2)	4.4	$28,613	5.2	$30,095	(0.5)	$29,945
February	26,127 (2)	(4.0)	25,078 (2)	3.8	26,034 (2)	12.7	29,351 (1)	(3.2)	28,415	2.3	29,062
March	30,856	0.1	30,876 (6)	(1.0)	30,573 (2)	8.5	33,178	(3.5)	32,014 (2)	(0.7)	31,804
April	31,496	2.0	32,137	1.5	32,625	0.7	32,860	2.1	33,560	0.3	33,644
May	34,132	2.4	34,961	2.1	35,690	(0.5)	35,518	1.3	35,987	1.4	36,494
June	34,762	3.3	35,909	0.3	36,024	3.7	37,359	0.9	37,713	1.0	38,075
July	37,650	1.6	38,267	3.4	39,568	0.3	39,689	0.1	39,711	1.4	40,281
August	38,748	1.0	39,125 (8)	2.8	40,207	0.5	40,394	(0.1)	40,338		
September	33,360	1.3	33,788 (8)	3.1	34,828	0.1	34,877	1.2	35,279		
October	33,454	0.1	33,476	1.1	33,841	1.0	34,174	2.4	34,990		
November	30,872	(1.3)	30,469	3.9	31,652	1.8	32,208	(0.5)	32,059		
December	29,921	4.7	31,335	3.6	32,472	(0.4)	32,346	(0.3)	32,235		
TOTAL	$390,297	0.6	$392,778	2.1	$400,910	2.4	$410,567	0.4	$412,396		$239,305
Subtotal Jan. - July	$223,942	0.3	$224,585	1.5	$227,910	3.8	$236,568	0.4	$237,495	0.8	$239,305

Commercial Vehicle Toll Revenue (5)

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$1,211	(20.6)	$962 (2,7,8)	2.3	$984 (2)	2.0	$1,004	9.4	$1,098	5.7	$1,161
February	1,103 (2)	(17.4)	911 (2,7)	3.7	945 (2)	8.1	1,022 (1)	(5.3)	968	5.8	1,024
March	1,249	(15.3)	1,058 (2,6,7)	6.8	1,130 (2)	9.9	1,242	(5.3)	1,176 (2)	0.8	1,185
April	1,477	(19.5)	1,189 (7)	9.3	1,299	3.6	1,346	(8.2)	1,235	6.6	1,317
May	1,732	(15.5)	1,463 (7)	1.2	1,480	(0.7)	1,470	3.3	1,519	2.0	1,550
June	1,619	(9.5)	1,465 (7)	3.8	1,520	(0.3)	1,515	1.1	1,532	0.6	1,541
July	1,749	(8.2)	1,605 (7)	2.4	1,643	(9.4)	1,489	1.6	1,513	4.8	1,585
August	1,707	(10.1)	1,534 (7,8)	3.1	1,582	(1.9)	1,552	0.9	1,566		
September	1,485	(4.5)	1,418 (7,8)	1.2	1,435	(8.2)	1,318	5.4	1,389		
October	1,378	4.4	1,438 (7)	2.4	1,472	(10.0)	1,325	3.0	1,365		
November	1,094 (7)	1.0	1,105	18.3	1,307	(10.6)	1,169	3.1	1,205		
December	943 (7)	14.4	1,079	7.0	1,155	(6.1)	1,085	10.1	1,195		
TOTAL	$16,747	(9.1)	$15,227	4.8	$15,952	(2.6)	$15,537	1.4	$15,761		$9,363
Subtotal Jan. - July	$10,140	(14.7)	$8,653	4.0	$9,001	1.0	$9,088	(0.5)	$9,041	3.6	$9,363

Total Toll Revenue

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$30,130	(6.0)	$28,319 (2,8)	0.2	$28,380 (2)	4.4	$29,617	5.3	$31,193	(0.3)	$31,106
February	27,230 (2)	(4.6)	25,989 (2)	3.8	26,979 (2)	12.6	30,373 (1)	(3.3)	29,383	2.4	30,086
March	32,105	(0.5)	31,934 (2,6)	(0.7)	31,703 (2)	8.6	34,420	(3.6)	33,190 (2)	(0.6)	32,989
April	32,973	1.1	33,326	1.8	33,924	0.8	34,206	1.7	34,795	0.5	34,961
May	35,864	1.6	36,424	2.0	37,170	(0.5)	36,988	1.4	37,506	1.4	38,044
June	36,381	2.7	37,374	0.5	37,544	3.5	38,874	1.0	39,245	0.9	39,616
July	39,399	1.2	39,872	3.4	41,211	(0.1)	41,178	0.1	41,224	1.6	41,866
August	40,455	0.5	40,659 (8)	2.8	41,789	0.4	41,946	(0.1)	41,904		
September	34,845	1.0	35,206 (8)	3.0	36,263	(0.2)	36,195	1.3	36,668		
October	34,832	0.2	34,914	1.1	35,313	0.5	35,499	2.4	36,355		
November	31,966	(1.2)	31,574	4.4	32,959	1.3	33,377	(0.3)	33,264		
December	30,864	5.0	32,414	3.7	33,627	(0.6)	33,431	(0.0)	33,430		
TOTAL	$407,044	0.2	$408,005	2.2	$416,862	2.2	$426,104	0.5	$428,157		$248,668
Subtotal Jan. - July	$234,082	(0.4)	$233,238	1.6	$236,911	3.7	$245,656	0.4	$246,536	0.9	$248,668

(1) Leap year - February had 29 days.
(2) Severe winter weather events.
(3) A 50% toll increase was implemented on January 1, 2012.
(4) Superstorm Sandy, October 29-30, 2012
(5) Consists of Classes 2 through B3. Heavy trucks, registered as 10,000 lbs or more (6 tires or 3-or-more-axles), are prohibited north of Interchange 105.
(6) Abnormally cold weather.
(7) NJTA changed its accounting for toll discounts, resulting in a slightly greater percentage of discounts attributed to commercial vehicles, and a decreased percentage attributed attributed to passenger cars. A comparison of commercial vehicle toll revenue to the prior year is not valid. The lost revenue exhibited for the commercial vehicles was added to the car category, but due to the relatively low value of the revenue shift, the impact is not noticeable for passenger cars.
(8) Casino closures: Atlantic Club in January, Showboat in August, and Revel and Trump Plaza in September.

Source: NJTA

Total System Trends

Table 3-10 shows monthly toll revenue trends for the Authority's roadways from January 2013 through July 2018. Compared to the preceding year, total systemwide toll revenue increased 2.3 percent in 2014, 5.4 percent in 2015, 3.1 percent in 2016, and 0.6 percent in 2017. In the first seven months of 2018, total toll revenue increased by 2.0 percent.

Annual Trends in E-ZPass Market Share

E-ZPass percent market shares of toll transactions for the Turnpike, Parkway and Total System are shown in **Table 3-11**. The market shares are provided by passenger car and commercial vehicle for the Turnpike from 2003 through 2017, and by all vehicles for the Parkway and the Total System from 2007 through 2017. In addition, the percentage point change in market share from the prior year is also provided.

The E-ZPass market shares increased from 60.2 percent in 2003 to 83.2 percent in 2017 for passenger-car transactions on the Turnpike. Commercial-vehicle transactions had an E-ZPass market share of 66.8 percent in 2003, increasing to 91.6 percent in 2017. Parkway E-ZPass market share increased from 65 .7 percent in 2007 to 81.4 percent in 2017. Total System E-ZPass market share increased from 67.4 percent to 82.5 percent in the same time period.

Currently passenger cars do not receive any automatic discount for E-ZPass usage on the Parkway. Trucks (classes 2 – 6) receive an automatic E-ZPass discount of about 5.0 percent off the cash rate for travel in off-peak periods. On the Turnpike, passenger-car E-ZPass customers receive an automatic discount for trips made during off-peak hours. The net discount varies depending on the particular trip. For a through trip, the passenger-car discount is 25 percent. Trucks using E-ZPass on the Turnpike also receive an automatic discount from the cash rate, totaling about 9 percent for a through trip any time of the day, and about 13 percent for a trip during off-peak hours. These current toll differentials do offer a financial incentive to use E-ZPass instead of cash. It should be noted that all E-ZPass toll discounts are only available to E-ZPass accounts set up in New Jersey. All non-New Jersey registered E-ZPass motorists pay the cash rates.

On December 1, 2008, tolls increased by 40 percent on the Turnpike and 43 percent on the Parkway, substantially increasing the actual toll differential between cash and E-ZPass. In 2008 and 2009 total E-ZPass market share increased by 1.9 percentage points and 1.4 percentage points, respectively, on the Turnpike in response to the 2008 toll increase. The rate of increase declined to 1.1 percentage points in 2010, and then increased by 1.9 percentage points in 2011. The toll increase implemented on January 1, 2012 further increased the actual toll differential between cash and E-ZPass. The increased differential contributed to unusually high E-ZPass market share growth in 2012, demonstrated by an increase of 2.8 percentage points for all Turnpike transactions. Since 2012, E-ZPass market share on the Turnpike has increased every year, by between 0.5 and 1.6 percentage points.

Table 3-10
Historical Gross Toll Revenue Trends By Month
Total of All Vehicle Classes
(Thousands of Dollars)

New Jersey Turnpike

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$75,908	(3.7)	$73,073 (2)	4.2	$76,146 (2,7)	4.7	$79,762 (7)	7.0	$85,323 (7,8)	1.1	$86,222 (7)
February	68,516 (2)	(4.6)	65,360 (2)	11.1	72,614 (2,7)	12.0	81,306 (1,7)	(5.7)	76,691 (7,8)	7.1	82,109 (7)
March	81,986	0.0	81,994 (6)	5.0	86,095 (2,7)	9.5	94,269 (7)	(5.0)	89,557 (7,8)	3.7	92,908 (7)
April	84,291	3.8	87,480 (7)	6.8	93,391 (7)	0.4	93,785 (7)	3.3	96,872 (7)	1.1	97,932 (7)
May	88,594	3.7	91,866 (7)	6.9	98,246 (7)	1.3	99,532 (7)	2.6	102,108 (7)	1.6	103,714 (7)
June	86,323	6.0	91,501 (7)	6.4	97,340 (7)	3.8	101,079 (7)	1.7	102,840 (7)	0.9	103,794 (7)
July	90,883	3.4	93,986 (7)	9.7	103,077 (7)	1.0	104,128 (7)	0.0	104,148 (7)	2.3	106,507 (7)
August	94,835	1.3	96,105 (7)	7.3	103,089 (7)	3.1	106,323 (7)	1.3	107,676 (7)		
September	84,290	4.7	88,282 (7)	5.4	93,074 (7)	2.9	95,758 (7)	1.5	97,172 (7)		
October	87,905	6.1	93,233 (7)	3.9	96,825 (7)	1.6	98,352 (7)	1.3	99,595 (7)		
November	81,972	5.3	86,356 (7)	7.0	92,405 (7)	3.1	95,274 (7)	(0.5)	94,759 (7)		
December	81,217	9.0	88,507 (7)	6.2	93,965 (7)	1.1	94,989 (7)	0.0	94,997 (7)		
TOTAL	$1,006,720	3.1	$1,037,743	6.6	$1,106,267	3.5	$1,144,557	0.6	$1,151,738		$673,186
Subtotal Jan. - July	$576,501	1.5	$585,260	7.1	$626,909	4.3	$653,861	0.6	$657,539	2.4	$673,186

Garden State Parkway

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$30,130	(6.0)	$28,319 (2)	0.2	$28,380 (2)	4.4	$29,617	5.3	$31,193	(0.3)	$31,106
February	27,230 (2)	(4.6)	25,989 (2)	3.8	26,979 (2)	12.6	30,373 (1)	(3.3)	29,383	2.4	30,086
March	32,105	(0.5)	31,934 (6)	(0.7)	31,703 (2)	8.6	34,420	(3.6)	33,190	(0.6)	32,989
April	32,973	1.1	33,326	1.8	33,924	0.8	34,206	1.7	34,795	0.5	34,961
May	35,864	1.6	36,424	2.0	37,170	(0.5)	36,988	1.4	37,506	1.4	38,044
June	36,381	2.7	37,374	0.5	37,544	3.5	38,874	1.0	39,245	0.9	39,616
July	39,399	1.2	39,872	3.4	41,211	(0.1)	41,178	0.1	41,224	1.6	41,866
August	40,455	0.5	40,659	2.8	41,789	0.4	41,946	(0.1)	41,904		
September	34,845	1.0	35,206	3.0	36,263	(0.2)	36,195	1.3	36,668		
October	34,832	0.2	34,914	1.1	35,313	0.5	35,499	2.4	36,355		
November	31,966	(1.2)	31,574	4.4	32,959	1.3	33,377	(0.3)	33,264		
December	30,864	5.0	32,414	3.7	33,627	(0.6)	33,431	(0.0)	33,430		
TOTAL	$407,044	0.2	$408,005	2.2	$416,862	2.2	$426,104	0.5	$428,157		$248,668
Subtotal Jan. - July	$234,082	(0.4)	$233,238	1.6	$236,911	3.7	$245,656	0.4	$246,536	0.9	$248,668

Total Toll Revenue

Month	2013	Percent Change	2014	Percent Change	2015	Percent Change	2016	Percent Change	2017	Percent Change	2018
January	$106,038	(4.4)	$101,392 (2)	3.1	$104,526 (2,7)	4.6	$109,379 (7)	6.5	$116,516 (7,8)	0.7	$117,328 (7)
February	95,746 (2)	(4.6)	91,349 (2)	9.0	99,593 (2,7)	12.1	111,679 (1,7)	(5.0)	106,074 (7,8)	5.8	112,195 (7)
March	114,091	(0.1)	113,928 (6)	3.4	117,798 (2,7)	9.2	128,689 (7)	(4.6)	122,747 (7,8)	2.6	125,897 (7)
April	117,264	3.0	120,806 (7)	5.4	127,315 (7)	0.5	127,991 (7)	2.9	131,667 (7)	0.9	132,893 (7)
May	124,458	3.1	128,290 (7)	5.6	135,416 (7)	0.8	136,520 (7)	2.3	139,614 (7)	1.5	141,758 (7)
June	122,704	5.0	128,875 (7)	4.7	134,884 (7)	3.8	139,953 (7)	1.5	142,085 (7)	0.9	143,410 (7)
July	130,282	2.7	133,858 (7)	7.8	144,288 (7)	0.7	145,306 (7)	0.0	145,372 (7)	2.1	148,373 (7)
August	135,290	1.1	136,764 (7)	5.9	144,878 (7)	2.3	148,269 (7)	0.9	149,580 (7)		
September	119,135	3.7	123,488 (7)	4.7	129,337 (7)	2.0	131,953 (7)	1.4	133,840 (7)		
October	122,737	4.4	128,147 (7)	3.1	132,138 (7)	1.3	133,851 (7)	1.6	135,950 (7)		
November	113,938	3.5	117,930 (7)	6.3	125,364 (7)	2.6	128,651 (7)	(0.5)	128,023 (7)		
December	112,081	7.9	120,921 (7)	5.5	127,592 (7)	0.6	128,420 (7)	0.0	128,427 (7)		
TOTAL	$1,413,764	2.3	$1,445,748	5.4	$1,523,129	3.1	$1,570,661	0.6	$1,579,895		$921,854
Subtotal Jan. - July	$810,583	1.0	$818,498	5.5	$863,820	4.1	$899,517	0.5	$904,075	2.0	$921,854

(1) Leap year - February had 29 days.
(2) Severe winter weather events.
(3) A 53% toll increase was implemented on January 1, 2012.
(4) A 50% toll increase was implemented on January 1, 2012.
(5) Superstorm Sandy, October 29-30, 2012.
(6) Abnormally cold weather.
(7) Construction on the Pulaski Skyway positively impacted passenger car traffic on the Turnpike.
(8) Delaware River Turnpike Bridge was closed to all traffic from January 20, 2017 through March 9, 2017.

Source: NJTA

Table 3-11
Historical Trends in E-ZPass Market Share
Of Toll Transactions

Calendar Year	Turnpike Passenger Cars	Turnpike Commercial Vehicles	Turnpike All Vehicles	Parkway All Vehicles	Total System All Vehicles
Percent E-ZPass Market Share					
2003	60.2 %	66.8 %	61.1 %	na	na
2004	63.5	69.7	64.3	na	na
2005	65.5	74.7	66.7	na	na
2006	67.4	76.7	68.6	na	na
2007	69.0	78.0	70.2	65.7 %	67.4 %
2008	70.9	80.0	72.1	67.7	69.4
2009	72.3	81.5	73.5	70.6	71.7
2010	73.5	81.8	74.6	71.4	72.6
2011	75.5	83.0	76.4	72.5	74.0
2012	78.1	86.5	79.2	75.7	77.0
2013	79.5	88.2	80.6	77.2	78.5
2014	80.0	89.1	81.2	78.1	79.3
2015	80.5	89.9	81.7	78.7	79.9
2016	81.4	90.8	82.6	79.6	80.8
2017	83.2	91.6	84.2	81.4	82.5
Net Change In Percentages					
2003	- -	- -	- -	- -	- -
2004	3.3	2.9	3.2	na	na
2005	2.0	5.0	2.4	na	na
2006	1.8	2.0	1.9	na	na
2007	1.6	1.3	1.6	na	na
2008	1.9	2.0	1.9	2.0	2.0
2009	1.5	1.5	1.4	2.9	2.3
2010	1.2	0.2	1.1	0.8	0.9
2011	1.9	1.2	1.9	1.1	1.4
2012	2.6	3.5	2.8	3.2	3.0
2013	1.4	1.7	1.4	1.5	1.5
2014	0.5	0.9	0.6	0.9	0.8
2015	0.5	0.8	0.5	0.6	0.6
2016	0.9	0.9	0.9	0.9	0.9
2017	1.8	0.8	1.6	1.8	1.7

Source: NJTA

The Parkway also exhibited larger than normal E-ZPass market share increases as a result of the December 2008 and January 2012 toll increases. In 2009, Parkway E-ZPass market share increased by 2.9 percent and in 2012 it increased by 3.2 percent. Since 2012, the rate of E-ZPass increase on the Parkway has been nearly identical to that for the Turnpike, averaging between 0.6 and 1.8 percentage points. This analysis of the E-ZPass market share trends helped develop future year estimates of E-ZPass penetration rates.

Annual Trends in Vehicle Class Distribution

The percent of commercial-vehicle transactions on the Turnpike and Parkway have remained quite stable over the last fourteen years, as has their share of the gross toll revenue. As seen in **Table 3-12**, commercial-vehicle toll transactions on the Turnpike ranged from a high of 13.9 percent of total toll transactions in 2006 and 2007 to a low of 12.5 percent in 2016 and 2017. Their share of the gross toll revenue ranged from a high of 36.5 percent of total toll revenue in 2008 to a low of 30.5 percent in 2017.

On the Parkway, commercial-vehicle toll transactions have much less variation, ranging from 1.1 percent to 1.4 percent of total transactions between 2004 and 2017. Their share of gross toll revenue was also very consistent, ranging from a high of 4.1 percent of total gross toll revenue to a low of 1.1 percent. Since 2008, the Parkway commercial-vehicle revenue share ranged from 2.8 percent to 4.1 percent. It should be noted that in 2007 the Parkway modified their vehicle class definitions to match the Turnpike's. This change impacted how transactions were divided into passenger car and commercial vehicle transactions from 2008 onward.

Table 3-12
Annual Trends in Commercial Vehicle Distribution
By Toll Transactions and Toll Revenue

Calendar Year	Toll Transactions Turnpike	Parkway	Total System	Gross Toll Revenue Turnpike	Parkway	Total System
2004	13.7 %	1.4 %	4.9 %	35.4 %	1.4 %	25.7 %
2005	13.8	1.3	5.5	36.0	3.5	26.9
2006	13.9	1.1	5.8	35.0	1.1	25.8
2007 (1)	13.9	1.1	5.9	35.5	1.1	26.2
2008	13.8	1.1	5.9	36.5	2.8	27.3
2009	12.9	1.3	5.6	33.7	3.3	24.8
2010	12.8	1.2	5.7	32.6	3.4	24.0
2011	12.7	1.3	5.6	33.9	3.2	24.9
2012	12.8	1.3	5.7	32.7	4.1	24.4
2013	13.0	1.4	5.8	33.2	4.1	24.8
2014	12.9	1.4	5.8	33.0	3.7	24.8
2015	12.7	1.4	5.8	32.7	3.8	24.8
2016	12.5	1.3	5.7	32.2	3.6	24.4
2017	12.5	1.3	5.8	30.5	3.7	23.2

Note: Commercial Vehicles are defined as vehicle classes 2-6 and B1 and B2.
(1) Parkway changed their class structure to match Turnpike in 2007.

Source: NJTA

Chapter 4

Corridor Growth Analysis

Historical and forecast socioeconomic data was collected and evaluated to understand how New Jersey and the major sub-state regions are growing. Discussions with local Metropolitan Planning Organization (MPO) representatives were also conducted to confirm and substantiate the socioeconomic data and understand underlying trends. This information was then used in an econometric analysis to estimate mid-term baseline travel demand on the two New Jersey Turnpike Authority (NJTA) facilities: the New Jersey Turnpike and the Garden State Parkway.

The purpose of this chapter is: 1) to provide a description of the historical and forecasted trends in the study area socioeconomics; 2) qualitatively summarize discussions with regional MPO representatives regarding socioeconomic trends and regional developments; and 3) to describe the methodological approach and findings of the econometric growth analysis.

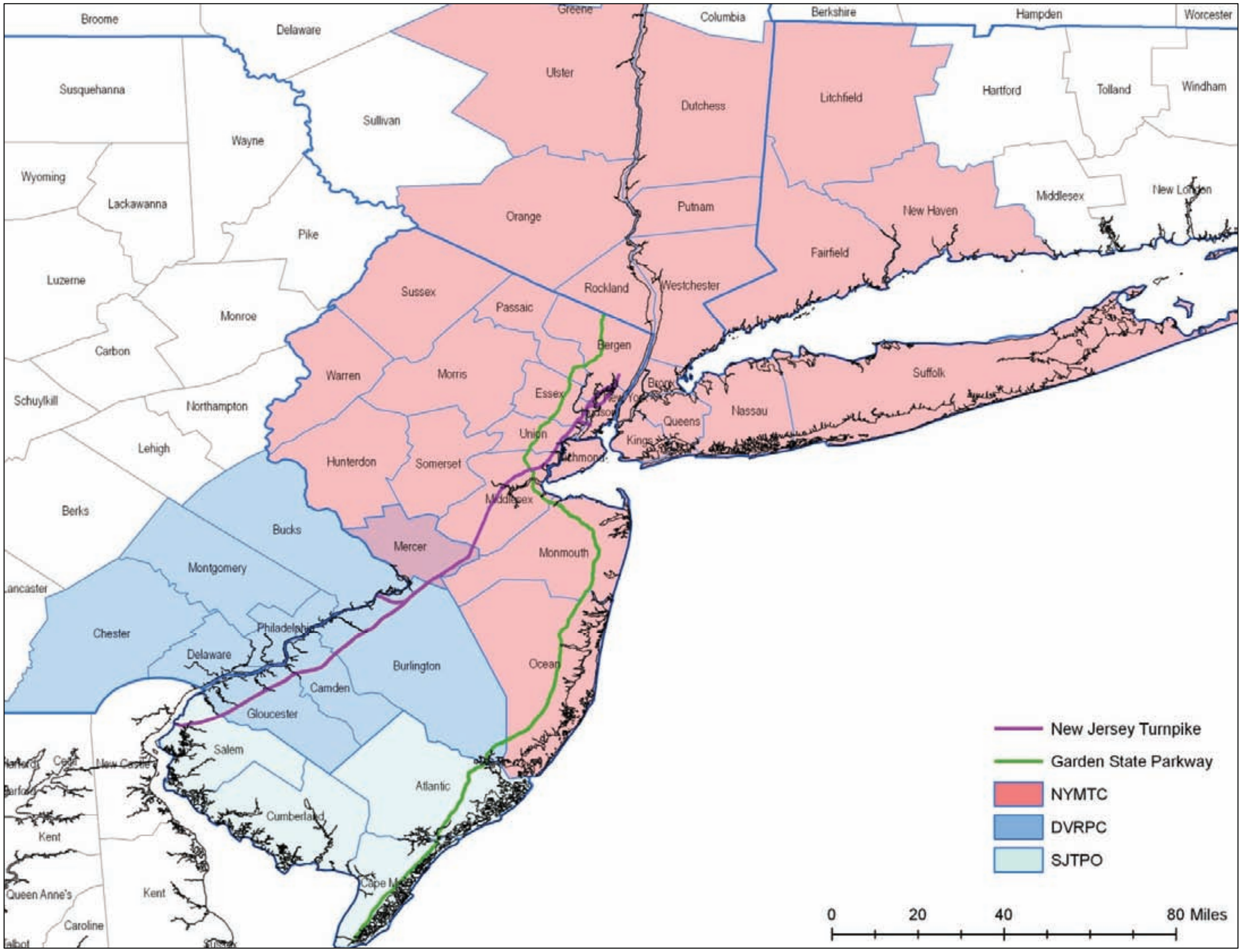
Socioeconomic Historical Trends and Forecasts

Socioeconomic trends and forecasts for the geographies along and surrounding the New Jersey Turnpike and the Garden State Parkway were evaluated, which serve as inputs into the regression-based demand growth analysis. Subsections below provide a summary of various demographic and economic measures, including population, employment, real retail sales, and real gross regional product (GRP). Additional information is provided regarding monthly unemployment rates and monthly retail gasoline and diesel fuel prices.

In the subsequent tables, the socioeconomic growth rates are presented in annualized compound average growth rate (CAGR) terms, reported in five-year increments from 1995 through 2030. Geographically, the state of New Jersey is presented along with the metropolitan areas of New York City (NYC) and Philadelphia, as well as the southeastern section of the state, and the entire nation. County compositions of the respective sub-state and metropolitan areas are included within footnotes in the presented tables and a map of the respective areas is depicted in **Figure 4-1**.

Population Historical Trends and Forecasts

Historical population data were obtained from the United States Census Bureau and forecast data from other public and private sources, depending on geography, as presented in Table 4-1 New Jersey counties' and metropolitan areas' population data were obtained from the respective regional MPOs, and are available through at least year 2040. Metropolitan NYC (comprised of counties in Connecticut, New York, and New Jersey) population forecast data are from the New York Metropolitan Transportation Council (NYMTC), and the North Jersey Transportation Planning Authority (NJTPA). Metropolitan Philadelphia data are from the Delaware Valley Regional Planning Commission (DVRPC), and the southeastern New Jersey counties are from the South Jersey Transportation Planning Organization (SJTPO). Population forecasts for the entire state of New Jersey are the aggregation of the constituent forecasts for the combined 21 counties in the state, from the respective MPO sources.



CORRIDOR INFLUENCE AREA

FIGURE 4-1

National data are presented for comparative purposes, with the forecasts from the Woods and Poole dataset[1].

As shown in **Table 4-1**, population growth in New Jersey and the surrounding metropolitan areas are lower relative to the growth in the nation, for both the historical trends and forecasts. Historically, the resident population in New Jersey annually increased by about 0.5 percent on average from 1995 through 2015, with metropolitan Philadelphia and southeastern New Jersey growth slower than NYC. Comparatively, historical population growth in the United States averaged about 0.9 percent per year over the same twenty-year period.

Table 4-1
Population Trends and Forecasts (CAGR, %)

Area		1995 - '00	2000 - '05	2005 - '10	2010 - '15	2015 - '20	2020 - '25	2025 - '30	1995 - '15	2015 - '30
Metro NYC	1	0.9	0.3	0.4	0.6	0.3	0.4	0.5	0.5	0.4
Metro Philadelphia	2	0.3	0.4	0.5	0.3	0.4	0.4	0.4	0.4	0.4
Southeastern NJ	3	0.6	0.7	0.3	(0.3)	0.4	0.4	0.3	0.3	0.4
New Jersey	4	0.8	0.5	0.3	0.4	0.3	0.4	0.5	0.5	0.4
United States		1.2	0.9	0.9	0.7	0.9	0.9	0.9	0.9	0.9

Geographies:

[1] Metro NYC as defined by NYMTC includes the following counties: Fairfield, CT; Litchfield, CT; New Haven, CT; Bergen, NJ; Essex, NJ; Hudson, NJ; Hunterdon, NJ; Mercer, NJ; Middlesex, NJ; Monmouth, NJ; Morris, NJ; Ocean, NJ; Passaic, NJ; Somerset, NJ; Sussex, NJ; Union, NJ; Warren, NJ; Bronx, NY; Dutchess, NY; Kings, NY; Nassau, NY; New York, NY; Orange, NY; Putnam, NY; Queens, NY; Richmond, NY; Rockland, NY; Suffolk, NY; Sullivan, NY; Ulster, NY; and, Westchester, NY

[2] Metro Philadelphia as defined by DVRPC includes the following counties: Burlington, NJ; Camden, NJ; Gloucester, NJ; Mercer, NJ; Bucks, PA; Chester, PA; Delaware, PA; Montgomery, PA; and, Philadelphia, PA

[3] Southeastern NJ as defined by SJTPO includes the following counties: Atlantic, NJ; Cape May, NJ; Cumberland, NJ; and, Salem, NJ

[4] New Jersey includes an aggregation of all 21 counties in the state

Sources: Years 1995 to 2015 reflect United States Census data; MPO forecasts are from the respective MPOs; New Jersey is based on the aggregation of pertinent MPO sources; and, United States forecasts are from Woods & Poole 2018

Future resident population growth around New Jersey is forecast to remain at the relatively slow-growth historical levels. As exhibited, projections average 0.4 percent per annum through 2030. Similar to the recent historical trends, this rate would remain below the expected population growth for the nation, which, on average, is projected to be 0.9 percent per annum through 2030.

