NEW ISSUE – BOOK-ENTRY-ONLY **Ratings: See "RATINGS" herein.**

In the opinion of Squire Patton Boggs (US) LLP and Powell Law, PC, Co-Bond Counsel, under existing law, (i) assuming continuing compliance with certain covenants and the accuracy of certain representations, interest on the 2022A Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax, and (ii) interest on the 2022A Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax. Interest on the 2022A Bonds may be subject to certain federal taxes imposed only on certain corporations. For a more complete discussion of the tax aspects, see "TAX MATTERS" herein.

$254,730,000
PENNSYLVANIA TURNPIKE COMMISSION
TURNPIKE REVENUE REFUNDING BONDS, SERIES A OF 2022

Dated: Date of Delivery **Due: As shown on Inside Front Cover**

The Pennsylvania Turnpike Commission Turnpike Revenue Refunding Bonds, Series A of 2022 (the ***"2022A Bonds"***) are being issued pursuant to Supplemental Trust Indenture No. 64 dated as of September 1, 2022 ***("Supplemental Indenture No. 64"***), to the Amended and Restated Trust Indenture dated as of March 1, 2001, as previously amended and supplemented (the ***"Restated Indenture,"*** and together with Supplemental Indenture No. 64, is referred to herein as, the ***"Senior Indenture"***), between the Pennsylvania Turnpike Commission (the ***"Commission"***) and U.S. Bank Trust Company, National Association, as successor trustee (the ***"Trustee"***). The 2022A Bonds are being issued for the purposes of financing: (a) the purchase price for the Purchased Refunded Bonds (as such term is defined herein) tendered to the Commission pursuant to the Tender Offer (as more fully described herein) and (b) the payment of the costs of issuing the 2022A Bonds. See "REFUNDING PLAN" herein.

The 2022A Bonds will be dated the date of initial issuance and delivery thereof. The 2022A Bonds will mature on December 1 of the years and bear interest from their delivery date at the rates shown on the inside cover page hereof, calculated on the basis of a year of 360 days consisting of twelve 30-day months. Interest on the 2022A Bonds will be payable on each June 1 and December 1, commencing December 1, 2022.

The 2022A Bonds are deliverable in fully registered form and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (***"DTC"***), which will act as securities depository for the 2022A Bonds. Beneficial ownership interests in the 2022A Bonds will be recorded in book-entry only form. The 2022A Bonds will be issued in denominations of $5,000 or any multiple thereof. Purchasers of the 2022A Bonds will not receive bonds representing their beneficial ownership in the 2022A Bonds, but will receive a credit balance on the books of their respective DTC Participants or DTC Indirect Participants. So long as Cede & Co. is the registered owner of the 2022A Bonds, principal of and interest on the 2022A Bonds will be paid to Cede & Co., as nominee of DTC, which will, in turn, remit such principal and interest to the Participants and Indirect Participants for subsequent disbursement to the Beneficial Owners, as described herein. The 2022A Bonds will be transferable or exchangeable to another nominee of DTC or as otherwise described herein. So long as Cede & Co. is the registered owner of the 2022A Bonds, payments of principal and interest on the 2022A Bonds will be made directly by the Trustee under the Senior Indenture, as described herein. See "DESCRIPTION OF THE 2022A BONDS – Book-Entry Only System" herein.

The 2022A Bonds will be subject to optional redemption prior to maturity as described herein. See "DESCRIPTION OF THE 2022A BONDS – Redemption of 2022A Bonds" herein.

THE 2022A BONDS ARE LIMITED OBLIGATIONS OF THE COMMISSION AND SHALL NOT BE DEEMED TO BE A DEBT OF THE COMMONWEALTH OF PENNSYLVANIA (THE "*COMMONWEALTH*") OR A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH, BUT THE 2022A BONDS SHALL BE PAYABLE SOLELY FROM THE TRUST ESTATE (AS DEFINED HEREIN) WHICH CONSISTS PRIMARILY OF TOLLS FROM THE SYSTEM (AS DEFINED HEREIN). THE COMMONWEALTH IS NOT OBLIGATED TO LEVY OR PLEDGE ANY FORM OF TAXATION WHATSOEVER FOR PAYMENT OF THE 2022A BONDS OR TO MAKE ANY APPROPRIATION FOR THE PAYMENT OF THE 2022A BONDS. THE COMMISSION HAS NO TAXING POWER.

THIS COVER PAGE CONTAINS CERTAIN INFORMATION FOR QUICK REFERENCE ONLY. IT IS NOT A SUMMARY OF THIS ISSUE. INVESTORS MUST READ THE ENTIRE OFFICIAL STATEMENT TO OBTAIN INFORMATION ESSENTIAL TO THE MAKING OF AN INFORMED INVESTMENT DECISION.

The 2022A Bonds are being offered by the Underwriters as described herein. The 2022A Bonds are being offered when, as and if issued, and accepted by the Underwriters, subject to prior sale, withdrawal, or modification of the offer without notice, to certain legal matters being passed upon by Squire Patton Boggs (US) LLP, Washington, D.C., and Powell Law, PC, Harrisburg, Pennsylvania, Co-Bond Counsel, and to certain other conditions. Certain legal matters will be passed upon for the Underwriters by Eckert Seamans Cherin & Mellot, LLC, Philadelphia, Pennsylvania, Counsel for the Underwriters. Certain legal matters will be passed upon for the Commission by its Chief Counsel, Doreen A. McCall, Esquire, and by Virtus LLP, Windermere, Florida, Disclosure Counsel to the Commission. It is anticipated that delivery of the 2022A Bonds in book-entry form will be made through the facilities of DTC in New York, New York on or about September 28, 2022.

BofA Securities **Loop Capital Markets**

Ramirez & Co., Inc.

Blaylock Van, LLC **Drexel Hamilton, LLC** **Quoin Capital LLC**

Baird **Rice Financial Products Company**

This Official Statement is dated September 13, 2022.

MATURITY SCHEDULE

$254,730,000
PENNSYLVANIA TURNPIKE COMMISSION
TURNPIKE REVENUE REFUNDING BONDS, SERIES A OF 2022

Maturity Date (December 1)	Principal Amount	Interest Rate	Yield	Price	CUSIP [*] No. (709225)
2029	$ 7,270,000	5.000%	2.940%	113.234	FD3
2030	11,005,000	5.000	3.030	114.166	FE1
2031	65,100,000	5.000	3.210	114.123	FF8
2032	72,615,000	5.000	3.280	114.773	FG6
2033	64,905,000	5.000	3.460	113.109[(C)]	FH4
2035	10,675,000	5.000	3.700	110.934[(C)]	FJ0
2036	9,955,000	5.000	3.770	110.309[(C)]	FK7
2040	8,685,000	4.125	4.320	97.556	FL5
2041	4,520,000	4.250	4.350	98.703	FM3

[(c)] Price/Yield to first optional redemption date of December 1, 2032.

PENNSYLVANIA TURNPIKE COMMISSION

* Commissioner Deon's term expired in May 2022. He continues to serve as a member of the Commission until reappointment or until a successor is appointed and confirmed.

No dealer, broker, salesman or other person has been authorized by the Commission or the Underwriters 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 or representations must not be relied upon as having been authorized by any or either of the foregoing. 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 2022A Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation, or sale. The information set forth herein has been obtained from the Commission, the Underwriters, DTC, and other sources which are believed to be reliable but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation by, the Underwriters. The information and expressions of opinion contained herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in any of the information set forth herein since the date hereof.

The 2022A Bonds are not and will not be registered under the Securities Act of 1933, as amended, or under any state securities laws, and the Senior Indenture has not been and will not be qualified under the Trust Indenture Act of 1939, as amended, because of available exemptions therefrom. Neither the United States Securities and Exchange Commission (the ***"SEC"***) nor any federal, state, municipal, or other governmental agency will pass upon the accuracy, completeness, or adequacy of this Official Statement.

The Underwriters and the Dealer Managers have provided the following sentence for inclusion in this Official Statement. The Underwriters and the Dealer Managers have reviewed the information in this Official Statement in accordance with, and as part of, their respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters and the Dealer Managers do not guarantee the accuracy or completeness of such information.

No quotations from or summaries or explanations of provisions of law and documents herein purport to be complete and reference is made to such laws and documents for full and complete statements of their provisions. This Official Statement is not to be construed as a contract or agreement between the Commission and the purchasers or holders of any of the securities described herein. Any statements made in this Official Statement involving estimates or matters of opinion, whether or not expressly so stated, are intended merely as estimates or opinions and not as representations of fact. The cover page hereof, list of officials, this page and the Appendices attached hereto are part of this Official Statement.

If and when included in this Official Statement, the words "expects," "plans," "forecasts," "projects," "intends," "anticipates," "estimates," "assumes" and analogous expressions are intended to identify forward-looking statements, and any such statements inherently are subject to a variety of risks and uncertainties that could cause actual results to differ materially from those that have been projected. Such risks and uncertainties, which could affect the amount of tolls and other revenue collected by the Commission, include, among others, changes in economic conditions and various other events, conditions, and circumstances, many of which are beyond the control of the Commission. Such forward-looking statements speak only as of the date of this Official Statement. The Commission disclaims any obligation or undertaking to release publicly any updates or revision to any forward-looking statement contained herein to reflect any changes in the

Commission's expectations with regard thereto or any change in events, conditions, or circumstances on which any such statement is based.

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 2022A BONDS IS MADE ONLY BY MEANS OF THIS ENTIRE OFFICIAL STATEMENT.

THIS OFFICIAL STATEMENT MAY BE AVAILABLE TO PROSPECTIVE PURCHASERS IN EITHER BOUND OR PRINTED FORMAT ("***ORIGINAL BOUND FORMAT***"), OR IN ELECTRONIC FORMAT FROM THE FOLLOWING WEBSITES: WWW.MCELWEEQUINN.COM AND WWW.EMMA.MSRB.ORG. THE ELECTRONIC MUNICIPAL MARKET ACCESS SYSTEM IS THE SOLE NATIONALLY RECOGNIZED MUNICIPAL SECURITIES INFORMATION REPOSITORY. PROSPECTIVE PURCHASERS MAY RELY ON THE INFORMATION CONTAINED IN THIS OFFICIAL STATEMENT IN THE ORIGINAL BOUND FORMAT OR ONLY IF SAVED IN FULL FROM SUCH WEBSITES; PROVIDED, HOWEVER, THAT PROSPECTIVE PURCHASERS SHOULD READ THE ENTIRE OFFICIAL STATEMENT (INCLUDING THE COVER PAGE, THE INSIDE FRONT COVER PAGE AND ALL APPENDICES ATTACHED HERETO) TO OBTAIN INFORMATION ESSENTIAL TO THE MAKING OF AN INFORMED INVESTMENT DECISION. IN THE EVENT OF ANY INCONSISTENCY BETWEEN THE ORIGINAL BOUND FORMAT AND THE ELECTRONIC FORMAT, THE ORIGINAL BOUND FORMAT SHALL CONTROL.

REFERENCES TO WEBSITE ADDRESSES PRESENTED HEREIN, INCLUDING THE COMMISSION'S WEBSITE OR ANY OTHER WEBSITE CONTAINING INFORMATION ABOUT THE COMMISSION OR ANY THIRD PARTY ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY BE IN THE FORM OF A HYPERLINK SOLELY FOR THE READER'S CONVENIENCE. UNLESS SPECIFIED OTHERWISE, SUCH WEBSITES AND THE INFORMATION OR LINKS CONTAINED THEREIN ARE NOT INCORPORATED INTO, AND ARE NOT PART OF, THIS OFFICIAL STATEMENT FOR ANY PURPOSE INCLUDING FOR PURPOSES OF RULE 15c2-12 PROMULGATED BY THE SEC PURSUANT TO THE SECURITIES EXCHANGE ACT OF 1934.

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OFFICIAL STATEMENT

$254,730,000
PENNSYLVANIA TURNPIKE COMMISSION
TURNPIKE REVENUE REFUNDING BONDS, SERIES A OF 2022

INTRODUCTION

This Official Statement, which includes the cover page, the inside front cover page and the Appendices hereto, is furnished by the Pennsylvania Turnpike Commission (the ***"Commission"***) in connection with the proposed issuance of $254,730,000 Pennsylvania Turnpike Commission Turnpike Revenue Refunding Bonds, Series A of 2022 (the "***2022A Bonds***"). The 2022A Bonds are being offered by the Commission in connection with the Offer to Tender or Exchange Bonds dated August 25, 2022 (the "***Invitation***"), as supplemented by the Pricing Notice and Notice of Amendment dated September 1, 2022 (the "***Amendment to the Invitation***"), inviting holders of certain outstanding Turnpike Revenue Bonds of the Commission which are described in more detail in the Invitation (the "***Invited Bonds***"), to tender such Invited Bonds for purchase by the Commission(the "***Tender Offer***"). As described in the Invitation, the Commission initially also commenced an offer to holders of Invited Bonds to tender Invited Bonds in exchange for (the "***Exchange Offer***") a proposed series of Turnpike Revenue Refunding Bonds, Series B of 2022 (the "***Proposed 2022B Bonds***"). However, as described in the Amendment to the Invitation, the Commission determined to terminate the Exchange Offer and consequently not issue any Proposed 2022B Bonds. See "REFUNDING PLAN" and "ADDITIONAL INDEBTEDNESS OF THE COMMISSION – Future Commission Financings" herein.

Certain information concerning the Commission is attached hereto as APPENDIX A. Audited financial statements of the Commission for the years ended May 31, 2021 and May 31, 2020 are attached hereto as APPENDIX B. A summary of certain provisions of the Senior Indenture (as defined herein) is attached hereto as APPENDIX C. The form of the opinions of Co-Bond Counsel to be delivered in connection with the issuance of the 2022A Bonds is attached hereto as APPENDIX D. A table setting forth the total debt service requirements for the Turnpike Revenue Bonds (as defined herein), the Subordinate Revenue Bonds (as defined herein) and the Special Revenue Bonds (as defined herein) is attached hereto as APPENDIX E. The form of the Continuing Disclosure Agreement (as defined herein) to be executed and delivered by the Commission in connection with the issuance of the 2022A Bonds is attached hereto as APPENDIX G.

The Pennsylvania Turnpike 2018 Traffic and Revenue Forecast Study prepared by CDM Smith dated April 20, 2018 (the ***"2018 Traffic Study"***), together with a "bring down" letter developed by CDM Smith dated April 29, 2019 (the "***2019 Bring Down Letter***"), a "bring down" letter developed by CDM Smith dated May 29, 2020 (the "***May 2020 Bring Down Letter***"), a supplemental letter developed by CDM Smith dated September 4, 2020 (the "***September 2020 Supplemental Letter***"), a "bring down" letter developed by CDM Smith dated December 18, 2020 (the ***"December 2020 Bring Down Letter")***, a "bring down" letter developed by CDM Smith dated May 28, 2021 (the ***"May 2021 Bring Down Letter"***), and a "bring down" letter developed by CDM Smith dated July 8, 2022 (the "***July 2022 Bring Down Letter***", and together with the 2018 Traffic

Study, the 2019 Bring Down Letter, the May 2020 Bring Down Letter, the September 2020 Supplemental Letter, the December 2020 Bring Down Letter, and the May 2021 Bring Down Letter, the ***"Traffic Study"***) is attached hereto as APPENDIX F.

The Traffic Study contains material information, forecasts, findings, assumptions, and conclusions concerning the System. The Traffic Study also contains certain "forward-looking statements" concerning the Commission's operations, performance, and financial condition, including the Commission's future economic performance, plans and objectives. Such statements are based upon several assumptions and estimates which are subject to uncertainties, many of which are beyond the control of the Commission. The Traffic Study presents certain traffic volume and toll revenue forecasts for the forecast period noted therein and sets forth the assumptions upon which the forecasts are based. The Traffic Study should be read in its entirety.

If and when included in this Official Statement, the words "expects," "forecasts," "projects," "intends," "anticipates," "estimates," "assumes" and analogous expressions are intended to identify forward-looking statements, and any such statements inherently are subject to a variety of risks and uncertainties that could cause actual results to differ materially from those that have been projected. Such risks and uncertainties, which could affect the amount of revenues received by the Commission include, among others, changes in economic conditions and various other events, conditions, and circumstances, many of which are beyond the control of the Commission. Such forward-looking statements speak only as of the date of this Official Statement. The Commission disclaims any obligation or undertaking to release publicly any updates or revision to any forward- looking statement contained herein to reflect any changes in the Commission's expectations with regard thereto or any change in events, conditions, or circumstances on which any such statement is based.

All capitalized terms not otherwise defined herein shall have the same meanings ascribed to them in the definitions set forth in APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE – DEFINITIONS OF CERTAIN TERMS" attached hereto. All references herein to the Enabling Acts (as defined herein), the 2022A Bonds, the Senior Indenture and the Continuing Disclosure Agreement are qualified in their entirety by reference to the complete texts thereof. Copies of drafts of such documents, except for the Enabling Acts, may be obtained during the initial offering period from the respective principal offices of the Underwriters and, thereafter, executed copies may be obtained from U.S. Bank Trust Company, National Association, as successor trustee (the ***"Trustee"***). All statements in this Official Statement involving matters of opinion, estimates, forecasts, projections or the like, whether or not expressly so stated, are intended as such and not as representations of fact. No representation is made that any of such statements will be realized.

Pennsylvania Turnpike Commission

The Commission is an instrumentality of the Commonwealth of Pennsylvania (the ***"Commonwealth"***) created by the Enabling Acts, with the power to construct, operate and maintain the System (as defined herein) and to perform other functions authorized by Act 44 (as defined herein). Its composition, powers, duties, functions, duration, and all other attributes are derived from the Enabling Acts, as amended, and supplemented from time to time. See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION." Except as provided therein, the Enabling

Acts may be modified, extended, suspended, or terminated at any time by further legislation. See "INVESTMENT CONSIDERATIONS" herein.

Senior Indenture and Enabling Acts

The 2022A Bonds are being issued pursuant to a Supplemental Trust Indenture No. 64 dated as of September 1, 2022 (***"Supplemental Indenture No. 64"***), as a supplement to the Amended and Restated Trust Indenture dated as of March 1, 2001, as previously amended and supplemented (the ***"Restated Indenture,"*** and together with Supplemental Indenture No. 64, the ***"Senior Indenture"***), between the Commission and the Trustee, all pursuant to and authorized by an Act of the General Assembly of Pennsylvania approved July 18, 2007, P.L. 169, No. 44 (***"Act 44"***), and various Acts of the General Assembly approved on several dates, including the Act of May 21, 1937, P.L. 774, Act 211; the Act of May 24, 1945, P.L. 972; the Act of February 26, 1947, P.L. 17; the Act of May 23, 1951, P.L. 335; the Act of August 14, 1951, P.L. 1232; and the Act of September 30, 1985, P. L. 240, No. 61 (***"Act 61"***) to the extent not repealed by Act 44, the Act of August 5, 1991, P.L. 238, No. 26 and the Act of November 25, 2013, P.L. 974, No. 89 (***"Act 89"***) (collectively, the ***"Enabling Acts"***), and the Resolutions adopted by the Commission on May 3, 2022, as amended by Resolutions adopted by the Commission on September 6, 2022 (collectively, the ***"Bond Resolution"***).

Refunding Plan

The 2022A Bonds are being issued for the purposes of financing: (a) the purchase price for the Purchased Refunded Bonds (as such term is defined herein) tendered to the Commission pursuant to the Tender Offer; and (b) the payment of the costs of issuing the 2022A Bonds. See "REFUNDING PLAN" and "ESTIMATED SOURCES AND USES OF FUNDS" herein.

DESCRIPTION OF THE 2022A BONDS

General

The 2022A Bonds will bear interest at fixed rates and will mature, subject to prior redemption, on the dates and in the amounts set forth on the inside front cover page of this Official Statement. Interest on the 2022A Bonds will accrue from the Dated Date (as defined herein) and will be payable semi-annually to maturity (or earlier redemption) on each June 1 and December 1 (each an ***"Interest Payment Date"***), commencing on December 1, 2022.

The 2022A Bonds shall have a Series Issue Date which shall be the date of original issuance and first authentication and delivery against payment or exchange, therefor, as applicable. The 2022A Bonds issued prior to the first Interest Payment Date shall have a "Dated Date" that is the same as the Series Issue Date.

Payment of Principal of and Interest on the 2022A Bonds. So long as the 2022A Bonds are in book-entry only form, the principal or redemption price of, and interest on, such 2022A Bonds is payable by check or draft mailed or wire transferred to Cede & Co., as nominee for DTC and Registered Owner of the 2022A Bonds, for redistribution by DTC to its Participants and in turn to Beneficial Owners as described under "DESCRIPTION OF THE 2022A Bonds – Book-Entry Only System."

The principal of and redemption premium, if any, and interest on the 2022A Bonds shall be payable in any coin or currency of the United States of America which on the respective dates of payment thereof is legal tender for the payment of public and private debts. The principal of and the redemption premium, if any, on all 2022A Bonds shall be payable at maturity or upon earlier redemption to the Persons in whose names such 2022A Bonds are registered on the Bond Register at the maturity or redemption date thereof, upon the presentation and surrender of such 2022A Bonds at the designated office of the Trustee or of any Paying Agent named in the 2022A Bonds.

The interest payable on each 2022A Bond on any Interest Payment Date shall be paid by the Trustee to the Person in whose name such 2022A Bond is registered on the Bond Register at the close of business on the Record Date (as defined herein) for such interest, such payment to be made (i) by check or draft mailed on the applicable Interest Payment Date to such Registered Owner at the address as it appears on such Bond Register or at such other address as is furnished to the Trustee in writing by such Owner or (ii) by electronic transfer in immediately available funds, if the 2022A Bonds are held by a Securities Depository, or at the written request addressed to the Trustee by any Owner of 2022A Bonds in the aggregate principal amount of not less than $1,000,000, such request to be signed by such Owner, and containing the name of the bank (which shall be in the continental United States), its address, its ABA routing number, the name and account number to which credit shall be made and an acknowledgment by the Owner that an electronic transfer fee is payable. Any such written request must be filed with the Trustee no later than ten (10) Business Days (as defined herein) before the applicable Record Date preceding such Interest Payment Date. "***Business Day***" means a day other than (i) a Saturday and Sunday, (ii) a day on which the Trustee, Paying Agent or banks and trust companies in New York, New York are authorized or required to remain closed, or (iii) a day on which the New York Stock Exchange is closed.

The ***"Record Date"*** for determining the Owner entitled to payment of interest with respect to the 2022A Bonds on any given Interest Payment Date is the fifteenth (15^{th}) day (whether or not a Business Day) of the month immediately preceding such Interest Payment Date.

In the event interest on any 2022A Bond is not paid when due (***"Defaulted Interest"***), the provisions relating to Defaulted Interest under Supplemental Indenture No. 64 shall apply. See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE – THE SENIOR INDENTURE – Defaulted Interest" for information with respect to the payment of Defaulted Interest.

Authorized Denominations. The 2022A Bonds will be issued as fully registered bonds in authorized denominations of $5,000 and any integral multiple thereof.

Registration, Transfer and Exchange. The Trustee has been appointed Bond Registrar and as such shall keep the Bond Register at its designated office. The Person in whose name any 2022A Bond shall be registered on the Bond Register shall be deemed and regarded as the absolute Owner of such 2022A Bond for all purposes, and payment of or on account of the principal of and redemption premium, if any, and interest on any such 2022A Bond shall be made only to or upon the order of the Registered Owner thereof or his legal representative. All such payments shall be valid and effectual to satisfy and discharge the liability upon such 2022A Bond, including the interest thereon, to the extent of the sum or sums so paid.

Any 2022A Bond may be transferred only upon the Bond Register upon surrender thereof to the Trustee duly endorsed for transfer or accompanied by an assignment duly executed by the Registered Owner or his attorney or legal representative in such form as shall be satisfactory to the Trustee. Upon any such transfer, the Commission shall execute, and the Trustee shall authenticate and deliver in exchange for such 2022A Bond a new 2022A Bond, or 2022A Bonds, registered in the name of the transferee, of any Authorized Denomination and of the same Series and maturity and bearing interest at the same rate.

The Commission, the Securities Depository or 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 or exchange. In the event any Bond Owner of a 2022A Bond fails to provide a correct taxpayer identification number to the Trustee, the Trustee may impose a charge against such Bond Owner sufficient to pay any governmental charge required to be paid as a result of such failure. In compliance with Section 3406 of the Code (as defined herein), such amount may be deducted by the Trustee from amounts otherwise payable to such Bond Owner.

The Trustee shall not be required to (i) transfer or exchange any 2022A Bond during a period beginning at the opening of business fifteen (15) days before the day of the mailing of a notice of redemption of such 2022A Bond and ending at the close of business on the day of such mailing, or (ii) transfer or exchange any 2022A Bond so selected for redemption in whole or in part, or (iii) transfer or exchange any 2022A Bond during a period beginning at the opening of business on any Record Date for such 2022A Bond and ending at the close of business on the relevant Interest Payment Date therefor. See also "DESCRIPTION OF THE 2022A BONDS – Book-Entry Only System" herein for further information regarding registration, transfer, and exchange of the 2022A Bonds.

The Senior Indenture, and all provisions thereof, are incorporated by reference in the text of the 2022A Bonds, and the 2022A Bonds provide that each Registered Owner, Beneficial Owner, Participant, or Indirect Participant (as such terms are defined herein), by acceptance of a 2022A Bond (including receipt of a book-entry credit evidencing an interest therein), assents to all of the provisions of the Senior Indenture.

Redemption of 2022A Bonds

Optional Redemption. The 2022A Bonds maturing on or after December 1, 2033, are subject to optional redemption by the Commission in whole or in part at any time and from time to time on or after December 1, 2032, at a redemption price of 100% of the principal amount thereof to be redeemed plus, in each case, accrued interest on the 2022A Bonds to be redeemed to, but not including, the redemption date.

See also APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE – THE SENIOR INDENTURE – Redemption of Bonds" attached hereto.

Selection of 2022A Bonds to Be Redeemed. 2022A Bonds shall be redeemed only in Authorized Denominations. Any 2022A Bonds subject to optional redemption shall be redeemed in any order of maturity and in any principal amount within a maturity and interest rate as designated by the Commission.

In the case of a partial redemption of 2022A Bonds, when any 2022A Bonds of denominations greater than the minimum Authorized Denomination are then Outstanding, then for all purposes in connection with such redemption each principal amount equal to the minimum Authorized Denomination shall be treated as though it was a separate 2022A Bond of the minimum Authorized Denomination. The particular 2022A Bonds within a maturity and interest rate to be redeemed shall be determined by the Trustee by lot or by such other method as the Trustee deems fair and appropriate.

If it is determined that a portion, but not all, of the principal amount represented by any 2022A Bond is to be selected for redemption, then upon notice of intention to redeem such portion, the Owner of such 2022A Bond or such Owner's attorney or legal representative shall forthwith present and surrender such 2022A Bond to the Trustee (i) for payment of the redemption price (including the premium, if any, and interest to the date fixed for redemption) of the principal amount called for redemption, and (ii) for exchange, without charge to the Owner thereof for a new 2022A Bond or 2022A Bonds of the aggregate principal amount of the unredeemed portion of the principal amount of such 2022A Bond. If the Owner of any such 2022A Bond shall fail to present such 2022A Bond to the Trustee for payment and exchange as aforesaid, said 2022A Bond shall, nevertheless, become due and payable on the redemption date to the extent of the principal amount called for redemption (and to that extent only).

The Trustee shall call 2022A Bonds for optional redemption and payment upon receipt by the Trustee at least forty-five (45) days (or such shorter time as is reasonably acceptable to the Trustee) prior to the redemption date of a written request of the Commission. Such request shall specify the principal amount of 2022A Bonds and the maturities so to be called for redemption, the applicable redemption price or prices and the provision or provisions above referred to pursuant to which such 2022A Bonds are to be called for redemption.

Notice and Effect of Call for Redemption. Official notice of any such redemption shall be given by the Trustee on behalf of the Commission by mailing a copy of an official redemption notice by first class mail at least thirty (30) days and not more than sixty (60) days prior to the redemption date to each Registered Owner of the 2022A Bonds to be redeemed at the address shown on the Bond Register or at such other address as is furnished in writing by such Registered Owner to the Trustee. Official notice of redemption having been given as aforesaid, the 2022A Bonds or portions of 2022A Bonds so to be redeemed shall, on the redemption date, become due and payable at the redemption price specified therein, and from and after such date (unless the Commission shall default in the payment of the redemption price) such 2022A Bonds or portions of 2022A Bonds shall cease to bear interest.

For as long as DTC is effecting book-entry transfers of the 2022A Bonds, notice of redemption shall be sent to DTC as provided in the Senior Indenture. It is expected that DTC shall, in turn, notify its DTC Participants and that the DTC Participants, in turn, will notify or cause to be notified the Beneficial Owners. Any failure of DTC to advise any DTC Participant, or of any DTC Participant, Indirect Participant, or nominee to notify the Beneficial Owner, of any such notice and its content or effect will not affect the validity of the redemption of the 2022A Bonds called for redemption. See "Book-Entry Only System" below.

An optional redemption notice may state (1) that it is conditioned upon the deposit of moneys, in an amount equal to the amount necessary to effect the redemption, with the Trustee no later than the redemption date and/or (2) that the Commission retains the right to rescind such notice at any time prior to the scheduled redemption date if the Commission delivers a certificate of a Commission Official to the Trustee instructing the Trustee to rescind the redemption notice (in either case, a ***"Conditional Redemption"***), and such notice and redemption shall be of no effect if such moneys are not so deposited or if the notice is rescinded as described below.

Any Conditional Redemption may be rescinded in whole or in part at any time prior to the redemption date if the Commission delivers a certificate of a Commission Official to the Trustee instructing the Trustee to rescind the redemption notice. The Trustee shall give prompt notice of such rescission to the affected Bondholders. Any 2022A Bonds subject to Conditional Redemption where redemption has been rescinded shall remain Outstanding, and the rescission shall not constitute an Event of Default.

Further, in the case of a Conditional Redemption, the failure of the Commission to make funds available in part or in whole on or before the redemption date shall not constitute an Event of Default.

Failure to give any notice to any Owner, or any defect therein, shall not affect the validity of any proceedings for the redemption of any other 2022A Bonds. Any notice mailed (or given in accordance with DTC operating procedures while the 2022A Bonds are in book entry mode) shall be conclusively presumed to have been duly given and shall become effective upon mailing, whether or not any Owner receives the notice. See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE – THE SENIOR INDENTURE – Notice of Redemption" attached hereto.

Book-Entry Only System

The Depository Trust Company (***"DTC"***), New York, New York, will act as securities depository for the 2022A Bonds. The 2022A 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 2022A Bond certificate will be issued in the aggregate principal amount of each maturity and interest rate of the 2022A Bonds, as applicable, 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 3.6 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. DTCC 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 a Standard & Poor's rating of "AA+". The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.*

Purchases of 2022A Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2022A Bonds on DTC's records. The ownership interest of each actual purchaser of each 2022A 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 or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2022A Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in 2022A Bonds, except in the event that use of the book-entry system for the 2022A Bonds is discontinued.

To facilitate subsequent transfers, all 2022A 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 2022A Bonds with DTC and their registration in the name of Cede & Co. or such other nominee do not affect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2022A Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2022A Bonds are credited, which may or may not be the Beneficial Owners. The Direct 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 2022A Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the 2022A Bonds, such as redemptions, defaults, and proposed amendments to the

* The information contained on such website link is not incorporated by reference in this Official Statement.

security documents. For example, Beneficial Owners of 2022A Bonds may wish to ascertain that the nominee holding the 2022A Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the 2022A 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 such other DTC nominee) will consent or vote with respect to the 2022A Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Commission 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 the 2022A Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payments of principal of, redemption premium, if any, and of interest on the 2022A 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 Commission or the Trustee on payable dates 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 (nor its nominee), the Trustee, or the Commission, subject to any statutory or regulatory requirements as may be in effect from time to time. Payments of principal, redemption premium, if any, and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) are the responsibility of the Commission 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 2022A Bonds at any time by giving reasonable notice to the Commission or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, 2022A Bond certificates are required to be printed and delivered.

The Commission may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, 2022A 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 Commission believes to be reliable, but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation by, the Underwriters, the Trustee, or the Commission.

NEITHER THE COMMISSION NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO DIRECT OR INDIRECT PARTICIPANTS,

BENEFICIAL OWNERS OR OTHER NOMINEES OF SUCH BENEFICIAL OWNERS FOR: (1) SENDING TRANSACTION STATEMENTS; (2) MAINTAINING, SUPERVISING OR REVIEWING, OR THE ACCURACY OF, ANY RECORDS MAINTAINED BY DTC OR ANY DIRECT OR INDIRECT PARTICIPANT OR OTHER NOMINEES OF SUCH BENEFICIAL OWNERS; (3) PAYMENT OR THE TIMELINESS OF PAYMENT BY DTC TO ANY DIRECT PARTICIPANT, OR BY ANY DIRECT OR INDIRECT PARTICIPANT OR OTHER NOMINEES OF BENEFICIAL OWNERS TO ANY BENEFICIAL OWNER, OF ANY AMOUNT DUE IN RESPECT OF THE PRINCIPAL OF OR REDEMPTION PREMIUM, IF ANY, OR INTEREST ON BOOK-ENTRY 2022A BONDS; (4) DELIVERY OR TIMELY DELIVERY BY DTC TO ANY DIRECT PARTICIPANT, OR BY ANY DIRECT OR INDIRECT PARTICIPANT OR OTHER NOMINEES OF BENEFICIAL OWNERS TO ANY BENEFICIAL OWNERS, OF ANY NOTICE (INCLUDING NOTICE OF REDEMPTION) OR OTHER COMMUNICATION WHICH IS REQUIRED OR PERMITTED UNDER THE TERMS OF THE SENIOR INDENTURE TO BE GIVEN HOLDERS OR OWNERS OF BOOK-ENTRY 2022A BONDS; (5) THE SELECTION OF THE BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF ANY PARTIAL REDEMPTION OF BOOK-ENTRY 2022A BONDS; OR (6) ANY ACTION TAKEN BY DTC OR ITS NOMINEE AS THE REGISTERED OWNER OF BOOK-ENTRY 2022A BONDS.

In the event that the Book-Entry Only System is discontinued and the Beneficial Owners become Registered Owners of the 2022A Bonds, the 2022A Bonds will be transferable in accordance with the provisions of the Senior Indenture.

PENNSYLVANIA TURNPIKE SYSTEM

The following provides a general description of the Pennsylvania Turnpike System and certain other information relating to operations of the Commission. Such information is not complete and is qualified by reference to the more complete information set forth in this Official Statement in APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION."

Overview of the System

The present Pennsylvania Turnpike System is composed of the following: (i) the 359 mile Turnpike Mainline traversing the southern portion of Pennsylvania from east to west; (ii) the 110 mile north-south section identified as the Northeast Extension; (iii) the approximately 16 mile north-south connection, known as the Beaver Valley Expressway which intersects the Turnpike Mainline in the southwestern portion of the Commonwealth; (iv) the approximately 13 mile Amos K. Hutchinson Bypass, which adjoins the Turnpike Mainline near the New Stanton Interchange; (v) the completed portion of the Mon/Fayette Expressway project totaling approximately 48 miles; (vi) a six mile section of the Southern Beltway project from PA 60 to U.S. 22 (known as the "***Findlay Connector***"); and (vii) a 13-mile section of the Southern Beltway between U.S. 22 and Interstate Route 79 ("***I-79***") that connects to the Findlay Connector. The new section of the Southern Beltway, which opened in October 2021, leads to I-79 at the Allegheny-Washington County line. Such roads, together with any other roads for which the Commission has operational responsibility and is collecting Tolls (as defined herein), presently constitute the *"**System**."*

The Turnpike Mainline connects with the Ohio Turnpike at its western terminus and with the New Jersey Turnpike at its eastern terminus. The Turnpike Mainline commences on the eastern boundary of Pennsylvania at the Delaware River Bridge which connects the System to the New Jersey Turnpike. The Turnpike Mainline traverses the state in a westerly direction generally paralleling the southern border of the state immediately north of Philadelphia and south of Harrisburg to the vicinity of Somerset. West of Somerset, the highway follows a northwesterly direction to the northeast of Pittsburgh and to the Ohio state line, south of Youngstown, Ohio. See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE TURNPIKE SYSTEM – General."

The System has a total of 73 toll interchanges which connect it with major arteries and population centers in its 565-mile traffic corridor. 36 of the interchanges are located on the Turnpike Mainline, including barriers at the New Jersey and Ohio state lines, and 11 interchanges are situated on the Northeast Extension. The additional 26 interchanges are located on the Beaver Valley Expressway, Amos K. Hutchinson Bypass, and completed segments of the Mon/Fayette expressway and Southern Beltway.

There are 17 service plazas along the System providing gasoline and diesel fuel, other automotive supplies and services, and restaurant services. Compressed natural gas refueling and electric recharging services are now available at select locations along the System. See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE TURNPIKE SYSTEM – Interchanges and Service Plazas."

Toll Collection

Due to the adverse health impacts of COVID-19, the Commission accelerated its planned conversion to all electronic tolling ("***AET***") toll collection on March 16, 2020; removing toll collectors from toll booths and relying solely on E-ZPass and Toll-By-Plate toll collection across the System. Initially intended to be a temporary response to the COVID-19 pandemic, the Commissioners, on June 2, 2020, unanimously approved the permanent transition to AET collection operations.

Toll-By-Plate is supplemental to E-ZPass toll collections and utilizes technology where cameras read the license plates of all non-E-ZPass customers, as they pass through each toll gantry. The registered owner of the vehicle is then invoiced for the assessed tolls. Commencing January 3, 2021, the Commission began imposing an additional toll increase on Toll-By-Plate transactions equal to 45% of the toll that would otherwise be due to cover the costs of non-payment associated with Toll-By-Plate.

The Commission plans to fully convert the System to Open Road Tolling (***"ORT"***) collection operations where cameras on overhead gantries capture a vehicle's license plate at highway speed, and a toll invoice is mailed to the vehicle's registered owner. The overhead gantries will also read the transponder signals for E-ZPass customers to pay tolls at such locations. An initial pilot of the ORT system was installed along the new section of the Southern Beltway which opened in October 2021. With the opening of the Southern Beltway in October 2021, the Commission implemented the first ORT infrastructure. ORT is currently in addition to E-ZPass and Toll-By-Plate toll collections.

Ultimately, the Commission plans to convert the entire System to ORT by fall 2026. Existing toll booths would be demolished and removed from service at locations in which ORT is implemented. See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE TURNPIKE SYSTEM – Toll Collection."

Revenue Sources of the Commission

The Commission's revenues are principally derived from three separate sources: (i) toll revenues from the operation of the System; (ii) revenue derived from a portion of the Commonwealth's Oil Franchise Tax; and (iii) revenue derived from a portion of the Commonwealth's vehicle registration fee revenues.

Toll Revenues. The largest part of the Commission's revenues is derived from the collection of all rates, rents, fees, charges, fines, or other income derived by the Commission from the vehicular usage of the System and all rights to receive the same (as defined in the Senior Indenture, collectively the ***"Tolls"***). The Tolls are pledged to secure the Commission's outstanding turnpike revenue bonds issued under the Senior Indenture (collectively, the ***"Turnpike Revenue Bonds"***)and other parity and subordinate obligations under the Senior Indenture (including certain interest rate swap agreements), which are subject to or may be issued under the terms of the Senior Indenture.

As of the date of this Official Statement, $6,386,400,000 in aggregate principal amount of Turnpike Revenue Bonds are Outstanding under the Senior Indenture. The principal amount outstanding under the Senior Indenture on the date of this Official Statement includes: (i) certain notes evidencing and securing $183,500,000 in loans (issued in four tranches) through the Immigrant Investor Program (known as the EB-5 visa program) administered by U.S. Citizenship and Immigration Services (the "***EB-5 Loans***"), the proceeds of which are being used to fund a portion of certain projects in the Commission's current or any prior ten-year capital plan (see APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS" for additional information on the EB-5 Loans); and (ii) $652,820,000 aggregate principal amount of variable rate obligations. Upon the issuance of the 2022A Bonds, and the tender and purchase of the Purchased Refunded Bonds, $6,367,310,000 in aggregate principal amount of Turnpike Revenue Bonds will be Outstanding under the Senior Indenture. See "REFUNDING PLAN," "ADDITIONAL INDEBTEDNESS OF THE COMMISSION – Future Commission Financings," and "INVESTMENT CONSIDERATIONS" herein.

Other obligations issued and Outstanding under the Senior Indenture include the Commission's obligations under various interest rate swap agreements having a total notional amount of $663,962,500 as of July 31, 2022. The Tolls are not pledged to secure the Subordinate Revenue Bonds, the Special Revenue Bonds, the Oil Franchise Tax Revenue Bonds (as defined herein) and the Registration Fee Revenue Bonds (as defined herein). Certain payments made from moneys in the General Reserve Fund which are derived from Tolls are, however, pledged on a wholly subordinate basis to secure payments due on Subordinate Revenue Bonds and Special Revenue Bonds. See "ADDITIONAL INDEBTEDNESS OF THE COMMISSION – Subordinate Indenture Bonds" herein and "COMMISSION INDEBTEDNESS AND OTHER

OBLIGATIONS" and "CERTAIN OTHER INFORMATION – Financial Policies and Guidelines" in APPENDIX A attached hereto.

Since 2009, the Commission has implemented annual increases in toll rates and other charges, as well as modifications to its commercial discounts, and expects to continue to implement future toll increases as determined by the Commission to be necessary to meet the then existing debt, capital, and operational obligations of the Commission, including its payment obligations under Act 44. For a discussion of the Commission's revenue sources, including current rates and tolls and forecasted toll rate increases, see APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – FINANCIAL PLAN" and "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN FINANCIAL INFORMATION – Revenue Sources of the Commission," and " – Toll Schedule and Rates" attached hereto.

The Commission is permitted under the terms of the Senior Indenture to exclude certain roads, other than the Turnpike Mainline and the Northeast Extension, from the System for the purposes of the Senior Indenture which would eliminate toll revenues from such roads from the definition of Tolls under the Senior Indenture. However, the Commission has never excluded any roads from the System and currently has no plans to remove any roads from the System. In addition, under the Senior Indenture, the Commission has covenanted that it will not sell, lease, or otherwise dispose of real estate or personal property comprising a portion of the System except upon compliance with the provisions of the Senior Indenture, including a determination by resolution that the Net Revenues of the Commission will not be materially adversely affected. The Commission from time to time may consider various proposals that could involve the transfer or other disposition of Commission property. Any such transfer or disposition would be required to comply with the provisions of the Senior Indenture.

Oil Franchise Tax Revenues. The Commission's second principal stream of revenues consists of that portion of the Commonwealth's oil franchise tax revenues (the ***"Oil Franchise Tax Revenues"***) allocated by statute to the Commission or the holders of the Commission's Oil Franchise Tax Revenue Bonds (the ***"Oil Franchise Tax Revenue Bonds"***), $1,511,057,910 of which are outstanding as of the date of this Official Statement (including compounded amounts as of June 1, 2022 for capital appreciation bonds). The Oil Franchise Tax Revenue Bonds, the proceeds of which were spent on portions of the Mon/Fayette Expressway and the Southern Beltway, are secured solely by Oil Franchise Tax Revenues. **The Oil Franchise Tax Revenues are not pledged to secure the 2022A Bonds, other Turnpike Revenue Bonds, other obligations under the Senior Indenture, the Subordinate Indenture Bonds, or the Registration Fee Revenue Bonds.**

Registration Fee Revenues. The Commission's third principal stream of revenues consists of that portion of the Commonwealth's vehicle registration fee revenues (the ***"Registration Fee Revenues"***) allocated by statute to the Commission or the holders of any of the Commission's Registration Fee Revenue Bonds (the ***"Registration Fee Revenue Bonds"***), $329,660,000 aggregate principal amount of which are outstanding as of the date of this Official Statement, including a direct purchase obligation in the aggregate principal amount of $231,425,000. The Registration Fee Revenue Bonds, the proceeds of which were spent on portions of the Mon/Fayette Expressway and the Southern Beltway, are secured by Registration Fee Revenues. Registration Fee Revenue Bonds are to be paid solely from the Registration Fee Revenues. **The Registration**

Fee Revenues are not pledged to secure the 2022A Bonds, other Turnpike Revenue Bonds, other obligations under the Senior Indenture, the Subordinate Indenture Bonds, or the Oil Franchise Tax Revenue Bonds.

Neither the Subordinate Indenture Bonds, the Oil Franchise Tax Revenue Bonds, the Registration Fee Revenue Bonds nor any other obligations (including swaps) secured under the respective indentures governing the Subordinate Indenture Bonds, the Oil Franchise Tax Revenue Bonds or the Registration Fee Revenue Bonds are secured by or have any interest in the Trust Estate.

Pennsylvania Legislation Affecting Transportation Funding

Pursuant to Act 89, the Commission's funding obligations under Act 44 changed significantly. Starting in Fiscal Year 2023 the Commission's obligation to provide annual Act 44/Act 89 Payments to support the Commonwealth's transit capital, operating, multi-modal and other non-highway programs decreased from $450 million to $50 million. Pursuant to statute, all $50 million is required to be funded by current revenues of the Commission. For a discussion of such legislative changes and their impact on Act 44 and the Commission generally, see APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE COMMISSION – Enabling Acts" and "– Recent Developments and Legislation" attached hereto.

Traffic Study

The Traffic Study is attached hereto as APPENDIX F. There will be no further update to the Traffic Study prior to the issuance of the 2022A Bonds. The July 2022 Bring Down Letter speaks only as of its date. In addition to incorporating an additional 14 months of actual data (through May 2022), and forecasted results for the forecast period of Fiscal Year 2022-2023 through Fiscal Year 2050-2051, the July 2022 Bring Down Letter also takes into account the continued impacts of the COVID-19 pandemic, the impact of increases in fuel prices, changes in E-ZPass market share, and changes to socioeconomic variables. In addition, the July 2022 Bring Down Letter assumes a toll increase across the balance of the System to be effective January 2023, which the Commission approved on August 2, 2022.

See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE TURNPIKE SYSTEM – Traffic Study –July 2022 Bring Down Letter" and "– CERTAIN FINANCIAL INFORMATION – Five-Year Financial History" attached hereto.

The Traffic Study should be read in its entirety for a full description of the assumptions and methodologies used to develop such forecasts. Based on the Traffic Study and the Fiscal Year 2023 Financial Plan (as defined in APPENDIX A), which are both forward looking reports, the Commission expects that it will have sufficient revenue to meet the debt, capital, and operational obligations of the Commission in the current fiscal year and in future years. This expectation is based on several assumptions which includes future toll increases. See "INVESTMENT CONSIDERATIONS" herein, APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – FINANCIAL PLAN" and APPENDIX F – "TRAFFIC STUDY" attached hereto.

REFUNDING PLAN

On August 25, 2022, the Commission released the ***Invitation*** which set forth the terms and conditions of the Tender Offer inviting holders of the Invited Bonds to tender such Invited Bonds for purchase by the Commission. The purpose of the Tender Offer is to give the Commission the opportunity to retire the Invited Bonds on the date of issuance of the 2022A Bonds (the "***Settlement Date***").

Pursuant to the Tender Offer as set forth in the Invitation, the owners of Invited Bonds may tender such Invited Bonds for cash and, subject to the conditions set forth therein, the Commission expects to purchase the Invited Bonds that are accepted for purchase per the terms and at the purchase prices set forth in the Invitation. The Invited Bonds purchased pursuant to the Tender Offer (the "***Purchased Refunded Bonds***") will be cancelled on the Settlement Date and shall no longer be deemed "Outstanding" within the meaning of the Senior Indenture. Funds to pay the purchase price of the Purchased Refunded Bonds, and to pay the costs of the Tender Offer, are expected to be provided from the proceeds of the 2022A Bonds, and other funds.

This section is not intended to summarize all of the terms of the Invitation and reference is made to the Invitation for a discussion of the terms of the Tender Offer and the conditions for settlement of the Invited Bonds validly tendered and accepted for purchase.

The Purchased Refunded Bonds that are accepted by the Commission for tender for purchase, as more particularly described in the Invitation, are listed in APPENDIX H attached hereto. APPENDIX H also reflects the application of the Purchased Refunded Bonds, which constitute term bonds, against the remaining sinking fund payments of the Invited Bonds not tendered for purchase or not accepted by the Commission for purchase.

As described in the Invitation, the Commission initially also commenced the Exchange Offer, offering to holders of Invited Bonds to tender Invited Bonds in exchange for the Proposed 2022B Bonds. However, on September 1, 2022, the Commission issued the Amendment to the Invitation, terminating the Exchange Offer and consequently will not issue any Proposed 2022B Bonds in connection with the terminated Exchange Offer.

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ESTIMATED SOURCES AND USES OF FUNDS

The following table sets forth the estimated sources and uses of funds in connection with the 2022A Bonds.

SOURCES OF FUNDS	
Par Amount of 2022A Bonds	$254,730,000.00
Plus, Net Original Issue Premium	32,873,543.15
Available Monies [(1)]	6,729,212.42
TOTAL SOURCES	$294,332,755.57
USES OF FUNDS	
Purchase of Purchased Refunded Bonds [(2)]	$291,501,484.06
Costs of Issuance [(3)]	2,831,271.51
TOTAL USES	$294,332,755.57

(1) Represents moneys released from the Debt Service Fund, and other Commission monies, if applicable.

(2) The accrued interest portion of the purchase price for the Purchased Refunded Bonds will be paid from available funds of the Commission.

(3) Costs of Issuance include, but are not limited to, Underwriters' discount, Dealer Manager fees, Information Agent and Tender and Exchange Agent fees, legal fees, rating agency fees, printing expenses, Financial Advisors' fees, Trustee fees, and other miscellaneous costs and expenses.

SECURITY FOR THE 2022A BONDS

Security

The 2022A Bonds are limited obligations of the Commission. They are secured, along with the other outstanding Turnpike Revenue Bonds and certain other Parity Obligations issued under the Senior Indenture, by the pledge by the Commission to the Trustee of: (i) all Revenues (which includes all Tolls); (ii) all moneys deposited into accounts or funds, other than the Rebate Fund, created by the Senior Indenture; (iii) any insurance proceeds required to be deposited under the Senior Indenture; (iv) all payments received pursuant to Parity Swap Agreements; and (v) all investment earnings on all moneys held in accounts and funds, other than the Rebate Fund, established by the Senior Indenture (all five of these items being collectively referred to as the ***"Trust Estate"***).

OIL FRANCHISE TAX REVENUES AND REGISTRATION FEE REVENUES, AS WELL AS OTHER SOURCES OF THE COMMISSION'S REVENUES NOT DERIVED FROM TOLLS, INCLUDING CONCESSION REVENUES, ARE EXCLUDED FROM THE TRUST ESTATE. THE TRUST ESTATE ALSO EXCLUDES ALL MONEYS HELD IN THE REBATE FUND. ANY ADDITIONAL BONDS AND PARITY OBLIGATIONS ISSUED PURSUANT TO THE SENIOR INDENTURE (OTHER THAN SUBORDINATED INDEBTEDNESS) WILL BE EQUALLY AND RATABLY SECURED UNDER THE SENIOR INDENTURE, EXCEPT TO THE EXTENT SUCH ADDITIONAL BONDS ARE NOT DEBT SERVICE RESERVE FUND BONDS.

THE 2022A BONDS SHALL <u>NOT</u> BE DEEMED TO BE A DEBT OF THE COMMONWEALTH OR A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH. THE COMMONWEALTH IS NOT OBLIGATED TO LEVY OR PLEDGE ANY FORM OF TAXATION WHATSOEVER THEREFOR OR TO MAKE ANY APPROPRIATION FOR THE PAYMENT OF ANY OF THE 2022A BONDS.

Payments of the principal of and the interest on the Turnpike Revenue Bonds, including the 2022A Bonds and any Additional Bonds and payments on certain other Parity Obligations, are secured, pro rata and without preference or priority of one Turnpike Revenue Bond or Parity Obligation over another, by a valid pledge of the Trust Estate and by the Senior Indenture, except to the extent that such Bonds are not Debt Service Reserve Fund Bonds. **The 2022A Bonds have been designated as Debt Service Reserve Fund Bonds and are secured by moneys in the Debt Service Reserve Fund.**

The Senior Indenture further provides that the Commission may not issue Additional Bonds or incur other Parity Obligations except upon satisfaction of various requirements as expressly provided in the Senior Indenture. See "SECURITY FOR THE 2022A BONDS – Additional Bonds Test" herein and APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE" attached hereto.

Rate Covenant

The Commission has agreed in the Senior Indenture that it will at all times establish and maintain schedules of Tolls for traffic over the System so that the Net Revenues of the System in each Fiscal Year will at all times be at least sufficient to provide funds in an amount not less than (1) the greater of (i) 130% of the Annual Debt Service for such Fiscal Year on account of all Applicable Long-Term Indebtedness then outstanding under the provisions of the Senior Indenture; or (ii) 100% of the Maximum Annual Debt Service on all Applicable Long-Term Indebtedness, <u>plus</u> (a) the amount of required transfers from the Revenue Fund to the credit of the Reserve Maintenance Fund pursuant to the Annual Capital Budget, and (b) an amount sufficient to restore any deficiency in the Debt Service Reserve Fund, if applicable, within an 18-month period; <u>plus</u> (2) the amount of any Short-Term Indebtedness outstanding pursuant to the Senior Indenture for more than 365 consecutive days. In addition, the amount of Net Revenues in excess of the sum of the amounts set forth in clauses (1) and (2) above, together with Other Revenues pledged to the payment of Subordinated Indebtedness, shall be sufficient to pay the Annual Debt Service for any Subordinated Indebtedness.

See also "SECURITY FOR THE 2022A BONDS – General Reserve Fund; Supplemental Capital Fund" below for discussion of the rate covenant applicable to Subordinate Indenture Bonds under the Subordinate Trust Indenture, dated as of April 1, 2008, between the Commission and Computershare Trust Company, National Association, as successor trustee, as heretofore amended and supplemented (the ***"Subordinate Indenture"***).

The Commission's failure to meet the Rate Covenant shall not constitute an Event of Default under the Senior Indenture if (i) no Event of Default occurred in debt service payments on Turnpike Revenue Bonds or other Parity Obligations as a result of such failure and (ii) the Commission promptly after determining that the Rate Covenant was not met retains a Consultant to make written recommendations as to appropriate revisions to the schedules of Tolls necessary or appropriate to meet the Rate Covenant and advises the Trustee in writing of such retention. Anything in the Senior Indenture to the contrary notwithstanding, if the Commission shall comply with the recommendations of the Consultant in respect of Tolls, it will not constitute an Event of Default under the provisions of the Senior Indenture if the Commission fails to meet the Rate Covenant during the succeeding Fiscal Year as long as no Event of Default has occurred in debt service payments on Turnpike Revenue Bonds or other Parity Obligations. If the Commission does not comply with the recommendations of the Consultant in respect of Tolls, the Trustee may, and upon the request of the holders of not less than 25% in Principal Amount of the Turnpike Revenue Bonds then outstanding and upon being indemnified to its satisfaction shall, institute and prosecute in a court of competent jurisdiction any appropriate action to compel the Commission to revise the schedules of Tolls. The Commission covenants that it will adopt and charge Tolls in compliance with any final order or decree entered in any such proceeding.

In the event that the Consultant shall fail to file with the Commission such recommendations in writing within sixty (60) days after such retention, the Trustee may designate and appoint a different Consultant to make recommendations as to an adjustment of the schedules of Tolls, which recommendations shall be reported in writing to the Commission and to the Trustee within sixty (60) days after such retention. Such written report shall for all purposes be considered to be the equivalent of and substitute for the recommendations of the Consultant retained by the Commission.

In preparing its recommendations, the Consultant may rely upon written estimates of Revenues prepared by the other Consultants of the Commission. Copies of such written estimates signed by such Consultants shall be attached to such recommendations. The Commission covenants that promptly after receipt of such recommendations and the adoption of any revised schedules of Tolls, certified copies thereof will be filed with the Trustee. The ability of the Commission to collect Tolls in an amount sufficient to comply with the Rate Covenant could be adversely affected by many factors, some of which are beyond the Commission's control.

The Commission covenanted in the Senior Indenture that Tolls will be classified in a reasonable way to cover all traffic, so that the Tolls may be uniform in application to all traffic falling within any reasonable class regardless of the status or character of any Person (including, any person, firm or corporation) participating in the traffic; provided, however, that the foregoing shall not be interpreted to restrict the Commission's right, in its discretion in connection with its management of the System, to establish and maintain flexible Toll schedules including, but not limited to, provisions for, utilizing or otherwise taking into account, peak and nonpeak pricing, introductory pricing, weight, method of payment, frequency, carpooling, electronic or other Toll collection technologies, traffic management systems, and similar classifications. The Commission has covenanted in the Senior Indenture that it shall not grant free passage or reduced Tolls within a class, except in the limited manner permitted by the Senior Indenture, which includes, among others, for operational or safety reasons including, but not limited to, reasons arising out of a work stoppage, work slowdown or work action, and for use by Commission employees and the Army, Air Force, Navy, Coast Guard, Marine Corps or militia or any branch thereof in time of war or other emergency. Any reduced Toll or grant of free passage shall be reviewed by the Commission with a Consultant before implementing the same unless the same is temporary (e.g., having a duration of less than one year).

In the event the Commission does not meet the Rate Covenant for the preceding Fiscal Year, any classification resulting in a reduced Toll or new classification shall be subject to a Consultant approving the same before it is implemented. In all events, the Commission shall not make a change in classification or any new classification which would cause the Commission to fail to meet the Rate Covenant.

In addition, in the event the Commission does not meet the Rate Covenant for the preceding Fiscal Year, any reduced Toll or free passage shall be subject to a Consultant approving the same before it is implemented by the Commission unless the circumstances require immediate implementation, in which event the Commission shall obtain such approval promptly following implementation. In all events, the Commission shall not reduce Tolls or grant free passage if it would cause the Commission to fail to meet the Rate Covenant.

The Commission's covenant as to uniformity of Tolls shall not be construed as requiring that Tolls for any given class of traffic be identical in amount throughout the entire System for trips of approximately identical lengths. The Commission may fix and place in effect schedules of Tolls for any given class of traffic wherein the Tolls charged for travel on a given section of the System shall be different from the Tolls charged on another section of the System notwithstanding the fact that both of said sections may be of identical or approximately identical length.

Revenue Fund

All Revenues will be deposited daily, as near as practicable, with the Trustee or in the name of the Trustee with a depositary or depositaries designated by the Commission and approved by the Trustee, to the credit of the Revenue Fund. The moneys in the Revenue Fund are to be held by the Trustee in trust and applied in accordance with the Senior Indenture.

Except as otherwise provided in the Senior Indenture, transfers from the Revenue Fund shall be made to the following funds and in the following order of priority:

a. Rebate Fund;

b. Operating Account;

c. Debt Service Fund;

d. Reserve Maintenance Fund;

e. Debt Service Reserve Fund, if applicable; and

f. General Reserve Fund.

Operating Account

The Commission shall establish an account known as the Operating Account which shall be held by the Commission in the name of the Commission outside of the Senior Indenture until applied as set forth in the Senior Indenture. The Trustee shall transfer from the Revenue Fund on or before the last Business Day of each month to the credit of the Operating Account an amount equal to (a) the amount shown by the Annual Operating Budget to be necessary to pay Current Expenses for the ensuing month and (b) an amount certified by a Commission Official as being reasonably necessary to pay Current Expenses which are expected for such month, after taking into account the amount on deposit in the Operating Account (including the amount described in clause (a) above).

Debt Service Fund

After first having made the foregoing specified deposits to the Operating Account, the Trustee is required to withdraw from the Revenue Fund and deposit to the applicable account in the Debt Service Fund held by the Trustee under the Senior Indenture, the amounts hereinafter specified which shall be applied by the Trustee for the purposes for which the same shall be deposited:

(a) On or before the last Business Day preceding an Interest Payment Date, an amount which equals the interest due on such Interest Payment Date on any Turnpike Revenue Bonds or Parity Obligations; provided, however, that in the case of any fixed rate bonds, term mode bonds and multi-modal fixed mode bonds (collectively, "***Fixed Rate Bonds***"), the withdrawal from the Revenue Fund and deposit to the Debt Service Fund shall be made on or before the first Business Day of each calendar month in an amount which equals the amount necessary to pay, and for the purpose of paying, one-sixth (1/6) of the interest due on any Fixed Rate Bonds issued under the Senior Indenture on the next succeeding Interest Payment Date (or, in the case of the period from the date of issuance of such Fixed Rate Bonds to the first Interest Payment Date for the applicable Fixed Rate Bonds, a monthly amount equal to the interest amount owed on such first Interest Payment Date divided by the number of months from the date of issuance of such Fixed Rate Bond to such first Interest Payment Date) plus any accumulated unfunded balance relating to prior months' deposit requirements;

(b) On or before the last Business Day preceding a principal payment date, an amount which equals the principal amount of the Turnpike Revenue Bonds or Parity Obligations maturing on such principal payment date; provided, however, that in the case of any Fixed Rate Bonds, the withdrawal from the Revenue Fund and deposit to the Debt Service Fund shall be made on or before the first Business Day of each calendar month in an amount which equals one-twelfth (1/12) of the amount necessary to pay and for the purpose of paying the principal amount of any Fixed Rate Bonds issued under the Senior Indenture maturing (including mandatory sinking fund installments) on the next succeeding principal payment date (or, in the case of the period from the date of issuance of such Fixed Rate Bonds to the first date on which principal is due on such Fixed Rate Bonds, a monthly amount equal to the principal amount owed on such first principal maturity date divided by the number of months from the date of issuance of such Fixed Rate Bond to such first principal maturity date) plus any accumulated unfunded balance relating to prior months' deposit requirements; and

(c) On the dates specified in any Supplemental Indenture relating to Additional Bonds or Parity Obligations, the amounts required to be deposited on said dates to the credit of the Interest Account or Principal Account pursuant to the provisions of such Supplemental Indenture for the purpose of paying the interest on and the principal of such Additional Bonds.

The Trustee is required to pay out of the Interest Account, from time to time, without further authorization from the Commission, and as the same shall become due and payable, the interest upon the Turnpike Revenue Bonds, except to the extent payable from funds and accounts other than the Debt Service Fund, as provided in any Supplemental Indenture. The Trustee is required likewise to pay out of the Principal Account, from time to time, without further authorization from the Commission, as the same shall become due and payable, the principal of the Turnpike Revenue Bonds, except to the extent payable from funds and accounts other than the Debt Service Fund, as provided in any Supplemental Indenture.

If at the time the Trustee is required to make a withdrawal from the Debt Service Fund and the moneys therein shall not be sufficient for such purpose, the Trustee shall withdraw the amount of such deficiency from the moneys on deposit in the following funds or accounts and transfer the same to the Debt Service Fund in the following order: the Debt Service Reserve Fund, if applicable, the General Reserve Fund, and the Reserve Maintenance Fund. **The 2022A Bonds have been designated as Debt Service Reserve Fund Bonds and are secured by moneys in the Debt Service Reserve Fund.** See "Debt Service Reserve Fund" below.

Reserve Maintenance Fund

In each Fiscal Year, after first having made the deposits provided by the Senior Indenture with respect to the Rebate Fund, the Operating Account and the Debt Service Fund, the Trustee shall transfer from the Revenue Fund on or before the last Business Day of each month to the credit of the Reserve Maintenance Fund the amount shown in the Annual Capital Budget for the ensuing month.

Except as otherwise provided in the Senior Indenture, or except in case of an emergency, as characterized in a certificate signed by a Commission Official stating that the moneys to the credit of the Operating Account are insufficient to meet such emergency, moneys in the Reserve Maintenance Fund shall be disbursed to pay current capital expenditures shown in the Annual Capital Budget for the System, plus the cost of unusual or extraordinary maintenance (as determined solely by the Commission) and shall be disbursed only for such purposes, except to the extent hereinafter provided. Such purposes shall include, but not be limited to, paying the cost of constructing, improving and reconstructing improvements and betterments to all parts of the System now or hereafter open to vehicular traffic, including, without limitation, additional lanes, tunnels, interchanges, toll plazas, bridges and connecting roads, transit interface facilities and any other improvements deemed necessary or desirable by the Commission.

Payments from the Reserve Maintenance Fund, except the transfers which the Trustee is authorized to make, shall be made pursuant to a requisition process which follows the process described in the Senior Indenture for payments from the Construction Fund.

The Trustee shall transfer any moneys from the Reserve Maintenance Fund to the credit of the General Reserve Fund from time to time upon the receipt of a certificate of a Commission Official certifying that the amount so to be transferred is not required for the purposes for which the Reserve Maintenance Fund has been created.

Debt Service Reserve Fund

A Debt Service Reserve Fund has been established under the Senior Indenture to provide additional security for Debt Service Reserve Fund Bonds. **The 2022A Bonds are Debt Service Reserve Fund Bonds and are secured by moneys in the Debt Service Reserve Fund.**

The Senior Indenture requires that the balance in the Debt Service Reserve Fund be maintained at the Debt Service Reserve Requirement, which is an amount equal to the Maximum Annual Debt Service on account of all the Debt Service Reserve Fund Bonds. Debt Service Reserve Fund Bonds include Long-Term Indebtedness specified by the Commission in a Supplemental Indenture as being secured by the Debt Service Reserve Fund. See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE – THE SENIOR INDENTURE – Debt Service Reserve Fund" attached hereto, for information with respect to the Debt Service Reserve Fund under the Senior Indenture.

Following the issuance of the 2022A Bonds, the tender and purchase of the Purchased Refunded Bonds, and the application of moneys in the Debt Service Reserve Fund in connection therewith, the funds on deposit in the Debt Service Reserve Fund will be sufficient, in the aggregate, to meet the Debt Service Reserve Requirement under the Senior Indenture, in the amount of $392,935,517.82.

General Reserve Fund; Supplemental Capital Fund

After first having made the above specified deposits to the Operating Account, the Debt Service Fund, the Reserve Maintenance Fund and the Debt Service Reserve Fund, and while any Turnpike Revenue Bonds are outstanding, the Trustee is required to transfer from the Revenue Fund on or before the last Business Day of each year (or more frequently if requested by a Commission Official) to the credit of the General Reserve Fund any funds which a Commission Official determines to be in excess of the amount required to be reserved therein for future transfers to the Debt Service Fund. Moneys in the General Reserve Fund may be expended by the Commission to restore deficiencies in any funds or accounts created under the Senior Indenture, and absent any such deficiency, for any of the following purposes, with no one item having priority over any of the others:

a. to purchase or redeem Turnpike Revenue Bonds;

b. to secure and pay the principal or redemption price of, and interest on, any Subordinated Indebtedness;

c. to make payments into the Construction Fund;

d. to fund improvements, extensions, and replacements of the System; or

e. to further any corporate purpose.

The Trustee has been directed to disburse from the General Reserve Fund, to the trustee under the Subordinate Indenture, funds sufficient to meet debt service requirements on the Subordinate Indenture Bonds. Under the Subordinate Indenture, the Commission has agreed that it will at all times establish and maintain Tolls for traffic over the System so that the amount paid into the General Reserve Fund in each Fiscal Year after deducting any liquidity reserve or other required holdback or deposit then in effect will be at least sufficient to provide funds in an amount not less than (i) 115% of the annual debt service on Subordinate Revenue Bonds (and obligations on parity with Subordinate Revenue Bonds), plus (ii) 100% of the annual debt service on Special Revenue Bonds (and obligations on a parity with Special Revenue Bonds and certain further subordinated bonds), plus (iii) any amount required under the Subordinate Indenture to restore within eighteen (18) months any deficiency in the debt service reserve fund held under the Subordinate Indenture. Failure to meet this covenant will not constitute a default under the Subordinate Indenture (or the Senior Indenture) but will require the Commission to retain a consultant to advise with respect to schedules of Tolls in order to bring the Commission into compliance. The Trustee has never withdrawn funds from the General Reserve Fund to meet regularly scheduled debt service payments on Turnpike Revenue Bonds outstanding under the Senior Indenture nor has the General Reserve Fund been used to restore any shortfalls in the Debt Service Reserve Fund for any Turnpike Revenue Bonds. See also "ADDITIONAL INDEBTEDNESS OF THE COMMISSION – Subordinate Indenture Bonds" herein.

The following chart sets forth the balances held in the General Reserve Fund as of the fiscal year end dates set forth below. As of the date of this Official Statement, the Commission had approximately $438 million on deposit in the General Reserve Fund.