[1] Source: Woods & Poole Economics, Inc. Washington, D.C. Copyright 2018. Woods & Poole does not guarantee the accuracy of this data. The use of this data and the conclusion drawn from it are solely the responsibility of the Consultant.

Employment and Unemployment Historical Trends and Forecasts

Employment trends are exhibited in **Table 4-2**, with historical data from the United States Bureau of Labor Statistics from 1995 through 2015, and future data are based on MPO sources or Woods & Poole, depending on geography, similar to the population data.

Historical employment growth patterns are similar across the presented geographies, with a relatively robust growth in the late '90s, followed by a deceleration in the subsequent five years through 2005, and a contraction between 2005 to 2010, reflective of the economic downturn realized during the recent recession, which officially began in late 2007. In all but the southeastern New Jersey region, employment growth rebounded following the recession in the 2010 to 2015 timeframe. Nationally, historical employment growth exhibited similar patterns during the five-year increments; although, similarly to population trends, the overall employment growth rates were somewhat faster for the nation than for the New Jersey areas.

Table 4-2
Employment Trends and Forecasts (CAGR, %)

Area		1995 - '00	2000 - '05	2005 - '10	2010 - '15	2015 - '20	2020 - '25	2025 - '30	1995 - '15	2015 - '30
Metro NYC	1	1.7	0.5	(0.2)	1.2	0.6	0.3	0.3	0.8	0.4
Metro Philadelphia	2	1.0	0.4	(0.2)	0.9	0.5	0.4	0.4	0.5	0.4
Southeastern NJ	3	1.8	0.8	(1.4)	(0.7)	(0.3)	(0.1)	0.3	0.1	(0.0)
New Jersey	4	1.3	0.3	(0.4)	0.7	0.7	0.3	0.3	0.5	0.4
United States		1.9	0.7	(0.4)	1.4	1.8	1.4	1.3	0.9	1.5

Geographies:

[1] Metro NYC as defined by NYMTC includes the following counties: Fairfield, CT; Litchfield, CT; New Haven, CT; Bergen, NJ; Essex, NJ; Hudson, NJ; Hunterdon, NJ; Mercer, NJ; Middlesex, NJ; Monmouth, NJ; Morris, NJ; Ocean, NJ; Passaic, NJ; Somerset, NJ; Sussex, NJ; Union, NJ; Warren, NJ; Bronx, NY; Dutchess, NY; Kings, NY; Nassau, NY; New York, NY; Orange, NY; Putnam, NY; Queens, NY; Richmond, NY; Rockland, NY; Suffolk, NY; Sullivan, NY; Ulster, NY; and, Westchester, NY

[2] Metro Philadelphia as defined by DVRPC includes the following counties: Burlington, NJ; Camden, NJ; Gloucester, NJ; Mercer, NJ; Bucks, PA; Chester, PA; Delaware, PA; Montgomery, PA; and, Philadelphia, PA

[3] Southeastern NJ as defined by SJTPO includes the following counties: Atlantic, NJ; Cape May, NJ; Cumberland, NJ; and, Salem, NJ

[4] New Jersey includes an aggregation of all 21 counties in the state

Sources: Years 1995 to 2015 reflect Bureau of Labor Statistics (BLS) data; MPO forecasts are from the respective MPOs; New Jersey is based on the aggregation of pertinent MPO sources; and, United States forecasts are from Woods & Poole 2018

Rebounding employment growth following the recession (excepting southeastern New Jersey) from 2010 to 2015 is not projected to continue at that pace. Future employment is forecast to grow, albeit at decelerated rates from the recent rebound period, such that for the overall 2015 to 2030 horizon, the average growth for New Jersey, NYC, and Philadelphia are at 0.4 percent annually. Southeast New Jersey, contrastingly, is projected to continue employment contraction through 2025 and then revert to slow growth through 2030. Nationally, employment is forecast to grow 1.5 percent annually from 2015 to 2030, and similar to population, at a relatively faster pace than New Jersey areas.

Figure 4-2 depicts seasonally-unadjusted monthly unemployment rates over the last decade, spanning January 2008 through June/July 2018, for the major metropolitan statistical areas (MSA) in and around New Jersey: Philadelphia-Camden-Wilmington, New York-Newark-Jersey City, and Atlantic City-Hammonton. In addition, unemployment rate data are also included pertaining to the entire state of New Jersey and for the United States. Given that the data is seasonally-unadjusted, the graph depicts both the cyclical seasonal variations, as well as the longer-term trends.

Unemployment rates for the entire state of New Jersey, the NYC MSA, and the Philadelphia MSA have generally tracked closely with national unemployment trends. In early 2008, the unemployment rates for such areas were all around 5 to 6 percent, but in the subsequent couple years, then spiked closer to 10 percent in late 2009/early 2010. Since that peak unemployment recessionary timeframe, unemployment rates have steadily decreased, closer to about 4 percent in mid-2018. Atlantic City-Hammonton MSA has historically exhibited higher unemployment than either the state of New Jersey or the nation and with greater seasonal volatility. Although unemployment has steadily decreased since the recessionary peak, the unemployment rates in the Atlantic City-Hammonton MSA remain higher than the other MSAs presented.

As of mid-2018, the unemployment rates, at around 4 percent, are considered at, or close-to, structural unemployment – or, the natural full-capacity rates that reflect “normal” employee turnover patterns. At structural unemployment, there is little opportunity for realistically lowering rates further.

Real Retail Sales Historical Trends and Forecasts

Real retail sales historical trends and forecast are presented below in **Table 4-3**, sourced from Woods & Poole. Both New Jersey and the metropolitan areas along the two facilities exhibit similar patterns of CAGR for real retail sales (both historically and forecasted). Since 1995, real retail sales growth for those geographies was between 1.5 and 2.1 percent per annum, depending on geography, with NYC exhibiting the highest relative growth. During that period, the change in real retail sales varied from strong growth of around 4.0 percent per year in the late ‘90s, to deceleration in the subsequent five years, followed by contraction between 2005 and 2010 due to the recession period. Since 2010, real retail sales rebounded from the recession, with New Jersey annual growth amounting to 2.6 percent. Over the entire twenty-year period from 1995, New Jersey exhibited 1.8 percent annualized growth, where the United States observed 2.0 percent.

Table 4-3
Real Retail Sales Trends and Forecasts (CAGR, %)

Area		1995 - '00	2000 - '05	2005 - '10	2010 - '15	2015 - '20	2020 - '25	2025 - '30	1995 - '15	2015 - '30
Metro NYC	1	4.2	2.4	(0.9)	2.9	1.3	0.9	0.7	2.1	1.0
Metro Philadelphia	2	3.8	2.0	(1.9)	2.2	1.3	1.0	0.8	1.5	1.0
Southeastern NJ	3	4.2	2.8	(1.9)	1.7	1.2	1.0	0.8	1.7	1.0
New Jersey	4	4.1	1.9	(1.5)	2.6	1.3	1.0	0.8	1.8	1.0
United States		4.1	2.1	(1.0)	3.0	1.8	1.4	1.2	2.0	1.5

Geographies:

[1] Metro NYC as defined by NYMTC includes the following counties: Fairfield, CT; Litchfield, CT; New Haven, CT; Bergen, NJ; Essex, NJ; Hudson, NJ; Hunterdon, NJ; Mercer, NJ; Middlesex, NJ; Monmouth, NJ; Morris, NJ; Ocean, NJ; Passaic, NJ; Somerset, NJ; Sussex, NJ; Union, NJ; Warren, NJ; Bronx, NY; Dutchess, NY; Kings, NY; Nassau, NY; New York, NY; Orange, NY; Putnam, NY; Queens, NY; Richmond, NY; Rockland, NY; Suffolk, NY; Sullivan, NY; Ulster, NY; and, Westchester, NY

[2] Metro Philadelphia as defined by DVRPC includes the following counties: Burlington, NJ; Camden, NJ; Gloucester, NJ; Mercer, NJ; Bucks, PA; Chester, PA; Delaware, PA; Montgomery, PA; and, Philadelphia, PA

[3] Southeastern NJ as defined by SJTPO includes the following counties: Atlantic, NJ; Cape May, NJ; Cumberland, NJ; and, Salem, NJ

[4] New Jersey includes an aggregation of all 21 counties in the state

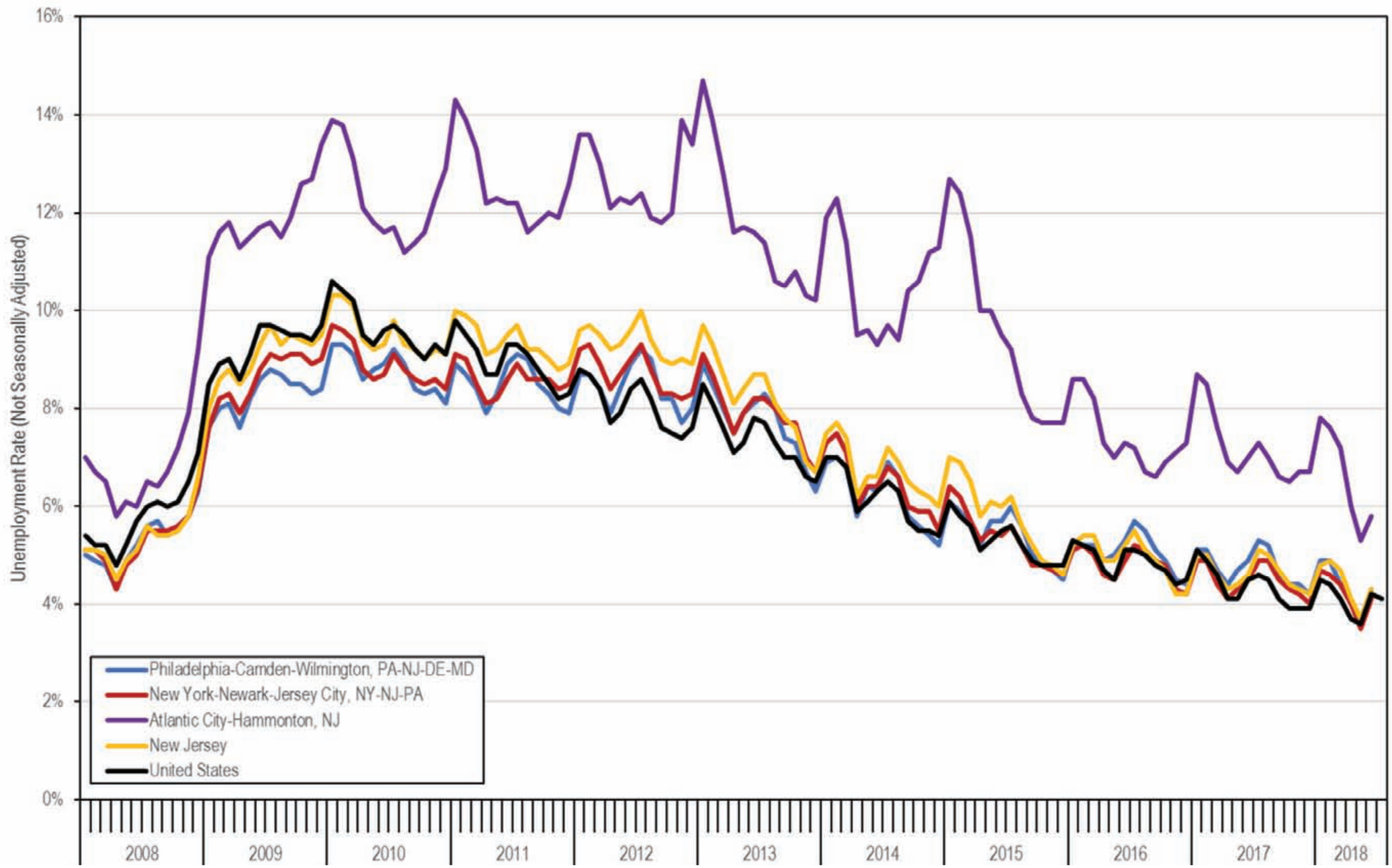
Source: Woods & Poole 2018

While real retail sales growth rebounded following the recession, that growth pattern is not projected to continue. Instead, Woods & Poole projects a decelerated annualized growth of 1.0 percent for New Jersey and the metropolitan areas, on average, through 2030. In comparison, real retail sales in the United States are projected to grow by 1.5 percent per annum during the same horizon.

Real Gross Regional Product (GRP) Historical Trends and Forecasts

Historical and forecast growth rates for real GRP are shown in **Table 4-4**, sourced from Woods & Poole. National real gross domestic product historically decelerated from an annual average rate of 4.5 percent in the late ‘90s to 2.8 percent over the first five years of the new millennium, to 0.7 percent between 2005 and 2010. Since the recession period, national real GDP grew 2.4 percent from 2010 to 2015. New Jersey’s real gross state product growth also decelerated similarly over the same period from 3.8 percent in the late ‘90s to 1.9 percent per annum in the subsequent five years and then to no growth during the recessionary timeframe, followed by a rebounding to 1.3 percent from 2010 to 2015. Metropolitan NYC and Philadelphia exhibited similar average growth rates since 1995, about 0.7 percent above the New Jersey’s annual average, while southeastern New Jersey experienced growth substantially slower than the other geographies in the study area at less than 1 percent per year.

Historically, the 14 metro NYC counties in New Jersey exhibited relatively slower real GRP growth than the 17 non-New Jersey counties, with average annual growth of 1.8 percent versus 2.7 percent, respectively, from 1995 to 2015. Woods and Poole forecasts very similar average annual growth through 2030 for both sub-metro regions, with the New Jersey counties projected to be slightly higher than the non-Jew Jersey counties, at 1.6 percent and 1.5 percent, respectively. Similar patterns are also



CDM Smith

SEASONALLY UNADJUSTED MONTHLY UNEMPLOYMENT RATES

FIGURE 4-2

evident for metro Philadelphia, with the four New Jersey counties exhibiting relatively slower average annual historical real GRP growth than the five non-New Jersey counties, at 2.1 percent versus 2.5 percent, respectively, from 1995 to 2015. Forecasts for the sub-Philadelphia regions are similar, with 1.7 percent annual growth from Woods and Poole for the New Jersey counties, and 1.8 percent for the non-New Jersey counties.

Table 4-4
Real Gross Regional Product Trends and Forecasts (CAGR, %)

Area		1995 - '00	2000 - '05	2005 - '10	2010 - '15	2015 - '20	2020 - '25	2025 - '30	1995 - '15	2015 - '30
Metro NYC	1	4.7	1.9	1.0	2.2	1.8	1.4	1.3	2.4	1.5
NYC - NJ		*4.1*	*1.5*	*0.1*	*1.4*	*1.8*	*1.5*	*1.5*	*1.8*	*1.6*
NYC - non-NJ		*5.0*	*2.0*	*1.3*	*2.5*	*1.8*	*1.4*	*1.3*	*2.7*	*1.5*
Metro Philadelphia	2	3.5	2.7	1.3	1.9	2.0	1.7	1.6	2.4	1.8
Philadelphia - NJ		*3.0*	*3.4*	*0.5*	*1.4*	*2.0*	*1.5*	*1.5*	*2.1*	*1.7*
Philadelphia - non-NJ		*3.7*	*2.5*	*1.6*	*2.1*	*2.0*	*1.7*	*1.6*	*2.5*	*1.8*
Southeastern NJ	3	0.9	4.7	(1.8)	(0.5)	1.4	1.2	1.2	0.8	1.3
New Jersey	4	3.8	1.9	0.0	1.3	1.7	1.5	1.5	1.7	1.6
United States		4.5	2.8	0.7	2.4	2.1	1.8	1.7	2.6	1.9

Geographies:

[1] Metro NYC as defined by NYMTC includes the following counties: Fairfield, CT; Litchfield, CT; New Haven, CT; Bergen, NJ; Essex, NJ; Hudson, NJ; Hunterdon, NJ; Mercer, NJ; Middlesex, NJ; Monmouth, NJ; Morris, NJ; Ocean, NJ; Passaic, NJ; Somerset, NJ; Sussex, NJ; Union, NJ; Warren, NJ; Bronx, NY; Dutchess, NY; Kings, NY; Nassau, NY; New York, NY; Orange, NY; Putnam, NY; Queens, NY; Richmond, NY; Rockland, NY; Suffolk, NY; Sullivan, NY; Ulster, NY; and, Westchester, NY

[2] Metro Philadelphia as defined by DVRPC includes the following counties: Burlington, NJ; Camden, NJ; Gloucester, NJ; Mercer, NJ; Bucks, PA; Chester, PA; Delaware, PA; Montgomery, PA; and, Philadelphia, PA

[3] Southeastern NJ as defined by SJTPO includes the following counties: Atlantic, NJ; Cape May, NJ; Cumberland, NJ; and, Salem, NJ

[4] New Jersey includes an aggregation of all 21 counties in the state

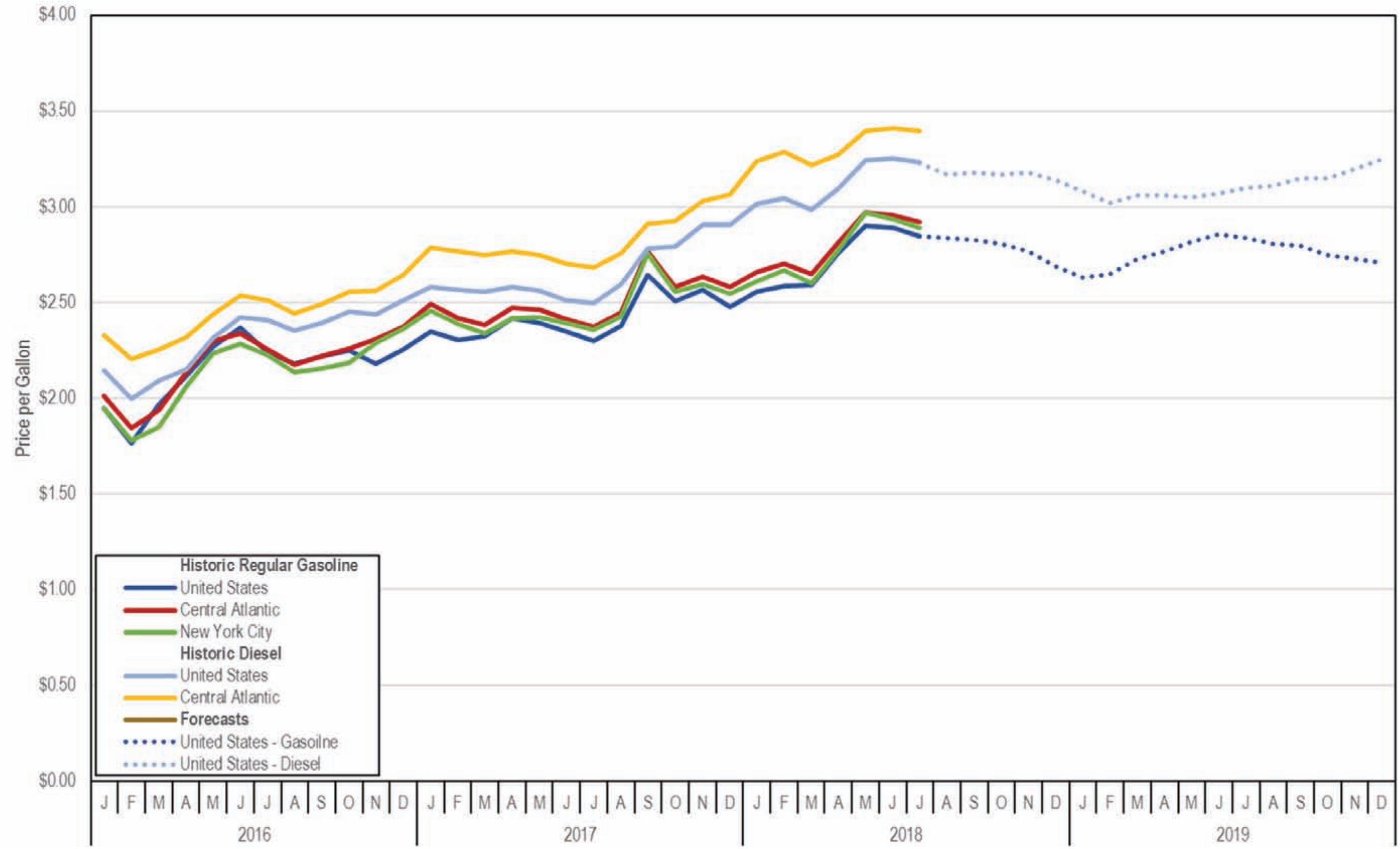
Source: Woods & Poole 2018

Future real GRP growth rates are estimated to average 1.9 percent for the United States, from 2015 through 2030, per annum, with New Jersey averaging about a 1.6 percent real increase per year. In the surrounding areas, similarly to the entire state, the real GRP growth is projected to be 1.3 to 1.8 percent per annum.

Gasoline Prices

Figure 4-3 depicts the monthly average nominal price per gallon of regular/conventional unleaded retail gasoline and diesel fuel over the last few years from the first month of 2016 through July 2018, sourced from the Energy Information Administration's (EIA's) Short-Term Energy Outlook. Data are shown for the United States, the Central Atlantic region (including New Jersey)[2], and New York City.

[2] Central Atlantic region includes: NY, PA, NJ, DE, MD, and DC.



HISTORICAL AND ESTIMATED AVERAGE REGULAR GAS PRICES

FIGURE 4-3

Between these regions, price variation is relatively narrow, with less than about a $0.10 to $0.20 per gasoline gallon differential in any given month. EIA's short-term fuel price forecasts (through 2019) show almost no change from current prices.

MPO Outreach and Regional Economic Conditions

To supplement the socioeconomic data analysis, additional qualitative inputs were collected through discussions with representatives from the major metropolitan planning organization (MPO) areas within, or near, the New Jersey Turnpike and Garden State Parkway. Additionally, information from annual reports and news articles identified by the MPOs were reviewed and incorporated. While discussed topics varied by MPO, they generally include: socioeconomic data (i.e., population and employment), development, and tolling perspectives. The five entities include:

- *NJTPA* – North Jersey Transportation Planning Authority
- *DVRPC* – Delaware Valley Regional Planning Commission
- *SJTPO* – South Jersey Transportation Planning Organization
- *NYMTC*– New York Metropolitan Transportation Council
- *PANYNJ* – Port Authority of New York and New Jersey

NJTPA

The North Jersey Transportation Planning Authority MPO includes thirteen New Jersey counties. In addition to the dense urban counties around New York City, the MPO extends west to the rural counties bordering Pennsylvania and south to Ocean County. Closely tied with the New York City economy, the NJTPA coordinates planning and development with the NYMTC and PANYNJ.

Socioeconomic – Recent and future population and employment growth reflect two central trends. First, urban counties adjacent to NYC (Bergen, Essex, and Union) have rebounded and continue to grow steadily, while growth trends in western rural counties (Sussex, Warren, and Hunterdon) have slowed notably and/or are forecasted to decline in the coming years. Second, Middlesex County, located along I-95 between NYC and Philadelphia is growing the fastest and may overtake Bergen as the most populated New Jersey county by year 2045.

Such growth reflects several factors that include Millennial generation (born early 1980's through early 2000's) lifestyle choices (e.g., urban, walkable neighborhoods, with non-driving transport) that continue to propel urban resurgence and land-use changes. Similarly, sprawling suburban corporate campuses are changing their location and construct. The Merck campus in Hunterdon County, the Sanofi Research facility in Somerset County, and the Bell Labs campus in Monmouth County have moved campuses closer to the urban core and/or transformed to mixed-use facilities.[3]

The NJTPA Long Range Transportation Plan (LRTP) acknowledges that workplace changes associated with new technologies and business practices will change commuting and travel patterns. The NJTPA also promotes transportation alternatives such as transit-oriented development near bus/rail

[3] NJTPA; Long Range Transportation Plan, 2015; https://togethernorthjersey.com/wp-content/uploads/2016/05/TNJ-Plan-v5-5-16-for-website-small.pdf

terminals in urban areas as well as suburban and rural communities.[4] Such alternatives are coordinated with NYMTC and the Port Authority. In volume terms, the Port Authority Bus Terminal (PABT) currently handles 260,000 passenger trips and 7,900 bus movements daily, which is forecast to grow by 30 percent to 337,000 passenger trips by 2040.[5]

Development – As the most densely populated state, few open "greenfield" sites exist in northern New Jersey, hence commercial growth is primarily led by "brownfield", or infill, redevelopment. In addition to the corporate campus relocations, NYC financial-related service-sector growth continues to spill-over into northern New Jersey, especially in Jersey City.

Various Port Authority development projects continue to address current and future transport needs of both passengers and freight. Projects are planned for a variety of modes including bridges, tunnels, airports, and ports (see PANYNJ subsection below), which affect passenger and freight movements. As a major freight hub, various port projects affect the desirability of current and future warehouse and intermodal facility locations. Similarly, airport improvements affect passenger access by road and transit. A key planning objective of these projects is to reduce highway congestion by diverting truck-borne freight traffic to rail and improving transit connectivity to commercial airports.

Tolling – The non-tolled interstates primarily feed traffic into/out of NYC and have comparatively minor effects on the NJTP or GSP (which are more north-south oriented). Given the existing built-out nature of the area, no new major non-tollway capacity improvements are envisioned, rather only various roadway repairs and rehabilitation projects. For example, rehabilitation of the Lincoln Tunnel viaduct will have a notable, albeit relatively short-term impact on Tunnel volume. While general plaza issues exist, no notable issues exist with specific plazas.

Regarding toll-rates, nobody was happy with recent rate increases; nor were they happy with similar transit rate increases. The limited number of major highways through northern New Jersey and water crossings into/out of NYC results in relatively inelastic demand. Traveler choices are limited to making the trip by car, car-pooling, transit, or not making the trip.

DVRPC

The Delaware Valley Regional Planning Commission comprises four counties (Burlington, Camden, Gloucester, and Mercer) in southern New Jersey, as well as five counties in the Philadelphia area. Toll facilities operate on both the New Jersey and connecting Pennsylvania highway facilities.

Socioeconomic – The urban core (Philadelphia) and the Pennsylvania suburbs are growing. Recent residential increase in central Philadelphia and adjacent ZIP codes reflect Millennials' demand for urban rental and multi-family housing. Similarly, suburban counties, townships, and boroughs are also booming. However, across the river from Philadelphia, population and employment in Camden County, New Jersey remain relatively stagnant as the county continues to struggle despite State-led

[4] Ibid.

[5] Breaking New Ground; 2017 Annual Report; The Port Authority of NY & NJ; https://corpinfo.panynj.gov/documents/2017/

development efforts and corporate investment incentives.[6] Comparatively, the surrounding Gloucester, Burlington and Mercer Counties are better positioned to respond to growing population (especially Gloucester) and employment.

Developments – Port of Philadelphia development continues to generate freight traffic that goes to/from the various distribution facilities along the Turnpike.

Freight and Shipping – With a major international port and commercial service airport along the eastern seaboard, the region accommodates a large volume of directional freight (inbound, outbound, internal, and through) by all four modes (truck, rail, port, and air). At the Port of Philadelphia, larger cranes and harbor deepening (45') facilitate larger Panamax vessels, increased containerization, and recent automobile imports (Hyundai/Kia). At Philadelphia International Airport (PHL), air cargo operations continue to expand (Cargo City and UPS), despite new runway expansion delays (10+ years).

Distribution facilities – Freight center growth continues along the Turnpike between New York City and Philadelphia, especially in Mercer County, which recently added a 1.2-million square foot Amazon facility in Robbinsville. Facility growth is also expanding around Exit 6A in northern Burlington County south of Philadelphia. Distribution facilities in southern Gloucester County (near the Salem County border) also continue to expand.

Other development – High population and employment growth in Middlesex County is also spilling-over into northern Mercer County where retail and office along US1 is growing, especially in West Windsor Township. While residential growth is strong in Mercer, regional growth is led by Gloucester.

Tolling – The 2015 widening of I-295 parallel to the Turnpike between Philadelphia and Trenton helped accommodate Mercer County employment growth. In doing so, I-295 has absorbed more traffic growth than the Turnpike. Nonetheless, congestion persists north of Trenton.

SJTPO

The South Jersey Transportation Planning Organization MPO includes four New Jersey counties: Atlantic, Cape May, Cumberland, and Salem. Predominantly influenced by the Parkway, the northern tip of rural Salem County is also affected by the Turnpike.

Socioeconomic – Contrary to northern New Jersey, southern New Jersey population witnessed sharp drops in population and employment over the past several years. Such contrasts reflect southern New Jersey's rural, tourist-oriented economy. Recent casino-sector rebounds and other developments suggest the region may stabilize and possibly grow despite the conservatively low population and employment forecasts.

As a seasonal-based destination, Atlantic City population is generally perceived to increase by 300 percent during the three summer months of June, July, and August. Such population swings between the on- and off-seasons significantly affect Parkway traffic volumes.

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[6] Huffington Post; March 09, 2018; https://www.huffingtonpost.com/alex-law/the-untold-tragedy-of-cam_b_9401640.html

Developments – While casinos remain the historical economic lynchpin to the region, other developments demonstrate a concerted attempt to revitalize and diversify the economy.