General Reserve Fund Balances
as of May 31[†]

2022	2021	2020	2019	2018
$437,513,657	$452,045,842	$404,330,774	$391,569,248	$345,414,879

Pursuant to Supplemental Indenture No. 59, dated as of June 2, 2021, the Commission established a Supplemental Capital Fund (the ***"Supplemental Capital Fund"***) under the Senior Indenture for deposit and disbursement of certain of the Commission's generally available Revenues for improvements, extensions and replacements to the System, or otherwise for any Project which may be identified by the Commission, and not otherwise funded, as set forth in the Commission's capital plans (collectively, the ***"Additional Capital Projects"***). The Supplemental Capital Fund is pledged as part of the Trust Estate under the Senior Indenture and will be funded solely from such amounts as the Commission, in its sole and absolute discretion, may transfer to it from the General Reserve Fund. Proceeds of Bonds, other Parity Obligations and Subordinated Indebtedness will not be deposited in the Supplemental Capital Fund. Funds may not be requisitioned from the Supplemental Capital Fund for Additional Capital Projects if a deficiency

[†] Balances in the General Reserve Fund can vary substantially, both month to month and year to year, due not only to variations in revenues, but also to the timing of expenditures, particularly capital expenditures, any transfers which may be made to the Supplemental Capital Fund for funding Additional Capital Projects, the Commission's equity contribution towards its Act 44/Act 89 Payment (as defined in APPENDIX A) and the Commission's deposit to the Pennsylvania Turnpike Commission Retiree Medical Trust. (See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN OTHER INFORMATION – Other Post-Employment Benefit Liabilities."). Over the past eleven Fiscal Years (Fiscal Years 2012 to 2022), the Commission utilized $1,114.5 million in General Reserve Fund balances to: 1) augment and/or make its Act 44/Act 89 Payments by $432.5 million; 2) make contributions to the Retiree Medical Trust of $167.4 million in excess of its annual required contribution; 3) redeem a portion of its Floating Rate Notes issued under the Senior Indenture at maturity on December 1, 2017 ($100 million) and December 1, 2018 ($50 million); 4) contribute $234.6 million to cash defease a portion of its outstanding Senior and Subordinate Revenue Bonds, and 5) contribute $130 million to the Supplemental Capital Fund.

exists in any of the funds and accounts established under the Senior Indenture. Notwithstanding any other provision of the Senior Indenture or the occurrence or continuation of any event or circumstance, monies on deposit in the Supplemental Capital Fund: (i) will be transferred to the General Reserve Fund to the extent not needed to fund such Additional Capital Projects; and (ii) may be transferred to the General Reserve Fund, in such amounts, and from time to time, as the Commission, in its sole and absolute discretion, shall determine. As of May 31, 2022, the Commission had over $95 million on deposit in the Supplemental Capital Fund. See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE – THE SENIOR INDENTURE – Supplemental Capital Fund" for information with respect to the Supplemental Capital Fund under the Senior Indenture.

Additional Bonds Test

The Commission is permitted to issue Additional Bonds and other Indebtedness under the terms of the Senior Indenture, having a lien on the Trust Estate, in the form of Short-Term Indebtedness, Long-Term Indebtedness, Subordinated Indebtedness and Approved Swap Agreements, provided that there is no default, that certain resolutions, opinions, supplemental indentures, certifications and moneys and securities, if necessary, are delivered to the Trustee and that the following conditions are met:

(a) with respect to Short-Term Indebtedness, (1) immediately after the incurrence of such Short-Term Indebtedness, the outstanding principal amount of all Short-Term Indebtedness issued pursuant to the Senior Indenture may not exceed 30% of the Revenues for the most recent Fiscal Year for which audited financial statements are available; and (2) for a period of not fewer than seven consecutive days within each Fiscal Year, commencing with the Fiscal Year following the issuance of such Short-Term Indebtedness, the aggregate principal amount of all outstanding Short-Term Indebtedness is reduced to less than 5% of the Revenues for the immediately preceding Fiscal Year for which audited financial statements are available. Short-Term Indebtedness issued pursuant to the Senior Indenture will be on a parity with other Additional Bonds;

(b) with respect to Long-Term Indebtedness, prior to or contemporaneously with the incurrence thereof (1) a certificate of a Commission Official certifying that the Historical Pro Forma Debt Service Coverage Ratio for the most recent Fiscal Year preceding the delivery of such certificate for which audited financial statements are available was not less than 1.75; or (2) a report of a Consultant to the effect that (i) the Net Revenues of the Commission during the preceding Fiscal Year were at least 130% of the Maximum Annual Debt Service on all Applicable Long-Term Indebtedness then Outstanding and on any Applicable Long-Term Indebtedness proposed to be issued (which report may assume any revisions of the Tolls which have been approved by the Commission after the beginning of such Fiscal Year were in effect for the entire Fiscal Year) and (ii) the Projected Debt Service Coverage Ratio is not less than 1.30; or (3) if the Long-Term Indebtedness is being incurred solely for the purpose of refunding, repurchasing or refinancing (whether in advance or otherwise) any outstanding Long-Term Indebtedness, a certificate of a Commission Official certifying the Maximum Annual Debt Service on all Applicable Long-Term Indebtedness prior to the issuance of the proposed Long-Term Indebtedness is greater than the Maximum Annual Debt Service on all Applicable Long-Term Indebtedness after the issuance of such proposed Long-Term Indebtedness;

(c) with respect to Subordinated Indebtedness, there is no limit, provided that the Subordinate Indebtedness is subordinate and junior in all respect to payment of all Turnpike Revenue Bonds and other Parity Obligations incurred under the Senior Indenture so that the same is payable as to principal and interest once all other payments have been made under the Senior Indenture from amounts on deposit to the credit of the General Reserve Fund as long as prior to or contemporaneously with the incurrence there is delivered to the Trustee, a certificate of a Commission Official certifying that the Rate Covenant would have been met during the preceding Fiscal Year taking into account the Maximum Annual Debt Service on such Subordinated Indebtedness. Such Subordinated Indebtedness and the payment thereof may be secured by a lien and pledge (a) subordinate to that of the Turnpike Revenue Bonds on the Revenues or (b) prior to, on a parity with or subordinate to, that of the Turnpike Revenue Bonds on Other Revenues, in which event the Commission and the Trustee may establish such other accounts under the Senior Indenture as they deem necessary or appropriate; and

(d) with respect to Approved Swap Agreements, no Approved Swap Agreement will be entered into unless prior to or contemporaneously with the incurrence thereof, a certificate of a Commission Official as described in (b)(1) above, or a report of a Consultant as described in (b)(2) above, which takes into account the expected payments by and to the Commission pursuant to such Approved Swap Agreement in calculating Annual Debt Service is delivered.

See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE – THE SENIOR INDENTURE – Additional Bonds" attached hereto.

ADDITIONAL INDEBTEDNESS OF THE COMMISSION

Bonds and Other Parity Obligations

The Commission has previously issued Turnpike Revenue Bonds and Notes under the terms of the Senior Indenture that have an equal claim to the Trust Estate with the 2022A Bonds. As of the date of this Official Statement, $6,386,400,000 in aggregate principal amount of Turnpike Revenue Bonds are Outstanding under the Senior Indenture. The principal amount outstanding under the Senior Indenture on the date of this Official Statement includes: (i) certain notes evidencing and securing $183,500,000 in EB-5 Loans, the proceeds of which are being used to fund a portion of certain projects in the Commission's current or any prior ten year capital plan (see APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN FINANCIAL INFORMATION" for additional information on the EB-5 Loans); and (ii) $652,820,000 aggregate principal amount of variable rate obligations. Upon the issuance of the 2022A Bonds, and the tender and purchase of the Purchased Refunded Bonds, $6,367,310,000 in aggregate principal amount of Turnpike Revenue Bonds will be Outstanding under the Senior Indenture. See "REFUNDING PLAN" and "INVESTMENT CONSIDERATIONS – Impacts of the COVID-19 Pandemic" herein.

Other obligations issued and Outstanding under the Senior Indenture include the Commission's obligations under various interest rate swap agreements having a total notional amount of $663,962,500 as of July 31, 2022. Under the terms of the Senior Indenture, regularly scheduled amounts payable under Parity Swap Agreements, and in certain cases termination payments, are secured on a parity with the Bonds by the Trust Estate. See APPENDIX A – "THE

PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN OTHER INFORMATION – Financial Policies and Guidelines" and APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE" attached hereto.

The Tolls are not pledged to secure the Subordinate Revenue Bonds, the Special Revenue Bonds, the Oil Franchise Tax Revenue Bonds, and the Registration Fee Revenue Bonds. Certain payments made from moneys released from the General Reserve Fund which are derived from Tolls are, however, pledged on a wholly subordinate basis to secure payments due on Subordinate Revenue Bonds and Special Revenue Bonds.

Subordinate Indenture Bonds

Act 44 authorizes the Commission to issue bonds for the purpose of paying costs of the Pennsylvania Department of Transportation (***"PennDOT"***) and bond-related expenses. Proceeds of such bonds may be applied toward the satisfaction of the Commission's annual payment obligations to PennDOT under the Amended Funding Agreement (as defined in APPENDIX A hereto). As of the date of this Official Statement, the Commission has $6,318,312,348 aggregate principal amount outstanding (including compounded amounts as of June 1, 2022 for the Commission's outstanding capital appreciation bonds) of Subordinate Revenue Bonds (the ***"Subordinate Revenue Bonds")*** under the Subordinate Indenture under the authorization of Act 44 to be paid solely from moneys released from the General Reserve Fund (such bonds are therefore subordinate to Bonds and other Parity Obligations under the Senior Indenture). Other obligations issued and outstanding under the Subordinate Indenture include the Commission's obligations under an interest rate swap agreement having a total current notional amount of $291,850,000. See "INVESTMENT CONSIDERATIONS – The FCA Announcement, changes to LIBOR determination methods or other reforms to LIBOR could increase payment obligations under the Commission's Swaps" herein and APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN OTHER INFORMATION – Financial Policies and Guidelines" attached hereto, for additional information relating to swaps.

Upon fulfillment of conditions set forth in the Subordinate Indenture, the Commission may issue additional Subordinate Revenue Bonds under the terms of the Subordinate Indenture. In addition to any Subordinate Revenue Bonds, the Commission is authorized under the terms of the Subordinate Indenture to enter into various interest rate exchange agreements that will constitute parity swap agreements under the Subordinate Indenture. Under the terms of the Subordinate Indenture, amounts payable under parity swap agreements, including termination payments, may be secured on a parity with the Subordinate Revenue Bonds.

There is no statutory limit on the amount of Subordinate Revenue Bonds that may be issued by the Commission. To date, the Commission has issued Subordinate Revenue Bonds under the Subordinate Indenture, but has not issued any Subordinated Indebtedness under the Senior Indenture. The Commission has no plans to issue any Subordinated Indebtedness under the Senior Indenture.

Previously, under Act 44, the Commission was able to issue up to $5 billion of Special Revenue Bonds guaranteed by the Motor License Fund under Act 44 (the ***"Special Revenue Bonds"*** and, together with the Subordinate Revenue Bonds, the ***"Subordinate Indenture Bonds"***) which are subordinate to Parity Obligations issued under the Senior Indenture and to the Subordinate Revenue Bonds issued under the Subordinate Indenture. However, other than bonds issued to refund outstanding Special Revenue Bonds, pursuant to Act 89, effective July 1, 2014, Special Revenue Bonds may no longer be issued by the Commission to fund any portion of its payment obligation under the Amended Funding Agreement. The Commission has issued Special Revenue Bonds currently outstanding in the aggregate principal amount of $991,709,421 (inclusive of compounded amounts as of June 1, 2022 for capital appreciation bonds). Debt service on the Special Revenue Bonds shall be payable from any available funds of the Commission, but is additionally secured by amounts payable from the Motor License Fund created under Act 44 required to pay any debt service shortfall; all such debt service payments are subordinate obligations of the Commission payable solely from certain money in, or periodically released from, the General Reserve Fund after meeting all other Commission requirements pursuant to any financial documents, financial covenants, insurance policies, liquidity policies or agreements in effect at the Commission; and the proceeds from the issuance of the Special Revenue Bonds may only be used for roads and bridges. The Amended Funding Agreement provides that the Commission is obligated to pay all debt service due with respect to the Special Revenue Bonds. See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE COMMISSION – Enabling Acts," attached hereto for a description of the Subordinate Revenue Bonds and Special Revenue Bonds which the Commission is authorized to issue under the Enabling Acts.

Other Bonds Issued by the Commission – No Claim on Trust Estate

The Commission has also issued Oil Franchise Tax Revenue Bonds that are currently outstanding in the aggregate principal amount of $1,511,057,910 (inclusive of compounded amounts as of June 1, 2022 for capital appreciation bonds) and Registration Fee Revenue Bonds that are currently outstanding in the aggregate principal amount of $329,660,000, which includes a direct purchase obligation in the aggregate principal amount of $231,425,000. The Commission has entered into various interest rate exchange agreements (swaps) with respect to certain of the Oil Franchise Tax Revenue Bonds and Registration Fee Revenue Bonds. Neither the Oil Franchise Tax Revenue Bonds nor the Registration Fee Revenue Bonds or any of the various swaps with respect to the Oil Franchise Tax Revenue Bonds and Registration Fee Revenue Bonds are secured by or have any interest in the Trust Estate. Furthermore, neither the Oil Franchise Tax Revenues nor the Registration Fee Revenues are pledged to secure the 2022A Bonds.

Future Commission Financings

On September 6, 2022, in furtherance of the Commission's desire to administer its debt obligations to obtain the best long-term financial advantage, and its continuing evaluation of market conditions, the Commission adopted amendments to the Bond Resolution providing for, among other things, the authority to (i) issue Turnpike Revenue Bonds to finance the costs of various capital expenditures ("***Potential New Money Bonds***"), and (ii) authorize the defeasance of a portion of any outstanding Turnpike Revenue Bonds of the Commission with available moneys (the "***Defeasance Program***"). The Commission expects to determine, at its sole discretion, whether and to what extent to execute the Defeasance Program and/or issue the Potential New Money Bonds after evaluating the totality of the economic results of the Tender Offer. If commenced, the settlement of the Defeasance Program and delivery of the Potential New Money Bonds could, subject to required approvals, occur prior to the end of October 2022.

See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Future Financing Considerations" attached hereto, for a discussion of future financings currently planned or contemplated by the Commission.

INVESTMENT CONSIDERATIONS

There are various investment considerations which could adversely affect the sufficiency of the Trust Estate and which, if present, may result in an inability to meet the debt service requirements on the 2022A Bonds. The following is intended only as a summary of certain investment considerations attendant to an investment in the 2022A Bonds and is not intended to be exhaustive. To identify risk factors and make informed investment decisions, potential investors should be thoroughly familiar with the entire Official Statement (including each Appendix hereto), and the Senior Indenture and related documents to make a judgment as to whether the 2022A Bonds are an appropriate investment. The following risk factors are among those which should be considered by a potential investor:

Commission Revenues may decline

The actual amount of future toll revenues collected by the Commission depends upon a number of factors, including rates established by the Commission and the level and composition of traffic on the System. Many of these factors are beyond the control of the Commission. The Commission is obligated under the terms of the Amended Funding Agreement, Act 44 and Act 89, the Senior Indenture, and the Subordinate Indenture to fix and revise tolls at levels that will generate revenues (together with other available moneys) sufficient to pay all of its obligations under the Amended Funding Agreement, to construct and maintain the System and to pay debt service obligations and other amounts payable to PennDOT or the Commonwealth. However, the amount of traffic on the System cannot be predicted with certainty and may decline due to general economic conditions, diversion of some traffic to alternative non-toll routes to avoid toll rate increases or because of increased fuel costs, increased mileage standards, higher fuel taxes or other factors. There is insufficient data to assess these risk factors fully. However, based on historical variations in such factors and the recent toll increases, the Commission reasonably expects to have sufficient revenues to meet its payment obligations, including payment obligations with respect to the 2022A Bonds. Also see APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN OTHER INFORMATION – Performance Audit by the Auditor General" attached hereto.

In addition, as set forth in the Traffic Study, there is considerable uncertainty inherent in future traffic and revenue forecasts for any toll facility, and differences between forecasted and actual results (which may be material) may occur due to events and circumstances beyond the control of the forecasters, including without limitation, economic conditions, and other factors. See APPENDIX F – "TRAFFIC STUDY" and APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE TURNPIKE SYSTEM – Traffic Study" attached hereto. While future traffic volume and revenues cannot be predicted with certainty, the Commission reasonably expects that it will have sufficient revenue to meet the then existing debt and operational obligations of the Commission. But see APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN OTHER INFORMATION – Performance Audit by the Auditor General" attached hereto.

In addition to implementing the additional Toll-By-Plate of 45% charge on all Toll-By-Plate transactions, which was implemented to encourage increased use of E-ZPass and to offset estimated revenue leakage, the Commission continues to actively work to address revenue leakage due to AET through various initiatives that address customer behaviors and system improvement. See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – TURNPIKE SYSTEM – Toll Collection" attached hereto.

If Commission experiences financial problems, delays in payment or losses on the 2022A Bonds may result

Adverse changes in the financial condition of the Commission could result in a failure to make its payments, or a delay in payments, to the Trustee with respect to the 2022A Bonds. In addition to a potential decline in revenues, the Commission's financial condition could be adversely affected by a number of factors including, but not limited to:

- Increased and/or unanticipated costs of operation and maintenance of the System;
- Decreased toll revenues due to declines in usage or otherwise;
- Increased use of remote work environments and technology among the general population that may decrease levels of commuting or travel for business or other purposes;

- Increased use of mass transit systems;
- Improvements in alternative infrastructure and transportation routes and changes in market conditions that may impact the level of commercial freight traffic utilizing the System;
- Work stoppage, slowdown, or action by unionized employees;
- Complete or partial destruction or temporary closure of the System due to events beyond the control of the Commission;
- Cybersecurity incidents that materially disrupt the operations of the Commission or one of its vendors or contractors, and/or cause physical or monetary damage;
- Increased unfunded pension benefits;
- Increased unfunded healthcare and other non-pension post-employment benefits;
- Failure to pay the purchase price on outstanding floating rate notes or other variable rate obligations issued by the Commission subject to maturity or mandatory tender;
- Increased fuel costs; and
- Claims or adverse litigation judgments for monetary damages not covered by insurance.

The Commission's financial condition may be adversely affected as a consequence of adverse changes in the financial condition of third-party financial institutions

Adverse changes in the financial condition of certain third-party financial institutions, including swap counterparties, providers of credit facilities (including providers of direct-pay letters of credit and bond insurers which have issued or may issue insurance policies on one or more Series of Bonds) may adversely affect the Commission's financial position. Different types of investment and contractual arrangements may create exposure for the Commission to such institutions including:

- Risk to the Commission's investment portfolio due to defaults or changes in market valuation of the debt securities of such institutions; and
- Counterparty risk related to swaps used by the Commission to hedge its cost of funds.
- Risk of rating changes of the Commission's credit enhancers or liquidity providers which may adversely

affect the interest costs on the Commission's variable rate debt, or which may render such variable rate debt unmarketable

See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS" and "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN OTHER INFORMATION – Financial Policies and Guidelines" attached hereto.

Litigation and Other Actions Against the Commission

The Commission is subject to litigation from time to time and may be subject to litigation and other actions in the future which could adversely affect the financial position of the Commission. The Commission cannot predict when or if any action will be brought against the Commission in the future, and, if brought, whether any action would be successful or result in monetary damages or other relief being imposed upon the Commission. See "LITIGATION" herein and APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE COMMISSION – Recent Developments and Legislation – *Julie E. Thomas v. TransCore, LP & Pennsylvania Turnpike Commission*" attached hereto.

Certain legislative actions may result in adverse changes to the Commission, Act 44, or Act 89

From time to time, legislation is introduced in the Pennsylvania General Assembly which may affect the Commission and therefore may affect certain of the assumptions made in this Official Statement. The Commission cannot predict if any of such bills or other legislation will be enacted into law, or how any such legislation may affect the Commission's ability to make timely payments on the 2022A Bonds.

Bankruptcy risk; Lien position

The rights and remedies of Bondholders could be limited by the provisions of the Federal Bankruptcy Code, as now or hereafter enacted (the ***"Bankruptcy Code"***), or by other laws or legal or equitable principles which may affect the enforcement of creditors' rights. Chapter 9 of the Bankruptcy Code permits, under prescribed circumstances, a political subdivision or public agency or instrumentality of a state, such as the Commission, to commence a voluntary bankruptcy proceeding and to file a plan of adjustment in the repayment of its debts, if such entity is generally not paying its debts as they become due (unless such debts are the subject of a bona fide dispute) or is unable to pay its debts as they become due. Under the Bankruptcy Code, an involuntary petition cannot be filed against a political subdivision, public agency, or instrumentality of a state.

In order to proceed under Chapter 9 of the Bankruptcy Code, state law must authorize the political subdivision, public agency, or instrumentality to file a petition under the Bankruptcy Code. THE ENABLING ACTS DO NOT CURRENTLY AUTHORIZE THE COMMISSION TO FILE A PETITION UNDER THE BANKRUPTCY CODE.

Reductions in federal subsidy payable to the Commission for its outstanding Build America Bonds due to sequestration

A series of automatic federal deficit reduction spending cuts known as "sequestration" became effective on March 1, 2013, as a result of the failure by Congress to adopt alternative deficit reduction legislation; recent legislation has extended sequestration through the 2030 federal fiscal year. Sequestration will affect the federal subsidy payable to the Commission with respect to its outstanding Build America Bonds. The federal subsidy has been reduced in each fiscal year, commencing with the federal fiscal year ended September 30, 2013. In August 2020, based on guidance issued by the Internal Revenue Service, such federal subsidy of 35% is reduced by 5.7% for payments from October 1, 2020, through September 30, 2030. The sequestration reduction rate will be applied unless and until a law is enacted that cancels or otherwise impacts the sequester, at which time the sequestration reduction rate is subject to change. Reductions of the federal subsidies payable to the Commission with respect to its outstanding Build America Bonds in future federal fiscal years could be caused by future action or inaction by Congress, cannot be predicted, and could result in the federal subsidy being reduced to zero. Adverse changes in the amount of the federal subsidy the Commission receives on its Build America Bonds will require the Commission to use other funds to offset the loss of this subsidy. The Commission currently has $875 million of Build America Bonds outstanding. In Fiscal Year 2022, the Commission received federal Build America Bond subsidies in the amount of approximately $16.5 million.

Possible changes in federal or Commonwealth tax laws could affect the excludability or deductibility of interest on tax-exempt bonds such as the 2022A Bonds

Current and future legislative proposals, if enacted into law, could cause interest on the 2022A Bonds to be subject, directly, or indirectly, to federal income taxation, or to be subject to or not be exempted from income taxation imposed by the Commonwealth, or otherwise prevent the owners of the 2022A Bonds from realizing the full current benefit of the tax status of such interest. The introduction and/or enactment of any such legislative proposals may also affect the market price for, or marketability of, the 2022A Bonds. Prospective purchasers of the 2022A Bonds should consult their own tax advisors regarding any pending or proposed federal tax legislation, as to which Co-Bond Counsel will express no opinion. See "TAX MATTERS" herein.

The 2022A Bonds may be repaid early due to the exercise of the redemption option. If this happens, 2022A Bondholders will bear reinvestment risk which could be at lower yields than the yields on the 2022A Bonds

The 2022A Bonds may be redeemed prior to their final maturity if the Commission exercises its option to redeem the 2022A Bonds. Bondholders bear the risk that monies received upon such redemption cannot be reinvested in comparable securities or at comparable yields.

Uncertainty as to available remedies

The remedies available to owners of the 2022A Bonds upon an Event of Default under the Senior Indenture or other documents described herein are in many respects dependent upon regulatory and judicial actions which often are subject to discretion and delay. Under existing constitutional and statutory law and judicial decisions, the remedies specified by the Senior Indenture and such other documents may not be readily available or may be limited. The various legal opinions to be delivered concurrently with the issuance of the 2022A Bonds will be qualified, as to the enforceability of the various legal instruments, by limitations imposed by bankruptcy, reorganization, insolvency, or other similar laws affecting the rights of creditors generally.

The FCA Announcement, changes to LIBOR determination methods or other reforms to LIBOR could increase payment obligations under the Commission's Swaps

On March 5, 2021, the Financial Conduct Authority announced that immediately after June 30, 2023, the 1-month, 3-month and 6-month US dollar LIBOR settings will permanently cease or no longer be representative (the "***FCA Announcement***"). Certain of the Commission's Swaps use London Interbank Offered Rate ("***LIBOR***") based rates as a reference rate for determining the interest rate and/or other payment obligations thereunder.

On January 3, 2022, the Commission submitted an Adherence Letter to the International Swaps and Derivatives Association, Inc., ("***ISDA***") indicating the Commission's adherence to the ISDA 2020 IBOR Fallbacks Protocol (the "***ISDA Protocol***"). The Commission received confirmation that ISDA accepted the Commission's Adherence Letter on January 3, 2022. Each of the Commission's swap counterparties has adhered to the ISDA Protocol, which together with the Commission's adherence, incorporates

ISDA Protocol interest rate fallback language in the respective Interest Rate Exchange Agreements.

The Commission actively monitors the degree of risk and exposure associated with the Swaps to which it is a party but can offer no assurances that compliance with its Swap Policy will prevent the Commission from suffering adverse financial consequences as a result of these transactions.

See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS" and "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN OTHER INFORMATION – Financial Policies and Guidelines" attached hereto.

Covenants and restrictions in other agreements vary from provisions of the Senior Indenture

The Commission has entered into agreements with certain financial institutions relating to certain indebtedness, including Parity Obligations under the Senior Indenture, some of which contain additional covenants and restrictions for the benefit of such financial institutions, including provisions that a ratings downgrade triggers an increase in the interest rate on certain obligations. See the Commission's Bank Loan Disclosures available at https://emma.msrb.org/IssuerHomePage/Issuer?id=4F1C2125DAC85ABFE053151ED20AC6F6&type=M[‡] and APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN OTHER INFORMATION – Financial Policies and Guidelines" attached hereto.

Cybersecurity Threats

The Commission, the Commonwealth and many of their respective vendors and contractors are dependent on information and computing technology to conduct general business operations, including toll transactions, toll collections, and customer account services. While to date the Commission has not experienced a materially disruptive cybersecurity threat, computer hacking, cyber-attacks or other malicious activities directed at the Commission's information systems or those of its vendors or contractors, could disrupt Commission services or cause physical or financial harm to the Commission, in the future. Further, cybersecurity breaches such as leakage or loss of confidential or proprietary data and failure or disruption of information technology systems could materially and adversely affect the Commission's reputation, which could

[‡] The information contained on such website link is not incorporated by reference in this Official Statement.

lead to significant outlays and decreased performance that insurance may not cover.

The Commission has a robust cybersecurity framework that leverages multiple layers of protection including edge and internal firewalls, an intrusion prevention system, security incident and event management, multi-layered anti-virus, malware protection and spam filters. The Commission performs regular security patching and regular internal and external vulnerability scans. Periodic security assessment and penetration testing is performed regularly by qualified third parties. The Commission has implemented cybersecurity awareness training and simulated phishing attacks, and has published third-party security requirements that define general security requirements, requirements for vendors providing hosting cloud-based systems, and requirements for vendors providing on-premises systems or devices physically connected to the Commission's networks. All Commission employees are required to complete annual information technology security training and phishing simulation campaigns are performed regularly. Additionally, the Commission has cyber insurance which also provides immediate access to third party forensic investigation experts to assist the Commission with any data or system breaches.

Although the Commission devotes significant resources to maintain and regularly upgrade its systems and processes that are designed to protect the security of its computer systems, software, networks and other technology assets and the confidentiality, integrity and availability of information belonging to customers, there is no assurance that all these security measures will provide absolute security or prevent the risk of the Commission's finances or operations being negatively impacted by a cybersecurity threat directed at one of the Commission's vendors or contractors. These risks may increase in the future as the Commission continues to utilize AET, mobile payments and other internet-based applications both internally and externally. A successful cybersecurity attack on the Commission, the Commonwealth or one of their respective vendors or contractors, could have a materially adverse effect on the financial condition and/or the operations of the Commission.

Impacts of the COVID-19 Pandemic

The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was declared a Public Health Emergency of International Concern by the World Health

Organization on March 11, 2020. Due to the adverse health impacts of COVID-19, the Commission moved to AET toll collection on March 16, 2020; removing toll collectors from toll booths and relying solely on AET In-Place and E-ZPass tolling across the System. Initially intended to be a temporary response to the COVID-19 pandemic, the Commissioners, on June 2, 2020, unanimously approved the permanent transition to AET collection operations.

The negative impacts of the COVID-19 pandemic have diminished over time. However, in the July 2022 Bring Down Letter, CDM Smith anticipates that there will be lingering COVID-19 impacts throughout the entirety of the forecast period (through Fiscal Year 2050-2051). See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE COMMISSION – Impacts of the COVID-19 Pandemic" and APPENDIX F – "TRAFFIC STUDY" attached hereto.

The Commission has maintained a strong liquidity position throughout the pandemic, ending Fiscal Year 2022 with approximately $438 million on deposit in its General Reserve Fund, which represents over 458 days of operating cash flow, and over $95 million on deposit in the Supplemental Capital Fund. See "SECURITY FOR THE 2022A Bonds – General Reserve Fund; Supplemental Capital Fund." In addition, as a continuing liquidity safeguard, the Commission has continued to maintain a one-year $200,000,000 revolving line of credit expiring in June 2023 from PNC Bank, National Association, which constitutes an Additional Bond, Short Term Indebtedness, and a Parity Obligation under the Senior Indenture, to be used for general working capital purposes, funding/reimbursing necessary reserves and the payment of debt service on the Bonds under the Senior Indenture. See APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Lines of Credit" attached hereto.

The COVID-19 pandemic is ongoing, and its dynamic nature leads to uncertainties. The Commission cannot predict, among other things, the duration or extent of the pandemic, or the possibility, magnitude, timing, or nature of any further actions taken by governmental authorities to treat the illness or contain the outbreak. Likewise, the

Commission cannot predict any future impact the COVID-19 pandemic, or any similar widespread public health issue, may have on travel generally, demand for use of the Commission's toll roads, or the System's on-going operations and financial results. No assurance can be given as to how much longer the COVID-19 pandemic and the restrictions imposed as a result thereof will continue or the extent to which changes in commercial and personal behavior in response to the COVID-19 pandemic may continue after it has ended.

For more information see APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE COMMISSION – Impacts of the COVID-19 Pandemic" and APPENDIX F – "TRAFFIC STUDY" attached hereto.

Environmental, Social and Governance Factors

For information regarding certain elements of the Commission's operations relating to environmental, social and governance factors see "THE COMMISSION – Long Term and Strategic Planning" and "CERTAIN OTHER INFORMATION – Environmental, Social and Governance Factors" in APPENDIX A attached hereto. Such information is not exhaustive and should be evaluated considering the entirety of the information regarding the Commission, the System, and the Commission's finances and operations set forth in this Official Statement.

AUDITED FINANCIAL STATEMENTS

The financial statements of the Commission for the years ended May 31, 2021 and May 31, 2020 are set forth in APPENDIX B – "AUDITED FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED MAY 31, 2021 AND 2020 " audited by Mitchell Titus, LLP in its capacity as the Commission's Independent Auditor. Mitchell Titus, LLP has not been engaged to perform and has not performed, since the date of its auditor's report, any procedures on the financial statements addressed in that report. Additionally, Mitchell Titus, LLP has not performed any procedures related to this Official Statement or other debt-related offering documents.

The Commission expects the audited financial statements for the fiscal years ended May 31, 2022 and May 31, 2021 to be available in October 2022.

CONTINUING DISCLOSURE

The Commission will enter into a Continuing Disclosure Agreement for the benefit of the Underwriters and the Registered Owners from time to time of the 2022A Bonds (the ***"Continuing Disclosure Agreement"***) pursuant to Rule 15c2-12 promulgated by the Securities and Exchange

Commission (the ***"SEC"***) under the Securities Act of 1934, as amended (the ***"Rule"***). The form of the Continuing Disclosure Agreement is attached hereto as APPENDIX G – "FORM OF CONTINUING DISCLOSURE AGREEMENT". The Commission has engaged Digital Assurance Certification, L.L.C. (the "***Dissemination Agent***"), to serve as the initial Dissemination Agent with respect to the Continuing Disclosure Agreement.

Pursuant to the Continuing Disclosure Agreement, the Commission will provide or cause to be provided to the Municipal Securities Rulemaking Board (the ***"MSRB"***), which is currently the sole nationally recognized municipal securities information repository ***("Repository"***) under the Rule, via electronic transmissions pursuant to the MSRB's Electronic Municipal Market Access System (***"EMMA"***), accessible at http://emma.msrb.org, certain financial and operating information and notices, all as set forth in the Continuing Disclosure Agreement.

A default under the Continuing Disclosure Agreement shall not be deemed to be a default under the 2022A Bonds or the Senior Indenture, and the sole remedy to enforce the provisions of the Continuing Disclosure Agreement shall be the right of any Registered Owner, by mandamus, suit, action or proceeding at law or in equity, to compel the Commission to perform the provisions and covenants contained in the Continuing Disclosure Agreement.

During the five (5) year period preceding the date of this Official Statement, the Commission has not failed to comply, in all material respects, with any of its outstanding continuing disclosure undertakings entered into pursuant to the Rule.

The Commission has become aware of certain facts that are disclosed below for the benefit of the Registered Owners of the 2022A Bonds.

Certain financial and operating information that was made available in a timely manner on EMMA, may not have been linked to all relevant CUSIP numbers. The Commission worked with the Dissemination Agent to correct this issue.

UNDERWRITING

Pursuant to the provisions of a bond purchase agreement with the Commission (the ***"Purchase Agreement"***), BofA Securities, Inc., and Loop Capital Markets LLC (in such capacity, the "Representatives"), on their own behalf and on behalf of the other Underwriters shown on the cover page hereof (the ***"Underwriters"***), will agree, subject to certain customary conditions precedent to closing, to purchase the 2022A Bonds from the Commission at a purchase price equal to $286,691,583.80 (representing the par amount of the 2022A Bonds, plus net original issue premium of $32,873,543.15, and less an underwriters' discount of $911,959.35. Pursuant to the Purchase Agreement, the Underwriters will be obligated to purchase all of the 2022A Bonds if any of such 2022A Bonds are purchased.

In connection with the Tender Offer, BofA Securities, Inc., and Loop Capital Markets LLC, are also serving as Dealer Managers (in such capacity, the "***Dealer Managers***") pursuant to the terms of a dealer manager agreement with the Commission. For their services as Dealer Managers, the Dealer Managers will be compensated (the "***Dealer Manager Fee***") in an amount equal to a percentage of the aggregate principal amount of Purchased Refunded Bonds tendered and accepted for purchase. The Dealer Manager Fee is expected to be paid from a portion of the proceeds of the 2022A Bonds.

The 2022A Bonds may be offered and sold to certain dealers (including the Underwriters and other dealers depositing such 2022A Bonds into investment trusts) at prices lower than such public offering prices (and such public offering prices may be changed, from time to time, by the Underwriters) only after a public offering of the 2022A Bonds at the initial offering price.

The obligation of the Underwriters to accept delivery of the 2022A Bonds is subject to the terms and conditions set forth in the Purchase Agreement, the approval of legal matters by counsel and other conditions.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing, and brokerage services. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for the Commission, 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 and equity securities (or related derivative securities, which may include credit default swaps) and financial instruments (including bank loans) 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 Commission.

The Underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities, and instruments.

BofA Securities, Inc., an underwriter of the 2022A Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated ("***MLPF&S***"). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the 2022A Bonds.

Drexel Hamilton, LLC has entered into a distribution agreement with Essex Securities LLC. Under this distribution agreement, such firm may purchase 2022A Bonds from Drexel Hamilton at the original issue price less a negotiated portion of the selling concession applicable to any 2022A Bonds that such firm sells.

RATINGS

Moody's Investors Service, Inc., Fitch Ratings and Kroll Bond Rating Agency have assigned their municipal bond ratings of "A1" (positive outlook), "AA-" (stable outlook), and "AA-" (stable outlook), respectively, to the 2022A Bonds.

An explanation of the significance of each of such ratings and any outlook may be obtained from the rating agency furnishing the same at the following addresses: Moody's Investors Service, Inc., 7 World Trade Center at 250 Greenwich Street, New York, New York 10007; Fitch Ratings, 33 Whitehall Street New York, New York 10004, and Kroll Bond Rating Agency, 845 Third Avenue, New York, New York 10022. Certain materials and information not included in this Official Statement may have been furnished to such rating agencies. A rating is not a recommendation to buy, sell or hold securities. There is no assurance that such ratings will continue for any given period of time or that they may not be lowered or withdrawn entirely by the rating agencies, or any of them, if, in their or its judgment, circumstances so warrant. Any such downward change in or withdrawal of such ratings, or any of them, may have an adverse effect on the market price of the 2022A Bonds.

Except as provided in the Continuing Disclosure Agreement, neither the Underwriters nor the Commission have undertaken any responsibility to bring to the attention of the holders of the 2022A Bonds any proposed or actual change in or withdrawal of any rating or the outlook of any rating and neither the Underwriters nor the Commission have undertaken any responsibility to oppose any proposed change or withdrawal of any rating or the outlook thereof. See "CONTINUING DISCLOSURE" above.

LITIGATION

General

There is no controversy or litigation of any nature now pending or threatened restraining or enjoining the issuance, sale, execution or delivery of the 2022A Bonds, or in any way contesting or affecting the validity of the 2022A Bonds or any proceedings of the Commission taken with respect to the offer or sale thereof, or the pledge or application of any monies or security provided for the payment of the 2022A Bonds, the existence or powers of the Commission, or the refunding of the Refunded Bonds.

The Commission is covered by Act No. 152, approved September 28, 1978, which provides for a limited waiver of sovereign immunity by the Commonwealth. Damages for any loss are limited to $250,000 for each plaintiff or $1,000,000 in the aggregate.

The Commission is subject to claims for personal injury and/or property damage pending against the Commission pertaining to matters normally incidental to routine operations. Currently, none of such claims, individually or in the aggregate, are deemed to expose the Commission to a material risk of loss.

Certain Litigation

The Commission may be subject to additional litigation or other actions from time to time in the future which cannot be predicted at this time. See "INVESTMENT CONSIDERATIONS – Litigation and Other Actions Against the Commission" herein and APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – THE COMMISSION – Recent Developments and Legislation – *Julie E. Thomas v. TransCore, LP & Pennsylvania Turnpike Commission*."

LEGAL MATTERS

Certain legal matters with respect to the 2022A Bonds will be passed upon by Squire Patton Boggs (US) LLP, Washington, D.C., and Powell Law, PC, Harrisburg, Pennsylvania, Co-Bond Counsel. A copy of the proposed form of opinion of Co-Bond Counsel which will be delivered on the date of issuance and delivery of the 2022A Bonds is set forth in APPENDIX D – "FORM OF OPINION OF CO-BOND COUNSEL." Certain other legal matters will be passed upon for the Underwriters by their Counsel, Eckert Seamans Cherin & Mellot, LLC, Philadelphia, Pennsylvania, and for the Commission by its Chief Counsel, Doreen A. McCall, Esquire, and Virtus LLP, Windermere, Florida, as Disclosure Counsel to the Commission.

The various legal opinions to be delivered concurrently with the delivery of the 2022A Bonds express the professional judgment of the attorneys rendering the opinion as to the legal issues explicitly addressed therein. In rendering a legal opinion, the attorney does not become an insurer or guarantor of that expression of professional judgment, of the transaction opined upon, or the future performance of the parties to the transaction. In addition, the rendering of an opinion does not guarantee the outcome of any legal dispute that may arise out of the transaction.

CO-FINANCIAL ADVISORS

The Commission has retained Phoenix Capital Partners, LLP, Philadelphia, Pennsylvania, and Public Resources Advisory Group, Inc., Media, Pennsylvania, as Co-Financial Advisors with respect to the authorization and issuance of the 2022A Bonds. The Co-Financial Advisors are not obligated to undertake or assume responsibility for, nor have they undertaken or assumed responsibility for, an independent verification of the accuracy, completeness or fairness of the information contained in this Official Statement. Each Co-Financial Advisor is a registered independent advisory firm and is not engaged in the business of underwriting, trading, or distributing municipal securities or other public securities.

TRUSTEE

The Commission has appointed U.S. Bank Trust Company, National Association, Philadelphia, Pennsylvania, as the Trustee and Authenticating Agent under the Senior Indenture. The obligations and duties of the Trustee are as described in the Senior Indenture. The Trustee has not evaluated the risks, benefits, or propriety of any investment in the 2022A Bonds, and makes no representation, and has reached no conclusions, regarding the validity of the 2022A Bonds, the security therefor, the adequacy of the provisions for payment thereof or the tax status of the interest on the 2022A Bonds. The Trustee has relied upon the opinions of Co-Bond Counsel for the validity and tax status of the interest on the 2022A Bonds as well as other matters set out in such opinions.

Furthermore, the Trustee has no oversight responsibility, and is not accountable, for the use or application by the Commission of any of the 2022A Bonds authenticated or delivered pursuant to the Senior Indenture or for the use or application of the proceeds of such 2022A Bonds by the Commission.

Under the terms of the Senior Indenture, the Trustee shall not be responsible for any loss or damage resulting from any action or inaction taken in good faith in reliance upon an opinion of counsel and the Trustee is liable only for those damages caused by its gross negligence or willful misconduct.

Under the Senior Indenture, the Trustee is not required to take notice, and is not deemed to have notice, of any default under the Senior Indenture (except for defaults in payment of debt service by the Commission), unless the Trustee has been specifically notified in writing of such default by the owners of at least 25% in aggregate principal amount of the Outstanding Bonds (as defined in the Senior Indenture). In the absence of any such notice, the Trustee may conclusively assume no Event of Default exists. The summary of the Trustee's rights, duties, obligations, and immunities is not intended to be a complete summary and reference must be made to the Senior Indenture for a complete statement of the Trustee's rights, duties, obligations, and immunities.

TAX MATTERS

In the opinion of Squire Patton Boggs (US) LLP and Powell Law, PC, Co-Bond Counsel, under existing law: (i) interest on the 2022A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the "Code"), and is not an item of tax preference for purposes of the federal alternative minimum tax; and (ii) interest on the 2022A Bonds is exempt from Commonwealth personal income tax and Commonwealth corporate net income tax. Co-Bond Counsel expresses no opinion as to any other tax consequences regarding the 2022A Bonds.

The opinion on federal tax matters will be based on and will assume the accuracy of certain representations and certifications, and continuing compliance with certain covenants, of the Commission contained in the transcript of proceedings and that are intended to evidence and assure the foregoing, including that the 2022A Bonds are and will remain obligations the interest on which is excluded from gross income for federal income tax purposes. Co-Bond Counsel will not independently verify the accuracy of the Commission’s representations and certifications or the continuing compliance with the Commission’s covenants.

The opinion of Co-Bond Counsel is based on current legal authority and covers certain matters not directly addressed by such authority. It represents Co-Bond Counsel’s legal judgment as to exclusion of interest on the 2022A Bonds from gross income for federal income tax purposes but is not a guaranty of that conclusion. The opinion is not binding on the Internal Revenue Service (the "IRS") or any court. Co-Bond Counsel expresses no opinion about (i) the effect of future changes in the Code and the applicable regulations under the Code or (ii) the interpretation and the enforcement of the Code or those regulations by the IRS.

The Code prescribes a number of qualifications and conditions for the interest on state and local government obligations to be and to remain excluded from gross income for federal income tax purposes, some of which require future or continued compliance after issuance of the obligations. Noncompliance with these requirements by the Commission may cause loss of such status and result in the interest on the 2022A Bonds being included in gross income for federal income tax purposes retroactively to the date of issuance of the 2022A Bonds. The Commission has covenanted to take the actions required of it for the interest on the 2022A Bonds to be and to remain excluded from gross income for federal income tax purposes, and not to take any actions that would adversely affect that exclusion. After the date of issuance of the 2022A Bonds, Co-Bond Counsel will not undertake to determine (or to so inform any person) whether any actions taken or not taken, or any events occurring or not occurring, or any other matters coming to Co-Bond Counsel's attention, may adversely affect the exclusion from gross income for federal income tax purposes of interest on the 2022A Bonds or the market value of the 2022A Bonds.

Interest on the 2022A Bonds may be subject: (1) to a federal branch profits tax imposed on certain foreign corporations doing business in the United States; (2) to a federal tax imposed on excess net passive income of certain S corporations; and (3) for tax years beginning after December 31, 2022, to the alternative minimum tax imposed under Section 55(b) of the Code on "applicable corporations" (within the meaning of Section 59(k) of the Code). Under the Code, the exclusion of interest from gross income for federal income tax purposes may have certain adverse federal income tax consequences on items of income, deduction or credit for certain taxpayers, including financial institutions, certain insurance companies, recipients of Social Security and Railroad Retirement benefits, those that are deemed to incur or continue indebtedness to acquire or carry tax-exempt obligations, and individuals otherwise eligible for the earned income tax credit. The applicability and extent of these and other tax consequences will depend upon the particular tax status or other tax items of the owner of the 2022A Bonds. Co-Bond Counsel will express no opinion regarding those consequences.

Payments of interest on tax-exempt obligations, including the 2022A Bonds, are generally subject to IRS Form 1099-INT information reporting requirements. If a 2022A Bond owner is subject to backup withholding under those requirements, then payments of interest will also be subject to backup withholding. Those requirements do not affect the exclusion of such interest from gross income for federal income tax purposes.

Co-Bond Counsel's engagement with respect to the 2022A Bonds ends with the issuance of the 2022A Bonds, and, unless separately engaged, Co-Bond Counsel is not obligated to defend the Commission or the owners of the 2022A Bonds regarding the tax status of interest thereon in the event of an audit examination by the IRS. The IRS has a program to audit tax-exempt obligations to determine whether the interest thereon is includible in gross income for federal income tax purposes. If the IRS does audit the 2022A Bonds, under current IRS procedures, the IRS will treat the Commission as the taxpayer and the beneficial owners of the 2022A Bonds will have only limited rights, if any, to obtain and participate in judicial review of such audit. Any action of the IRS, including but not limited to selection of the 2022A Bonds for audit, or the course or result of such audit, or an audit of other obligations presenting similar tax issues, may affect the market value of the 2022A Bonds.

Prospective purchasers of the 2022A Bonds upon their original issuance at prices other than the respective prices indicated on the inside cover of this Official Statement, and prospective purchasers of the 2022A Bonds at other than their original issuance, should consult their own tax advisors regarding other tax considerations such as the consequences of market discount, as to all of which Co-Bond Counsel expresses no opinion.

Risk of Future Legislative Changes and/or Court Decisions

Legislation affecting tax-exempt obligations is regularly considered by the United States Congress and may also be considered by the State legislature. Court proceedings may also be filed, the outcome of which could modify the tax treatment of obligations such as the 2022A Bonds. There can be no assurance that legislation enacted or proposed, or actions by a court, after the date of issuance of the 2022A Bonds will not have an adverse effect on the tax status of interest on the 2022A Bonds or the market value or marketability of the 2022A Bonds. These adverse effects could result, for example, from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), or repeal (or reduction in the benefit) of the exclusion of interest on the 2022A Bonds from gross income for federal or state income tax purposes for all or certain taxpayers.

For example, federal tax legislation that was enacted on December 22, 2017 reduced corporate tax rates, modified individual tax rates, eliminated many deductions, repealed the corporate alternative minimum tax, and eliminated the tax-exempt advance refunding of tax-exempt 2022A Bonds and tax-advantaged 2022A Bonds, among other things. Additionally, investors in the 2022A Bonds should be aware that future legislative actions might increase, reduce, or otherwise change (including retroactively) the financial benefits and the treatment of all or a portion of the interest on the 2022A Bonds for federal income tax purposes for all or certain taxpayers. In all such events, the market value of the 2022A Bonds may be affected and the ability of holders to sell their 2022A Bonds in the secondary market may be reduced.

Investors should consult their own financial and tax advisors to analyze the importance of these risks.

Original Issue Discount and Original Issue Premium

Certain of the 2022A Bonds ("***Discount 2022A Bonds***") may be offered and sold to the public at an original issue discount ("***OID***"). OID is the excess of the stated redemption price at maturity (the principal amount) over the "issue price" of a Discount 2022A Bond. The issue price of a Discount 2022A Bond is the initial offering price to the public (other than to bond houses, brokers or similar persons acting in the capacity of underwriters or wholesalers) at which a substantial amount of the Discount 2022A Bonds of the same maturity is sold pursuant to that offering. For federal income tax purposes, OID accrues to the owner of a Discount 2022A Bond over the period to maturity based on the constant yield method, compounded semiannually (or over a shorter permitted compounding interval selected by the owner). The portion of OID that accrues during the period of ownership of a Discount 2022A Bond (i) is interest excluded from the owner's gross income for federal income tax purposes to the same extent, and subject to the same considerations discussed above, as other interest on the 2022A Bonds, and (ii) is added to the owner's tax basis for purposes of determining gain or loss on the maturity, redemption, sale, or other disposition of that Discount 2022A Bond. A purchaser of a Discount 2022A Bond in the initial public offering at the issue price (described above) for that Discount 2022A Bond who holds that Discount 2022A Bond to maturity will realize no gain or loss upon the retirement of that Discount 2022 Bond.

Certain of the 2022A Bonds ("***Premium 2022A Bonds***") may be offered and sold to the public at a price in excess of their stated redemption price at maturity (the principal amount). That excess constitutes bond premium. For federal income tax purposes, bond premium is amortized over the period to maturity of a Premium 2022A Bond, based on the yield to maturity of that Premium 2022A Bond (or, in the case of a Premium 2022A Bond callable prior to its stated maturity, the amortization period and yield may be required to be determined on the basis of an earlier call date that results in the lowest yield on that Premium 2022A Bond), compounded semiannually. No portion of that bond premium is deductible by the owner of a Premium 2022A Bond. For purposes of determining the owner’s gain or loss on the sale, redemption (including redemption at maturity) or other disposition of a Premium 2022A Bond, the owner’s tax basis in the Premium 2022A Bond is reduced by the amount of bond premium that is amortized during the period of ownership. As a result, an owner may realize taxable gain for federal income tax purposes from the sale or other disposition of a Premium 2022A Bond for an amount equal to or less than the amount paid by the owner for that Premium 2022A Bond. A purchaser of a Premium 2022A Bond in the initial public offering who holds that Premium 2022A Bond to maturity (or, in the case of a callable Premium 2022A Bond, to its earlier call date that results in the lowest yield on that Premium 2022A Bond) will realize no gain or loss upon the retirement of that Premium 2022A Bond.

Owners of Discount and Premium 2022A Bonds should consult their own tax advisors as to the determination for federal income tax purposes of the existence of OID or bond premium, the determination for federal income tax purposes of the amount of OID or bond premium properly accruable or amortizable in any period with respect to the Discount or Premium 2022A Bonds, other federal tax consequences in respect of OID and bond premium, and the treatment of OID and bond premium for purposes of state and local taxes on, or based on, income.

MISCELLANEOUS

The financial data and other information contained herein have been obtained from the Commission's records, audited financial statements and other sources which are believed to be reliable. No guarantee is given that any of the assumptions, forecasts or estimates contained herein will be realized.

The references herein to the Enabling Acts, the 2022A Bonds, the Restated Indenture, Supplemental Indenture No. 64, the Subordinate Indenture, the Traffic Study, the Continuing Disclosure Agreement and other laws and documents are brief summaries of certain provisions thereof. Such summaries do not purport to be complete and, accordingly, are qualified by reference to and are subject to the full texts thereof.

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Neither this Official Statement nor any other disclosure in connection with the 2022A Bonds is to be construed as a contract with the holders of the 2022A Bonds. Any statements made in this Official Statement involving matters of opinion or estimates, whether or not expressly so identified, are intended merely as such and not as representations of fact. No representation is made that any of such statements will be realized.

PENNSYLVANIA TURNPIKE COMMISSION

By: *_/s/ Richard C. Dreher_*
Richard C. Dreher
Chief Financial Officer

APPENDIX A

THE PENNSYLVANIA TURNPIKE COMMISSION

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APPENDIX A

THE PENNSYLVANIA TURNPIKE COMMISSION

The information in this Appendix A is intended to provide general information regarding the Commission, the Turnpike System, and certain financial, regulatory and operational matters. The order and placement of information in this Appendix A, are not an indication of relevance, materiality or relative importance, and this Appendix A should be read in its entirety together with the forepart of this Official Statement and all other Appendices.

Capitalized terms used in this Appendix A and not otherwise defined have the meanings ascribed in the forepart of this Official Statement or in Appendix C of this Official Statement.

References to website addresses, articles, or reports presented herein, including the Commission's website or any other website containing information about the Commission, are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for any purpose including for purposes of Rule 15c2-12 promulgated by the U.S. Securities and Exchange Commission.

THE COMMISSION

General

The Commission is an instrumentality of the Commonwealth of Pennsylvania (the "***Commonwealth***") existing pursuant to an Act of the General Assembly of Pennsylvania approved on July 18, 2007, P. L. 169, No. 44 ("***Act 44***") and various Acts of the General Assembly approved on several dates, including the Act of May 21, 1937, P.L. 774, Act 211; the Act of May 24, 1945, P.L. 972; the Act of February 26, 1947, P.L. 17; the Act of May 23, 1951, P.L. 335; the Act of August 14, 1951, P.L. 1232; the Act of September 30, 1985, P.L. 240, No. 61 ("***Act 61***") to the extent not repealed by Act 44; the Act of August 5, 1991, P.L. 238, No. 26 ("***Act 26***") and the Act of November 25, 2013, P.L. 974, No. 89 ("***Act 89***") (collectively, the "***Enabling Acts***").

Pursuant to the Enabling Acts, the Commission has the power to construct, operate and maintain the Pennsylvania Turnpike System (as further described herein, the "***System***" or the "***Turnpike System***"). The Commission's composition, powers, duties, functions, duration and all other attributes are derived from the Enabling Acts. The Enabling Acts may be modified, suspended, extended or terminated at any time by further legislation.

Commission Members

The Commission is composed of five members, including one ex officio member, the Secretary (the "***Secretary***") of the Department of Transportation of the Commonwealth of Pennsylvania ("***PennDOT***"). Any vacancy in the membership of the Commission (other than the Secretary of Transportation) must be filled by appointment of the Governor, with the advice and consent of two-thirds of the members of the Pennsylvania Senate.

Act 89 enacted additional provisions pertaining to membership of the Commission. The term of confirmed members of the Commission (other than the Secretary of Transportation) is a period of four years and members may serve a maximum of two terms. Upon the expiration of a term, a member may continue to hold the office of Commissioner for a period of 90 days or until their successor is appointed and qualified, whichever is less. The limitations on Commissioner terms under Act 89 do not apply to members of the Commission who were appointed for the first time prior to Act 89's effective date.

The present members of the Commission and the expiration dates of their respective terms (which, in the case of all of the members of the Commission except Chair Ahmad, would be extended until reappointment or until a successor is appointed and confirmed) are as follows:

Wadud Ahmad, Esq., is the current Chair of the Commission, was initially confirmed by the Senate as a member of the Commission in September 2020. Chair Ahmad is a founding partner in Ahmad Zaffarese LLC. Prior to forming Ahmad Zaffarese LLC, Chair Ahmad served as an Assistant District Attorney in Philadelphia and was a board member on the Pennsylvania Intergovernmental Cooperation Authority and the Pennsylvania Tobacco Settlement Investment Board. Chair Ahmad previously served as the Vice Chairman of the Delaware River Joint Toll Bridge Commission. His term expires in September 2024.

Yassmin Gramian, PE, was confirmed as the Secretary of PennDOT by the Pennsylvania Senate on May 27, 2020, and serves as the ex-officio member of the Commission. At PennDOT, she oversees programs and policies affecting highways, urban and rural public transportation, airports, railroads, ports, and waterways. She manages PennDOT's annual budget, which is invested in Pennsylvania's approximately 120,000 miles of state and local highways and 32,000 state and local bridges. Under her leadership, PennDOT is directly responsible for nearly 40,000 miles of highway and roughly 25,400 bridges. She also has oversight of the Commonwealth's 11.8 million vehicle registrations and 10.3 million driver's licenses and IDs.

Ms. Gramian earned master's and bachelor's degrees in civil engineering from the University of Michigan and completed the Tuck Management Training Program at Dartmouth College. She is a professional engineer in Pennsylvania, Delaware, New Jersey, and Florida.

William K. Lieberman is the current Vice Chair of the Commission, and was first appointed to serve as a Commissioner in July 2010. Mr. Lieberman previously served as Chair of the Commission from January 2011 until January 2015. Mr. Lieberman has been President of The Lieberman Companies, an insurance and pension provider, since 2003. He serves on the board of AMPCO Pittsburgh. A graduate of The Pennsylvania State University, he is a University of Pittsburgh Trustee and former Chair of the Manchester-Bidwell Corp., Pittsburgh, Pennsylvania. Mr. Lieberman was re-nominated to serve as a Commissioner by Governor Tom Wolf and his re-nomination to serve another four-year term as a Commissioner was unanimously confirmed by the Senate in November 2019. His term expires in November 2023.

Sean F. Logan is the current Secretary/Treasurer of the Commission. The former State Senator Sean Logan was appointed to the Commission in July 2022. Mr. Logan previously served on the Commission's governing body, having first been appointed to the Commission in July 2013. He was elected Chairman of the Commission in January 2015, and served in that role through 2017. Mr. Logan was appointed to a two-year term as a commissioner on the Pennsylvania Gaming Control Board in February 2017 and reappointed to additional two-year terms in January 2019 and in January 2021. Prior to such roles, Mr. Logan was elected to the Pennsylvania State Senate representing the 45^{th} District in Allegheny and Westmoreland counties for three terms, from 2001 until 2010. Mr. Logan serves as Chairman of the UPMC-East board of directors and a board member for UPMC McKeesport. Commissioner Logan holds a bachelor's degree in political science from the University of Pittsburgh. Mr. Logan is the Executive Director/CEO of the Convention and Visitors Bureau of Greater Monroeville. His term expires in July 2026.

Pasquale T. Deon, Sr., an established businessman has served as a Commissioner since 2002. Mr. Deon is Chair of the Board of Directors of the Southeastern Pennsylvania Transportation Authority (SEPTA). He is also a service-industry entrepreneur involved in real-estate development, beverage distribution and construction services. He is the owner of WBCB-1490AM Radio, Levittown, Pennsylvania. Commissioner Deon was re-nominated to serve as a Commissioner by Governor Tom Wolf and his re-nomination to serve another four-year term as a Commissioner was unanimously confirmed by the Senate in May 2018. His term expired in May 2022[1].

Executive Personnel

Mark P. Compton assumed the position of Chief Executive Officer of the Commission on February 1, 2013. Mr. Compton previously served as Deputy Secretary of Administration of PennDOT, overseeing eight bureaus within the agency, including: human resources, information systems governance, business solutions and services, infrastructure and operations, and fiscal management. Before joining PennDOT, Mr. Compton served as Director of Government Affairs for all four companies of American Infrastructure, a heavy-duty civil construction company headquartered in Worcester, Pennsylvania. Prior to that, he worked in various public and private operations, focusing largely on transportation, construction and economic development.

Craig R. Shuey is the Chief Operating Officer of the Commission. He joined the Commission in August 2009 as Director of Government Affairs and was named Chief Operating Officer in January 2011. Mr. Shuey served as Acting Chief Executive Officer from October 2012 to February 2013. Prior to joining the Commission, Mr. Shuey was executive director of the Pennsylvania Senate Transportation Committee from 2001 to 2009. He also served as a representative on the Senate Transportation Commission and on various advisory committees in areas such as air, rail, freight movement and safety.

Richard C. Dreher was named the Chief Financial Officer in August 2020. Prior to that, he held the position of Assistant Chief Financial Officer for Financial Management with the Commission where he managed and coordinated the Commission's municipal debt activities and oversaw the Debt and Derivatives, Risk Management, Treasury and Investment departments. Before joining the Commission in 2013, Mr. Dreher served as the Director of the Bureau of Revenue, Capital and Debt in the Governor's Office of the Budget, Commonwealth of Pennsylvania from 2003 to 2013 where he managed the Commonwealth of Pennsylvania's general obligation debt and directed the Commonwealth's Capital Budget program. In addition, during his time at the Governor's Office of the Budget from 1997 through 2013, Mr. Dreher managed and

[1] Commissioner Deon continues to serve as a member of the Commission until reappointment or until a successor is appointed and confirmed.

expanded the largest economic redevelopment program in the Commonwealth totaling over $4 billion and involving nearly 2,000 projects across the Commonwealth.

Bradley J. Heigel, P.E., was named Chief Engineer in April 2012. He was previously employed by the Commission from 1990 to 2010 and served as the Total Reconstruction Program Manager from 2000 to 2010. From 2010 to 2012, he was employed as a Vice President with Michael Baker, Jr., Inc., an engineering unit of Michael Baker Corporation.

Doreen A. McCall, *Esq.*, has been the Chief Counsel since July 2005. Prior to that time, she served as Chief Counsel to the Pennsylvania Historical and Museum Commission from February 2003 to July 2005 and as Deputy General Counsel in the Governor's Office of General Counsel from April 2000 to January 2003. From September 1996 to April 2000, she was an Assistant General Counsel and from November 1993 to August 1996, she was a staff attorney in the Office of Inspector General.

Charles L. Duncan was named the Chief of Compliance, Legislative and Cultural Affairs in October 2020. Prior to that, he held the position of Director of Legislative Affairs where he served as the primary legislative and policy advisor for the Commission. Before joining the Commission in 2015, Mr. Duncan served as the Special Assistant to the Pennsylvania Senate Appropriations Chairman and was instrumental in the development of the Commonwealth's annual budget and spending priorities. Currently, Mr. Duncan serves as a board member-designee on the Pennsylvania State Employees Retirement System and has previously worked for Temple University, the Pennsylvania House of Representatives, and the Philadelphia Housing Authority.

Robert Taylor, P.E., PTOE was named the Chief Technology Officer in February 2017. He focuses on the use of technology and innovation to improve customer safety and mobility as well as to enable and modernize business operations. Mr. Taylor oversees a $50 million technology program that includes enterprise business systems, geoanalytics, technology infrastructure and cybersecurity. Prior to that, Mr. Taylor served as Manager of Traffic Operations where he managed the traffic incident management program, work zone operations, intelligent transportation systems and connected and automated vehicle technologies. Mr. Taylor worked at Gannett Fleming for over 20 years where he was responsible for the planning and deployment of transportation and security systems. He also served on the board of directors of Avant IMC which provided management consulting, planning, and engineering services for organizations that own and maintain large infrastructure systems.

Enabling Acts

Act 44 and the Act 44 Funding Agreement

On July 18, 2007, Act 44 was enacted, creating a "public-public partnership" between the Commission and PennDOT to provide funding for roads, bridges and transit throughout the Commonwealth. Subsequently, in order to, among other things, effectuate the provisions of Act 44 requiring the Commission to make substantial annual payments to PennDOT as described below, the Commission and PennDOT entered into a Lease and Funding Agreement (the "***Act 44 Funding Agreement***"), incorporating many of the terms of Act 44.

The Act 44 Funding Agreement also granted the Commission the option to lease the portion of Interstate Route 80 ("***I-80***") located in the Commonwealth from PennDOT upon, among other things, the approval of the Federal Highway Administration ("***FHWA***") of the conversion of such portion into a toll road (the "***Conversion***"). The Conversion was not approved by FHWA and neither the Commission nor PennDOT appealed the decision. The Commission did not exercise its option to lease such portion of I-80, and the period during which the Commission could exercise its option under the Act 44 Funding Agreement lapsed on October 14, 2010 without the Commission effectuating the Conversion or having the ability to do so in the future, leaving all legal, financial and operational responsibility for I-80 solely with PennDOT.

Pursuant to Act 44 and the Act 44 Funding Agreement, the Commission is obligated to make scheduled annual payments to PennDOT ("***Act 44/Act 89 Payments")***. Originally such payments in the amount of $450 million were due through 2057, payable in equal quarterly installments, with $200 million of the scheduled annual payments supporting road and bridge projects and $250 million supporting transit projects throughout the Commonwealth. However, the Commission's current annual Act 44/Act 89 Payment obligation is now $50 million. See "*Act 89 and the Act 89 Amendments*" below for more information about the annual Act 44/Act 89 Payments.

Act 89 and the Act 89 Amendments

On November 25, 2013, Act 89 was enacted to provide (i) substantial revenue enhancements to support investment in the Commonwealth's aging transportation infrastructure, and (ii) substantial reductions in the Commission's obligations with respect to the Act 44/Act 89 Payments. The revenue enhancements providing additional funds each year for investment in the Commonwealth's transportation infrastructure were fully implemented in Fiscal Year 2018.

Revisions to the Commission's Act 44/Act 89 Payment obligations enacted under Act 89 were implemented by Amendment Number One to Lease and Funding Agreement (the "***Act 89 Amendment***" and together with the Act 44 Funding Agreement, the "***Original Amended Funding Agreement***") executed by the Commission and PennDOT on April 4, 2014.

In accordance with Act 89 and the Original Amended Funding Agreement, the Commission's aggregate annual Act 44/Act 89 Payment to PennDOT for Fiscal Year 2014 through Fiscal Year 2022 was $450 million, with at least $30 million of such annual amount required to be paid from current revenues, and the remainder funded by the proceeds of bonds issued under the Subordinate Revenue Indenture (as hereinafter defined).

The Original Amended Funding Agreement was subsequently further amended, on July 31, 2018, by Amendment Number Two to Lease and Funding Agreement (the "***Amendment Two***"), and on June 11, 2020, by Amendment Number Three to the Lease and Funding Agreement (the "***Amendment Three,***" and together with the Original Amended Funding Agreement and Amendment Two, the "***Amended Funding Agreement***") both of which were executed by all parties to provide current year adjustments for certain due dates for Act 44/Act 89 Payments in Fiscal Years 2019 through 2021. See "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Other Obligations" below for more information on the total amount paid by the Commission under the Amended Funding Agreement.

Act 89 relieved the Commission from over $15 billion in future Act 44/Act 89 Payments to PennDOT during Fiscal Years 2023 through 2057 (the term of the Amended Funding Agreement), by reducing the Commission's aggregate annual Act 44/Act 89 Payments to PennDOT to $50 million, which amount must be paid from then current revenues of the Commission. Further, Act 89 revised the use of the Commission's annual Act 44/Act89 Payments. Effective July 1, 2014, none of the Commission's Act 44/Act 89 Payments may be used to support the Commonwealth's road and bridge projects. Instead, during Fiscal Years 2015 through 2022, $420 million of the scheduled annual Act 44/Act 89 Payments was required to be used to support mass transit capital and operating needs and other transportation programs of statewide significance, and $30 million was required be used to support multi-modal projects, which may include: aviation projects; rail freight projects; port projects; bicycle projects and pedestrian projects. Act 89 further provides that commencing with Fiscal Year 2023, the Commission's $50 million scheduled annual Act 44/Act 89 Payments must be used to support mass transit capital and operating needs. See "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Other Obligations – Act 44/Act 89 Payments to PennDOT" below for more information on the total amount paid by the Commission under the Amended Funding Agreement.

Rules Relating to Governance and Accountability Under the Enabling Acts

The Enabling Acts set forth certain rules relating to governance and accountability of the Commission, including, but not limited to: requiring the Commission to file an annual financial plan with the Pennsylvania Secretary of the Budget no later than June 1 of each year (see "FINANCIAL PLAN" herein); to have an audit of the Commission's finances (including a review of its performance, procedures, operating budget, capital budget and debt) conducted by the Auditor General every two years (such audit to be paid for by the Commission (see "CERTAIN OTHER INFORMATION – Performance Audit by the Auditor General" herein); to adopt a comprehensive code of conduct for Commissioners and executive-level employees, which the Commission adopted on October 31, 2007 and revised January 7, 2014 and January 28, 2015; and upon request, at least one Commission member shall testify annually before the appropriations committee of the Pennsylvania House of Representatives and the Senate of Pennsylvania.

Impact of COVID-19 Pandemic

The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was declared a Public Health Emergency of International Concern by the World Health Organization on March 11, 2020. The COVID-19 pandemic materially affected travel, commerce, and financial markets globally, and future impacts remain uncertain.

Due to the adverse health impacts of COVID-19, the Commission accelerated its planned conversion to all electronic tolling ("***AET***") toll collection on March 16, 2020; removing toll collectors from toll booths and relying solely on E-ZPass and Toll-By-Plate toll collection across the System. Initially intended to be a temporary response to the COVID-19 pandemic, the Commissioners, on June 2, 2020, unanimously approved the permanent transition to AET collection operations, including laying off 492 Fare Collection Department and Ticket Systems Audit Department employees. See "THE COMMISSION – Recent Developments and Legislation – All Electronic Tolling Layoff Arbitration" and "THE TURNPIKE SYSTEM – Toll Collections" herein.

<u>*Impact on Traffic Volume and Toll Revenues*</u>. Traffic volume initially began to decline on the System in March 2020 as a result of the COVID-19 pandemic. Volume losses initially stabilized after May 2020, with monthly improvements through August 2020, with subsequent fluctuations attributable to various factors, including but not limited to, changes in consumer behavior, and the development and spread of vaccinations and new strains of COVID-19. From August 2020 through August 2021, total monthly traffic volume averaged approximately 16.9% below pre-pandemic levels as measured for all vehicles (the months of March 2021 through August 2021, as measured against the corresponding months in 2019 and the months of August 2020 through February 2021 as measured against the corresponding months in 2019 and 2020). For Fiscal Year 2022, commercial vehicle traffic volume is now 11.6% over pre-pandemic peak levels of Fiscal Year 2019, while passenger vehicle traffic volume is 9.2% below pre-pandemic peak levels for Fiscal Year 2019. The impact of the COVID-19 pandemic on the Commission's traffic and revenue performance has been particularly acute with respect to passenger car traffic and revenues and partially offset by sustained recovery of commercial traffic and revenue. Ongoing traffic and revenue data for the System suggests that the negative impacts of the COVID-19 pandemic have diminished over time. However, the July 2022 Bring Down Letter forecasts ongoing COVID-19 impacts for the entirety of the Forecast Period (as hereinafter defined). See "TRAFFIC STUDY" herein.

<u>*Impact on Finances and Operations*</u>. The Commission implemented a number of measures intended to mitigate the operational and financial impacts resulting from the COVID-19 pandemic.