- *Casinos* – Following several closures through 2014, casino employment fell to under 25,000 versus a year 2012 peak of 37,500. However, recent State take-over of Atlantic City finances (bankruptcy refinancing) helped stabilize the market, thereby supporting the recent opening of the *Hard Rock Hotel & Casino Atlantic City* (4,400 jobs) and *Ocean Resort Casino* (3,800 jobs). Led by the market's current top employer, *Borgata Hotel Casino & Spa* (5,900 jobs), casino-employment has rebounded to over 30,000. Overall sector job growth reflects rehires from previously closed properties. And, regional community and business leaders hope the casino will help induce former longtime residents to return to the area, many of whom worked at the casinos.[7]
- *National Aviation Research and Technology Park (NARTP)* – Formerly known as the Stockton Aviation Research and Technology Park, the current NARTP objective is to create a NextGen FAA research center around the joint-use commercial/military airport in Egg Harbor Township. The first building, built and owned by the Atlantic City Improvement Authority, is scheduled for completion by October. The facility will feature 66,000 square feet of research space, a Federal Aviation Administration laboratory, classrooms, a large conference room, and a rooftop lounge. The build-out plan includes a sprawling seven-building research technology park, air cargo operation, and an aviation maintenance and repair academy and company.[8]
- *Stockton University* – Located in Galloway Township, the school originally opened in 1971 as a state college with 1,000 students. In 2011, it opened a Jewish family immigrant Holocaust museum. In 2015, Stockton was granted university status. Today, it enrolls over 9,200 undergraduate and graduate students, and is expanding its campus and building dorms in Atlantic City. As one of only two public-sector universities in New Jersey, it provides an economic driver to the South Jersey region and provides a notable growth opportunity – especially if it can collaborate successfully with public-private ventures such as NARTP.
- *Commercial vehicles* – Distribution facility growth continues along the NJTP in northern Salem County, closer to Philadelphia metro area. Agriculture in southern New Jersey also continues to play a major role in the regional economy. Combined commercial vehicle transport of local produce and distribution facility goods along the NJTP will continue to indirectly affect the SJTPO.

Tolling Perceptions – Concerns were raised regarding the number of tolls, high segment rates, and proximity to one another (too close to one another). The resulting toll diversion of commercial traffic to local roads, using Route 1, raises traffic congestion and safety concerns. Additionally, local leaders expressed a need for summer-month congestion management alleviation strategies.

[7] The Press of Atlantic City; August 10, 2018; https://www.pressofatlanticcity.com/news/atlantic-city-casinos-employing-for-first-time-in-years/article_077153d7-e06f-543e-b030-83f7d378f7a5.htm

[8] The Press of Atlantic City; August 19, 2018; https://www.pressofatlanticcity.com/news/atlantic-county-showing-tangible-results-with-new-aviation-industry/article_357a30fb-1fe5-504f-b245-5151dadbdacf.html

NYMTC

The New York Metropolitan Transportation Council provides a collaborative transport planning forum, develops regional plans, and coordinates local decisions regarding federal transportation fund allocations. NYMTC'S primary focus area includes New York City, Long Island, and the lower Hudson River Valley. NYMTC's planning effort incorporates metro Connecticut (three counties) and nine northern New Jersey counties (Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset, and Union).

NYMTC also coordinates planning and development with the NJTPA and the PANYNJ. Northern New Jersey sociodemographic data and trends provided by the NJTPA are incorporated into transportation modeling and planning decisions, as are Port Authority transport infrastructure development programs and policies. Anecdotal input regarding northern New Jersey socioeconomic data, future economic development, and/or tolling perceptions was not provided. Rather, we were directed to communicate directly with the NJTPA and the PANYNJ.

PANYNJ

The Port Authority plays a critical role in the region's multi-modal transport of people and freight; they operate six critical bridges and tunnels, three large-hub airports, and six major container terminals. We reached out to the Authority but were unable to talk with them. Nonetheless, we reviewed current developments and plans outlined in their year 2017 annual report[9], and discussed how major Port Authority projects and developments affect other MPOs, especially the NJTPA. Such efforts, summarized below, focus on factors that may affect toll facility forecasts.

<u>Bridge and Tunnel Developments</u> – Four bridge development milestones in 2017 will improve regional traffic flows. First, raising the Bayonne Bridge from 151 to 215 feet enables the port to accommodate larger cargo vessels (e.g., 18,000 twenty-foot equivalent unit (TEU) versus 14,000 TEU). Second, cashless tolling gantries at the Bayonne Bridge reduced traffic congestion associated with toll collection. Third, the eastbound span of the new Goethals Bridge opened to bi-directional traffic as construction continues on the westbound span. Fourth and finally, regional traffic flow will be improved with the authorization of $1.8 billion in George Washington Bridge restoration improvements. Combined, all four bridge developments will improve passenger and freight connectivity between I-95 and NYC, which are vital to accommodating passenger and commercial vehicle traffic forecasts.[10]

Regarding tunnels, much discussion continues regarding the need for a new tunnel(s) to accommodate current and future demand, especially given the age of the two existing tunnels (81-year old Lincoln, and 91-year old Holland). However, no definitive plan or champion has emerged to move plans forward towards realization. Also, as mentioned earlier, the Port Authority Bus Terminal (PABT) currently accommodates 260,000 daily passenger trips (7,900 bus movements), which is forecast to

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[9] Breaking New Ground; 2017 Annual Report; The Port Authority of NY & NJ; https://corpinfo.panynj.gov/documents/2017/

[10] Ibid.

increase by 30 percent to 337,000 by year 2040. To accommodate such demand, the Port Authority plans to develop a new central bus terminal.[11]

Airport Development – All three regional Port Authority commercial airports are redeveloping to accommodate future aviation demand. At LaGuardia, the $8 billion redevelopment of terminals B, C, and D will create a new airport with a vastly improved roadway system. At Newark Liberty International (EWR), a multi-stage redevelopment of Terminal One has begun. And, at JFK, a vision plan has begun to interconnect the terminals, overhaul the roadway system access, enhance AirTrain connectivity, and develop modern cargo facilities. Regarding airport access, the Port Authority plans to extend commuter rail from Newark-Penn Station to EWR, which would facilitate rail into NYC.

Port Development – An array of regional development projects accommodates cargo ship transit, improves landside freight transfers, and facilitates cross harbor freight movement.

- *Ship transit* –Two key development initiatives over the past decade have enabled the Port of New York and New Jersey to increasingly accommodate larger vessels, handle increased cargo volume, and attract new business. In addition to raising the Bayonne Bridge, the Harbor Deepening Project (HDP) deepened 38-miles of navigation channels to 50 feet.
- *Landside transfers* – The Port Authority also developed landside assets that will expand on-dock rail capacity, which will accommodate 1.5 million annual container lifts (the most on the east coast) and eliminate 2.25-million annual truck trips from local highways. Additionally, Truck Management System (TMS) developments enable truckers to reduce at-port turn times by 45 percent (in and out under an hour), which facilitates overall port cargo throughput.
- *Cross harbor movement* – To reduce road congestion and wear/tear, non-highway cross-harbor freight transport alternatives have been narrowed to either a four-mile freight tunnel or expanding an existing railcar float operation. Further study is underway to recommend a preferred alternative.

In summary, many highway transport issues affect the metro NYC/northern New Jersey area. Beyond highway passenger and freight issues, the Port Authority is addressing traffic demand drivers including connectivity issues with other modes. Such connectivity issues include port freight, air travel (both passenger and freight), and transit.

Conclusion

The qualitative MPO outreach discussions of local economic conditions confirmed the quantitative analysis of socioeconomic trends that went into the subsequent econometric growth analysis. The due-diligence outreach found nothing that would alter the quantitative forecasting process. Rather, the outreach collaborated and substantiated the socioeconomic trends with local depictions of where residential and/or business growth was (or was not) occurring and why.

Econometric Growth Analysis

An econometric analysis was conducted to forecast mid-term (ten-year) baseline travel demand on the New Jersey Turnpike and the Garden State Parkway. Historical travel demand was

[11] Ibid.

econometrically estimated via regression equations for groups of toll plazas. Regional socioeconomics and other variables were tested as explanatory factors. With statistically-significant historical equations, independent variable forecasts were applied to the equation coefficients to estimate future travel demand. Eighteen equations were tested for groups of proximate plazas; seven groupings for the New Jersey Turnpike, each for passenger cars (PC) and commercial vehicles (CV); and four for the Garden State Parkway, total volumes. All eighteen equations yielded statistically-significant, logical results. Forecasts were conducted from 2018 through 2028.

Subsequent toll modeling analyses conditionally incorporate these econometrically-derived baseline travel demand forecasts, which additionally consider short-term adjustments and future toll policies and rate structures in estimating future revenue potential.

Econometric Modeling

CDM Smith developed an econometric model for the New Jersey Turnpike and the Garden State Parkway, using multivariate regression analysis to develop mid-term toll-transaction growth forecasts. In the econometric modeling, the objective is to identify an independent variable (or variables) with historical trends that can explain, by way of statistical significance, corresponding traffic trends on the facilities. A resulting correlative relationship between historical trends in traffic and one or more independent variables is, in turn, applied in forecasting future transaction growth, given available and credible forecasts for the independent variable(s).

Regression Testing

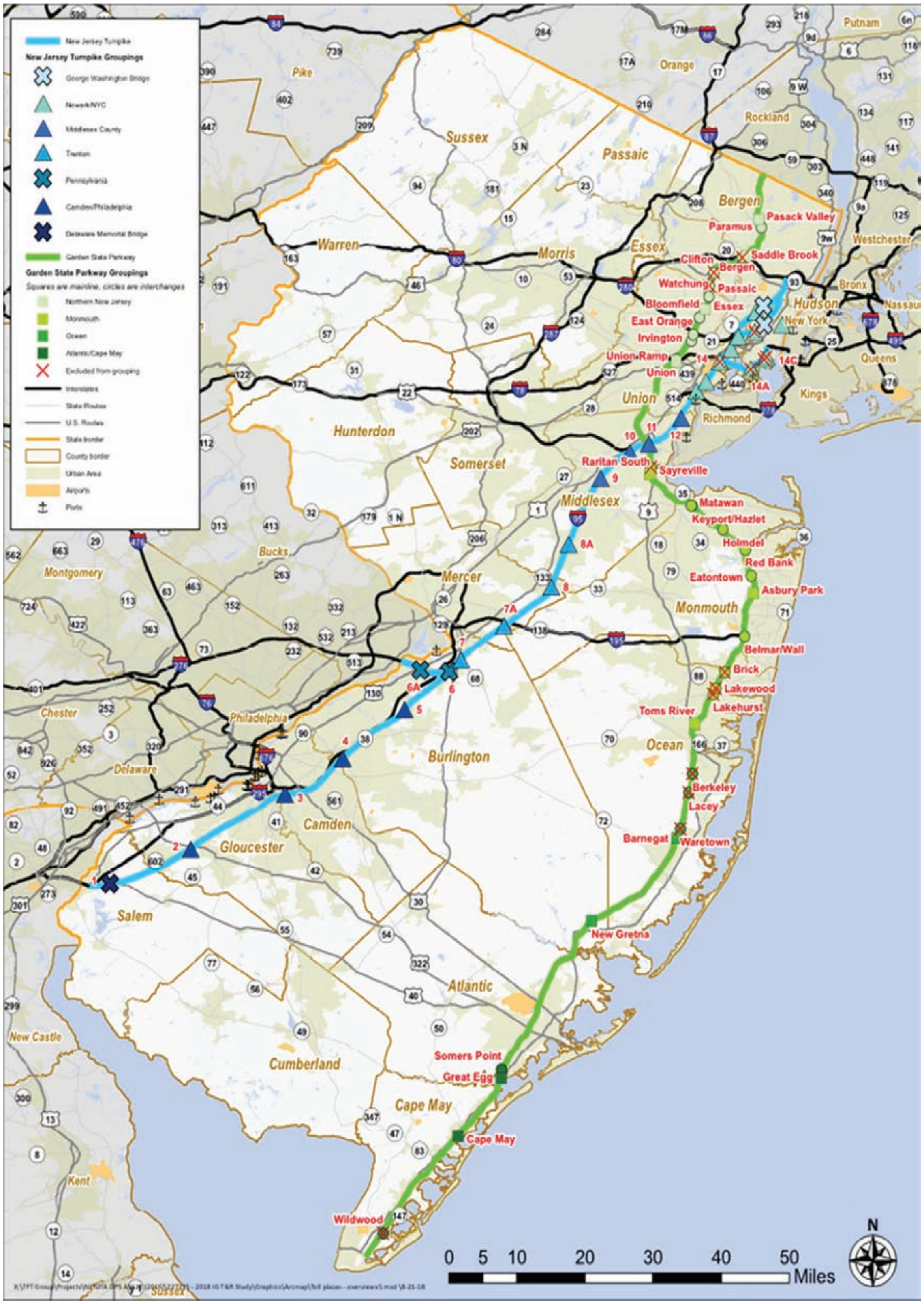
Individual highway travel occurs for various reasons, such as recreation, commuting, trade, etc., and is influenced by factors such as fuel prices, other travel costs, weather, trip urgency, and economics. Aggregate highway travel, however, typically trends closely with regional socioeconomic variables. As such, conceptually-relevant socioeconomic data were hypothesized, compiled, and regression-tested for explaining annual travel demand. These data include population, employment, real gross regional product, and real retail sales, compiled at various geographic levels. In addition to regional socioeconomic variables, average fuel prices, an average annual toll variable, and a dummy variable to reflect the NJTP widening were tested as explanatory factors for historical travel.

Multiple regression equations were tested and evaluated for each plaza grouping to account for the numerous possible combinations of relevant geographies (county clusters) for each possible socioeconomic variable, and combinations with fuel, toll rates, and dummy variable factors. A single "best fit" equation was identified for each plaza grouping and used for forecasting transactions.

Toll Plaza Groupings (Dependent Variables)

Plazas were clustered into the eleven groupings (from 65 individual plazas) to reduce regression testing to a reasonably manageable data universe and to aggregate transactions to minimize possible data outliers at any one individual plaza that may be uninfluenced by sociodemographic trends. Plazas were grouped based on geographic proximity, similarities in historical travel demand patterns, data availability, and other characteristics such as operating history.

For the Garden State Parkway, 35 plazas were divided into four groupings; 30 plazas for the New Jersey Turnpike were divided into seven groupings. These groupings are identified in **Table 4-5** and shown graphically in **Figure 4-4**. Some individual toll plazas were excluded from the groupings due to staggered plaza openings/closings, which, if included, would result in discontinuity and inconsistency



TOLL PLAZA GROUPINGS

FIGURE 4-4

within the time series. Also, some plazas were excluded due to outlier data patterns influenced by non-recurring factors unrelated to sociodemographic trends (e.g., exits 14, 14A, 14B, and 14C in the New Jersey Turnpike due to traffic diverted from the recent Pulaski Skyway closure). Of the 65 individual toll plazas, 47 were included in the groupings. Historical transaction data were used as continuous annual time series from 1992 through 2017 (26 years) for the New Jersey Turnpike, and from 1995 through 2017 (23 years) for the Garden State Parkway.

Table 4-5
Toll Plaza Groupings

	Grouping Name	Incl.	Excl.
GSP	Northern New Jersey	10	3
GSP	Monmouth	9	4
GSP	Ocean	2	3
GSP	Atlantic/Cape May	3	1
NJTP	Delaware Memorial Bridge	1	0
NJTP	Pennsylvania	2	0
NJTP	George Washington Bridge	2	0
NJTP	Camden/Philadelphia	4	0
NJTP	Trenton	4	0
NJTP	Middlesex County	4	0
NJTP	Newark/NYC	6	7

Source: CDM Smith

Socioeconomic Data (Independent Variables)

Data inputs include historical and forecast data for the possible explanatory independent variables, which include socioeconomics for geographies surrounding the facilities (i.e., New Jersey and surrounding states' counties). Data compiled for regression testing included:

- New Jersey Turnpike Authority – historical transactions and revenues (and thus, average annual toll rates)
- United States Census Bureau – historical population
- United States Bureau of Economic Analysis (BEA) – historical employment
- United States Energy Information Administration (EIA) – historical and forecast fuel prices
- Woods & Poole Economics, Inc. – historical and forecast population, employment, real gross regional product (GRP), and real retail sales

Socioeconomic data were tested as an explanatory variable at various combinations of counties surrounding the toll plazas groupings in conjunction with non-socioeconomic data, including the average annual toll rate, fuel prices, and a dummy variable to reflect the widening of the New Jersey Turnpike that was completed in 2015.

Regression Caveats

Econometrically-derived mid-term demand forecasts served as basis for further transaction and toll revenues estimates. Growth forecasts from the regressions do not explicitly consider route choice assumptions, the existing roadway network and planned improvements, existing and anticipated roadway capacities, origin-destination pairing, peak and directional factors, or traffic diversions. As such, the regression-based forecast growth rates are conditionally incorporated into further traffic and revenue modeling.

As this regression analysis attempted to estimate aggregate travel demand, the equations cannot account for all potentially influencing factors, especially any small-scale, qualitative/difficult-to-quantify, and/or irregularly occurring factors. Also, a regression analysis is incapable of forecasting unprecedented factors (positive or negative influence) such as catastrophic climate change, health epidemics, terrorism, natural disasters, or any other significantly destabilizing factors.

Forecasts are estimates, limited by the availability and robustness of input data, both historical and projected. Data unavailability, discrepancies, aberrations, and inaccuracies can hinder the robustness and results of econometric forecasting.

Regression Equations and Forecasting

A final regression equation was estimated for each plaza grouping, relating historical annual travel demand with a regional socioeconomic variable, and mostly with average annual tolls and/or a dummy variable. A regression summary for the groupings is provided in **Table 4-6**. After testing the compiled socioeconomics at various regional county clusters, it was determined that real GRP was the best-suited explanatory variable for all equations. In most equations, the average annual toll rates for the groupings were statistically significant and for the groupings on the New Jersey Turnpike for passenger cars, the dummy variable for widening was statistically significant. Fuel prices were irrelevant in all equations.

Geographically, regional combinations of contiguous counties in New Jersey, Pennsylvania, Delaware, and New York served as logical and statistically-acceptable catchment areas for regional real GRP relating to historical transactions. Although each equation has a unique county combination, anchored around the respective plaza groupings, the counties included in each equation are along and adjacent to the New Jersey Turnpike and Garden State Parkway. While the catchment areas regionalize socioeconomic variables for relationships with travel demand, the catchment areas should not imply that travel demand is only from those geographies, but rather that the catchment is a logical, statistically-valid representation for the aggregate demand.

All eighteen equations exhibited sensible relationships with acceptable statistics; the overall equations' robustness, measured by the adjusted R^2, are between 92.2 percent and 98.5 percent, with the individual coefficients' statistically valid with correct directional relationships (i.e., positive relationships with regional GRP, negative with average toll rates, positive with dummy variable NJTP widening). Such relatively high statistical fits indicate good relationships.

Table 4-6
Regression Summary

		Plaza Groupings	Results		Variables			Geographies (Counties)		
		Name/Area	Type	Adj. R2	Socio	Toll	Dummy	NJ	Other	Total
GSP	Total	Northern New Jersey	Ln-Linear	96.1%	GRP	Incl.	Excl.	9	1	10
		Monmouth	Ln-Linear	96.7%	GRP	Incl.	Excl.	5	0	5
		Ocean	Ln-Linear	92.7%	GRP	Incl.	Excl.	3	0	3
		Atlantic/Cape May	Ln-Linear	94.1%	GRP	Incl.	Excl.	2	2	4
NJTP	Passenger Cars	Delaware Memorial Bridge	Ln-Linear	96.4%	GRP	Excl.	Incl.	7	0	7
		Pennsylvania	Ln-Linear	97.9%	GRP	Incl.	Incl.	3	0	3
		George Washington Bridge	Ln-Linear	96.4%	GRP	Incl.	Excl.	5	3	8
		Camden/Philadelphia	Ln-Linear	98.0%	GRP	Excl.	Incl.	8	0	8
		Trenton	Ln-Linear	97.1%	GRP	Incl.	Incl.	7	0	7
		Middlesex County	Ln-Linear	98.5%	GRP	Incl.	Excl.	12	0	12
		Newark/NYC	Ln-Linear	96.2%	GRP	Incl.	Excl.	6	5	11
	Commercial Vehicles	Delaware Memorial Bridge	Ln-Linear	97.0%	GRP	Incl.	Excl.	10	4	14
		Pennsylvania	Ln-Linear	97.1%	GRP	Incl.	Excl.	10	1	11
		George Washington Bridge	Ln-Linear	92.2%	GRP	Incl.	Excl.	4	2	6
		Camden/Philadelphia	Ln-Linear	95.6%	GRP	Incl.	Excl.	3	1	4
		Trenton	Ln-Linear	97.0%	GRP	Incl.	Excl.	5	0	5
		Middlesex County	Ln-Linear	97.0%	GRP	Incl.	Excl.	6	0	6
		Newark/NYC	Ln-Linear	96.2%	GRP	Incl.	Excl.	5	0	5

Source: CDM Smith

With the final equations, regionalized real GRP forecasts were applied to the regression coefficients to estimate future mid-term travel demand. Forecasts for the average annual toll rates were assumed to remain at 2017 levels through the ten-year analysis horizon. Real GRP forecasts were obtained from Woods & Poole Economics, Inc. at a detailed county level. Woods & Poole statewide real GRP data for New Jersey was compared to that from Moody's Analytics, with both exhibiting very similar mid-term growth forecasts.

Demand Growth Results

Econometrically-derived travel demand forecasts for the New Jersey Turnpike and the Garden State Parkway are summarized in **Table 4-7** below, based on applied forecasts for the regional real GRP, constant average toll rates, and constant dummy variables, as applicable, to the respective regression coefficients. Compound average growth rates (CAGR) for the plaza grouping transactions are shown for incremental historical timeframes as comparative context, demarcated by 1992, 1995, 2000, 2007, and 2012, which are generally inflection points in the historical series' data. Additionally, the entire historical CAGR, from 1992 or 1995 depending on the facility, are also provided for context. The last column in Table 4-7 presents the average growth over the entire 2018 through 2028 forecast period.

Table 4-7
Transaction Growth Summary (CAGR)

		Plaza Groupings	History (Increments)					History (Full)		Forecast
		Name/Area	1992-1995	1995-2000	2000-2007	2007-2012	2012-2017	1992-2017	1995-2017	2018-2028
GSP	Total	Northern New Jersey	#N/A	1.6%	0.7%	-1.2%	1.5%	#N/A	0.6%	0.9%
GSP	Total	Monmouth	#N/A	2.9%	1.0%	-1.5%	1.4%	#N/A	0.9%	1.3%
GSP	Total	Ocean	#N/A	3.1%	1.8%	-3.1%	0.6%	#N/A	0.7%	1.4%
GSP	Total	Atlantic/Cape May	#N/A	2.4%	1.8%	-2.7%	1.4%	#N/A	0.8%	1.1%
NJTP	Passenger Cars	Delaware Memorial Bridge	1.3%	1.5%	2.3%	-0.9%	2.6%	1.4%	1.5%	1.2%
NJTP	Passenger Cars	Pennsylvania	2.5%	3.4%	2.3%	-2.2%	3.0%	1.7%	1.6%	1.7%
NJTP	Passenger Cars	George Washington Bridge	0.2%	2.0%	2.0%	-1.7%	4.2%	1.5%	1.6%	1.7%
NJTP	Passenger Cars	Camden/Philadelphia	1.7%	3.1%	4.3%	-1.7%	4.8%	2.6%	2.7%	1.9%
NJTP	Passenger Cars	Trenton	3.8%	3.0%	2.3%	-1.9%	4.7%	2.2%	2.0%	2.0%
NJTP	Passenger Cars	Middlesex County	1.9%	2.4%	2.5%	-2.3%	1.9%	1.3%	1.2%	1.7%
NJTP	Passenger Cars	Newark/NYC	0.3%	2.4%	1.9%	-1.5%	2.6%	1.3%	1.4%	1.5%
NJTP	Commercial Vehicles	Delaware Memorial Bridge	2.6%	5.1%	3.8%	-6.4%	3.1%	1.7%	1.5%	2.3%
NJTP	Commercial Vehicles	Pennsylvania	5.1%	4.0%	3.8%	-5.5%	3.4%	2.0%	1.5%	2.3%
NJTP	Commercial Vehicles	George Washington Bridge	0.9%	3.1%	3.1%	-2.9%	1.9%	1.4%	1.4%	1.7%
NJTP	Commercial Vehicles	Camden/Philadelphia	4.9%	7.7%	4.6%	-7.2%	5.0%	2.8%	2.6%	2.9%
NJTP	Commercial Vehicles	Trenton	5.6%	5.0%	1.7%	-5.0%	3.8%	1.8%	1.3%	2.3%
NJTP	Commercial Vehicles	Middlesex County	3.0%	3.4%	1.9%	-3.5%	1.8%	1.2%	1.0%	1.7%
NJTP	Commercial Vehicles	Newark/NYC	1.0%	3.3%	2.0%	-2.6%	1.7%	1.2%	1.2%	1.5%
Totals		GSP Total	#N/A	2.2%	0.9%	-1.5%	1.4%	#N/A	0.8%	1.1%
Totals		NJTP Passenger Cars	1.3%	2.5%	2.3%	-1.8%	3.0%	1.5%	1.5%	1.7%
Totals		NJTP Commercial Vehicles	2.4%	3.8%	2.4%	-3.7%	2.3%	1.4%	1.3%	1.8%
Totals		NJTP Total	1.4%	2.7%	2.3%	-2.1%	2.9%	1.5%	1.5%	1.7%
Totals		NJTP and GSP Total	#N/A	2.4%	1.4%	-1.7%	1.9%	#N/A	1.0%	1.3%

Source: CDM Smith

Average annual growth rates vary by facility, toll plaza grouping, and vehicle category (hence, subcategorizing the facilities as conducted). Generally, the Garden State Parkway is forecasted to exhibit relatively slower average growth than the New Jersey Turnpike, with the commercial vehicles forecast to grow relatively faster than passenger cars on that facility. Also, the plaza groupings in the northern half of the state (e.g., nearer to NYC) are forecast to have transactions growth relatively slower than plaza groupings in the southern half of the state, regardless of facility or vehicle type.

Regarding historical comparability, generally (barring a few plaza-grouping exceptions), the forecast growth is relatively faster than the entire historical timeframe. However, due to the major recession and concurrent major toll rate increases during that timeframe and recovery, there was a universal decline in transactions from 2007 through 2012, such that the entire time series (either 1992 or 1995 through 2017) is tempered and diverges from an uninterrupted growth trajectory. Since 2012, in the post-recessionary/recovery period, average growth exceeded the longer-term historical trends. Forecast growth is projected to generally be slower than the most recent 2012-2017 average growth.

In conclusion, the transaction forecasts based on multivariate equations with real GRP and average annual toll rates statistically explaining historical transaction data are projected to closely parallel overall longer-term historical growth patterns, albeit slightly faster. However, the mid-term ten-year forecasts are relatively slower than the most-recent post-recessionary growth since 2012.

A refined traffic and revenue analysis is the last component of the forecasting analysis. Growth rates developed from this econometric regression analysis are conditionally applied to further traffic and revenue modeling. Some post-processing adjustments to the econometric forecasts (e.g., converging 2018 forecasts with actual to-date observations, etc.) prior to further modeling are expected, which consider additional factors such as mid-term roadway capacities, etc.

Chapter 5

Transaction and Gross Toll Revenue Forecasts

Traffic and gross toll revenue estimates are provided in this chapter for the New Jersey Turnpike and the Garden State Parkway, separately, and for the total system. These forecasts extend from 2018, which include six months of actual transaction and revenue data, through 2028. The forecasts developed for this study take into account the underlying normal growth forecasts identified in Chapter 4, estimated impacts of committed roadway improvements, and continued growth in the E-ZPass market share.

Committed Roadway Improvements

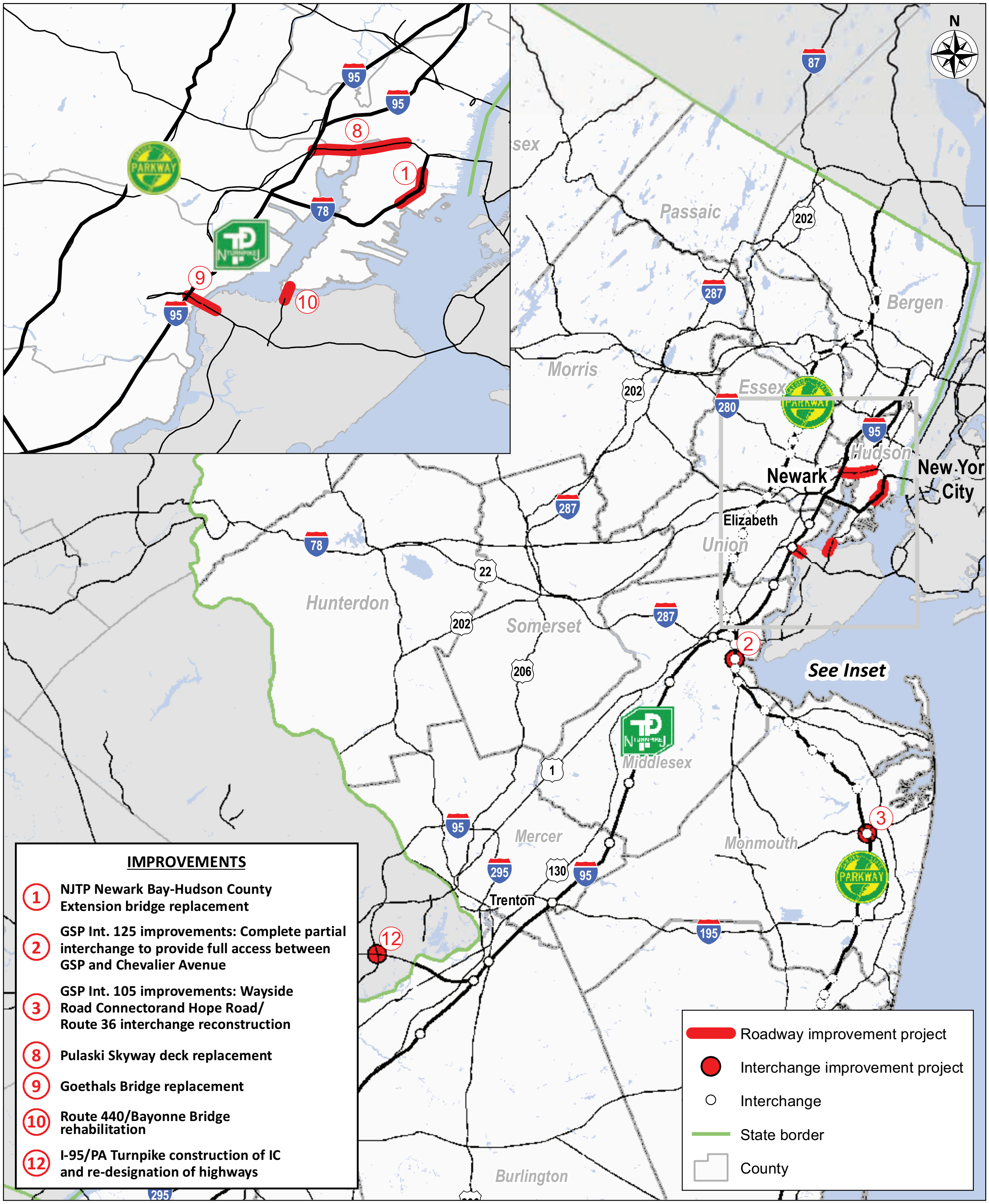
CDM Smith identified the major committed roadway projects that were taken into consideration for this study through discussions with the NJTA staff and by reviewing the following documents:

1. North Jersey Transportation Authority (NJTPA) FY 2018-2021 Transportation Improvement Program (TIP);
2. Delaware Valley Regional Planning Commission (DVRPC) FY 2018-2021 TIP For New Jersey;
3. DVRPC FY 2017-2020 TIP for Pennsylvania;
4. South Jersey Transportation Planning Organization (SJTPO) FY 2018-27 TIP;
5. Draft FY 2018 - 2027 New Jersey Statewide Transportation Improvement Program; and
6. 2018 New Jersey Turnpike Authority (NJTA) Capital Project and Investment Plan.