The Commission successfully implemented several cost mitigation measures which reduced operating expenses to approximately $362 million for Fiscal Year 2021, 15.1% below budget estimates. A significant portion of the cost mitigation was achieved through the Commission's early implementation of AET, which generated approximately $36 million in savings in Fiscal Year 2021 and is projected to produce over $50 million in annual savings in Fiscal Year 2022. See "THE TURNPIKE SYSTEM – Toll Collection" herein for more information.

The Commission maintained a strong liquidity position throughout the pandemic, ending Fiscal Year 2021 with over $452 million on deposit in its General Reserve Fund, which represents over 395 days of operating cash flow, and over $50 million on deposit in the Supplemental Capital Fund, and Fiscal Year 2022 with over $437 million on deposit in its General Reserve Fund, which represents over 458 days of operating cash flow, and over $95 million on deposit in the Supplemental Capital Fund. See "SECURITY FOR THE 2022A BONDS – General Reserve Fund; Supplemental Capital Fund" in the forepart of this Official Statement. In addition, as a continuing liquidity safeguard the Commission obtained and has maintained a one-year $200 million revolving line of credit (the "***Line of Credit***"). See "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Line of Credit" herein for more information.

With respect to the operations of the System, the Commission maintains contingency plans to minimize disruptions to its operations from exogenous events such as natural or man-made disasters. The Commission also maintains a Continuity of Operations ("***COOP***") Plan to address ongoing critical operations and disaster recovery efforts.

The COVID-19 pandemic is ongoing, and its dynamic nature leads to uncertainties. The Commission cannot predict, among other things, the duration or extent of the pandemic, or the possibility, magnitude, timing or nature of any further actions taken by governmental authorities to treat the illness or contain its spread. Likewise, the Commission cannot predict any future impact the COVID-19 pandemic, or any similar widespread public health issue, may have on travel generally, demand for use of the Commission's toll roads, or the System's on-going operations and financial results. No assurance can be given as to how much longer the COVID-19 pandemic and the restrictions imposed as a result thereof will continue or the extent to which changes in commercial and personal behavior in response to the COVID-19 pandemic may continue after it has ended. However, the July 2022 Bring Down Letter (as hereinafter defined) assumes COVID-19 impacts on the traffic volume and toll revenues of the Commission through the entire Forecast Period. See "THE TURNPIKE SYSTEM – The Traffic Study" herein for more information about the Traffic Study and the most recent update thereto, the July 2022 Bring Down Letter and APPENDIX F attached hereto.

Recent Developments and Legislation

Senate Resolution 209

A resolution was adopted by the Senate of Pennsylvania on January 24, 2018 (the "***Senate Resolution 209***") directing the Joint State Government Commission to conduct an analysis of a potential consolidation of interstate operations at PennDOT and the Commission. The Joint State Government Commission is the primary non-partisan research organization that serves the Pennsylvania General Assembly. Senate Resolution 209 tasked the Joint State Government Commission to, among other things, study all of the following:

1. Evaluate the cost savings, efficiencies and customer service improvements that may materialize as a result of consolidating the interstate operations, including personnel, equipment, facilities and highway administration.

2. Identify Federal and State laws that could impact the consolidation of interstate operations.

3. Review cases in other states where tolled bridges or roadways are effectively governed under a state department of transportation.

4. Evaluate and make recommendations on how to manage the Commission's debt as a result of the consolidation of interstate operations.

5. Evaluate and make recommendations on how to align contractual agreements, including labor agreements, bondholder agreements or other partnership agreements, as a result of the consolidation of interstate operations.

6. Propose legislation required to implement the consolidation of interstate operations.

On January 10, 2020, the Joint State Government Commission issued its report (the "***Report***") pursuant to Senate Resolution 209. The Report does not make any recommendations as to whether to consolidate the interstate operations of PennDOT or the Commission but rather identifies numerous issues that should be considered by the General Assembly. The Report also specifically responds to each of the items enumerated in Senate Resolution 209.

1. With respect to potential cost savings or efficiencies from a consolidation, the Report concludes that minor operational efficiencies could be realized. Specifically, the Report estimates that $5.3 million in annual costs savings could be generated. When compared to the combined operating budgets of PennDOT and the Commission totaling $10.3 billion annually, the projected savings would total roughly 0.05%.

2. The Report concludes that existing federal law does not preclude a possible consolidation of interstate operations of PennDOT and the Commission.

3. An examination of other states managing both tolled and free highways concluded that in most instances the states created a semi-independent instrumentality to operate the tolled highways within the state transportation agency. Financial protection of a state's transportation agency and the state was the primary reason to do this so that the public is not directly obligated to repay the bonds for the tolled roads.

4. The Report concludes that the Commission's outstanding debt of over $14 billion "could serve as a potential barrier to its consolidation within the department." Further, the Joint State Government Commission concluded that "it is unclear as to how the Commonwealth can lawfully assume the commission's bond debt." Finally, as a result of the financial burden of the Commission's currently outstanding debt, the Report concludes that "the Commonwealth would be unlikely to expand its subsidy for transportation elsewhere in the Commonwealth based on turnpike revenue nor would it be likely to relieve the pressure to continue to generate turnpike revenue robust enough to service the outstanding debt."

5. Preexisting contractual obligations at both PennDOT and the Commission would also likely present many complications to a consolidation of interstate operations.

6. As required by Senate Resolution 209, the Report includes proposed legislation to implement a consolidation of the interstate operations at PennDOT and the Commission. The proposed legislation does not appear to address or resolve many of the operational or legal obstacles identified in the Report.

The Commission cannot predict if the Report may lead to the introduction or adoption of legislation that may affect the Commission and/or its operations. Furthermore, the Commission cannot predict, at this time what action, if any, may be taken by the Pennsylvania General Assembly as a result of the Report, or what effect, if any, a consolidation of the Commission and PennDOT would have on the Commission's debt or the security for such debt.

TROC Report

On March 12, 2021, Governor Wolf signed Executive Order No. 2021-02 which established the Governor's Transportation Revenue Options Commission ("***TROC***"), an official advisory commission comprised of key stakeholders, including experts from the transportation industry, environmental community, business community, energy community, multimodal community and local government representatives. TROC was charged with developing a comprehensive, strategic proposal for addressing the transportation funding needs of the Commonwealth. TROC delivered its final report to the Governor on July 30, 2021 (the "***TROC Report***"). The TROC Report is available online at: https://www.penndot.gov/about-us/funding/Documents/TROC-Final-Report.pdf.[2]

The TROC Report estimates that the Commonwealth's state-level annual unmet transportation funding needs will reach $14.5 billion over the next ten years and attributes the funding gap to several factors: (i) over-reliance on shrinking gas tax revenues; (ii) Act 44 and Act 89 providing insufficient funding to address transportation funding statewide; (iii) dramatic increases in emergency repair needs; (iv) rigorous and costly interstate pavement standards; (v) federal transportation gas tax funding remaining static for almost 30 years; (vi) the increased costs created by deferred maintenance; and (vii) reduction in purchase power caused by inflation.

The TROC Report presents a strategic funding proposal, intended to effectively address all modes of transportation, that contemplates three phases of funding to close the gap over time. Notably, with respect to the Commission's outstanding Oil Franchise Tax Revenue Bonds, the TROC Report identifies the gas tax (which includes the Oil Franchise Tax) as an eroding revenue source that needs to be eliminated and replaced by various proposed revenue sources. Further, the TROC Report acknowledges that (i) the Commission's outstanding Oil Franchise Tax Revenue Bonds are secured by the Commission Allocation portion of Oil Franchise Tax revenues, and (ii) that portion of the Oil Franchise Tax would need to remain in place until the Commission's outstanding Oil Franchise Tax Revenue Bonds are retired or defeased.

To date, no action has been taken by the Governor or the General Assembly with respect to the TROC Report. The Commission cannot predict what resulting actions the Governor and/or the General Assembly may take as a result of the TROC Report, if any.

All Electronic Tolling Layoff Arbitration

On June 2, 2020, the Commission approved the layoff of Fare Collection Department employees and Ticket Systems Audit Department employees due to the implementation of AET collection. On this same date, the Commission so informed representatives of Teamsters Local Union Nos. 77 and 250 (collectively the "***Union***"). The resulting layoff of approximately 492 bargaining unit employees was implemented effective as of June 18, 2020. In accordance with terms negotiated with the Union, the laid off employees were eligible to receive severance based on their years of seniority upon execution of a release of claims.

On or about June 25, 2020, the Union submitted three (3) grievances challenging the layoff of the bargaining unit employees due to the implementation of AET. In the grievances, the Union contended that the layoff violated provisions of the applicable collective bargaining agreements and terms of the memorandum of understanding and/or purported oral promises relating to the layoff of employees. In particular, the Union alleged that the Commission was not permitted to lay

[2] The information contained on such website link is not incorporated by reference in this Appendix A.

off employees due to the implementation of AET until January 2022. The Union requested that the laid off employees be reinstated to their former positions and be made whole (including back pay).

The Commission vigorously defended its legal and contractual rights to implement AET and to lay off employees due to such implementation, arguing that it had: (a) not violated any provisions of the applicable collective bargaining agreements, (b) not violated any provisions of the memoranda of understanding relating to the layoff of employees, and (c) acted consistently with the applicable provisions of the collective bargaining agreements and memoranda of understanding relating to the layoffs resulting from the implementation of AET.

An arbitration hearing in this matter was held on November 11, 2020. The arbitrator's decision was issued on January 20, 2021, upholding the Commission's right to implement AET and layoff the affected employees and denying the Unions' grievances. The Unions did not appeal the arbitrator's decision.

Julie E. Thomas v. TransCore, LP & Pennsylvania Turnpike Commission.

On April 28, 2021, Julie Thomas (the "***Plaintiff***"), an E-ZPass customer and frequent traveler on the System, filed a putative class action lawsuit against the Commission, and TransCore, L.P. ("***TransCore***"), as the vendor that provides, operates, and maintains the Electronic Toll Collection Customer Service Center and Violations Processing Center.

The Commission and TransCore were served with the complaint on May 24, 2021. The complaint centers mostly on video tolls ("***V-Tolls***"). A V-Toll is an E-ZPass charge that is assessed when, for any reason, the customer's E-ZPass transponder is not read on both the customer's entry and exit from the System, resulting in a toll assessment based upon a video snapshot of the customer's license plate.

The Plaintiff asserts claims for conversion and unjust enrichment against the Commission, as well as additional claims against TransCore. The Plaintiff principally alleges that (i) the V-Tolls charged to her account are excessive and amount to disproportionate fines and penalties, (ii) refunds should be made to the customer's bank accounts, not the E-ZPass account, and (iii) the Commission and TransCore failed to notify E-ZPass customers that newly installed tolling equipment is incompatible with older E-ZPass transponders; resulting in more V-Tolls and overall higher tolls. Based on these allegations, the Plaintiff seeks, among other things, compensatory and punitive damages, as well as attorney's fees and costs, and asks the Court to certify a class action.

On June 14, 2021, TransCore filed a notice of removal seeking to move this matter from Dauphin County Court of Common Pleas. The matter was removed to the U.S. District Court for the Eastern District of Pennsylvania. On June 21, 2021, both the Commission and TransCore filed motions to dismiss. In response, Plaintiff filed a motion to remand the action to state court, which the Commission and TransCore opposed. On March 30, 2022, the Court denied Plaintiff's motion to remand and the motions to dismiss of both the Commission and TransCore without prejudice, and allowed the Plaintiff 45 days to take jurisdictional discovery.

Following jurisdictional discovery, the Plaintiff renewed her motion for remand on June 10, 2022, which the Commission and TransCore opposed on June 24, 2022. The motion has been fully briefed and the parties await the Court's decision. The Commission cannot, at this time, predict the ultimate outcome, but will continue to assert all available defenses against these allegations in court.

Additional Matters

Consistent with recommendations of the Commonwealth's Transportation Funding Advisory Commission, the Commission continues to be actively engaged with other Commonwealth administrative agencies in initiatives to streamline project delivery and increase operational efficiencies. Among such undertakings are a number of collaborative programs with PennDOT in various administrative and technical areas, including integration of communication and information systems, standardization of manuals and publications, and coordination of training, operations, project planning and construction phasing (all as outlined in an August 2011 report entitled *Mapping the Future between the Pennsylvania Turnpike Commission and the Pennsylvania Department of Transportation*).

Legislative Proposals

From time to time, legislation is introduced in the Pennsylvania General Assembly (with respect to the Enabling Acts and otherwise) and in the United States Congress, the nature and content of which may affect the Commission. The Commission cannot predict whether any such legislation will be enacted into law, or how any such legislation may affect the Commission's ability to pay the Senior Revenue Indenture Obligations (as hereinafter defined), the Subordinate Revenue Indenture Obligations (as hereinafter defined), the Oil Franchise Tax Revenue Bonds (as hereinafter defined) or the Registration Fee Revenue Bonds (as hereinafter defined), or to perform its operations and financial obligations pursuant to the Enabling Acts.

The Pennsylvania House of Representatives and the Pennsylvania Senate convene for a two-year session on the first Tuesday after New Year's Day in odd numbered years and adjourn (Sine Die) on November 30 of the next even numbered year. The 2021-22 legislative session began on January 5, 2021 and is scheduled to adjourn on November 30, 2022.

In the past, legislation has been introduced, but not enacted, to, among other things, further reduce the payments due by the Commission under Act 44, waive tolls for emergency vehicles in certain situations, grant disabled veterans a discount, create a partnership with the United States Treasury to collect delinquent taxes and debt (including tolls), obligate the Commission to construct, operate and maintain portions of the Southern Beltway Project, reinstate toll and fare collection employees laid off in June 2020, and impose various regulations affecting the operations of the Commission. The Commission cannot predict whether similar legislation or other legislation may be considered by the General Assembly or if any proposals or initiatives may lead to the adoption of legislation that may affect the Commission and/or its operations.

Legislation either in discussion or introduced in the Pennsylvania General Assembly during the 2021-22 legislative session, that if enacted would materially affect the Commission, includes the following:

House Bill 320, which if enacted would obligate the Commission to construct, operate and maintain portions of the Southern Beltway project, specifically, the sections from Interstate Route 79 to the Mon-Fayette Expressway near Finleyville and from State Route 885 in the City of

Pittsburgh to the Mon-Fayette Expressway. The proposed legislation was introduced on January 28, 2021 and referred to the House Transportation Committee.

Senate Bill 187, which if enacted would create the Turnpike-to-Port Freight Reimbursement Fund at the Pennsylvania Treasury for the purpose of providing Commonwealth-funded reimbursement for certain Pennsylvania-based companies for their tolls when transporting goods to and from Pennsylvania port facilities along the Turnpike System, was introduced and referred to the Senate Transportation Committee on February 10, 2021.

House Bill 525, which if enacted would create a toll discount of 10% on electronic toll collections on the System for the owners of vehicles which (i) obtain both at least 45 miles per gallon, as specified by the manufacturer, and (ii) produce 90% fewer emissions, as specified by the manufacturer, than average gasoline-powered vehicles of the same production year. This proposed legislation was introduced on February 11, 2021 and has been referred to the House Transportation Committee.

House Bill 1109, which if enacted would require the approval by the General Assembly in order to authorize the conversion of an existing public roadway to a toll road, either in whole or a portion, not including bridges and tunnels. This proposed legislation was introduced on April 6, 2021 and has been referred to the House Transportation Committee.

House Bill 1136, which if enacted would prohibit the Commission from charging or collecting a surcharge or other fee for toll collection by registration plate from an operator or owner of a vehicle registered in the Commonwealth in excess of the rate fixed by the Commission for electronic toll collection. House Bill 1136 further provides that (i) the Commission shall charge and collect a higher rate for electronic toll collection devices not issued by the Commission and (ii) that the higher rate charged shall not exceed the toll rate charged by the Commission for any nonelectronic toll collection. This proposed legislation was introduced on April 7, 2021 and has been referred to the House Transportation Committee.

The proposed Drive Smart Act is a series of proposed bills and resolutions that if enacted would, among other things, affect transportation in the Commonwealth. This proposed legislation is expected to be introduced in the Transportation Committee during the current legislative session. However, no assurance is given that such legislation will be introduced or the form and content of the legislation if it is introduced. This package of bills contained Senate Bill 382 which was enacted as Act 84 on July 11, 2022, Act 84 reforms the Public-Private Transportation Partnership (P3) statute to increase transparency and clarify the General Assembly's involvement in the P3 process. The series of proposed bills also included Senate Bill 737 which if enacted would amend the Municipalities Planning Code regarding the Commission. Senate Bill 737 was laid on the table pursuant to Senate Rule 9 on October 27, 2021.

House Bill 1922 was amended into House Bill 2139, which if enacted would amend Act 165 to lower the threshold for a vehicle registration suspension for unpaid tolls from six violations to four violations, and for administrative fines from $500 to $250. House Bill 2139 would also increase the timing for the statute of limitations for enforcing unpaid toll violations from three years to five years and include a requirement that the Commission notify customers of the imposition of any V-Tolls or flat video toll if the Commission is unable to match a license plate image. Additional reporting requirements would be imposed upon the Commission if House Bill 2139 is enacted, including a requirement to submit a report to the General Assembly by October 1 of each year summarizing toll revenues collected and uncollected, including the reasons toll revenues are uncollected during the prior fiscal year. Additionally, House Bill 2139 would require the Commission to conduct a feasibility study to assess alternative electronic toll collection payment options. This proposed legislation was introduced on December 7, 2021 and was approved by the House of Representatives on May 24, 2022. The bill is currently in Senate Appropriations Committee for consideration as of June 21, 2022.

House Bill 2747, which if enacted would streamline the Commission's and PennDOT's construction contracts by using the design build best value process, was introduced and referred to the House Transportation Committee on July 13, 2022.

House Bill 2630, which if enacted would allow digital registration plates to be provided by a vendor of digital license plate hardware and services to motor vehicle owners that is approved by PennDOT, was introduced and referred to the House Transportation Committee on May 27, 2022.

Long Term and Strategic Planning

2016 Long Range Plan. Adopted in November 2016, the Commission's Long Range Plan 2035 (the "***2016 Long Range Plan***") was developed to serve as the Commission's "Bridge to Zero Fatalities". The 2016 Long Range Plan is shaped by seven strategic drivers: (1) providing the safest possible environment for customers, employees and business partners; (2) meeting and exceeding customer expectations while providing safe, convenient and reliable travel; (3) maintaining a sound financial position; (4) managing new investments and preserve the life of existing assets; (5) achieving an accessible, reliable, and uninterrupted travel highway system; (6) enhancing stakeholder and business relationships to ensure the Commission is a valued partner; and (7) creating a workplace environment that ensures all employees understand, respect, and encourage a commitment to the Commission's value. The Long Range Plan is available online at: https://www.paturnpike.com/pdfs/about/PTC_LRP_11_7_16_FINAL.pdf.[3]

2040 Capital & Asset Analysis. In 2021, the Commission developed its Capital & Asset Analysis 2040 (the "***2040 Capital & Asset Analysis***"), which serves as an update to the 2016 Long Range Plan. The 2040 Capital & Asset Analysis provides evaluations for the asset condition of the Highway, Facilities, Fleet Equipment and Technology Programs to help the Commission make the most informed decisions on where we want to take our assets in the long-term. Among other items, the 2040 Capital & Asset Analysis, includes recommendations for increasing the number of miles of total reconstruction per year. A copy of the 2040 Capital & Asset Analysis Plan is available by request.

2020 Strategic Plan. Adopted in January 2020, the Commission's 2019-2024 Strategic Plan (the "***Strategic Plan***") established the Commission's current vision, commitments, and values. The vision is: " Driving the standard for safety, customer service, and mobility." The Commission's organizational commitments are: (1) improve safety – zero fatalities, no work-zone injuries, reduced incidents; (2) achieve accessible, reliable, and uninterrupted travel; (3) manage

[3] The information contained on such website link is not incorporated by reference in this Appendix A.

all assets in a restorative manner; and (4) be the leader in transportation services. The Strategic Plan is available online at: https://www.paturnpike.com/pdfs/about/StrategicPlan.pdf.[4]

2021 Sustainability Report. The Commission recently completed its 2021 Sustainability Report, which focused on the applicable elements of the United Nations Seventeen Sustainable Development Goals. The 2021 Sustainability Report reflects the benefit of the Commission's internal sustainable strategies as well as its continued work with the Commonwealth's GreenGov Council. The 2021 Sustainability Report is available online at: https://www.paturnpike.com/pdfs/about/PTC_Sustainability_Report_2021.pdf.[5]

Extreme Weather and Climate Resiliency Report. In July 2022 the Commission released the Extreme Weather and Climate Resiliency Report, which reflected a comprehensive assessment of the Commission's internal planning, operations, best management practices related to extreme weather events such as flooding, blizzards, hurricanes, and heatwaves, and opportunities to further improve preparedness and responsiveness to create a more resilient System. The Extreme Weather and Climate Resiliency Report may be found on the Commission's website at: https://files.paturnpike.com/production/docs/default-source/resources/investor-relations/additional-resources-and-reports/ptc-extreme-weather-and-climate-resiliency-report-2022.pdf?sfvrsn=f1d4a3a4_4.[6]

THE TURNPIKE SYSTEM

General

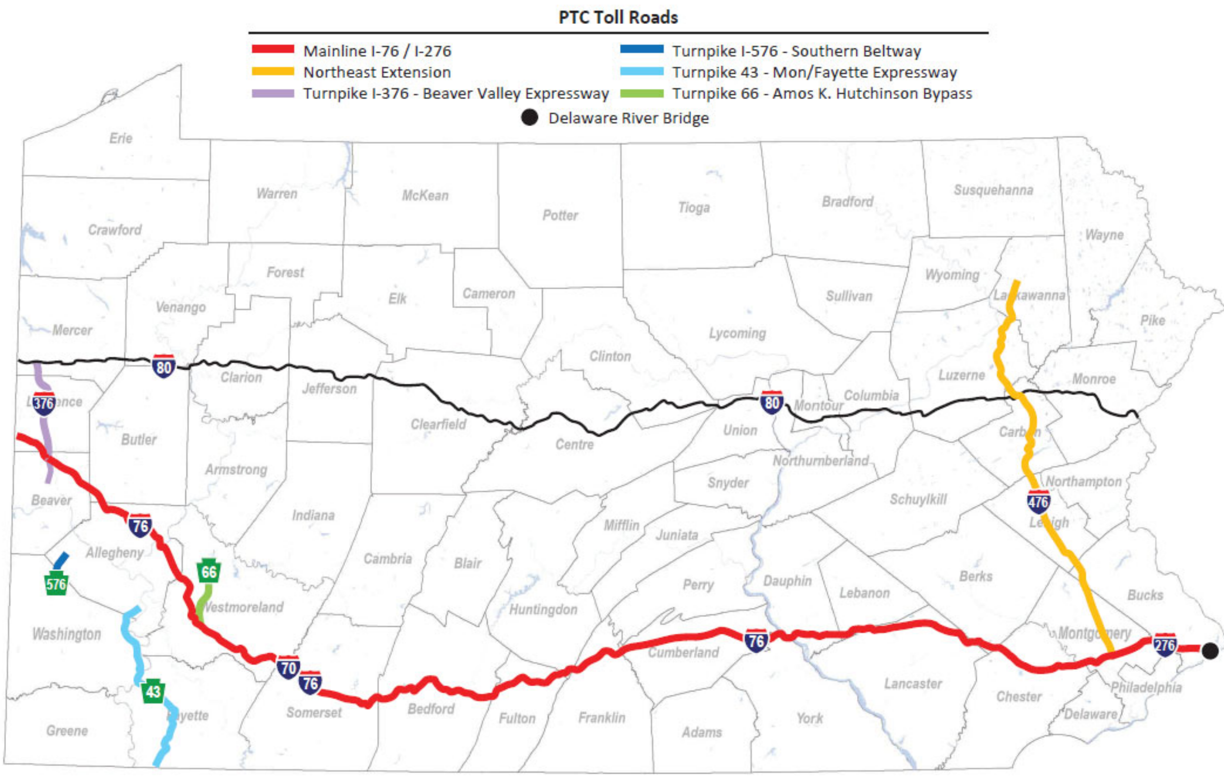
The present Turnpike System is composed of:

- the 359-mile Turnpike Mainline traversing the southern portion of Pennsylvania from east to west;
- the 110-mile north/south section identified as the Northeast Extension;
- the approximately 16-mile north/south connection, known as the Beaver Valley Expressway, which intersects the Turnpike Mainline in the southwestern portion of the Commonwealth;
- the approximately 13-mile Amos K. Hutchinson Bypass which adjoins the Turnpike Mainline near the New Stanton Interchange;
- the completed portion of the Mon/Fayette Expressway project totaling approximately 48 miles;
- a six-mile section of the Southern Beltway project from PA 60 to U.S. 22; and
- a 13-mile section of the Southern Beltway between U.S. 22 and Interstate Route 79 ("***I-79***"), which opened on October 15, 2021.

[4] The information contained on such website link is not incorporated by reference in this Appendix A.
[5] The information contained on such website link is not incorporated by reference in this Appendix A.
[6] The information contained on such website link is not incorporated by reference in this Appendix A.

For a more complete description of the Mon/Fayette Expressway and Southern Beltway projects, see "CAPITAL IMPROVEMENTS – Mon/Fayette Expressway and Southern Beltway" herein.

A map of the Turnpike System is provided below.



Note: I-80 is not a part of the Turnpike System.

The Turnpike Mainline connects with the Ohio Turnpike at its western terminus and with the New Jersey Turnpike at its eastern terminus. The Turnpike Mainline commences on the eastern boundary of Pennsylvania at the Delaware River Bridge which connects the System to the New Jersey Turnpike. The Turnpike Mainline traverses the state in a westerly direction generally paralleling the southern border of the state immediately north of Philadelphia and south of Harrisburg to the vicinity of Somerset. West of Somerset, the highway follows a northwesterly direction to the northeast of Pittsburgh and to the Ohio state line, south of Youngstown, Ohio.

The System was constructed prior to the development of the National Interstate Highway System and no Federal Highway Trust Fund monies have been utilized in the construction of the Turnpike Mainline, Northeast Extension, Beaver Valley Expressway or Amos K. Hutchinson Bypass section of the Turnpike System. However, portions of the System have been designated as Interstate Routes. The Turnpike Mainline has been designated as Interstate Route 276 between the area where Interstate Route 95 crosses the System and the Valley Forge Interchange. With the September 2018 opening of the interchange connecting the Turnpike Mainline with Interstate Route 95 ("***I-95***"), the portion of the Turnpike Mainline east of the new interchange has been designated as I-95. The portion of the Turnpike Mainline west of the Valley Forge Interchange to the western terminus at the Ohio state line has been designated as Interstate Route 76 ("***I-76***"). In addition, the Turnpike Mainline between the New Stanton and Breezewood Interchanges has been designated as Interstate Route 70 ("***I-70***"). The Northeast Extension has been designated as Interstate Route 476. Portions of the Beaver Valley Expressway are designated as Interstate Route 376 ("***I-376***").

The System was constructed and opened to traffic in sections. The original Turnpike Mainline segment between Irwin and Carlisle was opened in 1940. Ten years later, in 1950, the 100-mile section between Carlisle and King of Prussia was completed and opened. After 1950, construction of new segments of the System occurred at more frequent intervals with the Turnpike Mainline segment placed in service as of May 1956. The initial segment of the Northeast Extension between the Turnpike Mainline and the temporary interchange just south of the Lehigh Tunnel was opened in 1955. The final segment, from the temporary interchange to Scranton, was completed and opened for traffic in November 1957.

The Delaware River Bridge, which connects the Turnpike Mainline with the New Jersey Turnpike System, is owned jointly by the Commission and the New Jersey Turnpike Authority ("***NJTA***").

Interchanges and Service Plazas

The System has a total of 73 toll interchanges which connect it with major arteries and population centers along its 565-mile traffic corridor. 36 of the interchanges are located on the Turnpike Mainline, including Turnpike Mainline barriers at the New Jersey and Ohio state lines, and 11 interchanges are situated on the Northeast Extension. The additional 26 interchanges are located on the Beaver Valley Expressway, Amos K. Hutchinson Bypass, and completed segments of the Mon/Fayette Expressway and Southern Beltway.

There are 17 service plazas along the System providing gasoline and diesel fuel, other automotive supplies and services, and restaurant services. Beginning in 2005, the Commission has entered into long term service plaza redevelopment agreements with Applegreen ("***Applegreen***"), in its capacity as successor to HMSHost Restaurants, LLC, and 7-Eleven, Inc. ("***7-Eleven***"), in its capacity as successor to Sunoco, Inc.,[7] to design, reconstruct, finance, operate and maintain all 17 of the service plazas. The Commission has no responsibility for maintaining the service plazas under the agreements. Cumulatively, Applegreen and 7-Eleven have invested approximately $190 million in service renovation projects, at no cost to the Commission. The Commission recognized capital contribution revenues of $5.8 million and $5.5 million, related to these agreements for the Fiscal Years ended May 31, 2021, and 2022, respectively, which is based on the capital assets provided by Applegreen and 7-Eleven.

7 Pursuant to an Assignment and Assumption of Real Property Lease Agreement executed on January 23, 2018, Sunoco assigned its interest in the lease agreement by and between the Commission and Sunoco, as amended and supplemented, to 7-Eleven, Inc.

Additional Services

In addition to the 791 field personnel in 23 facilities available to keep the roadway open and safe in the event of unfavorable road conditions, the Commission has a 24/7 Traffic Operations Center which monitors conditions on the System and provides emergency dispatch.

In 2019, the Commission discontinued its Turnpike Roadway Information Program, which provided real-time data to drivers, and joined with PennDOT's 511PA travel program. The 511PA travel program offers motorists one source to obtain travel information for both the System and PennDOT roadways throughout the Commonwealth. It offers a suite of traveler resources such as the 511PA mobile app, a personal alerts subscription service, a website with a travel conditions map and access to travel information by dialing 511 from any phone. The 511PA travel program offers roadway conditions, slowdown information, live traffic camera images, highway construction updates, weather conditions and alerts, as well as other travel resources.

As part of this modernization, the Commission discontinued its Highway Advisory Radio alert system, which experienced significant reductions in use as travelers turned to digital sources for travel information. However, the Commission's Customer Assistance Center is still available for System-specific phone inquiries during weekday business hours.

In December 2011, Pennsylvania Department of Environmental Protection (the "***DEP***") announced a $1 million grant award to help develop electric vehicle infrastructure on the System. The grant recipient, Car Charging Group Inc. ("***CCGI***")[8], was to install charging stations at 15 of the System's mainline service plazas (the "***EVI Project***"). The Commission committed additional funding of up to $500,000 to upgrade the electrical systems at the plazas to accommodate the charging stations. The first three phases of the work were completed. However, CCGI was unable to complete the remaining phases of the EVI Project. As a result, on April 19, 2017, DEP terminated the grant and revoked further funding under the grant.

The Commission currently has an agreement with Blink Charging, Co., to provide electric vehicle charging stations at the following service plazas: New Stanton, Oakmont, King of Prussia, Bowmansville and Peter J. Camiel. Additionally, through Applegreen's partnership with Tesla, 40 Tesla superchargers are installed at six service plazas, Hickory Run (both north and south plazas), Bowmansville and Somerset (both north and south plazas) service plazas. The Commission is actively engaged with Applegreen Electric to provide additional EV charging opportunities across the entire system. The Commission is also working in cooperation with FHWA and PennDOT on PA's National Electric Vehicle Infrastructure program. Any charging stations developed pursuant to this program would be installed and operated by Applegreen Electric.

In February 2013, the Commission established free Wi-Fi service at all service plazas. The amenity was added to accommodate Turnpike System customers who want to use smartphones, tablets, laptops or other portable devices to access the internet while traveling.

In September 2013, the Commonwealth Financing Authority announced a $500,000 grant to Sunoco, Inc., a portion of which was used to partially fund a compressed natural gas refueling

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[8] CCGI's operations were assumed by its successor Blink Charging Co.

station located at the New Stanton service plaza, the first natural gas refueling station on the System. Construction was completed and the refueling station opened in November 2014.

The Commission's fiber optic cable network project is intended to provide the information backbone from which tolling information, real-time traffic and crash data for intelligent transportation system devices, connected vehicles, financial information, and other communications can be transmitted. The adoption of ORT will be made easier with the completion of the fiber optic cable project.

In summer of 2019, the Commission bid two design-build projects for the fiber optic network on the Mainline from the Harrisburg East interchange to the Delaware River Bridge ("***Contract 1***"), and for the entire length of the Northeast Extension ("***Contract 2***") to augment the existing digital microwave network utilized throughout the System. Notices to proceed for Contracts 1 and 2 were issued in the fall of 2020. Construction completion dates are currently estimated to be October 2022 for Contract 1 and May 2023 for Contract 2. It is anticipated that the fiber optic network will be operational in June 2023. Additionally, the Commission released a request for proposals for the operation, maintenance and commercialization of the fiber optic network in December 2019, and the notice to proceed was issued in February 2021. The Commission has allocated existing funds on hand to the costs for the remaining western portion of the fiber optic network on the Mainline west of Harrisburg. Completion of the western portion is scheduled for calendar year 2025 with activation anticipated by June 2026.

Toll Collection

The following information describes the infrastructure of the Commission's AET toll collection system. See "CERTAIN FINANCIAL INFORMATION – Toll Schedule and Rates" herein for information regarding the Commission's toll rates. The operation of an AET toll collection system inherently involves many risks including, but not limited to, threats to the integrity and security of the Commission's information and technology. See "INVESTMENT CONSIDERATIONS – Cybersecurity Threats" in the forepart of this Official Statement and see "CERTAIN OTHER INFORMATION – Cybersecurity" herein.

All Electronic Tolling

Early in 2011, the Commission initiated a feasibility study to examine the benefits and potential issues associated with converting the toll road to an all-electronic, cashless system. The team of McCormick Taylor/CDM Smith was selected and completed the feasibility report (the "***Feasibility Report***") in March 2012. At that time, the Commission determined, based on the assumptions in the Feasibility Report, that conversion to an all-electronic, cashless system was technically feasible from both a financial and physical perspective. In July 2012, the Commission selected HNTB Corporation to act as its Program Manager to lead and direct the multi-disciplinary efforts required to manage and coordinate the design and implementation of an all-electronic, cashless system. The resulting Conceptual Implementation Plan report, including a schedule for conversion, was issued in October 2014, and contemplated full conversion to a non-stop AET system by 2018. However, following the enactment of Act 89, the Commission re-evaluated the schedule and determined that a modified schedule for implementation would be necessary. The Commission's re-evaluation of the transition to a cashless, non-stop system resulted in a planned approach whereby the existing toll lanes were initially equipped with the technology for Toll By Plate tolling to allow for cashless tolling to occur (for vehicles not utilizing an E-ZPass transponder) at the existing plaza locations, with the ultimate conversion of the remaining System utilizing an open road tolling ("***ORT***") system originally scheduled for October 2021. The Commission also authorized the deployment of an initial six segments of the System consisting of the Delaware River Bridge, which went into operation in January 2016; the Beaver Valley Expressway, which went into operation in April 2017; Keyser Avenue/Clarks Summit, which went into operation in April 2018; the Findley Connector, which went into operation in June 2018, and the Amos K. Hutchinson Bypass and Gateway segments, which went into operation in October 2019.