The roadway improvement projects listed in **Table 5-1** and pictured in **Figures 5-1** and **5-2** were reviewed to determine their potential for impacting transactions and toll revenue on the Turnpike or Parkway, either permanently or temporarily. The listed improvements fall into the following four broad categories. The improvement numbers refer to the number shown in Table 5-1 and Figures 5-1 and 5-2.

7. New capacity/roadway widening (improvement number 4);
8. Improved interchanges (improvement numbers 2, 3, 5, 6, and 11);
9. New interchanges (improvement number 12); and
10. Bridge improvements (improvement numbers 1, 7, 8, 9, and 10).

Included in these roadway improvement projects are five existing interchanges (36, 37, 38, 105, and 125) on the Parkway that will have new ramps constructed that will provide for improved or previously missing movements. There will also be a new major interchange constructed, creating a direct, high-speed connection north of Philadelphia between I-276 (PA Turnpike) and a re-designated



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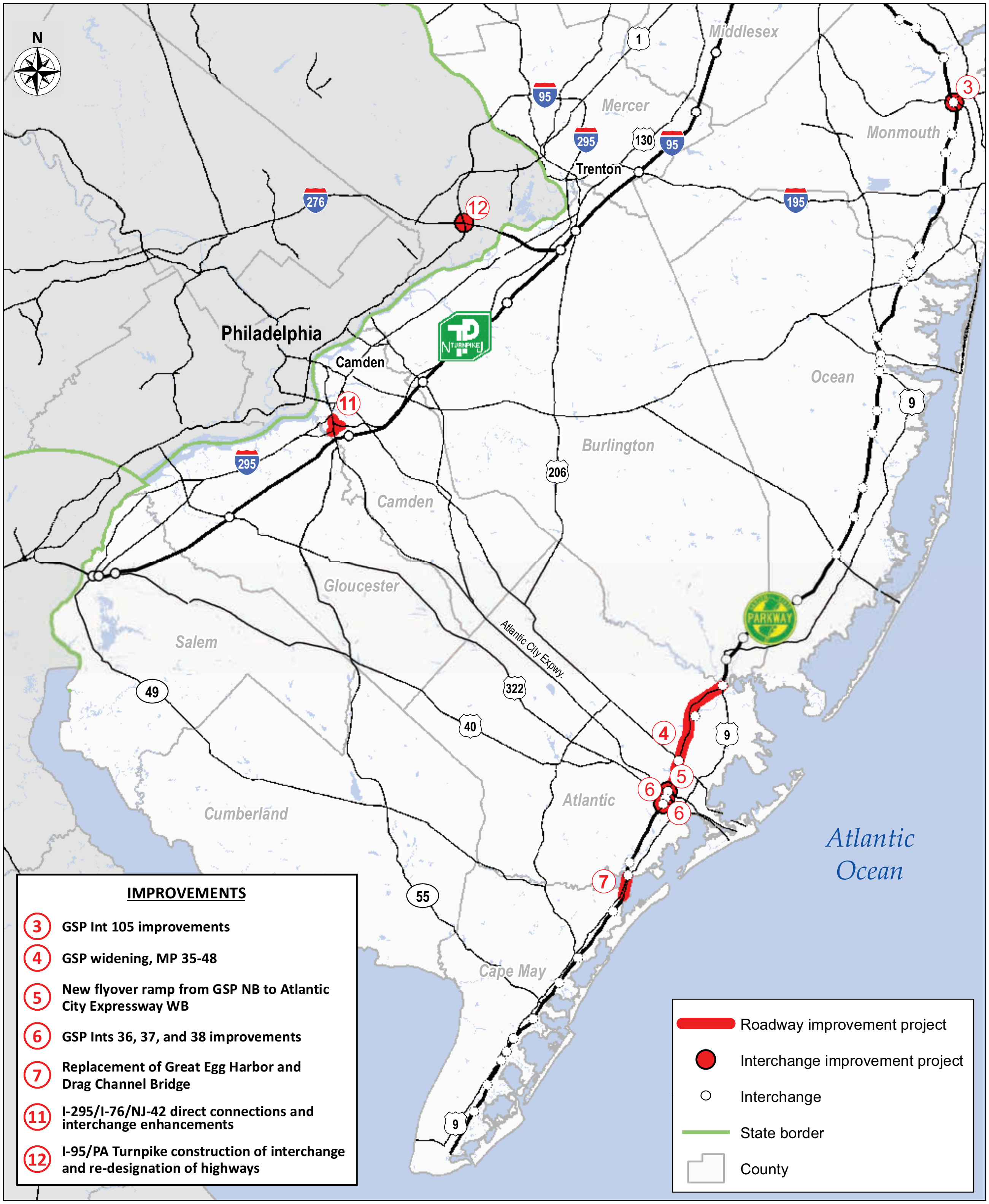
ROADWAY IMPROVEMENTS: NORTHERN NEW JERSEY

FIGURE 5-1



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ROADWAY IMPROVEMENTS: SOUTHERN NEW JERSEY

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FIGURE 5-2

Table 5-1
Summary of Major Committed Roadway Improvements
Considered for the Transaction and Toll Revenue Analysis

Improvement Number	Location by Interchange (Int) or Milepost (MP)	Description	Actual or Assumed Start Date	Assumed Completion Date
New Jersey Turnpike				
1	Newark Bay-Hudson County Extension	Replacement of the bridge deck in both directions	2016	2020
Garden State Parkway				
2	Int 125	Complete partial interchange to provide full access between Parkway and Chevalier Avenue	2016	2018
3	Int 105	New southbound connection from parkway to Wayside Road, addition of second northbound deceleration lane from Parkway to IC 105 and reconstruction of Hope Road NJ-36 intersection	2013	2018
4	MP 35-48	Widening of Garden State Parkway, Phase 3; new lanes already open in both directions north of MP 40	2014	2018
5	Int 38	New flyover ramp from Parkway northbound to Atlantic City Expressway westbound	2020	2022
6	Ints 36, 37, and 38	Addition of deceleration lane on southbound Parkway and acceleration lane on Tilton Road at IC 36 and separation of traffic entering Parkway at IC 38 from traffic exiting Parkway at IC 37	2014	2018
7	Great Egg Harbor and Drag Channel Bridge (MP 27-28)	Replacement of southbound span and rehabilitation of northbound span	2013	2019
Other Roadways				
8	Pulaski Skyway	Replacement of the bridge deck in both directions	2014	2018
9	Goethals Bridge	Replacement of Goethals Bridge on I-278 to include separate eastbound and westbound roadway decks	2014	2018
10	Route 440/ Bayonne Bridge	Rehabilitate to include 12-foot lanes, median safety divider, emergency shoulders, acceleration and deceleration lanes, walkway/bikeway, transit potential, and improve navigational clearance	2014	2018
11	I-295/I-76/NJ-42	Construction of direct connections and interchange enhancements	2014	2024
12	I-95/Pennsylvania Turnpike	Construction of interchange and re-designation of highways	2009	2018

Sources: NJTPA FY 2018-2021 TIP
DVRPC FY 2016-2019 TIP for New Jersey
DVRPC FY 2017-2020 TIP for Pennsylvania
SJTPO FY 2018-2027 TIP
Draft FY 2018-2027 Statewide TIP
NJTA 2018 Capital Project and Investment Plan

I-95. During the forecast period of this study, only part of the new interchange will be completed. By the end of the 2018 construction season, the PA Turnpike westbound to I-95 re-designated I-95. During the forecast period of this study, only part of the new interchange will be completed. By the end of the 2018 construction season, the PA Turnpike westbound to I-95 southbound ramps and the I-95 northbound to PA Turnpike eastbound ramp will be completed. No additional movements are assumed during the forecast period. This project will have a small negative effect on VMT and transactions over time.

An additional notable project is the Garden State Parkway widening program, which has been ongoing since 2008 and is scheduled to be completed in 2018. When complete, the project will have added a total of 90 lane miles by constructing a third travel lane and full-width shoulders in each direction between mileposts 35 and 80. The first phase of the project, between mileposts 63 and 80, was completed and opened to traffic in May 2011. Phase 2 (mileposts 48 to 63) opened in two segments; the lanes between mileposts 52 and 63 opened in 2013, while the four miles at the southern end of phase 2 could not open to traffic until the rehabilitation of the Bass River Bridge was completed in 2015. Phase 3 work, which extends between mileposts 35 to 48 (number 6 in Figure 5-2), began in 2014. New lanes are open in both directions north of milepost 40, and remaining work on the last few miles is scheduled to be completed and open to traffic by the end of 2018. This construction will provide a small short term positive impact on Parkway traffic.

A final notable project is the Pulaski Skyway rehabilitation. In mid-April 2014 the Pulaski Skyway was closed to eastbound/northbound (toward Jersey City and the Holland Tunnel) traffic to allow for replacement of the bridge deck of the entire 3.5-mile roadway. After more than four years, the Skyway was fully reopened to bi-directional traffic in July 2018. Slight negative impacts are expected on Turnpike transactions as a result.

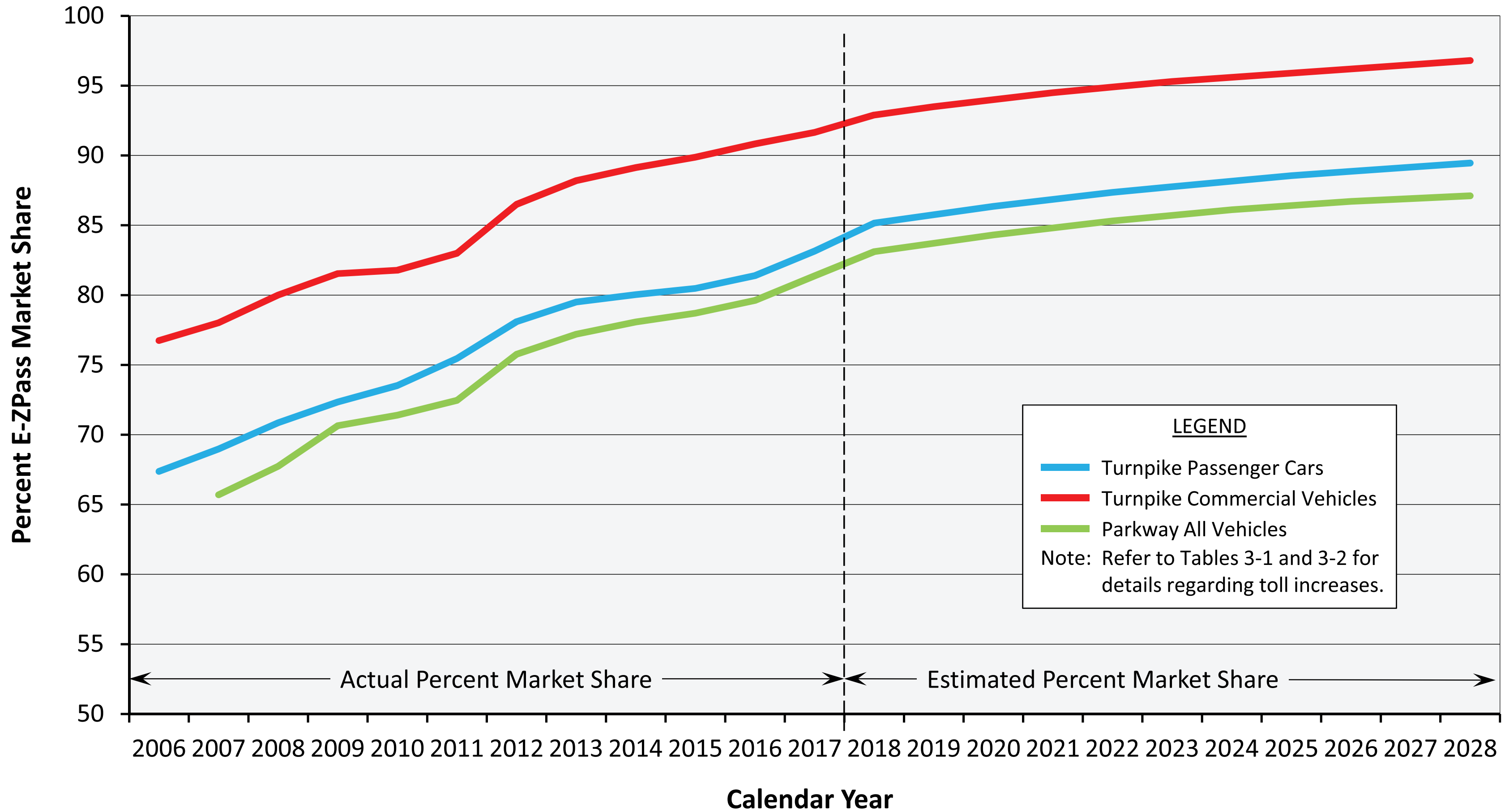
Estimated E-ZPass Market Share

Another key element in developing estimates of transactions and toll revenue is the future market share for E-ZPass. CDM Smith conducted a detailed review of historical growth trends in E-ZPass market share over the last several years. Table 3-11 summarizes those historical trends through the end of 2017. In 2017, the E-ZPass market share on the Turnpike totaled 83.2 percent for passenger cars, 91.6 percent for commercial vehicles, and 84.2 percent for all vehicles. 2017 E-ZPass market share on the Parkway totaled 81.4 percent for all vehicles.

Figure 5-3 shows the historical trends in E-ZPass market share, as well as estimated future market share through 2028. Separate estimates have been developed for Turnpike passenger cars and commercial transactions and for total Parkway transactions. By 2028, the E-ZPass market share on the Turnpike is estimated to reach about 89.5 percent for passenger cars and 96.8 percent for commercial vehicles. The E-ZPass market share for Parkway vehicles is estimated to reach 87.1 percent in 2028. In all cases, E-ZPass market share is expected to increase in every year of the forecast period, but at an increasingly slower pace than that experienced over the last several years.

Transaction and Gross Toll Revenue Forecasts

Annual estimates of toll transactions and gross toll revenue were developed by applying the estimated roadway improvement impacts (discussed previously in this chapter) to the underlying normal growth rates discussed in Chapter 4. Finally, the resulting travel demand was divided into its



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ACTUAL AND ESTIMATED PERCENT E-ZPASS MARKET SHARE

FIGURE 5-3

respective cash and E-ZPass market segments so that the differing average toll rates for each could be applied. As mentioned earlier, no future toll increases have been assumed during the forecast period.

Table 5-2 identifies the resulting toll transaction and toll revenue growth rates. The growth rates for 2017 are based on actual data and 2018 figures include seven months of actual data. The low growth rates estimated for Turnpike passenger cars in 2018 and 2019 results from the removal of the positive impact the Pulaski Skyway construction had on Turnpike passenger car traffic and revenue. Given that construction was completed in mid-2018, half of the negative impact would reduce 2018 traffic and revenue and half of the impact would reduce 2019 traffic and revenue. Since the Pulaski Skyway prohibits heavy commercial vehicles, this only affects passenger cars during this period. Beginning in 2020, traffic and revenue resumes a normal growth trend averaging about 1.6 percent annually for Turnpike passenger cars. The only divergence from this trend results from a slight bump (of approximately 0.2 percent) every four years due to the additional leap year day (in 2020, 2024, and 2028).

As discussed in Chapter 3, a revenue recognition change was implemented for the Turnpike in March 2018; it impacted nearly all of 2017 revenue data. This affected the mix of passenger car versus commercial vehicle revenue resulting in the 4.6 percent decrease in Turnpike 2017 commercial toll revenue. Through July 2018, commercial traffic and revenue has exhibited especially strong growth and this is reflected in the full-year estimates. About 1.0 to 1.5 percent of the increase in 2018 is the result of recovery from the loss of traffic and revenue during the Delaware River Toll Bridge closure in early 2017. But, overall growth has remained strong after that impact is accounted for. As shown in Table 5-2, full year 2018 commercial traffic and revenue is expected to increase by 5.0 and 5.6 percent, respectively. Beyond 2018, CDM Smith has assumed a more moderated rate of normal growth averaging 1.7 percent. Over the previous five years, actual commercial vehicle toll revenue growth has averaged about 3.0 percent, but some of that higher growth should be attributed to a continued recovery from the Great Recession. As with the forecasts for passenger cars, the additional leap year day is also factored into the forecasts in 2020, 2024, and 2028.

The impacts CDM Smith has observed (and recovery from those impacts) for Pulaski Skyway construction and the closure of the Delaware River Toll Bridge in early 2017 do not impact traffic and revenue on the Parkway. However, beginning July 23, 2018, conversion of Parkway Interchange 145 from two-way toll collection to one-way toll collection does have an impact which affects both 2018 and 2019. As shown, total toll transactions, as a result of the one-way conversion, are estimated to decrease by 0.8% in 2018 and by 1.4% in 2019. Because the toll rate at the new one-way Interchange 145 toll plaza is now double the previous rate, Parkway toll revenue continued to grow in both 2018 and 2019 (by 0.8% and 0.6%, respectively). Over the entire forecast period from 2018 to 2028, CDM Smith estimates that traffic growth will be 0.9 percent, while revenue growth will average 1.1 percent.

When the Turnpike and Parkway are combined, the Total System rate of growth between 2018 and 2028 amounts to 1.1 percent for toll transactions and 1.4 percent for toll revenue. Total System toll transaction growth is lower than toll revenue growth because Parkway transactions account for a much greater proportion of total transactions versus its contribution to total toll revenue. Thus, the lower growth estimated for the Parkway has a bigger impact on total transaction growth than it does on total toll revenue growth.

Table 5-2
Estimated Annual Toll
Transaction and Gross Toll Revenue Growth Rates
New Jersey Turnpike Authority

Percent Change Over Previous Year

Annual Toll Transactions

	Turnpike				
Year	Passenger Cars	Commercial Vehicles	Turnpike Total	Parkway Total	System Total
2016 (1,2)	---	---	---	---	---
2017 (1,3)	1.9%	2.6%	2.0%	0.8%	1.3%
2018 (1,4,5)	0.1	5.0	0.7	(0.8)	(0.2)
2019 (4,5)	(0.9)	1.7	(0.6)	(1.4)	(1.1)
2020 (2)	1.8	2.0	1.8	1.4	1.6
2021	1.4	1.4	1.4	0.9	1.1
2022	1.6	1.7	1.6	1.1	1.3
2023	1.6	1.7	1.6	1.1	1.3
2024 (2)	1.9	1.9	1.9	1.3	1.6
2025	1.3	1.4	1.4	0.8	1.0
2026	1.6	1.6	1.6	1.1	1.3
2027	1.6	1.6	1.6	1.1	1.3
2028 (2)	1.8	1.9	1.9	1.3	1.5

Annual Toll Revenue

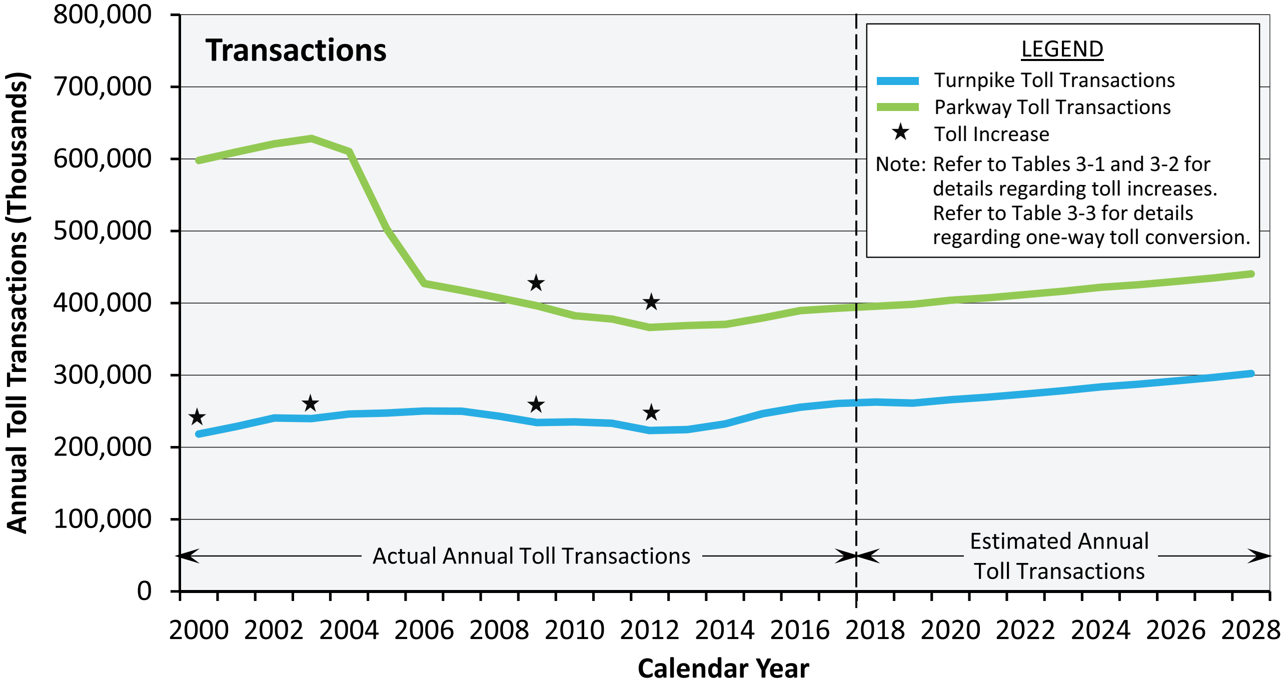
	Turnpike				
Year	Passenger Cars	Commercial Vehicles	Turnpike Total	Parkway Total	System Total
2016 (1,2)	---	---	---	---	---
2017 (1,3)	3.1%	(4.6%)	0.6%	0.5%	0.6%
2018 (1,4,5)	(0.2)	5.6	1.5	0.8	1.4
2019 (4,5)	(0.5)	1.6	0.2	0.6	0.3
2020 (2)	1.8	1.9	1.8	1.4	1.7
2021	1.3	1.4	1.4	0.9	1.2
2022	1.6	1.7	1.6	1.1	1.5
2023	1.6	1.7	1.6	1.1	1.5
2024 (2)	1.8	1.9	1.9	1.4	1.7
2025	1.3	1.4	1.3	0.9	1.2
2026	1.6	1.6	1.6	1.1	1.5
2027	1.6	1.6	1.6	1.1	1.5
2028 (2)	1.8	1.9	1.8	1.4	1.7

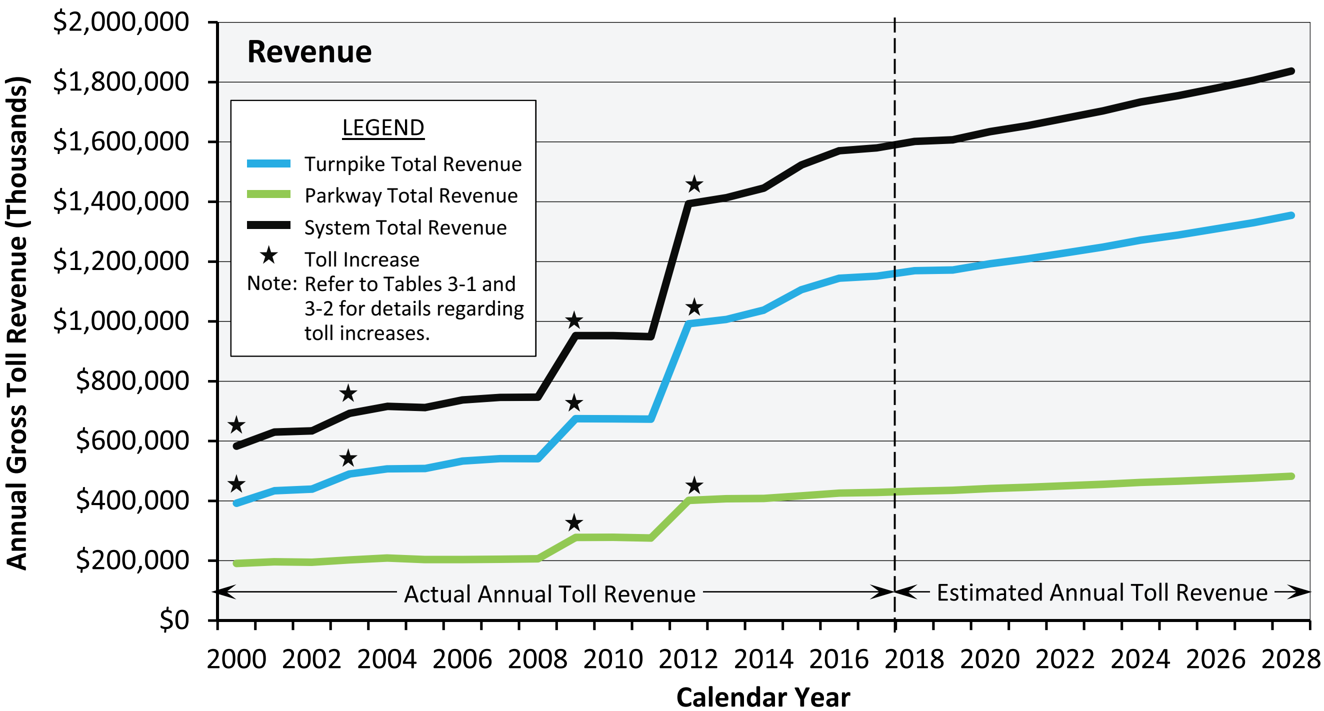
(1) Data through July 2018 is actual.
(2) Leap Year, includes 29 days in February.
(3) Reflects Delaware River Turnpike Bridge closed to traffic from January 20 through March 9, 2017.
(4) Reflects Pulaski Skyway opening to traffic in both directions beginning July 2, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.
(5) Reflects one-way conversion impacts of Parkway Interchange 145 beginning July 23, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.

Table 5-3 shows the resulting toll transaction and revenue estimates for Turnpike passenger cars, commercial vehicles, total Parkway, and the Total System through 2028. As noted, actual transactions and revenue are included through July 2018. As shown, total Turnpike toll transactions are expected to increase from 262.6 million in 2018 to 302.3 million by 2028. Total Parkway toll transactions are estimated to increase from 389.7 million to about 424.8 million over the same period. For the Total System, toll transactions amount to 652.2 million in 2018 and are expected to rise to 727.1 million in 2018, an average annual increase of 1.1 percent.

Total Turnpike toll revenue is estimated to increase from nearly $1,169.6 million in 2018 to just over $1,354.5 million by 2028. Parkway toll revenue is forecast to increase from almost $431.7 million to about $481.4 million between 2018 and 2028. For the Total System, toll revenue is estimated to amount to $1,601.3 million in 2018 and increase to just over $1,835.9 million by 2028, an average annual increase of 1.4 percent.

Figure 5-4 shows the historical and forecast toll transactions and revenue for the Turnpike and Parkway from 2000 through 2028. Prior year toll increases are noted. It should also be reiterated that the significant toll transaction decreases experienced on the Parkway between 2004 and 2010 are the result of the conversion of two-way toll collection to one-way toll collection (see Table 3-3 for the conversion schedule). No additional toll plaza conversions or toll increases are assumed during the forecast period.





ACTUAL AND ESTIMATED ANNUAL TOLL TRANSACTIONS AND GROSS TOLL REVENUE

FIGURE 5-4

Table 5-3
Estimated Annual Toll
Transactions and Gross Toll Revenue
New Jersey Turnpike Authority

All Values in Thousands

Annual Toll Transactions

Year	Turnpike Passenger Cars	Turnpike Commercial Vehicles	Turnpike Total	Parkway Total	System Total
2016 (1,2)	223,634	31,860	255,494	389,609	645,103
2017 (1,3)	227,979	32,686	260,665	392,895	653,560
2018 (1,4,5)	228,254	34,322	262,576	389,662	652,238
2019 (4,5)	226,213	34,895	261,108	384,049	645,157
2020 (2)	230,260	35,577	265,837	389,421	655,258
2021	233,437	36,088	269,525	392,783	662,308
2022	237,252	36,699	273,951	397,121	671,072
2023	241,116	37,315	278,431	401,494	679,925
2024 (2)	245,625	38,032	283,657	406,902	690,559
2025	248,940	38,564	287,504	410,300	697,804
2026	252,900	39,197	292,097	414,731	706,828
2027	256,922	39,840	296,762	419,209	715,971
2028 (2)	261,661	40,595	302,256	424,795	727,051

Annual Toll Revenue

Year	Turnpike Passenger Cars	Turnpike Commercial Vehicles	Turnpike Total	Parkway Total	System Total
2016 (1,2)	$776,337	$368,221	$1,144,558	$426,105	$1,570,663
2017 (1,3)	800,478	351,260	1,151,738	428,157	1,579,895
2018 (1,4,5)	798,675	370,907	1,169,582	431,669	1,601,251
2019 (4,5)	794,819	376,918	1,171,737	434,163	1,605,900
2020 (2)	808,837	384,052	1,192,889	440,409	1,633,298
2021	819,575	389,602	1,209,177	444,357	1,653,534
2022	832,543	396,218	1,228,761	449,412	1,678,173
2023	845,758	402,880	1,248,638	454,480	1,703,118
2024 (2)	861,218	410,617	1,271,835	460,722	1,732,557
2025	872,486	416,368	1,288,854	464,661	1,753,515
2026	886,091	423,199	1,309,290	469,771	1,779,061
2027	899,907	430,142	1,330,049	474,937	1,804,986
2028 (2)	916,224	438,292	1,354,516	481,360	1,835,876

(1) Data through July 2018 is actual.
(2) Leap Year, includes 29 days in February.
(3) Reflects Delaware River Turnpike Bridge closed to traffic from January 20 through March 9, 2017.
(4) Reflects Pulaski Skyway opening to traffic in both directions beginning July 2, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.
(5) Reflects one-way conversion impacts of Parkway Interchange 145 beginning July 23, 2018, of which the negative impacts on growth will be reflected in both 2018 and 2019.

Disclaimer

CDM Smith used currently accepted professional practices and procedures in the development of these traffic and revenue forecasts. However, as with any forecast, it should be understood that differences between forecasted and actual results may occur, as caused by events and circumstances beyond the control of the forecasters. In formulating the forecasts, CDM Smith reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the New Jersey Turnpike Authority (NJTA). CDM Smith also relied upon the reasonable assurances of independent parties and is not aware of any material facts that would make such information misleading.

CDM Smith made qualitative judgments related to several key variables in the development and analysis of the traffic and revenue forecasts that must be considered as a whole; therefore, selecting portions of any individual result without consideration of the intent of the whole may create a misleading or incomplete view of the results and the underlying methodologies used to obtain the results. CDM Smith gives no opinion as to the value or merit of partial information extracted from this report.

All forecasts and projections reported herein are based on CDM Smith's experience and judgment and on a review of information obtained from multiple agencies, including NJTA. These forecasts and projections may not be indicative of actual or future values and are therefore subject to substantial uncertainty. Future developments, economic conditions, and changes in travel behavior resulting from advances in automotive technology cannot be predicted with certainty and may affect the forecasts or projections expressed in this report, such that CDM Smith does not specifically guarantee or warrant any estimate or projection contained within this report.

While CDM Smith believes that the projections or other forward-looking statements contained within the report are based on reasonable assumptions as of the date of this letter, such forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from the results predicted. Therefore, following the date of that study, CDM Smith will take no responsibility or assume any obligation to advise of changes that may affect its assumptions contained within the report, as they pertain to socioeconomic and demographic forecasts, proposed residential or commercial land use development projects, and/or potential improvements to the regional transportation network.

CDM Smith is not, and has not been, a municipal advisor as defined in federal law (the Dodd Frank Bill) to NJTA and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to NJTA with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to NJTA. NJTA should discuss the information and material contained in this report with any and all internal and external advisors that it deems appropriate before acting on this information.

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APPENDIX C

REPORT OF CONSULTING ENGINEER

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CONSULTING
ENGINEER'S REPORT

New Jersey Turnpike Authority

Turnpike Revenue Bonds, Series 2019 A

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HNTB

CONSULTING ENGINEER'S REPORT

New Jersey Turnpike Authority

Turnpike Revenue Bonds – Series 2019 A

INTRODUCTION

As Consulting Engineer to the New Jersey Turnpike Authority (Authority), HNTB Corporation is pleased to submit this engineering report in support of the Authority's continued implementation of its $7 billion Capital Improvement Program (the CIP). In this report, we provide our professional opinions of the Authority's operations and maintenance performance, and descriptions and status of the projects included in the current capital program. The projects in the capital program generally serve to repair or replace existing capital assets and provide new assets to improve and expand both the New Jersey Turnpike (Turnpike) and the Garden State Parkway (Parkway). We also present estimates of operations and maintenance expenses for the Authority to operate and maintain the Turnpike and the Parkway for the period 2019 through 2028.

The capital assets of the Authority include approximately 316 centerline miles of mainline roadway, 4,446 lane miles (mainline, shoulders, and ramps) of roadway, and 1,106 bridges, as well as numerous facilities to accommodate patron services (service areas), maintenance activities, toll collection, materials storage, salt storage, and State Police offices.

ORGANIZATION AND MANAGEMENT

The character of the two roadways, the Turnpike and the Parkway, is remarkably different in a number of important aspects. These differences are a direct result of the type and volume of traffic using each roadway and the purposes and needs of an interstate road (the Turnpike) and an intrastate road (the Parkway). The disparity in the level of resources required to operate, maintain, enhance, and expand the two facilities is reflective of these inherent differences. The Authority has adequately organized their agency and is executing their operations and maintenance plans to address the infrastructure and operational needs of both roadways in a highly effective and cost-efficient manner. One common thread for the entire roadway system is proper maintenance. The following is a brief description of the Authority's recent and ongoing efforts to preserve the condition of their assets.

A STATE OF GOOD REPAIR

An enduring policy of the Authority has been to maintain its assets in a state of good repair. To this end, the Authority, since its inception, has implemented an aggressive annual inspection program of the bridges, roads, buildings, and toll plazas.

The Authority has implemented Enterprise Geographic Information Systems (eGIS) hardware and software throughout the agency to electronically record and store their infrastructure asset types, locations, condition statuses and photos where applicable. The assets that are currently included in the system include but are not limited to bridges, pavement, buildings, toll plazas, light poles, guide rail, median barrier, and drainage features. The eGIS information is maintained and updated during the annual inspections performed for the Authority's assets. The inspection field teams utilize handheld devices to quickly and efficiently identify, locate, and update condition status for the Authority assets. Assets that require immediate attention are noted and recorded during the field inspections. This allows the Engineering and Maintenance Departments to access and respond to these critical items noted in the eGIS inventory during the annual inspections. Planned for the near future, the eGIS inventories will be used to populate an online work order tracking system for roadway and facility maintenance crews.

Beginning in 2016, the Authority increased the level of detail for its annual inspection program to cover more items and provide a greater depth of inspection. For example, bridge and structure inspections, which include major and routine bridges, sign structures, antenna towers, retaining walls, noise barriers, high mast lighting poles, and other structural roadway features, represent average expenditures of $8.8 million per year for 2017 - 2019. Pavements are surveyed annually with state-of-the-art technology to identify areas where resurfacings are warranted to maintain serviceability. To ensure that maintenance funds are spent wisely and cost-effectively, the annual maintenance and improvement programs are comprised of projects prioritized in order of urgency in a manner that maintains public safety and the serviceability of the roadways and bridges.

Preventive maintenance and maintenance repairs are carried out through a combination of annual maintenance-related contracts and capital projects for the more significant projects. Annual contracts are awarded for all categories of bridge repairs -- deck replacements, superstructure repairs, and substructure repairs. In 2017, the amount awarded for this purpose exceeded $41 million. In 2018, that amount increased to nearly $60 million and is planned to be over $68 million for 2019. Because of this increased diligence in bridge repairs, the condition ratings of the Authority's 1,106 bridges range from "fair" to "excellent"; terms that are defined in the Federal Highway Administration (FHWA) Coding Guide for the Inventory and Appraisal of the Nation's Bridges. In addition, there were ten structurally deficient bridges at the beginning of the CIP. The continuation of the CIP coupled with the aggressive annual maintenance program will reduce that number to zero in 2019. All bridges are capable of safely supporting the heaviest legal loads of New Jersey and the United States.

The Authority also takes very good care of its pavements. It starts with the design criteria that the Authority has adopted. The design of the pavement section for both the Turnpike and the Parkway ensures that the roadways can withstand the daily impact of the traffic thereby helping to minimize future capital expenditure needs. Both the Turnpike and the Parkway have been recognized in the past for their pavement designs as "Perpetual Pavements" by the National Asphalt Pavement Association. A major requirement for this designation includes a minimum of a 50-year pavement life requiring only periodic resurfacings.

The Authority has developed and implemented an integrated Pavement Management System (PMS). The PMS is an effective means of assembling large volumes of data regarding pavement condition and other factors that affect pavement life and performance. Through the application of these software systems, the Authority obtains an objective analysis and vital information with which to manage the maintenance and repair of Turnpike and Parkway pavements for long-term sustainability.

The PMS has been supplemented with Decision Support System (DSS) software to provide a unique user interface for pavement management. The DSS uses American Association of State Highway Transportation Officials (AASHTO) Pavement Design Software to analyze pavement conditions and determine lifecycle performance for various sections of both the Turnpike and the Parkway. This provides Authority staff with a set of tools to quantify the current level of service provided on each toll road and it provides guidance on optimizing pavement performance and the annual allocation of repair funds.

The PMS leverages the value of the Authority's eGIS system. Pavement asset ratings are displayed on maps or charts and compared over multiple years, so trends can be identified.

The eGIS system is currently incorporated with the PMS to allow use of the following tools:

- Pavement Condition Viewer (PCV)
- Annual Visual Inspection
- Staff Reporting Capability
- Virtual Drive Tool
- Mobile Inspection Capability
- Pavement Repair History Data Base
- Identify Interim Maintenance Needs
- Interactive Capability with Trigger Points

Based on the results of the annual pavement analyses and the output of the PMS, annual contracts are awarded each year for pavement resurfacing projects on both the Turnpike and Parkway. Pavement resurfacing contracts in 2017 covering both roadways exceeded $37 million. The value of the pavement resurfacing contracts increased in 2018 and is planned to be over $68 million for 2019. Pavement resurfacing involves milling a minimum two inches of existing asphalt surfacing and replacing it with a minimum of two inches of new hot mix asphalt. The resurfacing cycle generally has been every 15 years, but the increased maintenance reserve funding policies recently adopted by the Authority have resulted in reducing that cycle down to 12 years which compares very favorably with other transportation agencies in the Northeast.

These annual maintenance and repair contracts are primarily funded through the Maintenance Reserve and Special Projects Reserve Funds (see below for a discussion of these funds and annual deposit requirements). Some projects however, are funded through a capital program or the Supplemental Capital Fund.

$7 BILLION CAPITAL PROGRAM

As Consulting Engineers to the Authority, we have participated in the planning, preparation of construction documents and cost estimates, and the monitoring of actual construction for various Authority widening and improvement projects that are part of the CIP. As part of the Authority's overall financial planning, we have reviewed the estimated total construction costs and the schedules for the projects included in the CIP and consider the estimated costs and schedules reasonable based on currently available engineering studies and construction statuses.

The projects that comprise the Authority's CIP can generally be divided into six categories: Turnpike Widening (Interchange 6-9), Bridge Improvements, Roadway Improvements, Interchange Improvements, Facilities Improvements, and Parkway Widening (Interchange 35-80). As seen in the breakdown of the CIP below, it is a balanced mix of projects which will increase traffic capacity and operational efficiencies while also maintaining the system in a state of good repair. The breakdown of the CIP is as follows:

Category	Amount (millions)	% of Program
Turnpike Widening (Interchange 6-9)	$2,135	30.5%
Bridge Improvements	$1,686	24.1%
Roadway Improvements	$847	12.1%
Interchange Improvements	$1,069	15.3%
Facilities Improvements	$672	9.6%
Parkway Widening (Interchange 35-80)	$591	8.4%
TOTAL	**$7,000**	

A detailed breakdown of the projects in these categories and brief descriptions of each are provided below:

CIP PROJECTS

Turnpike Widening (Interchange 6-9)

1. Turnpike Interchange 6-9 Widening

The project involved the construction of 3 additional lanes, both northbound and southbound, between Interchanges 6 and 8A, approximately 25 miles. The project also included the addition of one lane in each direction between Interchanges 8A and 9. The widening project resulted in 12 total mainline lanes being provided between Interchanges 6 and 9. In addition, the project included interchange improvements within the project limits as determined to be necessary to meet traffic demands for the design year of 2032.

Status – design and construction completed and opened to traffic – November 2014.

Bridge Improvements

2. Bridge Painting Phase I

This project provided for the design and construction for the cleaning and repainting of structural steel of the highest priority Turnpike and Parkway major and non-major bridges.

Status – design and construction completed – September 2014

3. Deck Reconstruction Phase I

This project provided for the design and construction of the re-decking of the highest priority Turnpike and Parkway mainline bridges.

Status – design and construction completed and opened to traffic – March 2016

4. Bridge Preservation & Security

This project provides for the design and construction phases of countermeasures and security improvements for the Authority's 16 major bridges on the Turnpike and Parkway. It also includes the design and construction of seismic retrofitting of the Turnpike's highest priority bridges as recommended from the Phase I Seismic Screening and Prioritization Report. This project further provides for the design and construction for the miscellaneous bridge work on the Turnpike not covered under the annual miscellaneous structural repair contracts. The primary work includes bridge bearing replacement and significant substructure repairs.

Status – design and construction are on-going

5. Deck Reconstruction Phase II

This project provides for the design and construction of the re-decking of the highest priority Turnpike and Parkway mainline bridges.

Status – design and construction are on-going

6. Bridge Painting Phase II

This project provides for the design and construction for the cleaning and repainting of structural steel of the highest priority Turnpike and Parkway major and non-major bridges.

Status – design and construction are on-going

7. Turnpike Interchange 16E-18E Bridge Improvements

This project provided for the widening and re-decking of Structure No. E112.58A and the widening of Secaucus Road, Structure No. E112.10.

Status – design and construction completed and opened to traffic – 2012

8. Turnpike Hackensack East Bridge Rehabilitation

This project provided for the design and construction of the rehabilitation on the Turnpike's existing Eastern Hackensack River Bridge, Structure No. E109.83. The primary work included bridge re-decking, structural repairs and seismic retrofit.

Status – design and construction completed and opened to traffic – April 2015

9. Newark Bay-Hudson County Extension Bridge Re-decking

This project provides for the design and construction of the re-decking of various structures on the Newark Bay-Hudson County Extension, including the Newark Bay Bridge, Structure No. N2.01. This project also provides for the repairs to structural steel and substructure units, security improvements, and painting.

Status – design and construction on-going

10. Turnpike Special Bridge Structures

This project provides for the design and construction of specialized bridge repairs on the Turnpike that are not covered under the annual miscellaneous structural repair contracts. The primary work includes mitigation of concrete deterioration caused by Alkali-Silica Reaction (ASR), pile replacement, cable suspender replacements, and high mast lighting repairs.

Status – design and construction are on-going

11. Parkway Bass River Bridge

This project provided for the design and construction of improvements to the Parkway crossing of the Bass River. The primary work included the construction of a new parallel bridge and re-decking, structural repairs and seismic retrofit on the existing bridge, Structure No. 51.9.

Status – design and construction completed and opened to traffic – May 2015

12. Parkway Mullica River Bridge

This project provided for the design and construction of improvements to the Parkway crossing of the Mullica River. The primary work included the construction of a new parallel bridge and re-decking, structural repairs and seismic retrofit on the existing bridge, Structure No. 49.0.

Status – design and construction of new bridge completed and opened to traffic – December 2012. Design and reconstruction of existing bridge completed and opened to traffic – April 2014.

13. Parkway Bridge Substructure Repairs

This project provided for the design and construction of repairs and rehabilitation of the existing Driscoll Bridge, Structure 127.2, along with pier caps, columns, and substructure elements on other water crossings.

Status – design and construction completed and opened to traffic – December 2015

14. Parkway Great Egg Harbor/Drag Channel Bridges

This project provides for the design and construction of a new parallel bridge carrying the southbound Parkway over Great Egg Harbor and Drag Channel. The new bridge will be constructed west of the existing southbound structure. The new bridges include a new 3,834-foot-long bridge over Great Egg Harbor and a new 770-foot-long bridge over Drag Channel. Construction will also include approximately 4,900 linear feet of new approach roadways; demolition of the existing southbound bridge; rehabilitation of the northbound Parkway bridge; and demolition of the nearby existing Beesley's Point Bridge. Special construction features include use of high performance concrete for the bridge decks, a ten-foot-wide multi-use pathway on the west side of the new bridges and approach roadways, and a plastic lumber fender system to protect the bridge piers.

Status – design and construction are on-going

Roadway Improvements

15. Drainage Improvements

This project includes design services and construction to rehabilitate or replace non-functioning and substandard drainage systems. The project also includes the analysis of the condition of existing median inlets along the Authority's mainline and interchange ramp roadways and will construct recommended improvements in compliance with current environmental regulations.

Status – design and construction completed – May 2018

16. Improvements to Roadway Appurtenances

This project provides for upgrading various guide rail, guide rail end treatments, and crash cushions along the Parkway and Turnpike.

Status – design and construction completed – September 2018

17. Median Barrier Improvements

This project included the inspection and condition assessment of concrete median barrier, and the implementation of a repair/replacement/upgrade program along the Parkway and Turnpike mainline and interchange ramps. The project included sections of severely deteriorated concrete median barrier that required replacement between Parkway MP 141 and MP 160.

Status – design and construction completed – July 2014

18. Guide Sign Replacements Phase I

This project includes inspection, assessment and implementation of the remedial measures necessary to bring dated mainline and interchange guide signing into compliance with current standards. This project will upgrade existing Parkway and Turnpike guide signs and structures, along the mainline, ramps or at facilities to the current design standards. The project includes the study and assessment of current signing legends and locations along with recommendations and plans to procure the construction services necessary to bring signing into compliance with current standards.

Status – design and construction completed – July 2018

19. Guide Sign Replacements Phase II

This project included the deployment of 244 Variable Message Signs (VMSs) at various locations along the length of the Turnpike and the Parkway. The project provided for design and construction of VMS sign supports, provision and installation of VMS signs, and connectivity utilizing fiber optic communications networks back to the Statewide Traffic Management Center (STMS). All signs are monitored and controlled from the STMC.

Status – design and construction completed – June 2015

20. Turnpike and Parkway Southern Improvements

This project provided miscellaneous improvements to mainline and interchanges located in the southern portion of the Turnpike between Interchange 1 and Interchange 4 and on the Parkway between MP 0 and MP 48.

Status – design and construction completed – December 2015

21. Parkway Mainline Shoulder Improvements

In the late 1980's, the right and left mainline shoulders from MP 80 to MP 100 on the Parkway were eliminated and the width of the travel lanes was reduced to create a third travel lane in both the northbound and southbound directions between Interchanges 80 and 91 and a fourth lane between Interchanges 91 and 98. The geometric changes were made to provide additional capacity to meet the traffic demands along this section of the Parkway. This project reconstructed the mainline roadway to provide full-width right and left shoulders and to widen the driving lanes to widths that meet current standards.

Status – design and construction completed and opened to traffic - December 2015

Interchange Improvements

22. Facilities Improvements Phase II

This project includes improvements to interchanges on the Turnpike and Parkway. Interchange locations include Turnpike Interchanges 9, 10, 15W, 16W, and Parkway Interchanges 0, 105, 109, 145, 163.

Status – design and construction are on-going

23. Turnpike Interchange 8A to Route 130 Connector Improvements

This project will address significant traffic congestion near Interchange 8A. The project limits include a section of Route 32 between Interchange 8A and the interconnection of Route 32 with Route 130. Middlesex County has requested that the Authority undertake appropriate improvements on the basis that much of the traffic within the corridor is destined to or from the Turnpike.

Status – design and construction are on-going

24. Turnpike Interchange 14A Reconstruction

There are operational limitations due to constrained geometry for this existing Turnpike interchange that it is located within the cities of Bayonne and Jersey City. The proposed redevelopment of the Military Ocean Terminal in Bayonne along with Global Terminal will result in a significant increase in traffic using the Interchange 14A toll plaza. The interchange capacity will be improved, and two additional toll lanes will be added to the existing toll plaza to address the operational and capacity deficiencies of the existing interchange.

Status – design and construction are on-going

25. Parkway Interchange 41 Improvements

At Interchange 41, local traffic previously accessed the Parkway through a service road to the Atlantic City Service Area from Jimmie Leeds Road. This project provided two additional ramps to allow Parkway access at Jimmie Leeds Road to and from the south.

Status – design and construction completed and opened to traffic – August 2015

26. Parkway Interchange 142 Improvements

This project was a joint cooperative project between the Authority and the New Jersey Department of Transportation (NJDOT) that provided for the design and construction of missing ramp connections between the Parkway and I-78. The project also provided improvements to the interchange's existing ramp network, toll plaza and to the I-78 mainline. The project was funded by the Federal Highway Administration, NJDOT, and the Authority. This project cost represents the Authority's share of the overall cost of the project.

Status – design and construction completed and opened to traffic – December 2015

27. Parkway Interchange 44 Improvements

Interchange 44 previously provided access to the Parkway to and from the north only. This project completed the interchange to provide two additional ramps to allow access to and from the south.

Status – design and construction completed and opened to traffic – August 2015

28. Parkway Interchanges 9, 10 & 11 Improvements

There were three traffic signals on the Parkway in Cape May County at Interchanges 9, 10 and 11. This project eliminated the traffic signals by providing three bridges to carry the Parkway over the local streets at each interchange. This project also provided for full access to the Parkway northbound and southbound at each interchange.

Status – design and construction completed and opened to traffic – April 2016

29. Parkway Interchange 125 Improvements Phase I

Interchange 125 is presently configured with a southbound entrance and northern exit ramp. This project will provide a new northbound entrance and new southbound exit ramp. The southbound exit ramp will be tolled to be consistent with one-way tolls at the Raritan Toll Plaza.

Status – design and construction are on-going

30. Parkway Interchange 88 Improvements

This project provided missing ramp movements at this partial interchange along with modifications to the existing ramp movements to and from the north and relocation of ramp toll collection facilities. The project also included the construction of two new bridges over NJ Route 70 for a collector/distributor roadway that was constructed between this location and Interchange 89.

Status – design and construction completed and opened to traffic – June 2015

31. Parkway Interchange 91 Improvements

This project is a joint cooperative project between the Authority and Ocean County that provides missing ramp movements at this partial interchange along with the reconstruction and safety improvements to the existing northbound ramp toll plaza. This project also includes the construction of two extended service roads and county road improvements that will eliminate the complexity of the current traffic pattern, relieve congestion on local roads, and enhance safety.

Status – design and construction completed – September 2017

Facilities Improvements

32. Salt Storage Facilities

This project provided new, increased salt storage capacity for the Turnpike and Parkway.

Status – design and construction completed – May 2016

33. Facilities Improvements Phase I

This project replaces and rehabilitates facilities at 22 Turnpike and Parkway maintenance districts to bring 50+ year old maintenance buildings into compliance with current building codes and operational standards. The project also includes repairing/rehabilitating several Turnpike toll plazas to incorporate safety and operational improvements. Finally, four new State Police facilities will be constructed under this project.

Status – design and construction are on-going

Parkway Widening (Interchange 35-80)

34. Parkway Widening Phase Interchanges 63-80

This project provided for a third travel lane with full shoulders in each direction on the Parkway and Express ***E-ZPass***/One-Way Southbound Tolls at the Barnegat Toll Plaza. Three (3) individual design and construction contracts were provided for mainline widening of the 17-mile section in both directions, new sign structures, ten bridge replacements, realignment of the Parkway at the Barnegat Toll Plaza to provide for the elimination of tolls in the northbound direction, creating Express ***E-ZPass*** operation in the southbound direction, and a new toll utility building.

Status – design and construction completed and opened to traffic – May 2011

35. Parkway Widening Phase Interchanges 35-63

This project provides for the construction of a third travel lane with full shoulders in each direction on the Parkway. Six (6) individual design and construction contracts will provide for the widening of the 28-mile section in both directions the Parkway, new sign structures, and multiple bridge replacements.

Status – design and construction Interchange 41 to 63 completed and opened to traffic – May 2016
– design and construction Interchange 35 to 41 completed and opened to traffic – May 2018

OPERATING EXPENSES

The Authority is currently pursuing an overall Financial Plan that is designed to maintain cost efficiencies, reduce costs where possible, and otherwise constrain the financial needs of Authority operations. Policy decisions that have been adopted during the last several years provide a continued constraint on non-operating staffing levels, a renegotiation of work rules under union contracts, and other procedures that have resulted in control over overall operating expenses. However, non-discretionary budget items such as projected wage, pension, and health benefit increases; increased utility costs; increased insurance premiums; and increased state police costs coupled with increased staffing due to additional roadway infrastructure being constructed under the CIP becoming complete and operational, will cause the operating expenses for the Authority to increase. Staff increases are primarily focused in the maintenance department to address additional maintenance needs created by the additional lane miles and toll collection department. The toll collection department is increasing their permanent staff moderately to offset the hiring of 100 seasonal toll collectors. Several departments are reducing staff and the effect of the toll collection department staffing adjustments is a net savings for this department. Furthermore, the Authority is being conservative when budgeting for maintenance activities associated with severe weather and other unexpected events. The severe winter of 2014 and the lingering effects of Superstorm Sandy have provided great experience and sound basis for budget planning for such events. The Authority has adopted a philosophy to budget based on the worst actual expenditures so there will be sufficient funds available to address severe weather and other unexpected events. Overall, the operating budget is being managed in an appropriate manner, keeping increases to a minimum while accounting for the needs of the Authority's assets and safety of the traveling public.

A review of the history of the Authority's operating expenses was performed for periods prior to and after consolidation with the New Jersey Highway Authority, which occurred in 2003. From 1994 to 2002, the Authority's growth in operating expenses was flat. During that eight (8) year period, the operating budget decreased by $626,300. After consolidation, for the period from 2004 to 2008, the operating expenses grew at a rate of 3.18% per year. From 2009 to 2016, however, the Authority's operating budgets remained relatively flat, increasing only slightly. In fact, from the 2011 budget to the 2017 budget, the operating expenses (not including costs associated with snow removal and severe weather) increased only 5% over the six-year period. This is only 0.8% per year. In 2018, numerous issues and agreements were addressed with worker unions and other human resource items were addressed, resulting in a larger than normal increase in operating expenses. However, the Authority is continuing its current operational policies with emphasis on strict cost controls moving forward. As one example, it is anticipated that future improvements in operational efficiency will continue as the percentage of ***E-ZPass*** users increase. At the September 29, 2015 Commission Meeting, the Authority awarded a contract for the upgrade and operation of the ***E-ZPass*** Customer Service Center to the current vendor, Conduent (formerly known as Xerox). The Authority has revised the contract requirements for the center's operations such that Conduent will be required to manage it under the philosophy of "active management for continuous improvement", a state-of-the-art management philosophy. With these new procedures, it is anticipated that efficiencies in the operations of the customer service center will be realized over the life of the new contract. The new ***E-ZPass*** Customer Service Center came online during October 2017 and is providing cost efficiencies with its operation.

In addition to the annual increase in the non-discretionary items of the operating budget, the capital projects included in the CIP will be completed and operational prior to 2022 resulting in added infrastructure that must be adequately inspected and maintained by the Authority. These projects include:

- Widening of the Turnpike between Interchanges 6 to 9 (216 equivalent lane miles of new pavement – in service 2015)
- Construction of the Garden State Parkway Shoulder Widening - Mileposts 80 to 100 (40 equivalent lane miles of new shoulder pavement – in service 2015)
- Construction of the new Mullica River Bridge (3.5 equivalent lane miles of new pavement – in service 2013)
- Completion of the new Bass River Bridge (3.5 equivalent lane miles of new pavement – in service 2015)
- Construction of the Garden State Parkway Interchange 125 Improvements (1 equivalent lane mile of new pavement – in service 2018)
- Construction of the Garden State Parkway Interchange 91 Improvements (2 equivalent lane miles of new pavement – in service 2016)
- Construction of the Garden State Parkway Interchanges 41 and 44 Improvements (4 equivalent lane miles of new pavement – in service 2015)
- Construction of the Garden State Parkway Interchange 88 Improvements (15 equivalent lane miles of new pavement – in service 2015)
- Construction of the Garden State Parkway Interchange 35 – 48 Widening (26 equivalent lane miles on new pavement – in service 2018)
- Construction of the Garden State Parkway Interchange 48 – 63 Widening (30 equivalent lane miles on new pavement – in service 2015)
- Construction of the New Jersey Turnpike Interchange 8A Improvements (8.6 equivalent lane miles of new pavement – in service 2018)
- Construction of the New Jersey Turnpike Interchange 14A Improvements (6 equivalent lane miles of new pavement – in service 2018)
- Construction of the Garden State Parkway Interchanges 9, 10, and 11 Improvements (4 equivalent lane miles of new pavement – in service 2015)

Based on the above analyses, the Authority's Financial Plan and fiscal policies, and our professional judgment, we have applied a yearly increase of 2% for Operating Expenses for the years 2019 through 2028.