On March 16, 2020, in response to the public health concerns resulting from the COVID-19 pandemic, the Commission moved to AET collection, removed toll collectors from toll booths and transitioned to only utilizing Toll By Plate and E-ZPass toll collection across the System. Initially intended to be a temporary response to the impact of the COVID-19 pandemic, the Commissioners, on June 2, 2020, unanimously approved the permanent transition to AET collection operations.

Toll-By-Plate is supplemental to E-ZPass toll collections and utilizes technology where cameras read the license plates of all non-E-ZPass customers, as they pass through each toll gantry. The registered owner of the vehicle is then invoiced for the assessed tolls. Commencing January 3, 2021, the Commission began imposing an additional toll increase on Toll By Plate transactions equal to 45% of the toll that would otherwise be due to cover the costs of non-payment associated with Toll-By-Plate.

The Commission plans to fully convert the System to ORT collection operations where cameras on overhead gantries capture a vehicle's license plate at highway speed, and a toll invoice is mailed to the vehicle's registered owner. The overhead gantries will also read the transponder signals for E-ZPass customers to pay tolls at such locations. An initial pilot of the ORT system was installed along the new section of the Southern Beltway which opened in October 2021. The Mainline transition to ORT was initially scheduled to commence on a portion of the System from the Reading Interchange to the New Jersey border in October 2022. However, as result of reductions in spending under the Fiscal Year 2021 Capital Plan, ORT conversion was deferred to October 2024. Conversion to ORT for the balance of the Mainline west of the Reading Interchange is scheduled for completion in fall 2026. Existing toll booths will be decommissioned and removed from service at locations in which ORT is implemented.

In addition to implementing the additional Toll-By-Plate of 45% charge on all Toll-By-Plate transactions, which was implemented to encourage increased use of E-ZPass and to offset estimated revenue leakage, the Commission continues to actively work to address revenue leakage due to AET through various initiatives that address customer behaviors and system improvement. In response to unpaid invoices, the Commission attempts to collect outstanding amounts via various options where practical and permitted by law. These include but are not limited to: (i) collection agency actions; (ii) vehicle registration suspensions; and (iii) court actions. See " – Toll Collection – Violation Enforcement" below. The Commission provides a 15% discount for Toll-By-Plate customers that pre-register their address and/or credit card for invoicing and has established new cash payment channels for unbanked customers through a partnership with Kubra.

The Commission is also pursuing reciprocity agreements with other states to enhance cross state collections and is pursuing legislative changes to strength enforcement measures for toll violators.

E-ZPass

The Commission has installed E-ZPass, a form of electronic toll collection, throughout the System. The benefits of E-ZPass include enhanced safety and convenience for users of the System, improved traffic flow and reduced congestion at the System's busiest interchanges.

E-ZPass is available on the entire System. In addition, Express E-ZPass lanes have been constructed at seven interchanges and permit E-ZPass customers to travel through the toll plaza at highway speeds. As of the date of this Official Statement, E-ZPass customers traveling in 19 other states that have implemented E-ZPass technology are able to use E-ZPass in those states.

The Commission has a contract, extending through 2024, with TransCore Company for the design, installation and maintenance of the E-ZPass system software and hardware and the operation of the E-ZPass Customer Service and Violations Processing Centers. See "THE COMMISSION – Recent Developments and Legislation – *Julie E. Thomas v. TransCore, LP & Pennsylvania Turnpike Commission*" herein for information about recent litigation.

The Commission also offers E-ZPass customers the ability to participate in E-ZPass Plus, which allows customers to use their transponder to pay for parking at participating facilities.

ETC Penetration Rates

As mentioned above, in response to the public health concerns resulting from the COVID-19 pandemic, on March 16, 2020, the Commission moved to AET collection, removing toll collectors from toll booths and transitioning to only using Toll-By-Plate and E-ZPass tolling across the System. Initially intended to be a temporary response to COVID-19, the Commissioners, on June 2, 2020, unanimously approved the permanent transition to AET collection operations.

Prior to the Commission's transition to AET, the Commission's annual revenues from electronic toll collection, which includes revenues from E-ZPass and Toll-By-Plate (collectively, "***ETC***") were approximately $1.1 billion for Fiscal Years 2020 and 2019. The Commission's annual revenues from ticketed drivers (i.e., those not using ETC) decreased to $170.2 million in Fiscal Year 2020 from $233.9 million in Fiscal Year 2019. Fiscal Year 2021 was the first Fiscal Year for which the Commission almost exclusively utilized electronic tolling across the whole System. All locations, except the Mon/Fayette Expressway, utilized electronic tolling exclusively for the full fiscal year. The Mon/Fayette was converted to all electronic tolling in mid-June 2020.

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The following table shows the Commission's ETC penetration rates among passenger, commercial and total users for Fiscal Years 2018 through 2022 and reflects a trend of both categories of System customers increasingly adopting electronic tolling prior to the transition to AET in March 2020. For Fiscal 2022, approximately 86.8% of all transactions were E-ZPass or E-ZPass associated transactions which are generally pre-paid accounts with funds on deposit with the Commission. The remaining 13.2% of transactions are Toll-By-Plate transactions which are invoiced to the registered owner of the vehicle.

ETC as a Percentage of Total Volumes

	Electronic Toll Collection				Non-ETC				
	Toll-By-Plate		E-ZPass		Cash		Totals		
Fiscal Year	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial	Grand Total
2018	1.69%	0.18%	68.21%	12.91%	15.76%	1.25%	85.66%	14.34%	100.00
2019	2.72	0.31	69.24	13.34	13.34	1.05	85.30	14.70	100.00
2020	4.69	0.67	68.79	14.72	10.36	0.77	83.84	16.16	100.00
2021	20.04	2.64	61.12	16.16	0.04*	0.00	81.20	18.80	100.00
2022	20.06	2.74	62.46	14.74	0.00	0.00	82.52	17.48	100.00

* Related to Mon/Fayette Expressway which converted to AET collection operations in June 2020. All other locations were converted to AET prior to June 1, 2020.

Violation Enforcement

To help ensure the collection of toll revenue due to the Commission, a Violation Enforcement System ("***VES***") has been installed at all E-ZPass interchanges to identify violators (customers who travel through E-ZPass lanes and do not have E-ZPass) and motorists with problem tags that are unreadable. VES enables the Commission to collect appropriate tolls and other additional fees relating to violations. Act 89 and other statutory provisions governing VES and procedures for enforcement and collection provide for enhanced fare evasion measures and criminal penalties pertaining to E-ZPass violators. Under Act 89, motorists who commit or attempt to commit fare evasion on the System shall have committed a summary offense and upon conviction, shall be fined a sum between $100 and $1,000 in addition to civil penalties that are already in place. Further, upon conviction, motorists who take affirmative action to evade a System fare can be found to have committed a misdemeanor of the third degree, punishable by fines ranging from $3,000 to $6,500 (depending on the number of offenses), and imprisonment of not more than six months for a second offense.

Revenue generated from the additional fare evasion fines imposed by Act 89 is to be deposited in the Commonwealth's Motor License Fund (as hereinafter defined) rather than with the Commission; however, restitution for the full fare is paid to the Commission. See "CERTAIN OTHER INFORMATION – Performance Audit by the Auditor General" herein for Auditor General findings with respect to enforcement powers of Commission.

After the Auditor General's Performance Audit, Act 165 was signed into law in 2016 which, among other things, allows for the suspension of vehicle registration for unpaid tolls. Specifically, the vehicle suspension process is triggered by the failure to pay six (6) or more violations or incurring unpaid tolls or administrative fees of $500. Additionally, Act 165 assists the Commission with the collection of unpaid out-of-state tolls by authorizing PennDOT to enter into a reciprocity agreement for purposes of toll collection and enforcement penalties with another state or tolling entity. Effective September 11, 2018, PennDOT and the State of Delaware Department of Transportation, Division of Motor Vehicles ("***DelDOT***") entered into the first reciprocity agreement under Act 165, generally providing that PennDOT and DelDOT will suspend or hold the registration of vehicles upon unpaid tolls, consistent with the laws and regulations of the other state, upon the request of such state.

In January 2018, the Commission began sending notices of possible vehicle registration suspensions under authority from Act 165 and in February 2018, PennDOT began suspending certain vehicle registrations. In April 2018, the Commission began filing criminal charges against some of the largest toll violators for theft of services. The Commission's Toll Revenue Enforcement ("***TRE***") unit brings such criminal charges in cooperation with local prosecutors, which has resulted in various plea and settlement arrangements. See "CERTAIN OTHER INFORMATION – Toll Revenue Enforcement" herein for more information about TRE and Act 165 enforcement efforts.

Signed into law on October 19, 2018, Act 86 of 2018 (formerly Senate Bill 172) ("***Act 86***") authorizes the Commission and PennDOT to conduct speed-enforcement operations inside active work zones ("***Enforcement Zones***") using automated speed-enforcement systems and technology (the "***Automated System***"). The Automated System is only used in active Enforcement Zones when proper notice is provided to motorists. The Automated System generates violation notices which are sent, via first class mail, to the registered owners of vehicles that travel 11 mph or more over the posted speed limit in an active Enforcement Zone. A registered owner's first-time violation receives a written warning, the second violation is a $75 fine and the third and all subsequent violations are a $150 fine. After a 60-day pre-enforcement pilot period, enforcement began on March 9, 2020. Fines collected pursuant to Act 86 do not become revenues of the Commission.

Traffic Study

The Pennsylvania Turnpike 2018 Traffic and Revenue Forecast Study prepared by CDM Smith dated April 20, 2018 (the ***"April 2018 Traffic Study"***) was updated by a "bring down" letter developed by CDM Smith dated April 29, 2019 (the "***April 2019 Bring Down Letter***"), a "bring down" letter developed by CDM Smith dated May 29, 2020 (the "***May 2020 Bring Down Letter***"), a supplemental letter developed by CDM Smith dated September 4, 2020 (the "***September 2020 Supplemental Letter***"), a "bring down" letter developed by CDM Smith dated December 18, 2020 (the ***"December 2020 Bring Down Letter"),*** a "bring down" letter developed by CDM Smith dated May 28, 2021 (the ***"May 2021 Bring Down Letter"***), and a "bring down" letter developed by CDM Smith dated July 8, 2022 (the ***"July 2022 Bring Down Letter"***), and together with the 2018 Traffic Study, the April 2019 Bring Down Letter, the May 2020 Bring Down Letter, the September 2020 Supplemental Letter, the December 2020 Bring Down Letter, and the May 2021 Bring Down Letter, collectively, the ***"Traffic Study"***) are available on the Commission's website at: https://www.paturnpike.com/business/investors_ttrfs.aspx.[9]

[9] The information contained on such website link is not incorporated by reference in this Appendix A.

Based on the advice of CDM Smith, the regularly scheduled full investment grade study continues to be delayed, to capture long-term implications from the COVID-19 pandemic and socio-economic changes that may occur and impact traffic trends in the long term.

The Traffic Study contains material information, forecasts, findings, assumptions and conclusions concerning the System. The Traffic Study contains certain "forward-looking statements" concerning the Commission's operations, performance and financial condition, including the Commission's future economic performance, plans and objectives. Such statements are based upon several assumptions and estimates which are subject to uncertainties, many of which are beyond the control of the Commission. The Traffic Study presents certain traffic volume and toll revenue forecasts for the forecast period noted therein and sets forth the assumptions upon which the forecasts are based.

The Traffic Study should be closely reviewed in its entirety. See "APPENDIX F" attached hereto.

Prior Updates to 2018 Traffic Study

The May 2020 Bring Down Letter reflected a downward revision to estimated toll revenue and traffic volumes versus that which was contained in the 2018 Traffic Study and the 2019 Bring Down Letter. The May 2020 Bring Down Letter also assumed a toll increase effective October 2020. The Commission later determined that the planned October 2020 toll increase would instead be effective January 2021. CDM Smith subsequently prepared the September 2020 Supplemental Letter to the May 2020 Bring Down Letter addressing the effect of this delay on toll revenue.

As part of the Commission's continued response to the impacts of the COVID-19 pandemic, the Commission requested a six-month update from CDM Smith to the May 2020 Bring Down Letter. CDM Smith prepared the December 2020 Bring Down Letter, which included a further downward revision to estimated toll revenue and traffic in Fiscal Year 2021 and beyond, and notably reflecting the impacts of the delay in the previously planned October 2020 toll increase and the early permanent conversion to AET, as implemented on June 2, 2020, which were not contained in the May 2020 Bring Down Letter. Likewise, the purpose of the May 2021 Bring Down Letter was to review and revise, if warranted, the short-term forecasts developed as part of the December 2020 Bring Down Letter. The May 2021 Bring Down Letter reflected actual traffic and toll revenue data through March 2021.

July 2022 Bring Down Letter

The July 2022 Bring Down Letter was prepared as an expanded analysis and provided updates beyond those traditionally included in the Commission’s prior Bring Down Letters. The forecasts included in the July 2022 Bring Down Letter are based on an additional 14 months (through May 2022) of new actual traffic and toll revenue experience, updates and revisions to E-ZPass market share estimates, COVID-19 related impacts through the full forecast period (Fiscal Years 2023 through 2051), major roadway improvements as well as updates to independent socioeconomic variables (population, employment, gross domestic product, retail sales and motor fuel prices).

The July 2022 Bring Down Letter projected approximately 198 million transactions and \$1.56 billion in Net Toll Revenues, which is approximately 4.3% and 5.5%, respectively, higher than the projection for Fiscal 2022 provided in the May 2021 Bring Down Letter and slightly lower than the Commission's actual, unaudited results for Fiscal Year 2022. Although, actual toll revenue and traffic volume exceeded projections in the May 2021 Bring Down Letter, the E-ZPass market share for both passenger and commercial vehicles was significantly lower than previously estimated, resulting in CDM Smith reducing the assumed E-ZPass penetration rate throughout the remainder of the forecast period (through Fiscal Year 2051). CDM Smith attributes the downward forecast for E-ZPass penetration to three primary factors: (i) the increased prevalence of telecommuting since the start of the COVID-19 pandemic; (ii) the reclassification (since the transition to AET) of transactions not immediately processed as successful roadside E-ZPass transactions as video transactions; and (iii) the new inclusion (since the implementation of AET) of Toll-By-Plate non-revenue transactions in total transaction statistics, which reduces the resulting calculation of E-ZPass penetration rates. With respect to the reclassification of certain video transactions described in (ii) above, it should be noted that approximately one-third of such video transactions are actually V-Tolls (transactions made by E-ZPass account holders where the transponder is not read properly at the roadside), that are later linked to an E-ZPass account, although they are not counted towards E-ZPass penetration rates.

Revised COVID-19 impacts were applied to the forecast in the July 2022 Bring Down Letter to reflect lingering COVID-19 impacts throughout the remainder of the forecast period (through Fiscal Year 2051). In the previous forecast in the May 2021 Bring Down Letter, no COVID-19 impacts were assumed after Fiscal Year 2026. The forecast in the July 2022 Bring Down Letter also anticipates that the elevated gas prices that the U.S. began experiencing in early 2022 will negatively impact transactions and revenue for much of the remainder of the decade.

The July 2022 Bring Down Letter assumes that annual toll rate increases will continue to occur throughout the forecast period.

The Traffic Study should be closely reviewed in its entirety.

CAPITAL IMPROVEMENTS

Ten-Year Capital Plan

The Commission prepares a ten-year capital plan for its facilities and equipment (exclusive of the Mon/Fayette and Southern Beltway projects), consisting of the Highway Program, the Technology Program, Fleet Equipment, and Facilities and Energy Management Operations, which it updates each year. All capital projects are reviewed and prioritized and the most critical and important projects necessary to maintain the System in a state of good repair are pursued.

On May 3, 2022, the Commission adopted its current ten-year capital plan for Fiscal Year 2023 (the "***Fiscal Year 2023 Capital Plan***"). The Fiscal Year 2023 Capital Plan calls for investment of approximately \$7.2 billion, net of federal reimbursements, over the coming decade, and reflects a 3% increase over the ten-year capital plan for Fiscal Year 2022 (the "***Fiscal Year 2022 Capital Plan***"). The Fiscal Year 2022 Capital Plan reflected a 20% increase over the ten-year capital from the prior fiscal year; demonstrating the Commission's strategic intent to restore capital funding to a level more consistent with the $6.52 billion Fiscal Year 2015 ten-year capital plan, and aligning with the projected decrease in Act 44/Act 89 Payments beginning in Fiscal Year 2023.

The Fiscal Year 2023 Capital Plan (i) continues the Commission's efforts for total roadway reconstruction and resurfacing, (ii) continues the rehabilitation or replacement of structurally deficient bridges, (iii) provides for the implementation of ORT, and (iv) provides for the development and installation of a fiber optic network.

The Fiscal 2023 Ten Year Capital Plan anticipates that approximately $4.2 billion will be funded on a pay-as-you-go basis and the remaining approximately $3 billion will be funded with proceeds from Senior Revenue Bonds (as hereinafter defined), which may include EB-5 Loans (as hereinafter defined). The Commission expects that the capital spending and additional debt issuance, will require the imposition of annual toll increases throughout the ten-year period and beyond. The Traffic Study assumes annual toll increases ranging between 3.0% to 5.0% in each year of the ten-year capital plan period. See "FINANCIAL PLAN – Updates to 2018 Traffic Study," "CERTAIN FINANCIAL INFORMATION – Revenue Sources of the Commission," and "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Future Financing Considerations" below.

The Traffic Study should be closely reviewed in its entirety.

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Capital expenditures by program category in the Fiscal Year 2023 Ten Year Capital Plan are shown below.

FY 2023 Ten Year Capital Plan (YOE)

		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2023 - 2032
Program	Category	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN	FY2023 REVISED PLAN
Highway	Roadway/Safety	129,994,000	132,672,800	142,251,642	98,648,177	86,400,146	93,414,705	99,354,925	103,583,415	97,693,973	108,567,809	1,092,581,591
Highway	Bridge,Tunnels & Misc Structure	87,078,284	81,841,760	92,791,062	81,167,341	103,415,242	94,226,291	91,480,190	112,942,235	104,120,362	106,383,479	955,446,246
Highway	Total Reconstruction	201,655,583	197,158,000	209,044,822	202,788,082	240,382,654	245,095,535	293,545,889	291,830,276	283,353,508	305,806,169	2,470,660,517
Highway	Interchanges	28,817,000	29,712,800	68,480,568	119,583,826	88,370,038	102,824,396	88,705,860	84,416,553	70,240,437	78,304,913	759,456,391
Highway	Highway Miscellaneous	38,962,862	44,198,622	38,580,911	36,139,378	35,298,607	32,547,817	34,303,244	36,180,875	47,069,758	44,229,356	387,511,430
Highway	Total	486,507,729	485,583,982	551,149,005	538,326,804	553,866,687	568,108,743	607,390,108	628,953,354	602,478,037	643,291,727	5,665,656,176
FEMO	Re-capitalization	2,392,000	1,955,200	2,045,160	1,862,603	1,941,320	1,999,559	2,059,546	2,121,332	2,184,972	2,250,522	20,812,214
FEMO	Sustainment	5,922,000	9,984,000	8,611,200	6,652,152	6,250,844	6,645,594	6,844,962	7,050,311	7,261,820	7,479,675	72,702,557
FEMO	Compliance	2,090,000	2,772,765	2,583,360	2,716,295	3,654,249	3,881,497	4,119,092	4,367,449	4,627,000	5,030,578	35,842,286
FEMO	New Energy Initiative	1,825,000	1,880,320	1,949,360	2,034,450	2,118,322	2,211,277	2,277,616	2,345,944	2,416,322	2,488,216	21,546,828
FEMO	Facilities Design	32,147,640	28,184,000	33,260,899	35,267,626	34,601,169	46,989,643	36,721,488	36,030,140	35,486,582	38,626,893	357,316,080
FEMO	Total	44,376,640	44,776,285	48,449,979	48,533,125	48,565,903	61,727,571	52,022,704	51,915,177	51,976,697	55,875,884	508,219,966
Fleet Equipm	Fleet Equipment	18,500,000	18,720,000	19,375,200	19,956,456	20,555,150	21,171,804	21,806,958	22,461,167	23,135,002	23,829,052	209,510,789
Technology	Functional Business Software	27,633,404	32,377,557	33,476,040	24,945,570	24,551,984	25,288,544	26,047,200	26,828,616	26,990,836	12,883,542	261,023,293
Technology	Infrastructure HW / SW	19,850,657	25,034,787	25,876,273	25,543,869	25,168,233	25,923,280	26,700,978	27,502,007	27,684,429	13,952,763	243,237,277
Technology	Toll Collection / Operations	3,185,000	1,508,000	1,453,140	1,108,692	228,391	235,242	242,300	249,569	257,056	0	8,467,388
Technology	Total	50,669,061	58,920,344	60,805,453	51,598,131	49,948,608	51,447,066	52,990,478	54,580,192	54,932,320	26,836,306	512,727,958
EN-00115	All Electronic Tolling Conversion	60,985,000	67,318,458	45,999,530	60,423,714	44,421,962	30,699,116	34,264,004	0	0	0	344,111,785
	Grand Total (PSEXP)	**661,038,430**	**675,319,069**	**725,779,167**	**718,838,231**	**717,358,310**	**733,154,300**	**768,474,252**	**757,909,890**	**732,522,057**	**749,832,968**	**7,240,226,674**
	Reimbursed Funds			20,000,000	20,000,000							
	Grand Total (PSNET)	**661,038,430**	**675,319,069**	**705,779,167**	**698,838,231**	**717,358,310**	**733,154,300**	**768,474,252**	**757,909,890**	**732,522,057**	**749,832,968**	**7,240,226,674**

Highway Program

The Highway Program consists of roadway, bridge, tunnel and toll plaza/interchange projects. The Technology Program consists of toll collection, communication, and other electronic information management projects. The Fleet Program funds rolling stock that is required to maintain the System. The Facilities and Energy Management Program consists of buildings and large, heavy or high value equipment needs.

The highest priority highway project for the Commission is the ongoing full depth roadway total reconstruction of the east/west Turnpike Mainline and Northeast Extension. This work includes the reconstruction and widening of the roadway, the widening of the median, and the replacement of both Mainline and overhead bridges. To date, approximately 153 miles of total reconstruction have been completed and approximately 23 miles are currently in construction with another 78 miles in the design phase.

Based on the Fiscal Year 2023 Capital Plan, the Commission plans to spend approximately $2.5 billion on total reconstruction projects and approximately $1 billion on various bridge and tunnel projects over the next ten years. In total, the Highway Program includes funding of approximately $6.009 billion over the next ten years.

Technology Program

The Information Technology (IT) department is responsible for overseeing the development, implementation, maintenance, and support of all information management technologies across the enterprise in two main categories. Functional Business Software includes planning, designing, and implementing systems and application technologies in the following program areas: GIS and Data Analytics, Enterprise and Business Systems, and Technology and Innovation Management. Infrastructure Hardware/Software includes maintenance, security, upgrades, and enhancements to the Central Office Data Center; the Wide Area Network and public safety radio system; and desktop technologies. This category also includes the following program areas: Server & Storage Management, End User Support, and Transportation Technologies and Communications, Intelligent Transportation Systems (ITS), Connected and Autonomous Vehicles (CAV), and IT Security. The Technology Program includes funding of approximately $513 million over the next ten years to address the Commission's technology needs including toll collection projects, communication, application development and technical operational needs. The Commission has implemented SAP ERP to provide a set of integrated business processes supported by multi-module application software with a centralized data repository.

Fleet Program

The Fleet Program includes funding of approximately $210 million to purchase rolling stock to insure adequate maintenance of the roadway system.

Facilities and Energy Management Program

The Facilities and Energy Management Program includes funding of approximately $508 million to repair and replace the aging facilities of the Commission. This commitment will ensure that major equipment and facilities are in good repair to support ongoing Turnpike System operations.

While the Commission has moved to a fully cashless tolling system as of March 16, 2020, additional capital investments are required to support an AET In-Place system and eventual conversion to an ORT system. The implementation of and long-term conversion to a cashless tolling system is estimated to require approximately $344 million in capital funding over the next ten years. See "THE TURNPIKE SYSTEM – Toll Collection" herein for additional information.

I-95 Interchange

I-95 was completed in 1969 without an interchange connecting it to the Turnpike Mainline. Interstate travelers were required to either by-pass the Philadelphia area entirely or exit the interstate system and navigate a complex system of local roadways to access I-95 again in New Jersey.

The Commission completed the first of three phases of its Pennsylvania Turnpike/I-95 Interchange Project (the "***Interchange Project***") in September 2018. The main objectives of the Interchange Project are to improve the linkage between I-95 and the Turnpike Mainline to create continuity in the interstate system, relieve congestion on local roads which are currently used by travelers to make the connection between I-95 and the Turnpike Mainline, create additional capacity on the Turnpike Mainline and I-95 to accommodate the transfer of traffic from the local roadway system, and improve travel times through the interchange area.

The first phase of the Interchange Project included preparatory work and construction of a portion of the interchange between I-95 and the Turnpike Mainline, including northbound I-95 to the eastbound Turnpike Mainline and westbound Turnpike Mainline to southbound I-95 and is currently under construction. This phase included construction of a new Turnpike Mainline toll plaza and a cashless tolling plaza westbound, which opened in January 2016. The first phase of the Interchange Project was completed and opened to traffic in September 2018. The portion of the Turnpike Mainline from the Interchange Project eastward to the Delaware River Bridge in Bucks County has been redesignated as I-95. The second phase of the Interchange Project will include the completion of the reconstruction and widening of the remaining interchange connectors. The third phase will be the construction of a new wider bridge over the Delaware River, replacing the existing bridge. Funding for the initial design costs of the subsequent phases was included in the Fiscal Year 2023 Capital Plan.

Mon/Fayette Expressway and Southern Beltway

Four projects constructed as part of the Mon/Fayette Expressway are now in operation. One is an approximately six-mile toll road between I-70 and U.S. Route 40 in Washington County. This project was built by PennDOT and turned over to the Commission upon its opening in 1990. The second is an approximately twelve-mile section of toll road from I-68 near Morgantown, West Virginia, to Fairchance, Pennsylvania, which is located just south of Uniontown. The third project is an approximately sixteen-mile section of the Mon/Fayette Expressway from I-70 in Washington County to Pennsylvania Route 51 in Allegheny County, which opened in April 2002. The fourth is an approximately fifteen-mile section from Uniontown to Brownsville, including a 3,022-foot bridge over the Monongahela River, which opened to traffic in July 2012. These four contiguous projects, which total 48 miles from Morgantown, West Virginia to Pennsylvania Route 51 south of Pittsburgh, are now part of the System.

On March 21, 2017, the Commission announced that it would stop engineering-design activities on the final 14-mile section of the Mon/Fayette Expressway, extending from Pennsylvania Route 51 to I-376 near Monroeville east of Pittsburgh, in light of the Southwestern Pennsylvania Commission's decision to table the project. On June 26, 2017, the Southwestern Pennsylvania Commission voted to add the final 14-mile segment of the Mon/Fayette Expressway to its long-range plan. This action will allow FHWA to approve changes to the environmental impact statement ("***EIS***"), a requirement for construction to commence. The current estimates to complete the final 14 miles of the Mon/Fayette Expressway to I-376 are in excess of $2 billion. An EIS re-evaluation was completed for the Mon/Fayette Expressway and approved by PennDOT and FHWA in 2019. Final design is now proceeding on the 14-mile southern section of the Mon/Fayette Expressway. The initial section of the southern section is scheduled to be bid in December 2022. When eventually completed, the Mon/Fayette Expressway will extend from Interstate 68 in West Virginia to I-376 in Monroeville, which is east of Pittsburgh.

The Southern Beltway is to be constructed from the Mon/Fayette Expressway, near Finleyville, extending as part of a beltway south of Pittsburgh to I-376 at the Pittsburgh International Airport. It is comprised of three distinct projects: (1) the six-mile project from I-376 to U.S. 22 (also known as the Findlay Connector) which opened to traffic in October 2006; (2) the 13-mile project from U.S. 22 to I-79, which opened October 15, 2021; and (3) the remaining Southern Beltway project, from I-79 to the Mon/Fayette Expressway, which received environmental clearance in May 2009. The final portion of the Southern Beltway is currently estimated to cost approximately $788 million.

The proceeds of various series of the Commission's Oil Franchise Tax Revenue Bonds (as hereinafter defined) and Registration Fee Revenue Bonds (as hereinafter defined), along with then currently available revenues, have been applied to fund the construction of the Mon/Fayette and Southern Beltway projects that have been completed to date. It is anticipated that the remaining costs to complete the Mon/Fayette Expressway and the Southern Beltway will be financed with Oil Franchise Tax Revenues and other funding sources. Although the open sections of the Mon/Fayette Expressway and the Southern Beltway are toll roads, the Tolls (as hereinafter defined) pledged for the repayment of Turnpike Revenue Bonds will not be applied to the financing of construction of these projects, which will instead be funded by Oil Franchise Tax Revenues.

The unfinished portions of the Mon/Fayette Expressway and Southern Beltway projects are not part of the Commission's Ten-Year Capital Plan, and the Commission has no legal obligation to fund the completion of such projects. To date, Act 89 has generated annual Oil Franchise Tax Revenues for the Commission in excess of the debt service coverage requirements for the Commission's outstanding Oil Franchise Tax Revenue Bonds.

Condition of the Turnpike System

The Commission's engineering and maintenance staff performs maintenance on, and repairs to, the System. In addition, the Commission also uses staff and consultants to perform periodic inspections of the System. Pursuant to the terms of the Senior Revenue Indenture, the Commission must arrange for the System to be inspected at least once every three years by engaging one or more consultants to conduct inspections and prepare a report. The report must state (a) whether the System has been maintained in good repair, working order and condition since the last inspection report and (b) any recommendations which such consultants may have as to revisions or additions to the Commission's annual capital budget.

The most recent inspection report, the Pennsylvania Turnpike Condition Assessment Report 2020 (submitted to the Commission in February 2021), was prepared by Michael Baker International (the "***Condition Assessment Report***").

Based on reviews performed by others as well as their own observations, the authors of the Condition Assessment Report found that, "the overall condition of the System is good except for specific areas noted in the report."

The following summarizes certain information found in the Condition Assessment Report, including certain of the "specific areas" referred to in the preceding paragraph, and in inspection data gathered in 2020. Two of the four asset groups, Roadway and Facilities, are rated "Good" overall. The remaining two asset groups Structures and Technology are rated to be in "Good to Fair" condition. Each of the asset groups are in good working order based on the condition ratings of the individual assets within the asset group. The individual asset condition rating was developed through an extensive evaluation of qualitative and quantitative performance data. There are several different evaluation measures used across the array of the Commission's assets included in the Condition Assessment Report. The following is an overall summary of each of the four asset groups.

Roadway

The recent roadway pavement inspection data indicates that the overall condition of the System's pavement meets or exceeds established criteria and is rated in Good condition. Supporting roadway features such as guiderail, attenuators, and concrete median barrier are generally in Good to Fair condition. These assets require regular inspection and prompt repair when damaged for the safety of customers. Stormwater facilities are in Good to Fair condition and are being inspected in accordance with permitting requirements. A continued focus on regular maintenance or repair, however, is needed to keep them functioning as intended. The roadway drainage system seems to be in Good condition based on the qualitative approach used to evaluate this asset. Based on a recent visual inspection of the moderate and high priority slopes and a comparative analysis from the 2018 Systemwide Rock Cut Evaluation and Report, the rock cuts appear to be in Good condition. The overall condition of signs is Good and is being maintained adequately. Recent field evaluations of the System's highly reflective, durable pavement markings and waterborne pavement markings at selected locations indicate that the System's pavement markings are in Good condition.

Structures; Status of Delaware River Bridge

In 2012, the Commission undertook a five-year program of enhanced capital spending to address critical needs of the System including structurally deficient bridges. The Commission's percentage of structurally deficient bridges (by count) decreased from 8.1% in 2012 to 3.8% in 2017.

The System's bridges and culverts are in Good condition with about 3.1% noted in Poor condition (formerly referred to as structurally deficient) in 2020. Notably, 55% of the bridges exceed 50 years in age, including 17% over 70 years in age. The System's sign structures have an overall condition rating of Good. Retaining walls/noise barriers are in Good condition overall. High mast light poles appear to be in Fair condition. High mast light poles are being removed with construction projects that impact them and will ultimately be phased out. PTC tunnels are generally in Fair condition with special attention to be given to structural elements (i.e., ceiling slabs, hanger rods) for prompt corrective action, if needed.

In January 2019, PennDOT, through its P3 Office, invited interested teams to respond to a Request for Information (the "***Tunnel RFI***") to provide feedback information and materials for the Commission to consider the development of a bundled tunnel rehabilitation project. The purpose of the Tunnel RFI was to gather feedback and information related to the development, design, construction, finance and maintenance of the Turnpike tunnels and tunnel systems. After review of the Tunnel RFI proposals, the Commission elected not to pursue development of a bundled tunnel rehabilitation project at this time. The rehabilitation of the Commission's tunnels will likely be complete with funding from the current or future Capital Plans. At present, the Commission is proceeding with a major rehabilitation of the Tuscarora tunnels.

On January 20, 2017, the Delaware River Bridge was closed following the discovery of a fracture in a steel truss. Phase l of the work to stabilize the bridge was completed on January 23, 2017 while structural engineers engaged in a more comprehensive assessment and structural analysis to determine a permanent repair strategy. After the completion of certain repairs and extensive examination and testing of the bridge over several weeks by the Commission, the NJTA and the FHWA and their respective experts and consultants, the bridge was fully reopened to traffic on March 9, 2017. CDM Smith, the Commission's traffic and revenue consultant has projected that the closure of the bridge resulted in the Commission incurring a loss of toll revenue on the Turnpike during the period between January 20, 2017, and March 9, 2017, of approximately $14 million (1.8 million transactions).

The bridge is jointly owned and maintained by the Commission and the NJTA and all costs of operation, maintenance and repair of the bridge are shared equally by the Commission and the NJTA. The Commission estimates that its 50% share of the costs of the repair, examination and testing of the bridge will be approximately $7.5 million, which will be funded by the Commission as part of its Fiscal Year 2023 Capital Plan.

In connection with the foregoing, the Commission concluded with its insurer that the costs associated with the bridge repairs along with lost revenues relating to the bridge closure, was covered under its All-Risk insurance policy (subject to applicable deductibles). The insurer accepted the Commission's claim on February 7, 2018. The Commission met its $5 million deductible and has received $9.9 million in final settlement of the claim. The Commission maintains a $200 million (per occurrence) All Risk insurance policy including loss of business income coverage as further described under "CERTAIN OTHER INFORMATION - Insurance" below.