Based upon the factors presented above, our periodic review of the Authority's expenses and budgets, as well as our specific knowledge of the operations for the Turnpike and Parkway, projections for Operating Expenses for the years 2019 through 2028 are as follows:

Estimate of Operating Expenses (In thousands)	
Year	**Amount**
2019	$582,071
2020	$593,712
2021	$605,587
2022	$617,698
2023	$630,052
2024	$642,653
2025	$655,506
2026	$668,616
2027	$681,988
2028	$695,628

RESERVE FUND REQUIREMENTS

Historically, the Authority has made annual deposits to the Maintenance Reserve Fund to provide funding for significant maintenance of the bridges and roadways. The Special Projects Reserve Fund was created to provide funding for various other types of projects including: safety improvements; repairs and replacements of buildings and other facilities; maintaining equipment and vehicle fleets; and improvements in administrative, toll collection, and communication systems. In short, the two funds provide for the maintenance and improvement of all elements that in some manner contribute to the proper and efficient operation of the Authority's toll road assets.

Currently, the Authority has approximately 4,446 lane miles of pavement, 1,106 bridges that require deck maintenance, superstructure and substructure maintenance, and painting. The Maintenance Reserve Fund budget will generally provide for the following:

- Resurface 300 lane-miles per year (move from a 15-year cycle to a 12-year cycle to resurface the entire roadway)
- Re-deck approximately eight to ten bridge decks per year
- Maintain all bridge decks (1,106) in a state of good repair
- Paint bridges (15-year cycle for painting all bridges)

The reserve fund amounts presented below are estimates of the annual requirements to meet the needs of the Authority for the purposes cited above. The projected amounts reflect a continuation of the Authority's historic policies and practices regarding the application of the funds and allows for annual increases commensurate with historical trends and current day economic conditions. These amounts are necessary and sufficient to meet the needs of the Authority's system and are consistent with those presented in Consulting Engineer's reports prepared by HNTB Corporation that accompanied previous official statements. The following table presents the projected costs to maintain the Turnpike and Parkway during the period 2019 through 2028. In arriving at the amounts, it has been assumed that inflation will increase modestly during the estimate period.

Reserve Fund Deposits (In thousands)		
Year	**Maintenance Reserve Fund Deposits**	**Special Project Reserve Fund Deposits**
2019	$131,468	$41,300
2020	$134,097	$42,126
2021	$136,779	$42,969
2022	$139,515	$43,828
2023	$142,305	$44,705
2024	$152,305	$45,599
2025	$162,305	$46,511
2026	$172,305	$47,441
2027	$182,305	$48,390
2028	$192,305	$49,358

CONCLUSIONS

This report has presented information to be applied in developing the financial program for the Authority and to assist in planning capital projects for the Turnpike and Parkway. On both roads, there are roadway sections and bridges that are over 60 years old. Many projects that make up the CIP provide major reconstruction that is necessary to maintain the facilities in proper condition for safe and convenient use by the traveling public. Timely implementation of this type of extraordinary maintenance is necessary to reduce the risk of revenue loss. Other projects included in the CIP are improvements, enhancements, and asset additions that are deemed necessary. Completion of these projects will improve safety and operations and likely increase revenues.

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APPENDIX D

SUMMARY OF GENERAL BOND RESOLUTION
AND CERTAIN DEFINITIONS

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SUMMARY OF GENERAL BOND RESOLUTION AND CERTAIN DEFINITIONS

A brief description of the General Bond Resolution and certain definitions used therein is included in this Appendix D. Such descriptions do not purport to be comprehensive or definitive and all references herein to the General Bond Resolution are qualified in their entirety by reference to the full text of the General Bond Resolution.

CERTAIN DEFINITIONS

The following is a summary of the definitions of certain terms used in the General Bond Resolution :

"Accreted Value" means, with respect to Capital Appreciation Bonds, the amount to which, as of any specified time, the principal of any such Bond has been increased by accretion, all as may be provided in an applicable Series Resolution.

"Accrued Debt Service" means, as of any date of calculation and with respect to any Series, an amount equal to the sum of (i) interest on the Bonds of such Series accrued and unpaid and to accrue to the end of the then current calendar month, (ii) all amounts due and payable by the Authority and all amounts to accrue to the end of the then calendar month pursuant to a Qualified Swap, and (iii) Principal Installments due and unpaid for such Series and that portion of the Principal Installment for such Series next due which would have accrued to the end of such calendar month if deemed to accrue monthly from a date one year prior to its due date or from the date of issuance of each such Series, whichever is later.

"Aggregate Debt Service" means, for any calendar year and as of any date of calculation, the sum of the amounts of Debt Service for such year with respect to all Series of Bonds then Outstanding and all Qualified Swaps then in effect.

"Annual Budget" means the annual budget, as amended or supplemented, adopted or in effect for a particular calendar year pursuant to the General Bond Resolution.

"Arts Center" means the Garden State Arts Center (currently known as the PNC Bank Arts Center), which is owned by the Authority.

"Authority" means the New Jersey Turnpike Authority, a body corporate and politic organized and existing under the New Jersey Turnpike Authority Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented from time to time.

"Authorized Denomination" means the minimum denomination, or any integral multiple thereof, in which a particular Series of Bonds may be issued pursuant to the applicable Series Resolution. In the case of Capital Appreciation Bonds, the Authorized Denominations may be stated in terms of Accreted Value at maturity or such earlier time as the Bonds are required to commence paying interest.

"Authorized Officer" means any member of the Authority or any officer or employee of the Authority authorized to perform specific acts or duties by resolution duly adopted by the Authority.

"Bond" or **"Bonds"** means any Bond or Bonds authenticated and delivered under and pursuant to the General Bond Resolution and an applicable Series Resolution and any obligations issued on or after August 20, 1991 under, or pursuant to the authority of, the 1984 Resolution which the Authority determines are entitled to the benefits of the General Bond Resolution. The term "Bond" shall include

Parity Variable Rate Bonds, any short term note or other debt obligation of the Authority, but shall not include any Variable Rate Debt, Commercial Paper or any Subordinated Indebtedness.

"Capital Appreciation Bonds" means any Bond issued pursuant to the General Bond Resolution and a Series Resolution which do not pay interest either until maturity or until a specified date prior to maturity, but whose amount increases periodically by accretion to a final principal amount.

"Charges Fund" means the Charges Fund established in the applicable Series Resolution related to a Qualified Swap to provide for the payment of fees and charges of the Standby Purchaser, the Remarketing Agent and the Tender Agent.

"Code" means the Internal Revenue Code of 1986, as amended, or any successor thereto, as the same may be in effect from time to time.

"Commercial Paper" means any note or other obligation of the Authority, subject to renewal at the end of any rate period, other than Variable Rate Debt, the term of which (prior to any renewal thereof) does not exceed 270 days.

"Consulting Engineers" means such engineer or engineering firm or corporation as at the time shall be retained by the Authority pursuant to the General Bond Resolution to perform the acts and carry out the duties provided for such Consulting Engineers in the General Bond Resolution.

"Cost of Construction" means with respect to any Project, the cost of construction and/or acquisition, and equipping, including without limitation, bridges or crossings over or under rivers, streams or other waters or over highways and railroads, the cost of acquisition of all land, rights-of-way, property, rights, casements and interests acquired or to be acquired by the Authority, the cost of demolishing or removing any buildings or structures on land so acquired, including the cost of acquiring any lands to which such buildings or structures may be moved, the cost of relocating or reconstructing highways, highway interchanges, access roads to private property, including the cost of land or easements therefor, the response costs, direct and indirect (including but not limited to the costs of testing, investigation, feasibility studies, remediation, treatment, clean-up, removal, litigation, fines and penalties related thereto) incurred with respect to any environmental hazard or perceived environmental hazard under federal, State or local laws or regulations and any third party claims with respect to such hazard or perceived hazard, the amount of any final award or judgment in, or any settlement or compromise of, any proceeding to acquire lands, rights-of-way, easements or other interests, the payment of damages caused by construction in the manner provided by law, the cost of any indemnity and surety bonds and premiums on insurance during construction, administrative expenses, legal fees, cost of audits, the cost of all machinery and equipment, initial inventories, financing expenses, fees and expenses of the Fiduciaries and costs of keeping accounts and making reports required by the General Bond Resolution, cost of traffic estimates and of engineering, financial and legal services, plans, specifications, surveys, estimates of costs and revenues, and other expenses necessary or incident to determining the feasibility or practicability of constructing or acquiring such Project, amounts, if any, required by the General Bond Resolution to be paid into the Debt Service Fund, the Debt Reserve Fund, the Maintenance Reserve Fund or the Special Project Reserve Fund, payments when due (including without limitation, on any early termination date) under a Qualified Swap and payments when due (whether at the maturity of principal or the due date of interest or upon redemption) on any indebtedness of the Authority (other than Bonds), including Variable Rate Debt, Commercial Paper and Subordinated Indebtedness, incurred for such Project, all to the extent applicable to the construction and/or acquisition of such Project and payable by the Authority, and such other expenses payable by the Authority not specified herein as may be necessary or incident to the construction and/or acquisition of such Project and the placing of such Project in operation.

"Credit Facility" means any letter of credit, standby bond purchase agreement, line of credit, surety bond, insurance policy or other insurance commitment or similar agreement (other than a Qualified Swap or an Exchange Agreement), satisfactory to the Authority, that is provided by a commercial bank, insurance company or other entity, with a current long term rating (or whose obligations thereunder are guaranteed by an entity with a long term rating) from Moody's and S&P not lower than the credit rating of any Series of Bonds, to provide support for a Series of Bonds or for any issue of Variable Rate Debt, Commercial Paper or Subordinated Indebtedness, and shall include any Substitute Credit Facility.

"Credit Issuer" means the issuer of the Credit Facility or any Substitute Credit Facility.

"Debt Reserve Fund" means the Debt Reserve Fund established in the General Bond Resolution to secure the Bonds.

"Debt Reserve Requirement" means with respect to all Bonds an amount equal to the lesser of (i) the greatest amount of interest accruing on the Outstanding Bonds in any one calendar year taking into account the increased Accreted Value of Capital Appreciation Bonds in such calendar year (except that the incremental amount attributable to any Parity Variable Rate Bonds may be based upon the fixed rate of interest as set forth in the Series Resolution for such Bonds), determined as of any particular date or (ii) the maximum amount permitted by Section 148(d)(1) of the Code.

"Debt Service" means, for any period, as of any date of calculation and with respect to any Series, an amount equal to the sum of (i) interest accruing during such period on Bonds of such Series, except to the extent that such interest is to be paid from Bond proceeds deposited in the Debt Service Fund, (ii) all net amounts, if any, due and payable by the Authority under a Qualified Swap during such period, and (iii) that portion of each Principal Installment for such Series which would accrue during such period if such Principal Installment were deemed to accrue monthly from a date one year prior to its due date or from the date of issuance of such Series, whichever is later, such amounts in clauses (i) and (iii) to be calculated on the assumption that Bonds Outstanding at the date of calculation will cease to be Outstanding by reason, but only by reason, of the payment of each Principal Installment on its due date; provided however, that in calculating Aggregate Debt Service for purposes of meeting the requirements for issuing Refunding Bonds under the General Bond Resolution and in calculating the Net Revenue Requirement for purposes of meeting the requirements for issuing Non-Refunding Bonds and Refunding Bonds and complying with the Authority's covenants concerning tolls and charges under the General Bond Resolution, Debt Service on Bonds for which the Authority has entered into a Qualified Swap shall be calculated assuming that the interest rate on such Bonds shall equal the stated fixed rate on the Qualified Swap or, if applicable and if greater than such stated fixed rate, the composite rate for the Authority's Parity Variable Rate Bonds for the twelve (12) month period preceding such calculation or such lesser period, if any, of at least three (3) months during which such Parity Variable Rate Bonds were Outstanding, in either case resulting in no assumed payment for purposes of clause (ii) above.

"Depository" means any bank, national banking association, savings or savings and loan institution or trust company selected by the Authority as a depository of moneys and securities held under the provisions of the General Bond Resolution, and may include the Trustee and may include the New Jersey Cash Management Fund.

"Exchange Agreement" means, to the extent from time to time permitted by applicable law, any interest exchange agreement, interest rate swap agreement, currency swap agreement or other contract or agreement, other than a Qualified Swap, authorized, recognized and approved by the Authority as an Exchange Agreement and providing for (i) certain payments by the Authority from the General Reserve Fund and (ii) payments by an entity whose senior long term debt obligations, other senior unsecured long term obligations or claims paying ability, or whose obligations under an Exchange Agreement are guaranteed by an entity whose senior long term debt obligations, other senior unsecured long term obligations or claims paying ability are rated not less than A3 by Moody's and A- by S&P, or the equivalent thereof by any successor thereto; which payments by the Authority and counterparty are calculated by reference to fixed or variable rates and constituting a financial accommodation between the Authority and such counterparty.

"Federal Securities" means (i) any direct and general obligations of, or any obligations guaranteed by, the United States of America, including but not limited to interest obligations of the Resolution Funding Corporation or any successor thereto, (ii) any obligations of any state or political subdivision of a state (collectively "Municipal Bonds") which Municipal Bonds are fully secured as to principal and interest by an irrevocable pledge of moneys or direct and general obligations of, or obligations guaranteed by, the United States of America, which moneys or obligations are segregated in trust and pledged for the benefit of the holders of the Municipal Bonds, and (iii) certificates of ownership of the principal or interest of direct and general obligations of, or obligations guaranteed by, the United States of America, which obligations are held in trust by a commercial bank which is a member of the Federal Reserve System.

"Feeder Road" means any road which in the opinion of the Authority creates or facilitates access to the Turnpike System and the acquisition, construction or repair of which by the Authority will increase or maintain Net Revenues after giving effect to the costs to the Authority of acquiring, constructing, repairing, maintaining and operating such road.

"Fiduciary" or **"Fiduciaries"** means the Trustee, the Registrar, the Tender Agent and the Paying Agents, or any or all of them, as may be appropriate.

"Fitch" means Fitch Ratings and any successor thereto.

"General Project" means a project, other than a Turnpike Project, which the Authority is authorized by law to undertake and all or a portion of the costs of which will be paid from the General Reserve Fund or from the proceeds of Subordinate Indebtedness.

"Investment Securities" means any of the following securities legal for the investment of the Authority funds at the time of purchase thereof:

(i) Federal Securities;

(ii) Bonds, debentures, notes or other evidences of indebtedness issued by any agency or instrumentality of the United States to the extent such obligations are guaranteed by the United States or by another such agency the obligations (including guarantees) of which are guaranteed by the United States;

(iii) Bonds, debentures, notes or other evidences of indebtedness issued by any of the following agencies: Government National Mortgage Association, Federal Land Banks, Federal Home Loan Mortgage Corporation, Federal National Mortgage Association, Federal home Loan Banks, Federal Intermediate Credit Banks, Banks for Cooperatives, Tennessee Valley Authority, United States Postal Service, Farmers Home Administration, Export-Import Bank, Federal Financing Bank and Student Loan Marketing Association;

(iv) Negotiable or non-negotiable certificates of deposit issued by any bank, trust company or national banking association, which certificates of deposit shall be continuously secured or collateralized by obligations described in subparagraphs (i) or (ii) of this definition, which shall have a market value (exclusive of accrued interest) at all times at least equal to the principal amount of such certificates of deposit and shall be lodged with the Trustee, as custodian, by the bank, trust company or national banking association issuing such certificates of deposit;

(v) Uncollateralized negotiable or non-negotiable certificates of deposit issued by any bank, trust company or national banking association, the unsecured obligations of which are rated in one of the two highest rating categories, without regard to rating sub-categories, by Moody's and S&P;

(vi) Repurchase agreements collateralized by obligations described in subparagraphs (i), (ii) or (iii) of this definition with any registered broker/dealer subject to the Securities Investors' Protection Corporation jurisdiction, which has an uninsured, unsecured and unguaranteed obligation rated "Prime-1" or "A3" or better by Moody's and "A-1" or "A" or better by S&P, or any commercial bank with the above ratings, provided:

(a) a master repurchase agreement or specific written repurchase agreement governs the transaction, which characterizes the transaction as a purchase and sale of securities,

(b) the securities are held free and clear of any lien by the Trustee or an independent third party acting solely as agent for the Trustee, and such third party is (i) a Federal Reserve Bank, (ii) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus, and undivided profits of not less than $75,000,000, or (iii) a bank approved in writing for such purpose by each Credit Issuer, if any, and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee,

(c) a perfected first security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 CFR 306.1 *et seq*. or 31 CFR 350.0 *et seq*. or a successor provision in such securities is created for the benefit of the Trustee,

(d) the repurchase agreement has a term of six months or less, or the Authority will value the collateral securities no less frequently than monthly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within two business days of such valuation,

(e) the repurchase agreement matures on or before a debt service payment date (or other appropriate liquidation period), and

(f) the fair market value of the securities in relation to the amount of the repurchase obligation is equal to at least 100%.

(vii) Banker's acceptances, eurodollar deposits and certificates of deposit (in addition to the certificates of deposit provided for by subparagraphs (iv) and (v) above) of the domestic branches of foreign banks having a capital and surplus of $1,000,000,000 or more, or any bank or trust company organized under the laws of the United States of America or Canada, or any state or province thereof, having capital and surplus, in the amount of $1,000,000,000; provided that the aggregate maturity value of all such banker's acceptances and certificates of deposit held at any time as investments of funds under the General Bond Resolution with respect to any particular bank, trust company, or national association shall not exceed 5% of its capital and surplus; and provided further that any such bank, trust company, or national association shall be rated in one of the two highest rating categories, without regard to rating sub-categories, by both S&P and Moody's;

(viii) Other obligations of the United States of America or any agency thereof which may then be purchased with funds belonging to the State or which are legal investments for savings banks in the State;

(ix) Deposits in the New Jersey Cash Management Fund;

(x) Obligations of any state, commonwealth or possession of the United States or a political subdivision thereof or any agency or instrumentality of such a state, commonwealth, possession or political subdivision, provided that at the time of their purchase such obligations are rated in either of the two highest rating categories by both S&P and Moody's; and

(xi) Commercial paper with a maturity date not in excess of 270 days rated A-1+ by S&P and P-1 by Moody's at the time of such investment, issued by an entity incorporated under the laws of the United States or any state thereof.

"Liquidity Facility" means any letter of credit, line of credit or standby loan commitment made available to fund purchases of Variable Rate Debt, Commercial Paper or Subordinated Indebtedness upon maturity or mandatory optional tender of such obligations; such Liquidity Facility may be part of, or separate from, any Credit Facility or Substitute Credit Facility supporting such obligations.

"Maintenance Reserve Payment" means any amount provided in the Annual Budget for any calendar year to be deposited in the Maintenance Reserve Fund during such year.

"Moody's" means Moody's Investors Service, Inc. and any successor thereto.

"Net Revenue Requirement" means, with respect to any period of time, an amount equal to the greater of (i) the sum of 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).

"Net Revenues" means, 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.

"Non-Refunding Bonds" means all Bonds issued pursuant to Section 203 of the General Bond Resolution.

"Operating Expenses" means the Authority's expenses for operation, maintenance, repairs, ordinary replacement and ordinary reconstruction of the Turnpike System and ordinary acquisition of equipment for the Turnpike System; including, without limiting the generality of the foregoing, all policing, administrative and engineering expenses, legal and financial advisory expenses, fees and expenses of the Fiduciaries, required payments to pension, retirement, health and hospitalization funds, insurance premiums, Credit Facility fees (except Credit Facility fees, charges and premiums to the extent such fees, charges and premiums are treated as interest under the Code) and any provision or reserves for self-insurance, all arbitrage rebate payments required by Section 148 of the Code to be made from time to time to the United States Government, and any other current expenses or obligations required to be paid by the Authority under the provisions of the General Bond Resolution or by law, all to the extent properly and directly attributable to the operation of the Turnpike System, but excluding any costs or expenses for new construction or any allowance for depreciation and any costs and expenses paid or required to be paid by any party other than the Authority.

"Parity Variable Rate Bonds" means Bonds issued pursuant to the General Bond Resolution and a Series Resolution bearing interest at a variable rate and specifying a maximum rate of interest permitted by law provided that at least one of the following conditions is met: (i) at the time of issuance, the Authority has entered into a Qualified Swap with respect to such Bonds or (ii) the Bonds bear interest at a variable rate, but are issued concurrently in equal par amounts with other Bonds bearing interest at a variable rate and which are required to remain Outstanding in equal amounts at all times, if the net effect of such equal par amounts and variable rates at times is a fixed rate of interest to the Authority.

"Pledged Revenues" means (i) all Turnpike Revenues, (ii) other revenues of the Authority, including but not limited to payments to the Authority under any Qualified Swap, but in all cases only to the extent specifically pledged pursuant to one or more Series Resolutions to secure Bonds issued under the General Bond Resolution, and (iii) investment income from any moneys or securities held under the General Bond Resolution and paid into the Revenue Fund.

"Principal Installment" means, as of any particular date of calculation and with respect to any particular future date and with respect to Bonds of a particular Series, (i) the principal amount of Outstanding Bonds of said Series which mature on such future date, taking into account the Accreted Value of any Capital Appreciation Bond but reduced by the aggregate principal amount of such Outstanding Bonds which would at or before said future date cease to be Outstanding by reason, but only by reason, of the payment when due and application in accordance with the General Bond Resolution of Sinking Fund Installments payable on or before said future date toward the retirement of such Outstanding Bonds, and (ii) the amount of any Sinking Fund Installment payable on said future date toward the retirement of any Outstanding Bonds of said Series.

"Purchase and Remarketing Fund" means, with respect to each Series of Bonds subject to tender purchase pursuant to the applicable Series Resolution, the Fund so designated in such Series Resolution.

"Qualified Swap" or **"Swap Agreement"** means, with respect to a Series of Bonds, any financial arrangement (i) that is entered into by the Authority with an entity that is a Qualified Swap Provider at the time the arrangement is entered into; (ii) which provides that the Authority shall pay to such entity an amount based on the interest accruing at a fixed rate on an amount equal to the principal amount of the Outstanding Bonds of such Series, and that such entity shall pay to the Authority an amount based on the interest accruing on a principal amount initially equal to the same principal amount as such Bonds, at a variable rate of interest computed according to a formula set forth in such arrangement (which need not be the same as the actual rate of interest borne by the Bonds) or that one shall pay to the other any net amount due under such arrangement; and (iii) which has been designated in writing to the Trustee by an Authorized Officer of the Authority as a Qualified Swap with respect to the Bonds; provided, however, that if the Bonds corresponding to such Qualified Swap are retired in whole, unless the Qualified Swap is also terminated, the Qualified Swap Provider shall then be entitled to receive a Counsel's Opinion from the law firm or firms rendering an opinion as to the Authority's obligations under the Swap Agreement on its date of issue, as to whether or not the Swap Agreement is a valid and binding obligation of the Authority after such retirement of the Bonds under then existing law.

"Qualified Swap Provider" means, with respect to a Series of Bonds, an entity whose senior long term debt obligations, other senior unsecured long term obligations or claims paying ability or whose payment obligations under a Qualified Swap are guaranteed by an entity whose senior long term debt obligations, other senior unsecured long term obligations or claims paying are rated (at the time the subject Qualified Swap is entered into) at least as high as A3 by Moody's and A– by S&P, or the equivalent thereof by any successor thereto.

"Rating Agencies" means (i) each of Fitch, Moody's and S&P so long as each such agency shall have assigned a rating to any Series of Bonds and (ii) any other nationally recognized securities rating agency which shall have assigned a rating to any Series of Bonds.

"Series Resolution" means any resolution of the Authority adopted pursuant to the General Bond Resolution to authorize the issuance of a particular Series of Bonds.

"Special Project" means any (i) major resurfacing of the Turnpike System, replacement or reconstruction of the Turnpike System or any part thereof, or any other major or extraordinary repairs, renewals or replacements of the Turnpike System, (ii) studies, surveys, estimates and investigations in connection with any of the foregoing purposes, and (iii) advance or contribution authorized by the Act for the State of New Jersey's share or any portion thereof under the Federal aid highway laws of the cost of construction of any highway improvement determined by the Authority to be a major improvement necessary to restore or prevent physical damage to the Turnpike System, for the safe or efficient operation of such System, or to prevent loss of Pledged Revenues.

"Special Project Reserve Payment" means any amount provided or required to be provided in the Annual Budget for any calendar year to be deposited in the Special Project Reserve Fund during such year.

"Special Project Reserve Requirement" means, as of any date of calculation, (i) at any time during the period commencing January 1, 1992 and ending December 31, 1995, an amount equal to $25,000,000, (ii) for calendar year 1996, an amount equal to $30,000,000, (iii) for calendar year 1997, an amount equal to $35,000,000, (iv) for calendar year 1998, an amount equal to $40,000,000, (v) for calendar year 1999, an amount equal to $45,000,000, and (vi) for calendar year 2000 and each year thereafter, an amount equal to $50,000,000.

"Special Treasury Obligations" means United States Treasury Certificates of Indebtedness, Notes and Bonds-State and Local Government Series.

"S&P" means Standard & Poor's, a division of The McGraw-Hill Companies, Inc., and any successor thereto.

"Standby Agreement" means, with respect to a Series of Bonds, an irrevocable letter of credit and related reimbursement agreement, line of credit, standby bond purchase agreement or similar agreement providing for the purchase of all or a portion of the Bonds of such Series, as amended, supplemented or extended from time to time.

"Standby Purchaser" means, with respect to a Series of Bonds, the provider of the Standby Agreement for such Series of Bonds.

"State" means the State of New Jersey.

"Subordinated Indebtedness" means any evidence of indebtedness permitted to be issued in accordance with the provisions described herein under the caption "Variable Rate Debt; Commercial Paper; Subordinated Indebtedness".

"Substitute Credit Facility" means any letter of credit, standby bond purchase agreement, line of credit, surety bond, insurance policy or other insurance commitment or similar agreement (other than a

Qualified Swap or an Exchange Agreement), satisfactory to the Authority, that replaces a Credit Facility and is provided by a commercial bank, insurance company or other financial institution with a current long term credit rating (or whose obligations thereunder are guaranteed by a financial institution with a long term credit rating) from Moody's and S&P not lower than the credit rating of any Series of Bonds.

"Supplemental Resolution" means any resolution of the Authority adopted pursuant to Article XI of the General Bond Resolution.

"Tax Exempt Obligations" means Bonds of the Authority the interest on which is intended to be excluded from gross income of the Owners thereof for purposes of federal income tax, except for any alternative minimum or similar tax.

"Tender Agent" means, with respect to a Series of Bonds, any commercial bank or trust company organized under the laws of any state of the United States or any national banking association designated as a tender agent for such Series of Bonds, and its successor or successors hereafter appointed in the manner provided in the applicable Series Resolution.

"Traffic Engineers" means such engineer or engineering firm or corporation at the time retained by the Authority pursuant to the General Bond Resolution to perform the acts and carry out the duties provided for such Traffic Engineers in the Resolution.

"Turnpike Project" or **"Project"** means (a) any express highway, superhighway or motorway authorized under the Act to be acquired or constructed by or on behalf of the Authority and that, except for (i) the I-95 extension referred to in Section 19 of the Act and (ii) a proposed by-pass highway at Hightstown, is subject to tolls and charges by the Authority under Section 27:23-9 of the Act, and (b) the Arts Center, all bridges, tunnels, overpasses, underpasses, interchanges, entrance plazas, approaches, toll facilities, service areas, service stations, service facilities, communications facilities, park and ride projects, Feeder Roads and administration, storage and other buildings, machinery and equipment, and all other structures, facilities and appurtenances necessary for the construction, operation or maintenance of the Turnpike System and all replacements, improvements and modifications thereto, together in each case with all land and rights in land required therefor.

"Turnpike Revenues" means (i) all tolls, revenues, fees, charges, rents and other income and receipts derived from the operation of the Turnpike System, (ii) the proceeds of any business interruption insurance relating to the Turnpike System and of any other insurance which insures against loss of Turnpike Revenues, and (iii) amounts on deposit in the Construction Fund, the Special Project Reserve Fund and the General Reserve Fund, and available for deposit in the Revenue Fund and actually deposited therein.

"Turnpike System" means the existing New Jersey Turnpike and all Turnpike Projects in addition thereto.

"Variable Rate Debt" means obligations of the Authority, other than Parity Variable Rate Bonds, Commercial Paper or Subordinated Indebtedness, bearing interest at a variable rate and specifying a maximum rate of interest permitted by law.

SUMMARY OF CERTAIN PROVISIONS OF THE GENERAL BOND RESOLUTION

The following is a brief summary of certain provisions of the General Bond Resolution .

Issuance of Non-Refunding Bonds (General Bond Resolution, Section 203)

One or more Series of Non-Refunding Bonds may be issued for the purpose of (i) paying the Costs of Construction of a Project and (ii) to raise funds to complete any Project for which Non-Refunding Bonds were issued pursuant to clause (i) above, subject to the following conditions and tests, among others:

> (1) The Net Revenues for any period of 12 consecutive calendar months (reflecting any adjustment in toll rates made at any time during such period as if such toll rates were effective since the beginning of such period out of the preceding 24 calendar months equal or exceed the Net Revenue Requirement for such 12 months without regard to the Bonds to be issued; and
>
> (2) The estimated Net Revenues for the then current and each future calendar year to and including the fifth full calendar year after the estimated date when the Project will be placed in service equal or exceed the Net Revenue Requirement for each such year and Net Revenues in the fifth such calendar year equal or exceed future maximum Aggregate Debt Service in any year.
>
> (3) There will be deposited (i) in the Debt Reserve Fund the amount, if any, necessary so that the balance in such fund equals the Debt Reserve Requirement, calculated immediately after delivery of such Non-Refunding Bonds, (ii) in any other Fund the amount required by the Series Resolution, and (iii) in the Construction Fund for the Project specified by the Series Resolution the remaining balance.

For the purposes of the above tests, the estimated Net Revenues are to be based on estimates by the Authority's Traffic Engineers, as defined in the General Bond Resolution, of Turnpike Revenues and estimates by the Authority's Consulting Engineers, as defined in the General Bond Resolution, of Operating Expenses and are to give effect to the construction of the Project for which such Bonds are being issued and any other uncompleted Project. The estimates of the Traffic Engineers are to reflect the effect of the construction, improvement or acquisition of any highway or other facility which any Federal, State or other agency is then projecting or planning and which, in their opinion, may be materially competitive with any part of the Turnpike System.

Issuance of Refunding Bonds (General Bond Resolution, Section 204)

One or more Series of Refunding Bonds may be issued to refund (i) any or all Outstanding Bonds of one or more Series or maturities within a Series or Bonds within a maturity or (ii) any Variable Rate Debt, Commercial Paper or Subordinated Indebtedness.

Bonds may be issued to refund outstanding Bonds only if, among other conditions, (i) either the Authority meets the tests described above under "ISSUANCE OF NON-REFUNDING BONDS" or Aggregate Debt Service is not increased for any calendar year as a result of such refunding and (ii) if there shall be in effect a Qualified Swap with respect to the Bonds to be refunded and such Qualified Swap shall be terminated upon the date such Refunding Bonds are issued, moneys in an amount sufficient to make the payment, if any, due by the Authority under such Qualified Swap upon such termination are deposited with the Trustee.

The issuance of Bonds to refund Variable Rate Debt, Commercial Paper or Subordinated Indebtedness is subject to substantially the same conditions and tests referred to above under "ISSUANCE OF NON-REFUNDING BONDS".

Pledge Effected by General Bond Resolution (General Bond Resolution, Sections 501 and 504)

The General Bond Resolution pledges for the payment of the principal and Redemption Price of, and interest on, the Bonds, and all obligations of the Authority under any Qualified Swap and certain Credit Facilities securing all or a portion of any Series of Bonds, in accordance with their terms and the provisions of the General Bond Resolution and such Qualified Swap and Credit Facilities, subject only to the provisions of the General Bond Resolution permitting the application thereof for the purposes and on the terms set forth in the General Bond Resolution: (i) the proceeds of the sale of the Bonds, (ii) all Pledged Revenues, and (iii) amounts on deposit in all Funds established by the General Bond Resolution, except for certain funds deposited in the Construction Fund and, under certain circumstances, the General Reserve Fund. The pledge and lien created by the General Bond Resolution may be modified by a Series Resolution or a supplemental resolution to provide for a pledge of amounts on deposit in particular funds or accounts to a particular Series of Bonds, the proceeds of which Series of Bonds funded such funds or accounts, superior to the pledge of such funds and accounts to other Bonds. The General Bond Resolution requires that the Authority shall pay out of moneys in the Revenue Fund, free and clear of any pledge created by the General Bond Resolution, all amounts required for reasonable and necessary Operating Expenses.

Funds

Construction Fund: The General Bond Resolution provides that the Authority shall establish within the Construction Fund a separate account for each Project the costs of which are to be paid in whole or in part out of the Construction Fund.

The Authority will pay into each separate account established for each Project the proceeds of Non-Refunding Bonds issued therefor, to the extent not required to make other required deposits. Amounts in each separate account established for each Project financed by Non-Refunding Bonds shall be applied to the purposes specified in the Series Resolution authorizing such Bonds. Certain insurance proceeds are also to be paid into the Construction Fund.

Moneys in the Construction Fund shall be invested by the Authority to the fullest extent practicable in Investment Securities maturing in such amounts and at such times as may be necessary to provide funds when needed to pay the Costs of Construction or other costs payable from such moneys.

To the extent that other moneys are not available therefor, amounts in the Construction Fund, except for moneys accepted from the United States Government or the State on the condition that such moneys not be encumbered by the Authority's debt service obligations, shall be applied to the payment of Debt Service.

Upon completion, substantial completion or abandonment of any Project and upon certification of an Authorized Officer of the Authority, any amount remaining in the separate account established therefor not required to complete payment of the Costs of Construction shall be deposited in the Debt Reserve Fund to the extent necessary to meet the Debt Reserve Requirement, and the balance shall be deposited into the Revenue Fund or the Maintenance Reserve Fund as directed by the Authority.

(General Bond Resolution, Section 503)

Debt Service Fund: The Trustee shall pay or request the Depository holding such Fund to pay from the Debt Service Fund the following amounts (a) to the respective Paying Agents, (i) the payment of interest and maturing principal amounts of the Bonds when due, (ii) payment of the redemption price and accrued interest on the redemption of Bonds, and (iii) payment of the purchase price of Bonds purchased through application of moneys accumulated in this fund by reason of the payment of any Sinking Fund Installment, and (b) to the Qualified Swap Provider, any amounts due and payable by the Authority during such month pursuant to a Qualified Swap under which the Authority is the fixed rate payor. All amounts held at any time in the Debt Service Fund shall be held on a parity basis for the ratable security and payment of Accrued Debt Service for the benefit of the Owners of all Bonds and of any Qualified Swap Provider in proportion to the amounts accrued and due to each of them.

(General Bond Resolution, Section 505)

Debt Reserve Fund: Amounts in the Debt Reserve Fund are to be applied to make up any deficiency in the Debt Service Fund. The General Bond Resolution provides that as a condition to the issuance of each Series of Bonds there shall be deposited in the Debt Reserve Fund the amount, if any, necessary so that the amount in such Fund equals the Debt Reserve Requirement calculated immediately after the issuance of such Series of Bonds.

Whenever the moneys and securities on deposit in the Debt Reserve Fund, together with the amount in the Debt Service Fund, are sufficient to pay in full all outstanding Bonds in accordance with their terms, together with any obligations owed by the Authority under any Credit Facility or any Qualified Swap secured on a parity with the Bonds, the funds on deposit in the Debt Reserve Fund are to be transferred to the Debt Service Fund.

In lieu of the required deposits into the Debt Reserve Fund, the Authority may deposit into the Debt Reserve Fund a surety bond or an insurance policy or a letter of credit in an amount equal to the difference between the Debt Reserve Requirement and the sums then on deposit in the Debt Reserve Fund, if any. The surety bond, insurance policy or letter of credit shall be payable on any interest payment date on which moneys will be required to be withdrawn from the Debt Reserve Fund and applied to the payment of Debt Service and such withdrawal cannot be withdrawn from the Debt Reserve Fund and applied to the payment of Debt Service and such withdrawal cannot be met by amounts on deposit in the Debt Reserve Fund or provided from any other Fund under the Resolution. The insurer providing such surety bond or insurance policy shall be an insurer whose municipal bond insurance policies insuring the payment, when due, of the principal of and interest on municipal bond issues results in such issues being rated in the highest rating category by both S&P and Moody's or any insurer who holds the highest policyholder rating accorded insurers by A.M. Best & Co. or any comparable service or successor service, provided that if the insurer is rated by A.M. Best & Co. but not by both Moody's and S&P, the Authority shall not agree to purchase the surety bond or insurance policy from such insurer unless the Authority gives at least fifteen (15) days' advance notice of its intention to do so to each of the Rating Agencies, which notice shall specify the identity of such insurer. The letter of credit issuer shall be a bank or trust company which is rated not lower than the second highest rating category (without regard to rating sub-categories) by both Moody's and S&P, and the letter of credit itself shall be rated in the highest category of both such ratings agencies. If a disbursement is made pursuant to a surety bond, an insurance policy or a letter of credit, the Authority shall be obligated either (i) to reinstate the maximum limits of such surety bond, insurance policy or letter of credit or (ii) to deposit into the Debt Reserve Fund, funds in the amount of the disbursement made under such surety bond, insurance policy or letter of credit, or a combination of such alternatives, as shall provide that the amount in the Debt Reserve Fund equals the Debt Reserve Requirement within a time period not longer than would be required to restore the Debt Reserve Fund by application of moneys in the Revenue Fund. The General Bond Resolution requires that if there is a reduction or suspension of any of the credit ratings of any insurer or letter of credit bank providing support for the Debt Reserve Fund, the Authority shall, within the time period provided in the General

Bond Resolution, provide a substitute surety bond, insurance policy or letter of credit meeting the requirements of the General Bond Resolution or shall deposit cash in the Debt Reserve Fund so that the amount in such Fund shall equal the Debt Reserve Requirement.

The Authority's payment obligation under any Qualified Swap shall be made from the Debt Service Fund if the Authority's obligation under the Qualified Swap remains a fixed rate obligation; otherwise, such payment shall be made from the General Reserve Fund. The Authority will not enter into any Qualified Swap unless it gives it at least fifteen (15) days' advance notice of its intention to do so to each of the Rating Agencies, which notice shall specify the identity of the Qualified Swap Provider.

(General Bond Resolution, Section 506)

Maintenance Reserve Fund: Amounts in the Maintenance Reserve Fund may be applied to the cost of major resurfacing, replacement or reconstruction of the Turnpike System and major or extraordinary repairs, renewals, or replacement of the Turnpike System, to the extent stated in a certificate of the Consulting Engineers filed with the Trustee and the Authority to be necessary (i) to restore or prevent physical damage to the Turnpike System or any part thereof, (ii) for the safe and efficient operation of the Turnpike System or (iii) to prevent loss of Pledged Revenues. Under certain conditions this fund is also to be used to meet certain deficiencies which may require transfers to be made to the Debt Service Fund.

(General Bond Resolution, Section 507)

Special Project Reserve Fund: Amounts in the Special Project Reserve Fund may be applied to the cost of one or more Projects or Special Projects. This fund may also be used in an amount up to 20% of the amount on deposit therein on the first day of any year to meet budgeted payments into the Maintenance Reserve Fund. Under certain circumstances, it is also to be used to meet deficiencies in the following Funds: the Debt Service Fund, the Debt Reserve Fund, the Charges Fund and the General Reserve Fund and excess amounts may be deposited in the Revenue Fund.

(General Bond Resolution, Section 509)

General Reserve Fund: Amounts in the General Reserve Fund are to be used to make up deficiencies in the Revenue Fund, the Debt Service Fund, the Debt Reserve Fund, the Charges Fund, the Maintenance Reserve Fund and the Special Project Reserve Fund. Amounts in this fund which are not required to remedy any such deficiency may be applied, subject to the terms of any pledge securing Subordinated Indebtedness. Variable Rate Debt, Commercial Paper or any Credit Facility supporting such obligations and any Exchange Agreement to: (i) the purchase or redemption of any Bonds and expenses in connection therewith; (ii) payment of the principal or redemption price of and interest on any Variable Rate Debt or Commercial Paper; (iii) payment of the principal or redemption price of and interest on any Subordinated Indebtedness; (iv) payments into the Construction Fund; (v) or the provision of reserves for these purposes; (vi) payments into the Revenue Fund; or (vii) any other corporate purpose of the Authority, including but not limited to any payments to be made to the State with respect to the development of State transportation projects.

(General Bond Resolution, Section 510)

Satisfaction of Sinking Fund Installments (General Bond Resolution, Section 505)

The Trustee, from amounts on deposit in the Debt Service Fund for Sinking Fund Installments, and the Authority (in lieu of depositing moneys in the Debt Service Fund) from any available funds, may purchase Bonds subject to redemption by operation of Sinking Fund Installments. Bonds so retired may be credited against the Sinking Fund Installment at the then applicable sinking fund Redemption Price. If the principal amount of such Bonds so retired through application or in lieu of any Sinking Fund Installment shall exceed the amount of such Sinking Fund Installment, such excess shall be credited toward future Sinking Fund Installments in such order as the Authority shall determine, provided, however, that the Authority shall give notice to the Trustee of its election to credit any such excess to a Sinking Fund Installment at least 45 days prior to the due date thereof.

Variable Rate Debt; Commercial Paper; Subordinated Indebtedness (General Bond Resolution, Sections 511 and 512)

The Authority may, at any time or from time to time, issue Variable Rate Debt and Commercial Paper payable out of, and which may be secured by a pledge of, such amounts in the General Reserve Fund as may from time to time be available for the purpose of payment thereof; provided, however, that (a) such indebtedness shall be incurred only for any one or more of the purposes set forth above under the description of the General Reserve Fund and the proceeds of such Variable Rate Debt or Commercial Paper shall only be applied for such purpose or purposes, (b) the Authority shall covenant to provide sufficient moneys in the General Reserve Fund to pay the Variable Rate Debt and Commercial Paper when and as due, and (c) such indebtedness shall be, and shall be expressed to be, subordinate in all respects to the Bonds issued or to be issued under the General Bond Resolution and subordinate to all obligations payable from Funds other than the General Reserve Fund but senior in all respects to any pledge to secure Subordinated Indebtedness. No Variable Rate Debt or Commercial Paper may be issues unless the Authority has first determined by certified resolution that the issuance of such Variable Rate Debt or Commercial Paper, as applicable, will not impair the financial viability of the Authority or its operations.

The Authority may incur Subordinated Indebtedness for one or more of the purposes mentioned above under description of the General Reserve Fund. Such indebtedness may be payable out of and secured by a pledge of such amounts in the General Reserve Fund as may from time to time be available therefor. Such pledge must be subordinate to the pledge created by the General Bond Resolution.

Variable Rate Debt, Commercial Paper and Subordinated Indebtedness may be issued without regard to the level of Net Revenues of the Authority but all Debt Service must be paid before any further payment of principal or interest on Variable Rate Debt, Commercial Paper or Subordinated Indebted if any of the following events occur: (i) an event of default under the General Bond Resolution resulting from the non-payment of Debt Service (until cured); (ii) an event of default occurs under the General Bond Resolution with respect to Bonds resulting in acceleration of Principal Installments and interest on Bonds; (iii) the principal and interest on Variable Rate Debt, Commercial Paper or Subordinated Indebtedness is accelerated; (iv) the Authority becomes insolvent; or (v) early termination of a Qualified Swap. Any event of default with respect to Variable Rate Debt, Commercial Paper or Subordinated Indebtedness shall not in itself create the right to declare an event of default with respect to Bonds. No Subordinated Indebtedness may be issued unless the Authority has first determined by certified resolution that the issuance of such Subordinated Indebtedness will not impair the financial viability of the Authority and its operations.

In connection with the issuance of Variable Rate Debt, Commercial Paper or Subordinated Indebtedness, the Authority may enter into Exchange Agreements with respect to such obligations if the Authority determines that such Exchange Agreement will assist the Authority in more effectively managing its interest costs. The Authority's payment obligation under any such Exchange Agreement shall be made from the General Reserve Fund.

Investment of Certain Funds (General Bond Resolution, Section 603)

The General Bond Resolution provides that certain funds held thereunder may, and in the case of the Debt Service Fund, the Debt Reserve Fund and the Charges Fund shall, be invested and reinvested to the fullest extent practicable in Investment Securities, as defined in the General Bond Resolution. The General Bond Resolution provides that such investments shall mature no later than such times as shall be necessary to provide moneys when needed for payments from such funds and, in the case of the following funds, not later than the period set forth below:

- the Revenue Fund, one year,
- the Debt Reserve Fund, five years,
- the Maintenance Reserve Fund, two years,
- the Special Project Reserve Fund, two years, and
- the General Reserve Fund, three years.

Net Investment income from investment of the Debt Service Fund shall be deposited in such Fund or Funds as the Authority directs from time to time provided that all deposits from the Revenue Fund required by the General Bond Resolution are made. Net investment income from investment of the Debt Reserve Fund shall be deposited in the same manner as other excess moneys in such fund as provided in the General Bond Resolution. Net investment income from all other Funds, except the Construction Fund, shall be paid into the Revenue Fund. Net investment income from the Construction Fund shall be held in the Construction Fund.

Valuation and Sale of Investments (General Bond Resolution, Section 604)

Investment securities in any Fund created under the provisions of the General Bond Resolution shall be deemed at all times to be part of such Fund, and any profit realized from the liquidation of such investments shall be credited to such Fund and any loss resulting from liquidation of such investment shall be charged to such Fund.

A valuation of the Debt Reserve Fund shall be made as of December 1 in each year. The value of securities held under the General Bond Resolution shall mean the amortized value thereof, provided, however, that all Special Treasury Obligations shall be valued at par and those obligations which are redeemable at the option of the holder shall be valued at the price at which such obligations are then redeemable. The computations shall include accrued interest on securities paid as a part of the purchase price thereof and not collected. Amortized value, when used with respect to a security purchased at par, means the purchase price of such security and when used with respect to a security purchased at a premium above or discount below par, means as of any subsequent date of valuation, the value obtained by dividing the total premium or discount by the number of days remaining to maturity on any such security at the time of such security at the time of such purchase and by multiplying the amount as calculated by the number of days having passed since the date of purchase and (i) in the case of a security purchased at a premium, by deducting the product thus obtained form the purchase price, and (ii) in the case of a security purchase at a discount, by adding the product thus obtained to the purchase price.

Annual Budget (General Bond Resolution, Section 710)

The Authority covenants that, not less than 40 days before the beginning of any calendar year, the Authority shall prepare and file with the Trustee a preliminary budget of Operating Expenses and reserves therefor for the ensuing year. Each such budget and each Annual Budget shall include, in addition to appropriations for all anticipated Operating Expenses and reserves therefor, provision for Maintenance Reserve Payments and for Special Project Reserve Payments. Such preliminary budget and any Annual Budget may set forth such additional material as the Authority may determine and shall contain a certificate of the Consulting Engineers approving such preliminary budget or such Annual Budget, as the case may be.

On or before the 15th day of each calendar year, the Authority shall finally adopt the Annual Budget for such year. The Authority may at any time adopt an amended Annual Budget for the remainder of the then current calendar year. Copies of the Annual Budget and of any amended Annual Budget shall be promptly filed with the Trustee, for inspection by Bondholders.

The Special Project Reserve Payments included in the Annual Budget shall be in an amount equal to the difference between (i) the balance on deposit in the Special Project Reserve Fund on the date of adoption of the Annual Budget and (ii) the Special Reserve Requirement.

If, in the Annual Budget for any calendar year or in any amended Annual Budget for any calendar year, the total Operating Expenses stated exceed 110% of the total Operating Expenses stated in the preliminary budget for such year as filed with the Trustee, such Annual Budget or amended Annual Budget shall not be effective or supersede any prior budget until the Authority shall have prepared a report in reasonable detail as to the reasonableness and necessity thereof, file copies of such report with the Trustee, and thereafter held a public hearing thereon at which any Bondholder may appear in person or by agent or attorney and present any objections he may have.

If the Owners of 25% in aggregate principal amount of the Bonds then Outstanding shall so request in writing at the time of the public hearing mentioned in the immediately preceding paragraph, the Authority shall obtain a report by the Consulting Engineers as to the reasonableness and necessity of such budget, and the Annual Budget for such year shall not be adopted until ten days after a copy of such report shall have been filed with the Trustee.

Toll Covenants (General Bond Resolution, Sections 713 and 714)

The Authority covenants in the General Bond Resolution that:

(i) It will at all times fix, charge and collect such tolls for the use of the Turnpike System as are required in order that in each calendar year Net Revenues shall at least equal the Net Revenue Requirement for such year.

(ii) 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 described in paragraph (i) above. Such review shall take into consideration the completion of any uncompleted Projects and the issuance of future series of Bonds, if necessary, to finance the completion of such Projects. If the Authority determines that the Pledged Revenues may not be so sufficient, it will cause its Traffic Consultants to make a study and to recommend a schedule of tolls which will provide sufficient Pledged Revenues in the following year to comply with the toll covenant described in paragraph (i) above and will cause additional Pledged Revenues to be collected in the following and later years sufficient to eliminate any deficiency at the earliest practicable time. The Authority will place the recommended schedule of tolls in effect no later than the next April 1.

Failure to comply with the toll covenant described in paragraph (i) above in any calendar year will not constitute an event of default under the General Bond Resolution if either (a) the Authority complies with the covenant described in paragraph (ii) above or (b) the Authority's Traffic Consultants are of the opinion that a toll schedule which will comply with the toll covenant described in paragraph (i) above is impracticable at that time, and the Authority therefor cannot comply with the covenant described in paragraph (ii) above, and the Authority establishes a schedule of tolls which is recommended by its traffic consultants to comply as nearly as practicable with the tolls covenant described in paragraph (i) above.

The Authority will not reduce any toll (except by way of certain adjustments or reclassifications of toll rates as referred to below) unless the following conditions and tests shall be met:

(1) There shall have been delivered to the Trustee a certificate of an Authorized Officer of the Authority to the effect that the cumulative reductions in the immediately preceding 12 months, including the proposed and all other reductions as if they had been in effect for such period, would not reduce Net Revenues for such period by more than one percent (1%), with schedules of traffic and toll collections demonstrating such conclusion and that, taking into account such reductions, the Authority would have met the Net Revenue Requirements for such period; or

(2) (i) the Net Revenues for the preceding calendar year shall have equaled at least the Net Revenue Requirement for such preceding calendar year;

(ii) the estimated Net Revenues for the then current and each future calendar year to and including the latest maturity of the Bonds (giving effect to the proposed toll reduction but not to any additional traffic which might result therefrom) shall equal at least the Net Revenue Requirement (giving effect to future Series of Bonds estimated to be required to complete uncompleted Additional Projects) for each such year;

(iii) the Authority is not in default in the performance of any of the provisions of the Bonds or the General Bond Resolution or of any Qualified Swap; and

(iv) the amount in the Debt Reserve Fund is at least equal to the Debt Reserve Requirement.

For purposes of the test referred to in paragraph (2)(ii) above, the estimated Net Revenues are to be based on estimates by the Authority's Traffic Consultants of Turnpike Revenues and estimates by the Authority's Consulting Engineers of Operating Expenses, Maintenance Reserve Payments and Special Project Reserve Payments in each case giving effect to the completion of any uncompleted Turnpike Project. The estimates of the Traffic Consultants are to reflect the effect of the construction, improvement or acquisition of any highway or other facility which any Federal, State or other agency is then projecting or planning and which, in their opinion, may be materially competitive with any part of the Turnpike System.

The Authority may increase toll rates and make any other adjustment or reclassification of toll rates or establish special toll rates provided that such action (i) is concurred in by the Traffic Engineers and affects tolls accounting for less than 10% of the Turnpike Revenues, as evidenced by a certificate filed with the Trustee, or (ii) is subject to a certification of the Traffic Engineer, filed with the Trustee, that the changed tolls will not result in a reduction in Net Revenues by reason of collectibility, reduction in traffic or costs of operation or any other reason.

The Authority shall not grant free passage for the use of any portion of the Turnpike System subject to tolls, except (i) to members, officers and employees of the Authority actually in the performance of their duties or in the course of traveling to or from the place of the performance of such duties, to members of the New Jersey State Police Force, to members of any fire department or any local police department in the performance of their duties and to any public or private ambulance or rescue squad service for the emergency passage of its ambulance or rescue vehicles, (ii) by means of passes or otherwise, to such vehicles owned by individuals, corporations or partnerships with which the Authority has entered into leases, concession contracts or service and maintenance contracts, as in its discretion may be deemed necessary for the operation of concessions and facilities upon the Turnpike System, for the maintenance of such concessions or facilities and for the prompt and economical furnishing of emergency services to patrons of the Turnpike System or any concession or facility thereof, (iii) commuter buses (as defined from time to time by the Authority's regulations), but only if and to the extent that the Authority first determine by certified resolution that the exemption of such commuter buses from tolls will not impair the financial viability of the Authority and its operations, and (iv) to others by passes, provided that there shall not be more than fifty such passes outstanding at any one time.

Insurance (General Bond Resolution, Section 715)

The Authority covenants that it will at all times maintain, to the extent reasonable obtainable, the, following kinds and the following amounts of insurance, or otherwise make provision for the payment of claims against the Authority, with such variations as shall reasonable be required to conform to applicable standard or customary insurance practice and subject to such exceptions and permissible deductions as are ordinarily required, all to be determined by the Authority after consultation with its insurance consultants:

(1) Property insurance on all real and personal property, including bridges and viaducts owned by the Authority in sufficient amounts to cover direct physical loss or damage from causes normally insured against;

(2) Liability insurance to cover injury to persons or damage to property for claims arising out of the construction, maintenance, reconstruction or operation of the roadway and other facilities owned or operated by the Authority;

(3) Business interruption insurance covering loss of Pledged Revenues due to any interruption in the use of the roadway or other facilities of the Authority which would cause a loss of revenue to the Authority;

(4) Any coverage required to be maintained by any State or federal law, including, but not limited to, workers' compensation coverage, and motor vehicle liability coverage;

(5) Any coverage which is customarily deemed appropriate to protect the interests of the Authority during any construction or reconstruction of any portion of the Turnpike System; and

(6) Any additional insurance which may be necessary or advisable to protect the interests of the Authority.

Reports (General Bond Resolution, Sections 717 and 718)

The Authority covenants to file with the Trustee, and to mail to those Bondholders who file with it their names and addresses for such purpose, periodic reports on the operations of the Turnpike System, including statements of traffic, Pledged Revenues and Net Revenues. Quarterly reports are to cover the preceding quarter and 12-month period, with comparative data for corresponding periods a year earlier. In addition, semi-annual reports are to cover a Six-month period and contain, among other things, a statement of transactions in and investments of funds established by the General Bond Resolution, and annual reports are to contain statements of traffic, Pledged Revenues, Net Revenues, fund transactions and investments audited by an independent public accountant or accounting firm of recognized national standing approved by the Trustee. The Authority will cause an annual audit to be made of its books and accounts relating to the Turnpike System for the preceding calendar year.

With respect to each Project under construction, the Authority covenants to file and to mail (as provided above) quarterly construction progress reports prepared by its consulting engineers, with comparisons between actual elapsed times and costs and previously estimated times and costs.

Arbitrage (General Bond Resolution, Section 720)

The Authority covenants that it will not at any time take any action or fail to take any action which would cause any Tax Exempt Obligation to be an arbitrage bond within the meaning of the Code or permit any of the proceeds of Tax Exempt Obligations or any other funds of the Authority to be used directly or indirectly to acquire any securities or obligations the acquisition of which would cause any Tax Exempt Obligation to be an arbitrage bond within the meaning of the Code.

Events of Default and Remedies (General Bond Resolution, Sections 801 and 804)

The General Bond Resolution defines events of default which include, among others, (i) defaults (a) in the due and punctual payment of the principal or redemption price of any Bond when and as the same shall become due and payable or the payment of the purchase price of a tendered Bond on any date on which Bonds are required to be purchased pursuant to a Series Resolution, (b) in the due and punctual payment of any installment of interest on any Bond, (c) in the compliance with the toll covenant of the General Bond Resolution, except as stated under "Toll Covenants" above, (d) the Authority undertaking the filing of a petition seeking a composition of indebtedness under the federal bankruptcy laws, or under any other applicable law or statute of the United States of America or of the State of New Jersey, (e) in the performance of any other covenant or condition in the General Bond Resolution or in the Bonds if such default shall continue for 60 days after notice by the Owners of not less than 10% in principal amount of Bonds outstanding, and (f) failure by the Authority to vacate the appointment by a court of a receiver or receivers of the Turnpike System or any part thereof, or of the tolls and other revenues therefrom within 90 days after the entry thereof, and (ii) the Trustee's receipt from the Standby Purchaser of notice of the Occurrence of an "event of default" under the Standby Agreement.

If an event of default shall happen and shall have not been remedied, the Trustee may, and upon written request of the Owners of 10% in principal amount of the Bonds outstanding shall, proceed to enforce by such proceedings at law or in equity as it deems most effectual, the rights of the Owners of Bonds issued under the General Bond Resolution, and either the Trustee or the Owners of 25% in principal amount of the Bonds then outstanding may declare the principal of and interest on all the Bonds then outstanding due and payable immediately.

No Bondholder shall have any right to institute any suit or proceeding for the execution of any trust under the General Bond Resolution, or for the enforcement of any provision of the General Bond Resolution, unless such Bondholder shall have given previously the Trustee written notice of the event of default on account of which such suit or proceeding is to be instituted, and unless the holders of at least 25% in principal amount of the Bonds then outstanding shall have filed a written request to the Trustee and shall have afforded the Trustee a reasonable opportunity to exercise its powers or to institute such suit or proceeding, and unless there shall have been offered to the Trustee adequate security and indemnity against its costs, expenses and liability to be incurred and the Trustee shall have refused or failed to comply with such request within 60 days after receipt of such notice, request and offer of indemnity. Nothing in the General Bond Resolution or the Bonds affects or impairs the Authority's obligation to pay the Bonds and the interest thereon when due or the right of any Bondholder to enforce such payment.

Resignation and Removal of Trustee (General Bond Resolution, Sections 908, 909 and 910)

The Trustee may at any time resign and be discharged of its duties and obligations under the General Bond Resolution by giving the Authority not less than 60 days written notice and publishing notice of its resignation in certain newspapers. The Trustee may also be removed at any time by the Owners of a majority in principal amount of the Bonds then Outstanding by a signed and acknowledged instrument. The resignation, discharge or removal of the Trustee shall not become effective until a successor Trustee has assumed the duties and obligations of the Trustee under the General Bond Resolution.

In the case of the resignation or removal of the Trustee, or if the Trustee is incapable of acting or is otherwise relieved of its duties, the Owners of a majority in principal amount of the Bonds then Outstanding may appoint a successor. Any successor Trustee shall be a bank or trust company or national banking association, doing business and having its principal office in the City and State of New Jersey and having capital stock and surplus aggregating at least $50,000,000, if there be such a bank or trust company or national banking association willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the General Bond Resolution.