In collaboration with the NJTA, a Request for Information ("***RFI***") regarding the Delaware River Bridge was released via PennDOT's P3 Office on November 18, 2019. The RFI provided an opportunity for respondents to offer feedback on project scope, project delivery options and financing. Twenty-three (23) responses were received by January 10, 2020. Respondent team members include P3 concessionaires (12 of 23), contractors (6 of 23) and designers (5 of 23) with experience in developing and/or financing large transportation infrastructure projects. Evaluation of the responses was completed, and in conjunction with NJTA, the Commission issued a Request for Proposals on February 8, 2021, with six Statements of Interests received on March 4, 2021, for a consultant to complete an alternative analysis for the new structure and upon completion and agreement by both agencies the consultant will advance the selected alternative to 20% design completion. On June 15, 2021, the Commission selected HDR Engineering, Inc., as the firm to provide the alternative analysis and initial design services. It is anticipated that the 20% design will be completed in late 2023, at which time the Commission and NJTA expect to further collaborate on project delivery via design-bid-build or design-build.

Facilities

The service plazas are rated Good overall with the exception of one facility where the deficiency is being addressed with an additional water source to the Cumberland Valley facility. Facility condition reports are being shared with Applegreen and 7-Eleven to assist with their maintenance responsibilities and provide the necessary information for capital planning needs and allocations. Maintenance buildings are rated in Good condition overall. The Commission has adopted a Strategic Facilities Replacement Plan for maintenance facilities and funding has been provided within the Fiscal Year 2023 Capital Plan to replace designated maintenance facilities in the next 10 years. The interchange buildings are rated in Fair condition as many of the facilities' electrical and mechanical systems are approaching their expected life cycle. All but one of the Poor-rated interchange buildings are scheduled to be replaced by ORT facilities with future deployment of ORT throughout the System. The overall condition for the following facility types is rated Good: administration buildings, district fare collection buildings, state police station facilities, and stockpiles. Warehouse and training facilities are rated Fair. Overall, the communication towers are rated as Good.

Since taking responsibility for inspection and maintenance of the communication towers in 2013, the Commission has advanced a tower-climbing and structural analysis review program to assess the condition of communications towers. Climbing inspections have been completed on all of the towers except for two old state forest fire towers that have no PTC systems installed on them and are scheduled to be demolished. of the towers. All towers have been inspected in accordance with PTC policy and all are satisfactory, except four that are scheduled to be reinforced.

Technology

Technology is comprised of the Intelligent Transportation System ("***ITS***") devices, access gates, and AET equipment. The overall condition of ITS devices is rated Good to Fair. The

Commission's IT staff continually monitors the virtual network and provides support for troubleshooting issues as needed. The Commission's ITS contractor maintains the ITS equipment through preventative and response maintenance plans. Access gates are rated Good condition and are in the process of upgrading to add remote operation capabilities. AET assets are in Good condition.

FINANCIAL PLAN

General

Act 44 requires the Commission to prepare and submit an annual financial plan (the "***Financial Plan***") to the Secretary of the Budget of the Commonwealth no later than June 1 of each year for the ensuing fiscal year, describing its proposed operating and capital expenditures, borrowings, liquidity and other financial management covenants and policies, estimated toll rates and all other revenues and expenses. The purpose of the annual Financial Plan is to demonstrate that the Commission's operation in accordance with such plan can be reasonably anticipated to generate unencumbered funds sufficient to make all Act 44/Act 89 Payments due to PennDOT in the upcoming year after all other Commission obligations and interest thereon, sinking fund requirements of the Commission, and other requirements in any trust indenture, notes or resolutions have been met. Any deviations and the causes therefor in prior year plans must be explained.

Since the enactment of Act 44 in 2007, the Commission's annual Financial Plan has demonstrated that for the prior Fiscal Year that the Commission was able to meet all of its financial covenants and obligations under the Enabling Acts and was able to progress with its then-current Capital Plan. The Commission delivered to the Secretary of the Budget its Financial Plan for Fiscal Year 2023 on June 1, 2022 and subsequently delivered the Amended and Restated Financial Plan for Fiscal Year 2023 on August 8, 2022 (collectively, the "***Fiscal Year 2023 Financial Plan***") to incorporate the updated forecast in the July 2022 Bring Down Letter. See "– Fiscal Year 2023 Financial Plan" below. The Fiscal Year 203 Financial Plan indicated that in Fiscal Year 2022, the Commission was able to meet all of its financial covenants and obligations under the Enabling Acts and was able to progress with its then-current Capital Plan.

Fiscal Year 2023 Financial Plan

The Fiscal Year 2023 Financial Plan defined the reasonably expected revenues the Commission will generate necessary to meet required Turnpike operating and maintenance expenses, debt service payments, capital expenses, and liquidity requirements, and included the adoption of the Commission's Fiscal Year 2023 Ten-Year Capital Plan which was adopted by the Commission in May 2022. The Fiscal Year 2023 Financial Plan indicates that in Fiscal Year 2022, the Commission was able to meet all of its financial covenants and obligations under the Enabling Acts and was able to progress with its then-current Capital Plan. A copy of the Fiscal Year 2023 Financial Plan is available on the Commission's website at: https://www.paturnpike.com/about-us/investor-relations/act-44-plan.[10]

10 The information contained on such website link is not incorporated by reference in this Appendix A.

CERTAIN FINANCIAL INFORMATION

Revenue Sources of the Commission

The Commission's revenues are principally derived from three separate sources: toll revenues from the operation of the System, revenue derived from a portion of the Commonwealth's Oil Franchise Tax Revenues, and revenue derived from a portion of the Commonwealth's vehicle registration fee revenues.

Toll Revenues

The largest part of the Commission's revenues is derived from the collection of all rates, rents, fees, charges, fines and other income derived by the Commission from the vehicular usage of the System and all rights to receive the same (the "***Tolls***"). Tolls are pledged to secure the Commission's outstanding Turnpike Senior Revenue Bonds and other parity and subordinate obligations issued under the Senior Revenue Indenture (as hereinafter defined). See "– Toll Schedule and Rates" and "– Five-Year Financial History" below for more information regarding the Tolls. See also "OUTSTANDING INDEBTEDNESS AND OTHER OBLIGATIONS – Commission Indebtedness" herein.

Oil Franchise Tax Revenues

The Commission's second principal stream of revenues consists of that portion of the Commonwealth's oil company franchise tax revenues (the "***Oil Franchise Tax Revenues***") allocated by statute to the Commission. The Oil Franchise Tax was first imposed in 1981 by Act 35, in the amount of 35 mills on each gallon of petroleum sold. The tax was increased by an additional 25 mills in 1983 by Act 32 and an additional 55 mills in 1991 by Act 26. With Act 3 of 1997, the tax was increased by an additional 38.5 mills to a total of 153.5 mills on all liquid fuels (primarily gasoline) and an additional 55 mills (for a total increase of 93.5 mills) for a total of 208.5 mills on liquid fuels and other fuels (diesel fuel and all other special fuels except dyed diesel fuel, liquid fuels and alternative fuels). Oil Franchise Tax Revenues consist of the Commission's allocation of 14% of the additional 55 mills of Oil Franchise Tax which became effective September 1, 1991, pursuant to Act 26 (the "***Commission's Allocation***"). Act 26 provides for monthly payments of oil franchise tax revenues to the Commission. Oil Franchise Tax Revenues are primarily pledged to the Trust Estate securing the Commission's Oil Franchise Tax Revenue Bonds. See "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Commission Indebtedness" herein.

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The following table reflects the five-year history of annual oil franchise tax revenues collected by the Commonwealth and the annual amounts allocated to the Commission.

Five-Year History of
Oil Franchise Tax Collections and Commission Allocation*
(in thousands)

Fiscal Year (actual)	Oil Franchise Tax Collections (1)	Commission Allocation (2) (3)
2018	$1,016,312	$142,793
2019	1,004,534	141,594
2020	929,683	141,665
2021	906,855	114,176
2022*	950,192	136,522

* Unaudited.
(1) Amount determined at the end of the Commonwealth's fiscal year ending June 30th of each year.
(2) Amount determined at the end of the Commission's fiscal year ending May 31 of each year.
(3) The amount of the Commission's Allocation does not equal exactly 14% of the tax collected from the added 55 mills due to the difference between the Commonwealth's and the Commission's fiscal years.

Registration Fee Revenues

The Commission's third principal stream of revenues consists of a portion of the Commonwealth's vehicle registration fee revenues (the "***Registration Fee Revenues***"). Registration Fee Revenues consist of an annual appropriation of $28 million of increased registration fees allocated to the Commission pursuant to Act 3 of 1997. Registration Fee Revenues are primarily pledged to secure payment of the Commission's Registration Fee Revenue Bonds. See "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Commission Indebtedness" herein.

Toll Schedule and Rates

The current System generally employs a closed or ticket system method for toll collection. Tolls are determined based on the length of the trip and vehicle class. There are nine vehicle classes determined either by axles or, in the case of commercial vehicles, by axles and weight. Historically, all drivers were issued a ticket upon entering the System and were required to surrender the ticket and pay the appropriate toll upon exiting. The System permanently transitioned to AET collection methods effective March 16, 2020. See "THE TURNPIKE SYSTEM – Toll Collection" herein.

The Turnpike is the only remaining road in the United States that still establishes tolls based on vehicle weight. As part of its efforts to continue to modernize its operations, the Commission is using an upgraded vehicle classification system at two tolling locations. In Spring 2018, the Commission began utilizing an "axle/height" system that calculates tolls based on the vehicle's height plus the number of axles. The axle/height classification system is currently utilized in eastern Pennsylvania at the Clarks Summit and Keyser Avenue tolling points on the Northeastern Extension and also in western Pennsylvania on the Southern Beltway, and will be phased in over time as it is expected to be the most accurate, predictable and efficient system for customers. It is also expected to be less expensive for the Commission to maintain and will be consistent with systems currently being operated in neighboring states.

The following Table I illustrates the tolls and per mile rates applicable to each vehicle class for a trip on the Turnpike Mainline from Interchange 1 through Interchange 353 following the toll increase effective January 3, 2022:

TABLE I
Current Tolls and Per Mile Rates for Mainline Roadway East – West Complete Trip Neshaminy Falls – Warrendale (Ticket System)

Vehicle Toll Class	Gross Vehicle Weight (Thousand Pound)	Toll-By-Plate Effective 1/2022	Per Mile Toll By Plate	Toll Rate E-ZPass Effective 1/2022	Per Mile E-ZPass Rate
1	1-7	86.50	0.268	42.80	0.133
2	7-15	127.00	0.393	62.70	0.194
3	15-19	153.20	0.474	75.60	0.234
4	19-30	183.80	0.569	90.90	0.281
5	30-45	257.50	0.797	127.50	0.395
6	45-62	322.80	0.999	160.00	0.495
7	62-80	461.90	1.430	228.90	0.709
8	80-100	605.60	1.875	300.10	0.929
9	Over 100	605.60	1.875	300.10	0.929

Notes:

The above rates represent an "East West" trip for the ticket toll system between the Neshaminy Falls (#353) interchange and Warrendale (#30). For purposes of the Senior Indenture, the Mainline is the entire length of the roadway between Ohio and the Delaware River Bridge.

The 30-mile Gateway to Warrendale roadway between Warrendale and the Ohio Turnpike has a barrier toll at the Gateway Mainline interchange (#2). The toll on the Gateway connector is payable only when traveling eastbound.

The toll on the Delaware River Bridge to Neshaminy Falls portion is a one-way toll westbound only, and is collected by Toll-By-Plate or E-ZPass.

Additional toll rate information can be found at https://www.paturnpike.com/toll-calculator/toll-schedules.[11]

Act 44 requires the Commission to fix toll rates such that revenues from tolls and other sources to the Commission are sufficient to pay the cost of the System's operation, construction, expansion and maintenance, all Commission obligations and interest thereon, sinking fund requirements of the Commission, other requirements in any trust indentures, notes or resolutions, and the Act 44/Act 89 Payments to PennDOT under the Amended Funding Agreement.

[11] The information contained on such website link is not incorporated by reference in this Appendix A

Between 1957 and 2008, the Commission implemented only five revisions in its toll schedule. However, with the enactment of Act 44 and the significant increases in the Commission's funding obligations, from 2008 to 2021, the Commission has implemented annual revisions to its toll schedule to maintain rates consistent with inflation, capital improvements and operational costs, Act 44/Act 89 Payment obligations, and the modernization of toll collection methods. The most recent toll increase took effect on January 3, 2022. The next systemwide toll increase is scheduled to take effect in January 2023, and consists of a 5% increase, which the Commission approved on August 1, 2022. The July 2022 Bringdown Letter assumes that the Commission will continue to increase tolls annually through at least 2051. The toll schedules for the entire System can be viewed at: https://www.paturnpike.com/toll-calculator/toll-schedules.[12]

The following table summarizes the fundamental rate increases for the last ten years:

Recent Toll Rate Increase History

	Percent Increase	
Effective Date	**Toll-By-Plate***	**E-ZPass**
1/5/2014	12%	2%
1/5/2015	5	5
1/3/2016	6	6
1/8/2017	6	6
1/2/2018	6	6
1/7/2019	6	6
1/5/2020	6	6
1/3/2021	6	6
1/3/2022	5	5
1/8/2023	5	5

* Effective March 16, 2020, the Commission permanently transitioned to all-electronic, cashless toll collection system, that now only utilizes Toll By Plate and E-ZPass. See "THE TURNPIKE SYSTEM – Toll Collection" above. Commencing January 3, 2021, the Commission began imposing an additional toll increase on Toll By Plate transactions equal to 45% of the toll that would otherwise be due to cover the costs of non-payment associated with Toll-By-Plate. Non-E-ZPass users that pre-register their vehicle will receive a discount.

Five-Year Financial History

The following Tables II and III summarize certain operating and financial information with respect to the System for the Fiscal Years from 2018 to 2022. This information is derived from the Commission's regularly prepared books and records. The financial information presented in Table III is a combination of cash basis financial statements with certain accruals included. **Certain of this information is not presented in accordance with generally accepted accounting principles and has not been audited.**

Tables II and III should be read in conjunction with the financial statements prepared in accordance with generally accepted accounting principles and related notes included in "APPENDIX B – AUDITED 2021 AND 2020 FINANCIAL STATEMENTS" of this Official

[12] The information contained on such website link is not incorporated by reference in this Appendix A

Statement (the "***Financial Statements***"). The Commission expects the audited financial statements for Fiscal Year 2022 to be completed in October 2022.

TABLE II
Number of Vehicle Transactions and Fare Revenues
Summarized by Fare Classification
(in thousands)

	2018^	2019	2020(1)	2021	2022**
Number of Vehicle Transactions*:					
Passenger	179,125	181,946	158,738	137,714	165,128
Commercial	29,985	31,346	30,602	31,887	34,976
Total (2)	209,110	213,292	189,340	169,601	200,104
Fare Revenue:					
Passenger	$678,720	$740,205	$683,511	$610,353	$819,784
Commercial	524,438	595,180	606,050	648,458	749,243
Total	$1,203,158	$1,335,385	$1,289,561	$1,258,811	$1,569,027
Discounts, Adjustments and Toll Bad Debt	-6,552	-8,354	-41,782	-68,392	-109,111
Net Fare Revenues	$1,196,606	$1,327,031	$1,247,779	$1,190,419	$1,459,916

* Number of vehicles is unaudited.
** Unaudited.
^ Restated Traffic Volumes for both revenue and non-revenue transactions. Prior to this fiscal year, the Commission only reported traffic volume classified as revenue transactions.
(1) Fiscal Year 2020 Net Fare Revenues are approximately $32.0 million less than presented in previous official statements. This is because of a reclassification of toll related bad debt from Miscellaneous to Discounts, Adjustments and Toll Bad Debt. Also, see note on Table III.
(2) The number of vehicle transactions presented in Table II for fiscal years 2018 to 2020 are slightly less than numbers presented in previous official statements. The slight (less than 0.6%) decrease is the result of a change in methodology for reporting orphan transactions. Orphan transactions are transactions that can't be correlated because of a missing entry or exit record for the transaction. This change was implemented as part of a reporting enhancement project. Prior years were restated so counts are consistent with the Commission's current methodology.

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TABLE III
Summary of System Revenues and Operating Expenditures Before Interest and Other Charges[(1)]
(000's Omitted)

	Fiscal Year Ended May 31,				
	2018[(5)]	2019	2020[(6)]	2021	2022[*]
Revenues					
Net Fare Revenues	$1,196,606	$1,327,031	$1,247,779	$1,190,419	$1,459,916
Concession Revenues	3,911	4,737	4,426	3,652	5,008
Senior Interest Income	13,808	17,155	20,605	13,391	12,534
Subordinate Interest Income	4,948	5,638	6,758	5,514	5,142
MLF Enhanced Interest Income	530	526	638	462	441
Miscellaneous	757	4,837	31,578	36,101	38,654
Total Revenues	$1,220,560	$1,359,924	$1,311,784	$1,249,539	$1,521,695
Operating Expenditures					
General & Administrative	$42,548	$45,281	$52,122	$50,860	$63,196
Traffic Engineering and Operations	3,244	3,262	3,162	3,396	3,471
Service Centers	35,556	38,703	41,972	48,334	59,688
Employee Benefits[(7)]	98,515	96,993	91,161	86,087	16,100
Toll Collection	59,669	58,200	58,129	31,261	26,237
Normal Maintenance	73,429	73,110	64,636	74,891	78,065
Facilities and Energy Mgmt. Operation	12,080	11,522	11,344	11,400	11,763
Turnpike Patrol	48,807	49,432	53,638	55,593	53,738
Total Operating Expenditures	$373,848	$376,503	$376,164	$361,822	$312,258
Revenues less Operating Expenditures	$846,712	$983,421	$935,620	$887,717	$1,209,437
Senior Annual Debt Service Requirement	$379,042	$303,781	$306,338	$234,905	$311,234
Coverage Ratio[(2)]	2.22	3.22	3.03	3.75	3.87
Annual Subordinate Debt Service Requirement	$256,817	$355,247	$320,707	$261,311	$331,983
Coverage Ratio[(3)]	1.33	1.49	1.49	1.79	1.88
Annual MLF Enhanced Debt Service Requirement	$37,938	$43,175	$42,057	$48,818	$49,385
Coverage Ratio[(4)]	1.26	1.40	1.40	1.63	1.75

(1) This summary of revenues and operating expenditures is not intended to present results of operations in conformity with generally accepted accounting principles. Debt service is net of capital interest and receipt of Federal Subsidy.
(2) Calculated using Senior Interest Income
(3) Calculated using Senior and Subordinate Interest Income
(4) Calculated using Senior, Subordinate and MLF Enhanced Interest Income
(5) Fiscal Year 2018 debt service coverage ratios reflect the voluntary retirement at maturity of $100 million of Senior floating rate notes that were originally expected to be refunded. Had the Commission chosen to refund the $100 million

in notes Fiscal Year 2018 Senior, Subordinate and MLF Enhanced debt service coverage ratios would have been 3.04, 1.58, and 1.48 respectively.
(6) Certain Fiscal Year 2020 revenues, presented in previous official statements, have been reclassified to conform to the Fiscal Year 2021 financial statement presentation. Approximately $32.0 million of toll-related bad debt, was reclassified from Miscellaneous to Net Fare Revenues. The reclassifications between these two categories did not change Total Revenues previously presented.
(7) Current estimated operating expenses for Fiscal Year 2022 include accounting entries to pension and OPEB expenses that reduce the reported operating expenses by $59 million. Without these entries, estimated Fiscal Year 2022 operating expenses would be $371 million.
* Preliminary – Unaudited

COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS

Commission Indebtedness

Authority to Issue Debt

Under the Enabling Acts, the Commission is authorized and empowered, among other things, to issue turnpike revenue bonds, notes or other obligations (either senior on a parity basis or subordinate) to pay (i) pursuant to the Amended Funding Agreement, if applicable, the costs of construction, reconstructing, widening, expanding or extending I-80 or any other costs of I-80 and the System, (ii) Act 44/Act 89 Payments to PennDOT, (iii) costs of improvements to the System, and (iv) certain amounts pursuant to the Amended Funding Agreement, to be used for mass transit programs, multi-modal transportation programs and, other transportation programs of statewide significance, alternative energy transportation programs (provided that, pursuant to the terms of the Amended Funding Agreement, the proceeds of any Special Revenue Bonds (as hereinafter defined) may not be applied for payments to mass transit programs, multi-modal transportation programs or alternative energy transportation programs).

The bonds authorized to be issued by the Commission under Act 44 included up to $5 billion of Special Revenue Bonds. Proceeds of such bonds were applied toward the satisfaction of the Commission's scheduled annual Act 44/Act 89 Payment obligations under the Amended Funding Agreement and the Enabling Acts, except for that portion of the annual payment obligations to be deposited in the Public Transportation Trust Fund pursuant to the terms of the Amended Funding Agreement. Since all of the Commission's Act 44/Act 89 Payments to PennDOT under the Amended Funding Agreement are being deposited into the Public Transportation Trust Fund commencing July 1, 2014, as of such date, the Commission is no longer issuing Special Revenue Bonds to fund its obligations under the Amended Funding Agreement. See "*Statutory Limitations on the Incurrence of Special Revenue Bonds*" below. The Amended Funding Agreement provides that the Commission is obligated to pay all debt service due with respect to the Special Revenue Bonds.

Outstanding Indebtedness

The Commission has the following outstanding indebtedness: (1) Turnpike Senior Revenue Bonds (as hereinafter defined herein) secured by the pledge of the Trust Estate under the Senior Revenue Indenture consisting primarily of Tolls received by or on behalf of the Commission from the System; (2) Turnpike Subordinate Revenue Bonds (as hereinafter defined) secured by a pledge of the Trust Estate under the Turnpike Subordinate Revenue Indenture consisting primarily of

Commission Payments from amounts transferred from the General Reserve Fund under the Turnpike Senior Revenue Indenture after the payment of all Turnpike Senior Revenue Indenture Obligations; (3) Motor License Fund-Enhanced Turnpike Subordinate Special Revenue Bonds (as hereinafter defined) secured by Commission Payments on a subordinate basis to Turnpike Subordinate Revenue Bonds; (4) Oil Franchise Tax Revenue Bonds secured by a pledge of the Oil Franchise Tax Revenues; and (5) Registration Fee Revenue Bonds (as hereinafter defined) secured by revenues received from the Motor License Fund.

The following table summarizes the Commission's outstanding indebtedness as of the date of this Official Statement:

Outstanding Commission Indebtedness

	Outstanding Principal	**Accreted thru 6/1/2022**	**Total Outstanding**
Turnpike Senior Revenue Bonds	\$6,386,400,000.00*	-	\$6,386,400,000.00
Turnpike Subordinate Revenue Bonds	6,271,744,982.75	\$46,567,365.70	6,318,312,348.45
Subordinate Special Revenue Bonds	947,394,785.45	44,314,635.50	991,709,420.95
Oil Franchise Tax Revenue Bonds	1,496,581,246.00	14,476,663.95	1,511,057,909.95
Motor Vehicle Registration	329,660,000.00	-	329,660,000.00

* A portion of the proceeds of the 2022A Bonds, together with other legally available funds, will be used to pay the purchase price and accrued interest for Purchased Refunded Bonds. See "REFUNDING PLAN" in the forepart of this Official Statement for more information. Upon the issuance of the 2022A Bonds, and the tender and purchase of the Purchased Refunded Bonds, \$6,367,310,000 in aggregate principal amount of Turnpike Senior Revenue Bonds will be Outstanding under the Turnpike Senior Revenue Indenture.

Turnpike Senior Revenue Bonds

Turnpike Senior Revenue Bonds are issued under that certain Amended and Restated Trust Indenture originally dated as of July 1, 1986, and Amended and Restated as of March 1, 2001, between the Commission and U.S. Bank Trust Company, National Association, as trustee (the "***Turnpike Senior Revenue Indenture Trustee***"), as supplemented and amended (the "***Turnpike Senior Revenue Indenture***"). Tolls are presently pledged to secure the Turnpike Revenue Bonds, as well as Turnpike Senior Revenue Indenture Parity Obligations, and any subordinated indebtedness that may be issued under the Turnpike Senior Revenue Indenture (collectively, the "***Turnpike Senior Revenue Indenture Obligations***").

The Commission has \$6,386,400,000 in aggregate principal amount of Turnpike Senior Revenue Bonds outstanding under the Turnpike Senior Revenue Indenture. Upon the issuance of the 2022A Bonds, and the tender and purchase of the Purchased Refunded Bonds, \$6,367,310,000 in aggregate principal amount of Turnpike Senior Revenue Bonds will be Outstanding under the Turnpike Senior Revenue Indenture. The foregoing amount includes certain notes evidencing and securing \$183,500,000 in loans through the Immigrant Investor Program (known as the EB-5 visa program) administered by the U.S. Citizenship and Immigration Services, the proceeds of which are being used to fund a portion of the projects identified in the Commission’s 2016-2017 Ten-Year Capital Plan (the "***EB-5 Loans***"). See "COMMISSION INDEBTEDNESS AND OTHER

OBLIGATIONS – Direct Purchase Obligations – *EB-5 Loans (Senior)*." The Commission has not issued any subordinated indebtedness under the Turnpike Senior Revenue Indenture.

Also included in the principal amount outstanding under the Turnpike Senior Revenue Indenture as of the date of this Official Statement is $652,820,000 aggregate principal amount of variable rate obligations (the "***Turnpike Senior Variable Rate Debt***"). See "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Direct Purchase Obligations" for a summary of direct purchase obligations of the Commission. Other obligations incurred and outstanding under the Turnpike Senior Revenue Indenture include the Commission's obligations under various interest rate swap agreements having a total current notional amount of $663,962,500, as of July 29, 2022.

Tolls are not pledged to secure the Oil Franchise Tax Revenue Bonds, the Registration Fee Revenue Bonds or the bonds and other obligations issued (or otherwise secured) under the Subordinate Revenue Indenture (the "***Turnpike Subordinate Revenue Indenture Obligations***"). All Turnpike Subordinate Revenue Indenture Obligations are subordinated to the payment of the Turnpike Senior Revenue Indenture Obligations issued under the Turnpike Senior Revenue Indenture.

Neither the Turnpike Subordinate Revenue Indenture Obligations, the Oil Franchise Tax Revenue Bonds, nor the Registration Fee Revenue Bonds are secured by or have any interest in the Trust Estate established pursuant to the Turnpike Senior Revenue Indenture.

The Commission may in the future, under the terms of the Turnpike Senior Revenue Indenture, identify in writing certain roads, other than the Turnpike Mainline and the Northeast Extension, as not being part of the System for the purposes of the Turnpike Senior Revenue Indenture which would eliminate toll revenues from these portions from the definition of Tolls under the Turnpike Senior Revenue Indenture. The Commission currently has no plans to remove any roads from the System.

In addition, under the Turnpike Senior Revenue Indenture, the Commission has covenanted that it will not sell, lease or otherwise dispose of real estate or personal property comprising a portion of the System except upon compliance with the provisions of the Turnpike Senior Revenue Indenture, including a determination by resolution that the Net Revenues of the Commission will not be materially adversely affected. The Commission from time to time may consider various proposals that could involve the transfer or other disposition of Commission property. Any such transfer or disposition would be required to comply with the provisions of the Turnpike Senior Revenue Indenture.

Turnpike Subordinated Revenue Bonds

Pursuant to the terms of the Subordinate Trust Indenture dated as of April 1, 2008, between the Commission and Computershare Trust Company, National Association (the "***Turnpike Subordinate Revenue Indenture Trustee***"), as amended and supplemented (the "***Turnpike Subordinate Revenue Indenture***"), the Commission has covenanted to direct the Turnpike Senior Revenue Indenture Trustee to pay to the Turnpike Subordinate Revenue Indenture Trustee, after payment of all required debt service on all Turnpike Senior Revenue Indenture Obligations and subject to the provisions of the Turnpike Senior Revenue Indenture, out of the General Reserve Fund established under the Turnpike Senior Revenue Indenture, such amounts as are required by the Turnpike Subordinate Revenue Indenture, by a supplemental indenture to the Turnpike Subordinate Revenue Indenture or by a parity swap agreement to pay, at the times specified, all amounts due in respect of the Turnpike Subordinate Revenue Indenture Obligations outstanding under the Turnpike Subordinate Revenue Indenture or under a parity swap agreement.

Accordingly, the Commission is required to instruct and furnish a debt service schedule to the Senior Revenue Indenture Trustee providing (i) for the payment to the Subordinate Revenue Indenture Trustee out of available funds held in the General Reserve Fund of the amount from time to time necessary to satisfy all required deposits under the Turnpike Subordinate Revenue Indenture to the Commission Payments Fund established under the Turnpike Subordinate Revenue Indenture and (ii) for the payment of debt service on the outstanding Turnpike Subordinate Revenue Indenture Obligations and all other payments required from time to time under the Subordinate Revenue Indenture and in any supplemental indenture to the Turnpike Subordinate Revenue Indenture (collectively, the "***Commission Payments***").

Under the Turnpike Subordinate Revenue Indenture, the Commission may, from time to time, issue additional bonds to satisfy its payment obligations under the Enabling Acts, including (a) bonds issued for the purpose of making Act 44/Act 89 Payments to PennDOT to finance transit programs, and which are not secured by payments from the Motor License Fund, but have a senior claim on Commission Payments (the "***Subordinate Revenue Bonds***") and (b) Special Revenue Bonds. The Commission intends that any long-term indebtedness to be issued under the Turnpike Subordinate Revenue Indenture is to be paid solely from Commission Payments. Such obligations, if issued, are subordinate to the Turnpike Senior Revenue Bonds issued under the Turnpike Senior Revenue Indenture. Such Subordinate Revenue Bonds will be parity obligations with the outstanding Turnpike Subordinate Revenue Bonds already issued under the Turnpike Subordinate Revenue Indenture.

As of the date of this Official Statement, there is \$6,318,312,348 in aggregate principal amount of Turnpike Subordinate Revenue Bonds outstanding under the Turnpike Subordinate Revenue Indenture (including compounded amounts as of June 1, 2022, for outstanding capital appreciation bonds). The foregoing amounts include \$291,850,000 aggregate principal amount of floating rate notes (the "***Subordinate Variable Rate Debt***" and together with the Senior Variable Rate Debt, the "***Variable Rate Debt***") constituting a direct purchase obligation. See "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Direct Purchase Obligations" for a summary of direct purchase obligations of the Commission. Other obligations incurred and outstanding under the Turnpike Subordinate Revenue Indenture include the Commission's obligations under an interest rate swap agreement having a current notional amount of \$291,850,000, as of July 29, 2022.

Statutory Limitations on the Incurrence of Special Revenue Bonds

Under the Enabling Acts, the Commission is authorized to issue, by resolution, Special Revenue Bonds (as defined in § 9511.2 of Act 44, and as issued as such under the Turnpike Subordinate Revenue Indenture, the "***Special Revenue Bonds***") up to an aggregate principal amount of \$5 billion, exclusive of original issue discount, for the purpose of paying bond related expenses and costs of PennDOT, including the costs of highway, road, tunnel and bridge construction, renovation and expansion, including acquisition of land, rights, machinery and equipment and certain finance charges relating thereto, planning, engineering, administrative and other expenses, and debt service. No more than $600 million in aggregate principal amount of such Special Revenue Bonds, exclusive of original issue discount, may be issued in any calendar year. No such bonds may be issued unless the Amended Funding Agreement is in effect, and no such bonds may be outstanding beyond the stated term of the Amended Funding Agreement at the time of issuance. Special Revenue Refunding Bonds (as defined in § 9511.9 of Act 44) shall not be deemed to count against the total or annual maximum issuance volume under Act 44. Pursuant to Act 89, Special Revenue Bonds may not be issued by the Commission to fund any portion of its annual payment obligation commencing July 1, 2014, as all of such annual payment obligation is to be deposited in the Public Transportation Trust Fund after such date, although Special Revenue Refunding Bonds could be issued.

Special Revenue Bonds have been issued under the Turnpike Subordinate Revenue Indenture. As of the date of this Official Statement, there are $991,709,421 aggregate principal amount of Special Revenue Bonds outstanding under the Turnpike Subordinate Revenue Indenture (including compounded amounts as of June 1, 2022, for capital appreciation bonds). Special Revenue Bonds have a right to payment from Commission Payments that is subordinate to the rights of payment of the holders of Turnpike Subordinate Revenue Bonds issued under the Turnpike Subordinate Revenue Indenture.

Should the Commission fail to timely make required debt service deposits for Special Revenue Bonds, the Subordinate Revenue Indenture Trustee shall proceed under the terms of Act 44 and a Memorandum of Agreement between PennDOT, the Office of the Budget of the Commonwealth and the Pennsylvania State Treasurer, dated July 16, 2010 (the "***MOA***"), to notify PennDOT of such default, and thereafter, PennDOT shall give notice to the Office of the Budget of the Commonwealth of such deficiency, the Office of the Budget of the Commonwealth shall request that the Treasurer of the Commonwealth transfer funds to the Subordinate Revenue Indenture Trustee in an amount necessary to cure such deficiency, and the Treasurer of the Commonwealth shall transfer such funds to the Subordinate Revenue Indenture Trustee but only from amounts available for such purpose in the Motor License Fund. The appropriation of money in the Commonwealth's Motor License Fund in respect of Special Revenue Bonds issued by the Commission under Act 44 is continuing and non-lapsing. The Commonwealth has no obligation to appropriate any funds, other than available funds on deposit in the Motor License Fund, for the payment of any such Special Revenue Bonds. Pursuant to the MOA, certain funds equal to the maximum annual debt service on outstanding Special Revenue Bonds are to be set aside (but not pledged) in the Motor License Fund for this purpose upon the issuance of Special Revenue Bonds. Funds in such amounts were set aside in the Motor License Fund in connection with the issuance of fourteen series of the Commission's Motor License Fund-Enhanced Turnpike Subordinate Special Revenue Bonds. The Commission is obligated pursuant to the Amended Funding Agreement to reimburse the Treasurer of the Commonwealth for any amounts withdrawn from the Motor License Fund in order to cure a default in the payment by the Commission with respect to the annual debt service on any such Special Revenue Bonds. This reimbursement obligation is subject to and junior to the payment obligations of the Commission under the Special Revenue Bonds.

Oil Franchise Tax Revenue Bonds

As of the date of this Official Statement, there is (i) $890,212,910 in aggregate principal amount of Oil Franchise Tax Senior Revenue Bonds, including accreted interest through June 1, 2022, and (ii) $620,845,000 in aggregate principal amount of Oil Franchise Tax Subordinated Revenue Bonds, outstanding under that certain Trust Indenture relating to such bonds. Oil Franchise Tax Revenue Bonds are secured solely by the Trust Estate securing those bonds which includes, among other things, Oil Franchise Tax Revenues allocated to the Commission. **The Oil Franchise Tax Revenues are not pledged to secure any Senior Revenue Indenture Obligations, any Subordinate Revenue Indenture Obligations or any Registration Fee Revenue Bonds.** Note, however, that funds in the Oil Franchise Tax General Fund may be used by the Commission for any purposes as authorized by the Enabling Acts. See "CERTAIN FINANCIAL INFORMATION – Revenue Sources of the Commission – Oil Franchise Tax Revenues" herein.