Co-Trustee (General Bond Resolution, Section 917)

At any time so long as no event of default has occurred and is continuing under the General Bond Resolution, the Authority, by Supplemental Resolution, may, solely in its discretion, appoint an additional institution as a separate or Co-Trustee meeting the requirements of a successor trustee under the General Bond Resolution, in which event each and every remedy, power, right, claim, demand, cause of action, immunity, estate, title interest and lien expressed or intended by the General Bond Resolution to be exercised by or vested in or conveyed to the Trustee with respect thereto shall be exercisable by and vest in such separate or Co-Trustee, but only to the extent necessary to enable such separate or Co-Trustee to exercise such powers, rights and remedies, and every covenant and obligation necessary to the exercise thereof by such separate or Co-Trustee shall run to and be enforceable by either of them. In case any separate or Co-Trustee, or a successor, shall become incapable of acting, resign or be removed, all the estates, properties, rights, powers, trusts, duties and obligations of such separate or Co-Trustee, so far as permitted by law, shall vest in and be exercised by the Trustee until the appointment, if any, by the Authority of a successor to such separate or Co-Trustee. Any Co-Trustee appointed by the Authority pursuant to the General Bond Resolution may resign in accordance with the General Bond Resolution or be removed in accordance with the General Bond Resolution, in which case all powers, rights and remedies vested in the Co-Trustee shall again vest in the Trustee as if no such appointment of a Co-Trustee had been made. No successor Co-Trustee shall be required (but shall be permitted subject to the requirements of the General Bond Resolution) so long as the Trustee continues to act under the General Bond Resolution.

In connection with the appointment of any Co-Trustee pursuant to the General Bond Resolution the Authority, the Trustee and the Co-Trustee shall execute a separate Agreement in form acceptable to the parties thereto defining the respective duties of such Co-Trustee and the Trustee under the General Bond Resolution.

Series Resolutions (General Bond Resolution, Section 1001)

The Authority may adopt at any time and from time to time Series Resolutions to authorize the issue of Series of Bonds under the General Bond Resolution. A Series Resolution may also designate Variable Rate Debt, Commercial Paper and Subordinated Indebtedness as Bonds if at the time of such designation specified requirements of the General Bond Resolution are met with respect to such indebtedness. A Series Resolution shall be fully effective in accordance with its terms upon its adoption by the Authority in order to specify, determine or authorize any matters and things concerning any such Bonds or the proceeds thereof which are not contrary to or inconsistent with the General Bond

Resolution. Upon the adoption of a Series Resolution, the Authority shall file with the Trustee a copy thereof, certified by an Authorized Officer of the Authority.

Amendments and Supplements (General Bond Resolution, Sections 1101 and 1102)

The Authority may, without Bondholder consent, adopt at any time or from time to time a Supplemental Resolution supplementing and amending the General Bond Resolution or any Series Resolution or any Supplemental Resolution for one or more of the following purposes:

(1) To close the General Bond Resolution against, or impose additional limitations or restrictions on, the issuance of Bonds, or of other notes, bonds, obligations or evidences of indebtedness;

(2) To impose additional covenants or agreements to be observed by the Authority which are not contrary to or inconsistent with the General Bond Resolution;

(3) To impose other limitations or restrictions upon the Authority;

(4) To cure any ambiguity, omission or defect in the General Bond Resolution, any Series Resolution or Supplemental Resolution in such manner as shall not be inconsistent with the overall intent of the General Bond Resolution and shall not impair or adversely affect the security for any Bonds issued under the General Bond Resolution;

(5) To revise the timing for the performance of certain of the Authority's covenants contained in the General Bond Resolution in the event that the Authority's fiscal year is ever changed from a calendar year to a different 12 month period, provided that such revisions shall require the performance of such covenants within the same relative time periods of the new fiscal year as is required currently in a calendar year;

(6) To surrender any right, power or privilege reserved to or conferred upon the Authority by the General Bond Resolution;

(7) To confirm, as further assurance, any pledge of or lien upon the Pledged Revenues or any other moneys, securities or funds;

(8) To effect any other change necessary to maintain the excludability of the interest on Tax Exempt Obligations from gross income for federal income tax purposes;

(9) To appoint a Co-Trustee in the discretion of the Authority pursuant to the General Bond Resolution; and

(10) To effect any other change in the General Bond Resolution, any Series Resolution or Supplemental Resolution that does not materially adversely affect the Owners of the Bonds.

The Authority also may adopt modifications or amendments to the General Bond Resolution, any Series Resolution or Supplemental Resolution in addition to the amendments described above, (i) by adoption of a Supplemental Resolution with the written consent of the Holders of at least 51% in principal amount of the Bonds Outstanding at the time such consent is given, or (ii) in case less than all of the several Series of Bonds then Outstanding are affected by the modification or amendment, of the Holders of at least 51% in principal amount of the Bonds of each Series so affected and Outstanding at the time such consent is given; provided, however, that if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified like Series and maturity remain Outstanding, the consent of the Owners of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds. If permitted by an applicable Series Resolution, a Credit Issuer for a Credit Facility or Substitute Credit Facility securing a Series of Bonds shall have the right to consent to amendments on behalf of the Owners of the Bonds of such Series. No such modification or amendment shall permit a change in the terms of redemption or maturity of the principal of any Outstanding Bonds, or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the Holder of such Bond, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto.

Each such Supplemental Resolution shall be accompanied, when filed with the Trustee, by (a) a Counsel's Opinion to the effect that such resolution has been duly and lawfully adopted by the Authority in accordance with the provisions of the General Bond Resolution, is authorized or permitted by the General Bond Resolution and, when effective, will be valid and binding upon the Authority, the Bondholders and the Trustee, and (b) if such Supplemental Resolution shall change or modify any of the rights or obligations of any Qualified Swap Provider, any Standby Purchaser, any Tender Agent or any Remarketing Agent, the written consent of such person to such Supplemental Resolution (which consent shall not be unreasonably withheld).

Defeasance (General Bond Resolution, Section 1201)

If the principal or redemption price, if applicable, of and interest due and to become due on all Bonds is paid to the Bondholders and all obligations of the Authority due or to become due under each Qualified Swap and Standby Agreement then in effect or thereupon terminated is paid in accordance with the terms thereof, then the pledge of Pledged Revenues and other moneys and all covenants, agreements and other obligations of the Authority to the Bondholders, each Qualified Swap Provider and each Standby Purchaser are discharged and satisfied. All outstanding Bonds prior to the maturity or redemption date thereof shall be deemed to have been paid and shall cease to be entitled to any lien, benefit or security under the General Bond Resolution and all covenants, agreements and obligations of the Authority to the Owners thereof shall be discharged and satisfied, if the following conditions are met: (i) (a) the interest rates in effect with respect to Bonds that are to be deemed paid with the meaning of the defeasance provisions of the General Bond Resolution cannot be reset prior to the date on which such Bonds are to be redeemed or their maturity date, and (b) such Bonds are not subject to tender for purchase prior to the date on which such Bonds are to be redeemed or their maturity date, (ii) in the case of the Bonds to be redeemed, the Authority shall have given to the Trustee instructions to pay or redeem all of said Bonds in accordance with the applicable Sinking Fund Installments and to publish the notice of redemption thereof, (iii) there shall have been deposited with the Trustee in trust either moneys in an amount which shall be sufficient, or Federal Securities, the principal of and interest on which, when due, will provide moneys which, together with any moneys also deposited, shall be sufficient to pay when due the principal or redemption price, if applicable, and interest due or to become due on such Bonds, and (iv) in the event such Bonds are not to be redeemed with the next succeeding 60 days, the Authority shall have given the Trustee irrevocable instructions to publish, as soon as practicable, a notice to the Owners of such Bonds that the above deposit has been made with the Trustee and that such Bonds are deemed to be paid and stating the maturity or redemption dates upon which moneys are to be available to pay the principal or redemption price, if applicable, of such Bonds.

No payments of principal of any of the Federal Securities deposited with the Trustee or interest thereon shall be withdrawn or used for any purpose other than the payment of such principal or Redemption Price of, or interest on, the Bonds deemed to be paid unless after such withdrawal the amount held by the Trustee and interest to accrue on Federal Securities so held shall be sufficient to provide fully for the payment of the principal or Redemption Price of and interest on the balance of such Bonds.

Amounts deposited with the Trustee for the payment of Principal Installments of and interest on any Bonds deemed to be paid, if so directed by the Authority, shall be applied by the Trustee to the purchase of such Bonds in accordance with the General Bond Resolution. Bonds for which a redemption date has been established may be purchased on or prior to the 45th day preceding the redemption date. The principal amount of Bonds to be redeemed shall be reduced by the principal amount of Bonds so purchased. Bonds which mature on a single future date may be purchased at any time prior to the maturity date. All such purchases shall be made at prices not exceeding the applicable principal amount or redemption price established pursuant to the General Bond Resolution, plus accrued interest, and such purchases shall be made in such manner as the Trustee shall determine. No purchase shall be made by the Trustee if such purchase would result in the Trustee holding less than the moneys and Federal Securities required to be held for the payment of all other Bonds deemed to be paid.

The Authority may purchase with any available funds any Bonds determined to be paid in accordance with the General Bond Resolution. Bonds for which a redemption date has been established may be purchased by the Authority on or prior to the 45th day preceding the redemption date. On or prior to the 45th day preceding the redemption date the Authority shall give notice to the Trustee of its intention to surrender such Bonds on the redemption date. The Trustee shall proceed to call for redemption the remainder of the Bonds due on the redemption date and shall pay to the Authority on the redemption date the redemption price of and interest on Bonds purchased by the Authority upon surrender of such Bonds to the Trustee. Bonds which mature on a single future date may be purchased at any time prior to the maturity date. The Trustee shall pay to the Authority the principal amount of and interest on such Bonds upon surrender of such Bonds on the maturity date.

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APPENDIX E

FORM OF BOND COUNSEL OPINION

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Upon the issuance of the Series 2019 A Bonds, Wilentz, Goldman & Spitzer, P.A., Woodbridge, New Jersey, Bond Counsel, anticipates rendering its final opinion in substantially the following form:

February 7, 2019

New Jersey Turnpike Authority
1 Turnpike Plaza
P.O. Box 5042
Woodbridge, NJ 07095-5042

Ladies and Gentlemen:

We have examined a record of proceedings relating to the issuance by the New Jersey Turnpike Authority (the "Authority") of $449,110,000 aggregate principal amount of its Turnpike Revenue Bonds, Series 2019 A (the "Series 2019 A Bonds"). The Authority is a public body corporate and politic 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").

The Series 2019 A Bonds are issued under and pursuant to the 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 further amended, restated and supplemented from time to time (collectively, the "General Bond Resolution"), including as supplemented by the Series 2017 Turnpike Revenue Bond Resolution, adopted by the Authority on September 19, 2017 (the "Series 2017 Resolution"), and a Certificate of Determination relating to the Series 2019 A Bonds executed by the Executive Director of the Authority dated the date hereof (the "Certificate of Determination", and together with the General Bond Resolution and the Series 2017 Resolution, the "Resolution"). Capitalized terms used but not otherwise defined herein shall have the meaning ascribed thereto in the Resolution.

The Series 2019 A Bonds are dated the date hereof, mature on the dates and in the principal amounts, bear interest from their date at the rates and payable on such dates and contain such other provisions, all as set forth in the Series 2017 Resolution and the Certificate of Determination. The Series 2019 A Bonds are subject to redemption prior to maturity on the terms and conditions set forth in the Resolution.

The Series 2019 A Bonds are being issued by the Authority to (i) pay the Costs of Construction of various Projects which are part of the Authority's ongoing capital improvement program for the Turnpike System, and (ii) pay the costs of issuance of the Series 2019 A Bonds.

Under the terms of the Resolution, the Authority may hereafter authorize and issue other additional Bonds under the Resolution for the purposes and on the terms and conditions set forth in the Resolution. Any such additional Bonds, when issued, will be entitled, equally and ratably with the Series 2019 A Bonds, all other Bonds heretofore or hereafter issued and Outstanding under the Resolution and certain other obligations described in the Resolution, to the benefit, protection and security of the provisions, covenants and agreements of the Resolution, including the pledge of Pledged Revenues and the amounts on deposit in all Funds established by the Resolution, except as otherwise set forth in the Resolution.

In rendering the opinions set forth below, we have examined such matters of law and documents, certificates, records and other instruments as we deemed necessary or appropriate to enable us to express the opinions set forth below, including, without limitation, the Act, original counterparts or certified copies of the Resolution and the other documents, certifications, instruments, opinions and records filed with the Trustee in connection with the issuance of the Series 2019 A Bonds. In rendering the opinions set forth below, we have assumed and relied upon the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to the original documents of all documents submitted to us as copies. As to any facts material to our opinions we have, when such facts were not independently established, relied upon the truthfulness, completeness and accuracy of the aforesaid instruments, certificates, opinions, records and other documents without any independent investigation thereof.

Based on the foregoing and subject to the limitations, qualifications and exceptions set forth below, we are of the opinion that:

1. The Authority has been duly created and is validly existing as a public body corporate and politic under the provisions of the Act, with power to adopt the Resolution and to issue the Series 2019 A Bonds.

2. The Resolution has been duly and lawfully adopted by the Authority, is in full force and effect, is valid and binding upon the Authority and is enforceable in accordance with its terms, and no other authorization for the Resolution is required.

3. The Series 2019 A Bonds have been duly authorized and issued by the Authority in accordance with the Act and the provisions of the Resolution, are valid and binding obligations of the Authority enforceable in accordance with their terms and the terms of the Resolution, and are entitled to the benefit, protection and security of the Resolution and the Act.

4. The Resolution creates the valid pledge that it purports to create of the proceeds of the sale of the Bonds, the Pledged Revenues and the amounts on deposit in all Funds established by the Resolution (except for moneys provided by governmental authorities whose availability is conditioned on such amounts not being subject to the pledge of the Resolution), subject only to the provisions of the Resolution permitting the application thereof for the purposes and on the terms set forth in the Resolution.

5. The Series 2019 A Bonds constitute additional Bonds under the Resolution, and are equally and ratably entitled to the benefits, protection and security of the Resolution along with all

other Bonds heretofore issued and Outstanding under the Resolution and certain other obligations described in the Resolution.

6. The Internal Revenue Code of 1986, as amended (the "Code") establishes certain requirements which must be met at the time of, and on a continuing basis subsequent to, the issuance and delivery of the Series 2019 A Bonds in order for interest on the Series 2019 A Bonds to be and remain excluded from gross income for Federal income tax purposes under Section 103 of the Code. Noncompliance with such requirements could cause interest on the Series 2019 A Bonds to be included in gross income for Federal income tax purposes retroactive to the date of issuance and delivery of the Series 2019 A Bonds. The Authority has represented in its tax certificate relating to the Series 2019 A Bonds that it expects and intends to comply and will comply, to the extent permitted by law, with such requirements.

Under existing statutes, regulations, rulings and court decisions and assuming continuing compliance by the Authority with the requirements of the Code described in the preceding paragraph, interest on the Series 2019 A Bonds is not includable in gross income for Federal income tax purposes pursuant to Section 103 of the Code and is not treated as a preference item under Section 57 of the Code for purposes of calculating the Federal alternative minimum tax.

Under Section 171(a)(2) of the Code, no deduction is allowed for the amortizable bond premium (determined in accordance with Section 171 (b) of the Code) on the Series 2019 A Bonds that are initially offered and sold at a premium. Under Section 1016(a)(5) of the Code, however, an adjustment must be made to the purchaser's basis in such Series 2019 A Bonds to the extent of any amortizable bond premium that is disallowable as a deduction under Section 171(a)(2) of the Code.

7. Under existing laws of the State of New Jersey, the interest on the Series 2019 A Bonds and any gain on the sale of the Series 2019 A Bonds are not includable in gross income under the New Jersey Gross Income Tax Act.

The foregoing opinions in paragraphs 2 and 3 above are qualified to the extent that the enforceability of the Resolution and the Series 2019 A Bonds may be limited by applicable bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or other similar laws now or hereafter enacted by any state or by the Federal government affecting the enforcement of creditors' rights generally and general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law) and the valid exercise of the sovereign police powers of the State of New Jersey and the constitutional power of the United States of America.

Except as stated above, we express no opinion as to any Federal, state or local tax consequences of the ownership or disposition of the Series 2019 A Bonds.

We express no opinion as to the effect, if any, on the tax status of interest paid or to be paid on the Series 2019 A Bonds as a result of any action hereafter taken or not taken in reliance upon an opinion of other counsel.

Attention is called to the fact that we have not been requested to examine and have not examined any documents or information relating to the Authority other than the certified copies of the proceedings and proofs referred to hereinabove, and no opinion is expressed as to any financial or other information, or the adequacy thereof, that has been or may be supplied to any purchaser of the Series 2019 A Bonds. We express no opinion herein as to the accuracy, adequacy or sufficiency of the Official Statement of the Authority pertaining to the offering of the Series 2019 A Bonds.

The opinions expressed herein are limited to and based upon the laws and judicial decisions of the State of New Jersey and the Federal laws and judicial decisions of the United States of America as of the date hereof, and are subject to any amendment, repeal or other modification of the applicable laws or judicial decisions that served as the basis for our opinions or to any laws or judicial decisions hereafter enacted or rendered.

Our engagement by the Authority with respect to the opinions expressed herein does not require, and shall not be construed to constitute, a continuing obligation on our part to notify or otherwise inform the addressee hereof of the amendment, repeal or other modification of the applicable laws or judicial decisions that served as the basis for this opinion letter or of any laws or judicial decisions hereafter enacted or rendered that impact on this opinion letter.

Very truly yours,

WILENTZ, GOLDMAN & SPITZER, P.A.

APPENDIX F

FORM OF CONTINUING DISCLOSURE AGREEMENT

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CONTINUING DISCLOSURE AGREEMENT

Between

NEW JERSEY TURNPIKE AUTHORITY,

THE BANK OF NEW YORK MELLON, Co-Trustee

and

U.S. BANK NATIONAL ASSOCIATION, Co-Trustee

Relating to

NEW JERSEY TURNPIKE AUTHORITY

$449,110,000
Turnpike Revenue Bonds,
Series 2019 A

Dated: February 7, 2019

CONTINUING DISCLOSURE AGREEMENT

This **CONTINUING DISCLOSURE AGREEMENT** (the "Disclosure Agreement") is made this 7th day of February, 2019 between the NEW JERSEY TURNPIKE AUTHORITY (the "Authority"), THE BANK OF NEW YORK MELLON and U.S. BANK NATIONAL ASSOCIATION, in their capacity as co-trustees (the "Co-Trustees") under the Authority's Turnpike Revenue Bond Resolution, adopted on August 20, 1991, as amended, restated and supplemented (the "Resolution"), including as supplemented by the Series 2017 Turnpike Revenue Bond Resolution adopted by the Authority on September 19, 2017. This Disclosure Agreement is entered into in connection with the issuance and sale by the Authority of its Turnpike Revenue Bonds, Series 2019 A, and any additional bonds hereinafter issued under the Resolution and designated pursuant to a supplemental schedule as bonds to be covered hereunder (collectively, the "Bonds").

1. **Purpose of this Disclosure Agreement.** This Disclosure Agreement is being executed and delivered for the benefit of the holders and beneficial owners of the Bonds (collectively, the "Bondholders") and in compliance with Rule 15c2-12(b)(5) of the Securities and Exchange Commission, as it may be amended from time to time, including administrative or judicial interpretations thereof, as it applies to the Bonds.

2. **Definitions.** In addition to the definitions set forth in the Resolution and hereinabove, which apply to any capitalized term used in this Disclosure Agreement unless otherwise defined in this Section 2, the following capitalized terms shall have the following meanings:

"Annual Report" shall mean the Authority's Annual Report provided pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

"Continuing Disclosure Information" shall mean, collectively, (i) each Annual Report, (ii) any notice required to be filed by the Authority with the MSRB pursuant to Section 3(c) of this Disclosure Agreement, and (iii) any notice of a Listed Event required to be filed by the Authority with the MSRB pursuant to Section 5(b) of this Disclosure Agreement.

"Listed Events" shall mean any of the events listed in Section 5(a) of this Disclosure Agreement.

"MSRB" shall mean the Municipal Securities Rulemaking Board.

"Opinion of Counsel" shall mean a written opinion of counsel expert in federal securities law acceptable to the Authority.

"Rule" shall mean Rule 15c2-12 adopted by the SEC under the Securities Exchange Act of 1934, as it may be amended from time to time, including administrative or judicial interpretations thereof, as it applies to the Bonds.

"SEC" shall mean the United States Securities and Exchange Commission.

"State" shall mean the State of New Jersey.

3. **Provision of Annual Reports.**

(a) The Authority shall, not later than May 1 of each year during which any of the Bonds remain Outstanding, provide to the MSRB, in accordance with the provisions of Section 6 of this Disclosure Agreement, the Annual Report prepared for the respective fiscal year of the Authority ending the immediately preceding December 31 (or if the fiscal year of the Authority shall end on any date other than December 31, the Authority shall provide its Annual Report to the MSRB not later than the first day of the fifth month next following the end of such other fiscal year). Each Annual Report shall comply with the requirements of Section 4 of this Disclosure Agreement and may be submitted as a single document or as separate documents comprising a package.

(b) The Authority shall, at the same time as it submits the Annual Report to the MSRB, provide written notice of such submission to the Co-Trustees.

(c) The Authority shall also file with the MSRB, in a timely manner and in accordance with the provisions of Section 6 of this Disclosure Agreement, notice of any failure of the Authority to provide an Annual Report in compliance with the requirements of this Section 3 and Section 4 of this Disclosure Agreement.

4. **Contents of Annual Report.**

(a) The Annual Report shall include information pertaining to the Authority of the type appearing in the Official Statement circulated in connection with the issuance of the Bonds and will include the (i) audited financial statements of the Authority for the preceding fiscal year of the Authority as required by Section 3(a) hereof prepared using the accounting standards described in subsection (b) of this Section 4, (ii) annual budgets of the Authority, (iii) debt service coverage certifications, and (iv) management's discussion of results of operations, if and to the extent not otherwise provided in the audited financial statements. In the event that audited financial statements are not available on the date required in Section 3(a) hereof, the Authority shall file unaudited financial statements for such fiscal year until audited financial statements are available. Each Annual Report may cross-reference other information which is available to the public on the MSRB's internet website or which has been filed with the SEC and, if the document incorporated by reference is a final official statement, it must be available from the MSRB.

(b) As of the date of this Disclosure Agreement, the Authority prepares its financial statements in accordance with generally accepted accounting principles in the United States of America.

5. **Reporting of Listed Events.**

(a) This Section 5 shall govern the giving of notices of the occurrence, with respect to the Bonds, of any of the following Listed Events:

(1) Principal and interest payment delinquencies;

(2) Non-payment related defaults, if material;

(3) Unscheduled draws on debt service reserves reflecting financial difficulties;

(4) Unscheduled draws on credit enhancements reflecting financial difficulties;

(5) Substitution of credit or liquidity providers, or their failure to perform;

(6) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;

(7) Modifications to rights of Bondholders, if material;

(8) Bond calls, if material, and tender offers;

(9) Defeasances of the Bonds;

(10) Release, substitution, or sale of property securing repayment of the Bonds, if material;

(11) Rating changes relating to the Bonds;

(12) Bankruptcy, insolvency, receivership or similar event of the Authority;

(13) The consummation of a merger, consolidation, or acquisition involving the Authority or the sale of all or substantially all of the assets of the Authority, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and

(14) Appointment of a successor or additional trustee for the Bonds or the change of name of a trustee for the Bonds, if material.

(b) The Authority shall, in a timely manner not in excess of ten (10) business days after the occurrence of any Listed Event, file a notice of the occurrence of such Listed Event with the MSRB in accordance with the provisions of Section 6 of this Disclosure Agreement. In determining the materiality of any of the Listed Events specified in subsection (a) of this Section 5, the Authority may, but shall not be required to, rely conclusively on an Opinion of Counsel. The Authority shall also provide written notice of such Listed Event to the Co-Trustees at the same time it provides notice of such Listed Event to the MSRB.

6. **Filing of Continuing Disclosure Information.** Any Continuing Disclosure Information filed with the MSRB in accordance with this Disclosure Agreement shall be in an electronic format as shall be prescribed by the MSRB or such other format as the Rule may require or permit, and shall be accompanied by such identifying information as shall be prescribed by the MSRB or as may otherwise be required by the Rule.

7. **Termination of Reporting Obligation.** The obligations of the Authority under this Disclosure Agreement shall terminate upon the defeasance, prior redemption or payment in full of all of the Bonds.

8. **Amendment; Waiver.** Notwithstanding anything in this Disclosure Agreement to the contrary, the Authority may amend this Disclosure Agreement, and any provision of this Disclosure Agreement may be waived, if such amendment or waiver is supported by an Opinion of Counsel addressed to the Authority and the Co-Trustees to the effect that such amendment or waiver will not, in and of itself, cause the undertakings herein to violate the Rule.

9. **Additional Information.** Nothing in this Disclosure Agreement shall be deemed to prevent the Authority from disseminating any other information, using the means of dissemination set forth in this Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Agreement. If the Authority chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Agreement, it shall not have any obligation under this Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

10. **Default.** In the event of a failure of the Authority to comply with any provision of this Disclosure Agreement, the Co-Trustees may (and, at the written request of the Holders of at least 25% in aggregate principal amount of Outstanding Bonds affected by such failure, shall), or any Bondholder may take such actions at law or in equity as may be necessary and appropriate to enforce the specific performance and observance of the obligations of the Authority under this Disclosure Agreement; provided, however, that no person or entity shall be entitled to recover monetary damages hereunder under any circumstances and the right of any Bondholder, or the Co-Trustees on behalf of Bondholders, to challenge the adequacy of information provided pursuant to this Disclosure Agreement shall be limited in the same manner as enforcement rights are limited under the Resolution. A default under this Disclosure Agreement shall not be deemed an Event of Default under the Bonds or the Resolution, and the sole remedy under this Disclosure Agreement in the event of any failure of the Authority to comply with this Disclosure Agreement shall be an action to compel performance.

11. **Beneficiaries.** This Disclosure Agreement shall inure solely to the benefit of the Bondholders, and each Bondholder is hereby declared to be a third party beneficiary of this Disclosure Agreement. Except as provided in the immediately preceding sentence, this Disclosure Agreement shall create no rights in any other person or entity.

12. **Notices.** All notices and other communications required or permitted under this Disclosure Agreement shall be in writing and shall be deemed to have been duly given and made

only when delivered (personally, by recognized national or regional courier service, or by other messenger, for delivery to the intended addressee) or when deposited in the United States mail, registered or certified mail, postage prepaid, return receipt requested, addressed as set forth below:

(i) *If to the New Jersey Turnpike Authority:*

1 Turnpike Plaza
P.O. Box 5042
Woodbridge, New Jersey 07095
Attention: John M. Keller, Executive Director

(ii) *If to the Co-Trustees:*

(a) The Bank of New York Mellon
Global Corporate Trust
385 Rifle Camp Road, 3rd Floor
Woodland Park, New Jersey 07424
Attention:

(b) U.S. Bank National Association
333 Thornall Street, 4th Floor
Edison, New Jersey 08837
Attention:

Any party may alter the address to which communications are to be sent by giving notice of such change of address in conformity with the provisions of this Section 12.

13. **Successors and Assigns.** All of the covenants, promises and agreements contained in this Disclosure Agreement by or on behalf of the Authority or the Co-Trustees shall bind and inure to the benefit of their respective successors and assigns, whether so expressed or not.

14. **Headings for Convenience Only.** The descriptive headings in this Disclosure Agreement are inserted for convenience of reference only and shall not control or affect the meaning or construction of any of the provisions hereof.

15. **Counterparts.** This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

16. **Severability.** If any provision of this Disclosure Agreement, or the application of any such provision in any jurisdiction or to any person or circumstance, shall be held invalid or unenforceable, the remaining provisions of this Disclosure Agreement, or the application or such provision as is held invalid or unenforceable in jurisdictions or to persons or circumstances other than those in or as to which it is held invalid or unenforceable, shall not be affected thereby.

17. **Governing Law.** This Disclosure Agreement shall be governed by and construed in accordance with the laws of the State.

18. **Compliance with L. 2005, c. 271 Reporting Requirements.** Each Co-Trustee is hereby advised of its responsibility to file an annual disclosure statement on political contributions with the New Jersey Election Law Enforcement Commission ("ELEC") pursuant to *N.J.S.A.* 19:44A-20.13 (L. 2005, c. 271, section 3) if the Co-Trustee enters into contracts or agreements with public entities in the State, such as the Authority, and receives compensation or fees in excess of $50,000 or more in the aggregate from public entities in the State, such as the Authority, in a calendar year. It is each Co-Trustee's responsibility to determine if filing is necessary. Failure to do so can result in the imposition of financial penalties by ELEC. Additional information about this requirement is available from ELEC at 888-313-3532 or at www.elec.state.nj.us.

19. **Compliance with L. 2005, c. 92.** In accordance with L. 2005, c. 92, each Co-Trustee agrees that all services performed under this Disclosure Agreement or any subcontract awarded under this Disclosure Agreement shall be performed within the United States of America.

20. **Certain Provisions Relating to the Co-Trustees.** The provisions of Article IX of the Resolution relating to the duties, obligations, protections and indemnities of the Co-Trustees shall apply to the Co-Trustees' performance of this Disclosure Agreement and are by this reference incorporated as if set forth in full herein.

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[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the NEW JERSEY TURNPIKE AUTHORITY, THE BANK OF NEW YORK MELLON and U.S. BANK NATIONAL ASSOCIATION have caused this Disclosure Agreement to be executed and delivered in their respective names by their respective authorized officers, all as of the date first above written.

NEW JERSEY TURNPIKE AUTHORITY

By: ____

JOHN M. KELLER
Executive Director

THE BANK OF NEW YORK MELLON, as Co-Trustee

By: ____

Name:
Title:

U.S. BANK NATIONAL ASSOCIATION, as Co-Trustee

By: ____

Name:
Title:

NEW JERSEY TURNPIKE AUTHORITY • TURNPIKE REVENUE BONDS, SERIES 2019 A

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