Registration Fee Revenue Bonds

As of the date of this Official Statement, $329,660,000 in aggregate principal amount of the Commission's Registration Fee Revenue Bonds (the "***Registration Fee Revenue Bonds***"), is outstanding, which includes a direct purchased obligation in the aggregate principal amount of $231,425,000. The proceeds of the Registration Fee Revenue Bonds were spent on portions of the Mon/Fayette Expressway and the Southern Beltway, are secured by, and are to be paid solely from, Registration Fee Revenues. See "CERTAIN FINANCIAL INFORMATION – Revenue Sources of the Commission – Registration Fee Revenues" and "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Direct Purchase Obligations" herein.

Direct Purchase Obligations

Below is a summary of direct purchase obligations of the Commission outstanding as of the date of this Official Statement. These transactions may include terms and provisions, including but not limited to covenants and events of default, that are different from those contained in the Senior Revenue Indenture, Subordinate Revenue Indenture, and/or the Registration Fee Indenture. Copies of certain agreements relating to these transactions may be viewed on the Municipal Securities Rulemaking Board – Electronic Municipal Market Access system ("***EMMA***").

EB-5 Loans

As of the date of this Official Statement, there is an aggregate of $183,500,000 in EB-5 Loans that are outstanding as Senior Revenue Indenture Obligations. The Commission previously obtained an up to $800 million draw-down loan under the EB-5 visa program available to be drawn in separate tranches, of which $183,500,000 million has been drawn to date, leaving $616,500,000 of EB-5 Loans currently not drawn. The EB-5 Loans issued to date under this facility have been issued in four tranches: one on February 21, 2018, a second tranche on November 13, 2018, a third tranche on November 6, 2019, and a fourth tranche on January 22, 2020. Each tranche of the EB-5 Loans has a five-year term and are secured as parity obligations with Turnpike Senior Revenue Bonds and other parity obligations issued under the Senior Revenue Indenture.

First Series of 2022 Bonds (Subordinate)

Turnpike Subordinate Revenue Refunding Bonds, First Series of 2022 (the "***First Series of 2022 Bonds***"), of which $291,850,000 aggregate principal amount is outstanding as of the date of this Official Statement, were issued under the Subordinate Revenue Indenture and are parity obligations with certain Subordinate Revenue Bonds and other parity obligations issued under the Subordinate Revenue Indenture. Additional information regarding the First Series of 2022 Bonds can be found at: https://emma.msrb.org/P11599155-P11233724-P11656323.pdf.[13]

2005 Registration Fee Bonds (Registration Fee)

Registration Fee Revenue Bonds, Series B, C, and D of 2005 (the "***2005 Registration Fee Bonds***"), outstanding in the aggregate principal amount of $231,425,000 as of the date of this Official Statement, were converted to a direct purchase transaction in October 2015. The 2005 Registration Fee Bonds were issued under a separate indenture, as subsequently amended and supplemented, securing Registration Fee Revenue Bonds and are parity obligations with Registration Fee Revenue Bonds and any other parity obligations issued under such indenture. Additional information regarding the 2005 Registration Fee Bonds can be found at:

https://emma.msrb.org/EP1026791-EP795538-EP1197062.pdf [14]
https://emma.msrb.org/ES1188445-ES928832-ES1329795.pdf [15]
https://emma.msrb.org/MarketActivity/ContinuingDisclosureDetails/ES965483 [16]

Line of Credit

In June 2020, the Commission obtained a $200 million one-year revolving line of credit from PNC Bank, National Association, authorized to be used for the purposes of funding or refinancing costs including general working capital needs of the Commission, funding/reimbursing necessary reserves and the payment of debt service on the Turnpike Senior Revenue Bonds, which the Commission utilized to pay a prior EB-5 Loan. The Commission renewed the Line of Credit, in June 2021 and June 2022, to provide funding for (or refinancing) costs including general working capital needs of the Commission. The Line of Credit constitutes Short-Term Indebtedness and a Parity Obligation under the Senior Revenue Indenture. To date, no draws have been made on the current Line of Credit.

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13 The information contained on such website link is not incorporated by reference in this Appendix A.
14 The information contained on such website link is not incorporated by reference in this Appendix A.
15 The information contained on such website link is not incorporated by reference in this Appendix A.
16 The information contained on such website link is not incorporated by reference in this Appendix A.

Letter of Credit Agreements

The Commission has entered into letter of credit agreements related to certain of its Turnpike Revenue Bonds as detailed in the following table. The letter of credit agreements may contain provisions that are different from, and may be more restrictive than, the Senior Revenue Indenture.

Summary of Letter of Credit Agreements for
Turnpike Revenue Bonds
(as of the date of this Official Statement)

Variable Rate Bond Issue	Amount Outstanding	Provider	Expiration Date
Second Series of 2019	$139,815,000	TD Bank, N.A.	06/04/2024
Series of 2020	225,820,000	TD Bank, N.A.	06/24/2025
Series A of 2020	98,240,000	Barclays Bank PLC	12/01/2023

Interest Rate Exchange Agreements

As of the date of this Official Statement, approximately 92.2% of the Commission's outstanding debt is fixed rate, 7.0% is synthetic fixed and 0.8% is unhedged variable rate.

The Commission has interest rate exchange agreements with respect to certain portions of its Turnpike Revenue Bonds, Series 2009A, 2018A, 2018B, Second Series of 2019, Series of 2020, and 2020A. In addition, the Commission has interest rate exchange agreements with respect to its Subordinate Revenue Refunding Bonds, First Series of 2022, Registration Fee Revenue Bonds, Series 2005, and Oil Franchise Tax Revenue Bonds, Series 2009B and 2016A.

Interest Rate Exchange Agreements
(as of July 29, 2022)

Lien	Current Notional	Mark to Market Valuation
Senior Bonds	$663,962,500	($87,860,905)
Subordinate Bonds	291,850,000	17,162,762
Motor Vehicle Registration	231,425,000	(52,605,464)
Oil Franchise Tax	320,000,000	(1,967,853)

See Note 4, Note 7 and Note 9 to the Financial Statements for additional information relating to the foregoing. The Commission does not have any interest rate exchange agreements associated with its Special Revenue Bonds.

There are a number of risks associated with Swaps (as hereinafter defined) that could affect the value of the Swaps, the ability of the Commission to accomplish its objectives in entering into the Swaps and the ability of the Commission to meet its obligations under the Swaps. These risks include, among others, the following: counterparty risk – the failure of the counterparty to make required payments; credit risk – the occurrence of an event modifying the credit rating of the

Commission or its counterparty; termination risk – the need to terminate the transaction in a market that dictates a termination payment by the Commission under certain events, including but not limited to, credit rating downgrades of the Commission, defaults, etc.; collateral posting risk – the risk of the Commission posting collateral upon certain credit rating downgrades; tax risk – the risk created by potential tax events that could affect Swap payments; and basis risk – the mismatch between actual variable rate debt service and variable rate indices used to determine Swap payments.

On March 5, 2021, the Financial Conduct Authority announced that immediately after June 30, 2023, the 1-month, 3-month and 6-month US dollar LIBOR settings will permanently cease or no longer be representative (the "***FCA Announcement***"). Certain of the Commission's Swaps use London Interbank Offered Rate ("***LIBOR***") based rates as a reference rate for determining the interest rate and/or other payment obligations thereunder.

On January 3, 2022, the Commission submitted an Adherence Letter to the International Swaps and Derivatives Association, Inc., ("***ISDA***") indicating the Commission's adherence to the ISDA 2020 IBOR Fallbacks Protocol (the "***ISDA Protocol***"). The Commission received confirmation that ISDA accepted the Commission's Adherence Letter on January 3, 2022. Each of the Commission's swap counterparties has adhered to the ISDA Protocol, which together with the Commission's adherence, incorporates ISDA Protocol interest rate fallback language in the respective Interest Rate Exchange Agreements. The fallback provisions lay out a process that uses the secured overnight funding rate ("***SOFR***"), plus the defined spread, to determine a replacement rate for the LIBOR, after its permanent discontinuance or earlier cessation.

The Commission actively monitors the degree of risk and exposure associated with the Swaps to which it is a party but can offer no assurances that compliance with its Swap Policy (as hereinafter defined) will prevent the Commission from suffering adverse financial consequences as a result of these transactions.

Other Obligations

Act 44/Act 89 Payments to PennDOT

The Enabling Acts provide that all Act 44/Act 89 Payments shall be subordinate obligations of the Commission payable solely from the General Reserve Fund after meeting all other Commission requirements pursuant to any financial documents, financial covenants, liquidity policies or agreements in effect at the Commission. Pursuant to the Amended Funding Agreement, the Act 44/Act 89 Payments to PennDOT over the seven Fiscal Years ended May 31, 2014, were allocated between deposits to the Commonwealth Motor License Fund (the "***Motor License Fund***") for road and bridge work and deposits into the Public Transportation Trust Fund for distribution to Pennsylvania's local and regional public transportation agencies for operating and capital purposes.

No portion of the Act 44/Act 89 Payments to be deposited into the Public Transportation Trust Fund may be made with proceeds of Special Revenue Bonds. Effective July 1, 2014, 100% of the scheduled Act 44/Act 89 Payments to PennDOT is being deposited into the Public Transportation Trust Fund and may be used to support transit operating and capital costs, multi-modal transportation capital project costs and alternative energy transportation capital project costs.

As reflected in the following table, of the date of this Official Statement, the Commission has paid a total amount of $7,912,500,000 under the Amended Funding Agreement, as set forth in the following table (dollar amounts in millions).

Act 44/Act 89 Payments
(in millions)

Fiscal Year Ended May 31	Payments to Motor License Fund	Payments to Public Transportation Trust Fund	Total
2008	$450.0	$300.0	$750.0
2009	500.0	350.0	850.0
2010	500.0	400.0	900.0
2011	200.0	250.0	450.0
2012	200.0	250.0	450.0
2013	200.0	250.0	450.0
2014	200.0	250.0	450.0
2015	0.0	450.0	450.0
2016	0.0	450.0	450.0
2017	0.0	450.0	450.0
2018	0.0	450.0	450.0
2019	0.0	0.0	0.0
2020	0.0	900.0	900.0
2021	0.0	450.0	450.0
2022	0.0	450.0	450.0
2023*	0.0	12.5	12.5
Totals:	**$2,250.0**	**$5,662.5**	**$7,912.5**

* As required by Act 89 of 2013, the Commission will utilize $50 million of current revenues to fully satisfy to its Fiscal Year 2023 Act 44/Act 89 Payment obligation. As of the date of this Official Statement, $12.5 million of the $50 million Fiscal 2023 obligation has been paid.

As a result of the materially adverse impact of the COVID-19 pandemic, the Commission and PennDOT agreed, pursuant to Amendment Three, to extend the payment dates for the Commission's July 2020 and October 2020 scheduled payments of $112.5 million each, to January 29, 2021. The Commission ultimately paid the full $450 million within Fiscal Year 2021, issuing Subordinate Revenue Bonds in January 2021 to fund the Fiscal Year 2021 Act 44/Act 89 obligation covering payments originally due in July 2020 and October 2020, as well as the payment due January 2021 and a portion of the April 2021 payment.

The Act 44/Act 89 Payments due to PennDOT for Fiscal Year 2022 totaled $450 million and were paid in July 2021 with $420 million of the net proceeds of the Commission's 2021B Subordinate Revenue Bonds and $30 million of current revenues. Beginning in Fiscal Year 2023 through 2057 (the term of the Amended Funding Agreement), the annual Act 44/Act 89 Payments were reduced to $50 million. To date, the Commission has paid the scheduled quarterly installment of $12.5 million toward the Fiscal Year 2023 Act 44/Act 89 Payment obligation.

The Commission's obligation to pay the annual debt service on any Special Revenue Bonds on a timely basis continues to be part of its payment obligation under the Amended Funding Agreement.

The Enabling Acts provide that if the Secretary of the Budget notifies the Commission of a failure to make Act 44/Act 89 Payment to PennDOT under the Amended Funding Agreement, all actions of the Commission taken by a vote of the Commissioners thereafter must be approved by a unanimous vote of all Commissioners until such time as the Act 44/Act 89 Payment is made. However, a unanimous vote is not required if it would prevent the Commission from complying with covenants with "current bondholders, debt holders or creditors." These voting procedures have never been used as the Commission has not missed any Act 44/Act 89 Payments under the Amended Funding Agreement.

The Commission is required by the terms of the Amended Funding Agreement and Act 44 to fix and adjust tolls at levels that will generate revenues (together with other available moneys) sufficient to pay, among other things, amounts to PennDOT pursuant to the Amended Funding Agreement when due and other obligations of the Commission, and the Commission has covenanted in the Subordinate Revenue Indenture to set tolls at a level sufficient to meet its coverage obligations taking into account any additional debt incurred in order to make such payments.

The Commission believes that System revenues should enable it to satisfy its payment obligations as set forth in the Amended Funding Agreement.

Future Financing Considerations

The Commission may issue additional bonds and obligations under the Senior Revenue Indenture and/or the Subordinate Revenue Indenture. In addition, the Commission may, from time to time, issue other notes and bonds payable from such sources as may be available so long as the Tolls, the Oil Franchise Tax Revenues securing the Oil Franchise Tax Revenue Bonds or the Registration Fee Revenues securing the Registration Fee Revenue Bonds are not pledged to such other notes and bonds or, if pledged, are pledged on a subordinate basis. The Commission regularly evaluates market conditions with respect to the possible refunding of its outstanding Senior Revenue Bonds, Subordinate Revenue Bonds, Special Revenue Bonds, Oil Franchise Tax Revenue Bonds and Registration Fee Revenue Bonds.

On September 6, 2022, in furtherance of the Commission's desire to administer its debt obligations to obtain the best long-term financial advantage, and its continuing evaluation of market conditions, the Commission adopted amendments to the Bond Resolution providing for, among other things, the authority to (i) issue Turnpike Senior Revenue Bonds to finance the costs of various capital expenditures ("***Potential New Money Bonds***"), and (ii) authorize the defeasance of a portion of any outstanding Turnpike Senior Revenue Bonds of the Commission with available moneys (the "***Defeasance Program***"). The Commission expects to determine, at its sole discretion, whether and to what extent to execute the Defeasance Program and/or issue the Potential New Money Bonds after evaluating the totality of the economic results of the Tender Offer. If commenced, the settlement of the Defeasance Program and delivery of the Potential New Money Bonds could, subject to required approvals, occur prior to the end of October 2022.

The Fiscal Year 2023 Financial Plan anticipates that the estimated $7.2 billion in net costs associated with the Fiscal Year 2023 Capital Plan will be funded with approximately $4.2 billion on a pay-as-you-go basis, with the remaining approximately $3 billion funded with proceeds from Senior Revenue Bonds, including EB-5 Loans.

See "CAPITAL IMPROVEMENTS – Ten-Year Capital Plan" and "FINANCIAL PLAN – Fiscal Year 2023 Financial Plan" herein for more information.

The Commission may from time to time increase toll rates to meet the debt, capital and operational obligations of the Commission. The most recent toll increase took effect on January 3, 2022. On August 1, 2022, the Commission approved the next systemwide toll increase which will be 5% and take effect in January 2023. See "CERTAIN FINANCIAL INFORMATION – Toll Schedule and Rates" above for further information.

The ability of the Commission to repay such borrowings could be adversely affected by many factors, some of which are beyond the control of the Commission. For example, economic circumstances which result in significant declines in motor vehicle acquisition or operating cost increases could adversely affect the number of motor vehicles in use. An increase in the cost of fuel could adversely affect both the number of motor vehicles using the System and the mileage that such vehicles travel. Government regulations, such as Clean Air Act requirements, might also significantly restrict motor vehicle use and therefore diminish Tolls. See "INVESTMENT CONSIDERATIONS" in the forepart of this Official Statement.

CERTAIN OTHER INFORMATION

Budget Process

The Commission’s Finance and Administration Department develops preliminary budget information for all Commission departments. This information is provided to each of the respective departments for their review and to enable them to make any proposed revisions for their budget requests. The information is then returned to the Finance and Administration Department and a Commission wide preliminary budget is prepared. This budget is reviewed by senior management and, in cooperation with the respective departments, revisions are made when necessary to conform to the annual Financial Plan. The final recommended budget is then presented to the Board of Commissioners for formal approval.

The Commission also annually prepares its annual Financial Plan as required under Act 44. See "FINANCIAL PLAN" herein.

Financial Policies and Guidelines

The Commission’s Investment Policy and Guidelines, adopted on June 6, 1997, and amended from time to time thereafter (the "***Investment Policy***"), sets forth the purpose, objectives and investment guidelines for eligible securities for the investment of financial assets of the Commission. Eligible securities include those that are consistent with the Senior Revenue Indenture. For a discussion of the Commission's concentration of credit risk to particular issuers, see Note 4 to the Financial Statements.

The Investment Policy provides that appropriate benchmarks shall be developed for the various funds invested by the Commission and that the returns of the Commission's individual portfolio segments are to be compared to such benchmarks. Pursuant to the Investment Policy, the Commission's Investment Policy Committee must prepare an investment report for the Commissioners on a quarterly basis, including a management summary that provides a clear picture of the status of the current investment portfolio and transactions made over the latest reporting period. The report is to include investment performance and demonstrate conformity with the Investment Policy.

The Commission adopted three additional financial policies on April 20, 2004: a Liquidity Standard Policy; a Debt Management Policy; and an Interest Rate Swap Management Policy (the "***Swap Policy***"). These financial management policies were developed in recognition of the increasing financial sophistication of the Commission with respect to its debt structure and to provide guidance governing the issuance, management, ongoing evaluation and reporting of all debt obligations.

The Liquidity Standard Policy requires that the Commission maintain sufficient year-end fund balances to ensure levels of uncommitted reserves necessary to secure and protect its long-term debt and other financial obligations. Under this policy, the Commission budgets and maintains cumulative fund balances, including balances in the Reserve Maintenance Fund and the General Reserve Fund, equal to the greater of maximum annual debt service on those bonds not secured by a debt service reserve fund or 10% of annual budgeted revenues.

The Debt Management Policy establishes parameters and provides guidance governing the issuance and management of Commission debt. It addresses such issues as usage of unhedged variable rate debt, rate covenants and limitations on additional bonds and disclosure. Notwithstanding the rate covenants in the Senior Revenue Indenture, the Commission's Debt Management Policy requires the Commission's management to maintain 2.00 debt service coverage on the Turnpike Revenue Bonds, 1.30 debt service coverage on the Subordinate Revenue Bonds and 1.20 debt service coverage on the Special Revenue Bonds. For a discussion of the rate covenant under the Senior Revenue Indenture, see "SECURITY FOR THE 2022A BONDS – Rate Covenant" in the forepart of this Official Statement.

The Commission's Swap Policy establishes guidelines for the use and management of all interest rate management agreements, including, but not limited to, interest rate swaps, swaptions, caps, collars and floors (collectively, "***Swaps***") incurred in connection with the incurrence of debt. The Commission's Swap Policy was amended in October 2018 to reflect current regulations and best practices in the derivatives industry, particularly with respect to the selection requirements and on-going monitoring related to swap advisors.

The Swap Policy authorizes the Commission to use Swaps to hedge interest rate movement, basis risk and other risks, to lock in a fixed rate or, alternatively, to create synthetic variable rate debt. Swaps may also be used to produce interest rate savings, limit or hedge variable rate payments, alter the pattern of debt service payments, manage exposure to changing market conditions in advance of anticipated bond issues (through the use of anticipatory hedging instruments) or for asset/liability matching purposes.

At least annually, the Commission's Assistant Chief Financial Officer for Financial Management, in consultation with the Commission's Swap Advisor and legal counsel, must evaluate the risks associated with outstanding Swaps and provide to the senior executives and the Commissioners a written report of the findings based upon criteria set forth in the Swap Policy.

The Commission has also adopted additional financial policies related to post issuance compliance procedures and continuing disclosure.

The Tax-Exempt Debt, Build America Bonds and Other Tax-Advantaged Debt Post-Issuance Compliance Policies and Procedures (the "***Post Issuance Compliance Policy***") became effective on December 21, 2011, and implemented various policies and procedures to ensure that the Commission complies with all applicable federal tax rules related to its tax-exempt debt, Build America Bonds and other tax-advantaged debt issuances. Among other items, the policy requires compliance with all applicable federal tax documentation and filing requirements, yield restriction limitations, arbitrage rebate requirements, use of proceeds and financed projects limitations and recordkeeping requirements.

The Continuing Disclosure Policy was adopted by the Commission on February 2, 2016 and applies to all publicly offered Commission municipal securities that are subject to federal securities laws and/or continuing disclosure agreements. The policy requires the Commission to comply with all applicable securities laws, satisfy in a timely manner all contractual obligations undertaken pursuant to continuing disclosure agreements or otherwise, and to adhere to best practices for disclosure. The policy also requires the development, establishment and implementation of written procedures necessary to implement the Continuing Disclosure Policy, identifies key Commission participants responsible for disclosure, defines the role of Commission Disclosure Counsel and addresses training and document retention related to disclosure obligations.

Copies of the Commission's Investment Policy, Liquidity Standard Policy, Debt Management Policy, Swap Policy, Post Issuance Compliance Policy and Continuing Disclosure Policy can be found on the Commission's website at:
https://www.paturnpike.com/pdfs/about/Policy_Letters.pdf.[17]

The policies of the Commission described above may be revised or amended at any time at the discretion of the Commission.

Personnel and Labor Relations

As of August 1, 2022, the Pennsylvania Turnpike Commission employed a total of 1,376 persons, consisting of 446 management and supervisory union employees and 930 full-time non-supervisory union employees. Approximately 61% of all employees are engaged in maintenance

17 The information contained on such website link is not incorporated by reference in this Appendix A.

operations and fare collection. There are 791 field personnel located across 23 facilities, which is comprised of employees in the maintenance and facilities operations departments. The Commission currently employs 1,174, or 46% fewer employees than it did at the peak employment year of 2002.

As noted previously, on June 2, 2020 in connection with the permanent transition to all-electronic, cashless toll collection operations, the Commissioners unanimously approved a measure to lay off 492 employees, primarily fare collection-related employees, effective June 18, 2020. See "THE COMMISSION – Recent Developments and Legislation" above.

The Commission is a party to three collective bargaining agreements and one memorandum of understanding with Teamsters' Local Unions covering central office, field, professional and first level supervisory personnel. The three collective bargaining agreements became effective on May 1, 2020 and expire September 30, 2023. The memorandum of understanding was agreed to on December 8, 2020 and has no termination date.

Retirement Plan

The State Employee's Retirement System of the Commonwealth ("***SERS***") is one of the nation's oldest and largest statewide retirement plans for public employees. SERS administers both a defined benefit plan and a defined contribution plan. The defined benefit plan is funded through a combination of employee contributions, employer contributions and investment earnings. The defined contribution plan (Commonwealth of Pennsylvania Deferred Compensation Program) is funded by voluntary employee contributions and investment earnings.

Substantially all employees of the Commission are covered by SERS. The costs of the defined benefit plan are paid by the Commission quarterly based upon a stipulated contribution rate. Participating agency contributions, including those for the Commission, are mandated by statute and are based upon an actuarially determined percentage of gross pay that is necessary to provide SERS with assets sufficient to meet the benefits to be paid to SERS members.

Article II of the Pennsylvania Constitution provides the General Assembly the authority to establish or amend benefit provisions. Act 2001-9, signed into law on May 17, 2001, established Class AA ("***Class AA***") membership whereby, generally, annual full retirement benefits for electing active members is 2.5% of the member's highest three-year average salary (final average salary) multiplied by years of service. Commission employees hired after June 30, 2001, but before January 1, 2011, are Class AA members. Members hired on or before June 30, 2001 had the option, but were not required, to elect Class AA membership.

Those members not electing Class AA membership are considered Class A ("***Class A***"). The general annual benefit for full retirement for Class A members is 2% of the member's final average salary multiplied by years of service. Retirement benefits for Class A and AA employees vest after 5 years of credited service. Class A and AA employees who retire at age 60 with three years of service or with 35 years of service if under age 60 are entitled to an unreduced annual retirement benefit.

On July 6, 2010, Pennsylvania Act 2010-46 was enacted which reduced the employer contribution rates for Fiscal Year 2010-2011, thus reducing the Commission's contribution rates for Fiscal Year 2010-2011 from 3.80% for Class A employees and 4.75% for Class AA employees to 3.29% for Class A employees and 4.11% for Class AA employees. This rate reduction was only for one year.

On November 23, 2010, Pennsylvania Act 120 of 2010 ("***Act 120***") was enacted. Under this legislation, effective January 1, 2011, benefit reductions are mandated for future SERS members; however, benefits for current members are preserved. New employees are subject to a higher contribution rate, an increase in the vesting period from five to ten years, elimination of lump-sum withdrawals, and an increase to the normal retirement age to obtain full, unreduced pension benefits. Rather than the current full benefit provision of 35 years of credited service, new employees' age and combined years of service must equal 92, including a minimum of 35 years of credited service, before they may receive full benefits. Act 120 established Class A-3 and Class A-4 memberships. Effective January 1, 2011, all new members to the System must elect one of these new membership classes. New members who elect Class A-3 will accrue benefits at 2% of their final average salary multiplied by years of service. Those members choosing Class A-4 will accrue benefits at 2.5% of their final average salary multiplied by years of service. Under Act 120, retirement benefits for Class A-3 and A-4 vest after 10 years of credited service. Class A-3 and A-4 members who retire at age 65 with three years of service or when the member's age (last birthday) plus their completed years of credit service total at least 92 (Rule of 92) are entitled to an unreduced annual retirement benefit. Members hired prior to January 1, 2011, retain their current full benefit provision of 35 years of credited service.

On June 12, 2017, Governor Wolf signed Act 5 of 2017 ("***Act 5***") into law that fundamentally changed retirement options for most new Commission employees beginning January 1, 2019. Act 5 allowed current Commission employees/SERS members to opt-in to one of the three new options between January 1, 2019 and March 31, 2019.

Among other changes, Act 5 creates three new classes of service which include: two new hybrid defined benefit/defined contribution tiers ("***A-5***" and "***A-6***"); and a straight defined contribution plan ("***DC***") for SERS. The new classes of service apply to all Commission employees who first become SERS members on or after January 1, 2019. Benefit reductions and increased retirement ages are mandated for future SERS members. Beginning January 1, 2019, new A-5 employees will annually accrue benefits at a rate of 1.25% and A-6 employees will annually accrue benefits at a rate of 1.0%. A-5, A-6 and DC employees will be subject to different employee contribution rates for the defined benefit and defined contribution plans and the vesting period for the defined benefit portion will be ten years while the defined contribution portion vests after three years. Additionally, Act 5 increases the normal retirement age to obtain full, unreduced defined benefit pension benefits for new A-5 and A-6 employees to age 67 and it requires 35 years of service and utilizes the "Rule of 97" (i.e., years of service plus age equal or exceed 97). The final average salary used to calculate defined benefits will be the employee's five highest salary years. Employer contribution rates for the defined contribution plan for A-5, A-6 and 401(a)DC employees will be 2.25%, 2.0% and 3.5%, respectively.

Act 5 does not affect current Commission retirees' pension benefits, nor does it reduce benefits for Commission employees hired before January 1, 2019. Act 5 also provides special benefit enhancements for current A-3 and A-4 Commission employees who will be allowed to take certain lump sum withdrawals upon retirement. Additionally, A-3 and A-4 employee pension contribution rates will go down when SERS investment returns exceed return targets. This provision balances the current downside risk-sharing required of A-3 and A-4 members as required by Act 120.

For more information on SERS, including Act 120 and Act 5, see the SERS website at http://sers.pa.gov/Newsroom.html[18], http://sers.pa.gov/About-Legislation.html[19], and the disclosure beginning on page 44 of this Official Statement for the Commonwealth's General Obligation Bonds, First Series of 2021 and First Refunding Series of 2021, dated May 5, 2021, as supplemented May 17, 2021, which may be found at the EMMA website at https://emma.msrb.org/P21461340-P21134109-P21546788.pdf.[20] **See also Note 8 to the Commission's Financial Statements and related Required Supplementary Information for more information on the Commission's pension liabilities.**

Covered Class A, Class AA, Class A-3, A-4, A-5, A-6 and 401(a)DC employees are required by statute to contribute to SERS at a rate of 5.00%, 6.25%, 6.25%, 9.30%, 8.25%, 7.5% and 7.5%, respectively, of their gross pay. Employees' contributions are recorded in individually identified accounts, which are also credited with interest, calculated quarterly to yield 4.00% per annum, as mandated by statute. Accumulated employee contributions and credited interest vest immediately and are returned to the employee upon termination of service if the employee is not eligible for other benefits.

Participating agency contributions, including those for the Commission, are also mandated by statute and are based upon an actuarially determined percentage of gross pay that is necessary to provide SERS with assets sufficient to meet the benefits to be paid to SERS members. The Commission's total required retirement contribution (for both defined benefit and defined contribution), as a percentage of covered payroll, by class for the most recent five (5) Fiscal Years of the Commonwealth, is as follows:

Year Ended June 30 (Commonwealth's Fiscal Year)	Class A	Class AA	Class A-3	Class A-4	Class A-5	Class A-6	401(a)DC
2022	29.98%	37.46%	25.90%	25.90%	19.93%	19.93%	19.88%
2021	29.48	36.84	25.47	25.47	19.59	19.59	19.56
2020	28.84	36.04	24.92	24.92	19.18	19.18	19.12
2019	27.71	34.63	23.94	23.94	18.42	18.42	18.39
2018	27.55	34.44	23.80	23.80	N/A	N/A	N/A

The Commission's required contributions and percentage contributed for most recent five (5) Fiscal Years of the Commission are as follows:

18 The information contained on such website link is not incorporated by reference in this Appendix A.
19 The information contained on such website link is not incorporated by reference in this Appendix A.
20 The information contained on such website link is not incorporated by reference in this Appendix A.

Year Ended May 31	Commission Required Contribution (in millions)	Percent Contributed
2022	$31.4	100%
2021	31.7	100
2020	37.8	100
2019	37.8	100
2018	38.1	100

The Commission has budgeted $48 million for pension expense for Fiscal Year 2023. The SERS required contributions are expected to be approximately $34.3 million. The Commission's higher budgeted amount for pension expense is calculated on an accrual basis, while the SERS required contribution amount is calculated based on budget estimates for salaries, employee pension classes, and approved SERS employer contribution rates.

A copy of SERS's annual financial statements may be obtained by writing to: State Employees' Retirement System, 30 North Third Street, P.O. Box 1147, Harrisburg, Pennsylvania, 17108-1147. Additional information about SERS, including its Comprehensive Annual Financial Reports and actuarial valuation reports, are available at http://www.sers.state.pa.us.[21]

Act 120 also imposes limits referred to as "collars" on annual increases to employer contribution rates (i.e., the employer contribution rate for a particular year may not exceed the sum which results from adding the collar applicable for such year to the prior year's contribution rate). The collar for Commonwealth Fiscal Year 2015-2016 was 4.5% and no longer applies effective July 1, 2017.

At Fiscal Year ended May 31, 2021, the Commission reported a liability of $288.5 million for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2020, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. See Note 8 to the Commission's Financial Statements for additional information on how such pension liability was calculated.

Other Post-Employment Benefit Liabilities

The Commission maintains another postemployment welfare plan program (the "***Plan***") for the purpose of providing benefits to eligible retirees and their dependents. The Plan is a single employer, defined benefit plan. The Plan's financial statements are not included in the financial statements of a public employee retirement system. The Plan issues a stand-alone financial report, which can be obtained by contacting the Commission's Accounting and Financial Reporting Department.

The Commission established the Pennsylvania Turnpike Commission Retiree Medical Trust (the "***Trust***") on May 30, 2008, as an irrevocable trust, tax-exempt under the Internal Revenue Code, to provide funding for the Plan. The Trust is administered by five trustees appointed by the Commission, who each serve two-year terms. The chairman and vice chairman

21 The information contained on such website link is not incorporated by reference in this Appendix A.

of the Trust are appointed by the Trustees and serve two-year terms. PNC Bank, N.A. serves as custodian of the assets of the Plan. Disbursement of Plan assets are made by the custodian at the direction of the Trustees.

Plan benefit provisions and retiree and dependent contribution rates are established and may be amended by the Commission.

Management and Supervisory Union Employees/Retirees. The benefits funded by the Trust include certain post-employment medical, prescription drug, dental and vision benefits to management and supervisory union employees based upon their date of hire and years of service. Eligibility categories generally include:

- Employees hired before March 1, 2016, who have reached 20 years of service and are under age 60; benefit eligibility changes from 20 to 10 years for retirees 60 years of age or older. The last five years of service must be with the Commission.

- Employees hired on or after March 1, 2016, who have reached 30 years of service and are under age 60; benefit eligibility changes from 30 to 25 years for retirees 60 years of age or older. The last ten years of service must be with the Commission. (Some current and previous Commonwealth employees hired on or after this date would be grandfathered under the first eligibility category.)

The same coverage is provided to surviving spouses and dependents of management and supervisory union retirees who retired on or after March 1, 2001. Surviving spouses of retirees who retired prior to March 1, 2001, may purchase medical coverage at the group rate and dependents are offered coverage under the Consolidated Omnibus Budget Reconciliation Act (COBRA). Medicare Part B premiums are paid by the retiree, spouse or dependent if age 65 or over, or under age 65 and disabled.

Non-Supervisory Union Employees/Retirees. The Benefits also include certain post-employment medical and prescription drug benefits to non-supervisory union employees who have satisfied the eligibility requirements in the applicable collective bargaining agreement.

- For Local 30 Professionals who were hired prior to January 1, 2011 and Local 250 and 77 employees who were hired prior to January 27, 2016, the earlier of completion of 20 years of credited service or the later of attainment of age 60 and completion of 10 years of credited service. The last 5 years of credited service must be with the Commission.

- For Local 30 Professionals who were hired on or after January 1, 2011, and Local 250 and 77 employees who were hired on or after January 27, 2016, the earlier of completion of 30 years of credited service or the later of attainment of age 60 and completion of 25 years of credited service. The last 10 years of credited service must be with the Commission.

The same coverage is provided to spouses and dependents of eligible non-supervisory union retirees until the death of the retiree. Surviving spouses are required to contribute the full cost of coverage and dependents are offered coverage under COBRA.

In accordance with the pronouncements of the Governmental Accounting Standards Board ("***GASB***"), the Commission implemented GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions during Fiscal Year 2008. GASB Statement No. 45 was superseded by GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. Statement No. 75 addresses accounting and financial reporting for OPEB that is provided to the employees of state and local governmental employers. Statement No. 75 establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expenses. The Commission adopted Statement No. 75 for its Fiscal Year ended May 31, 2019.

The Commission's Net OPEB liability was $14.8 million as of May 31, 2021. This liability was determined by an actuarial valuation as of May 31, 2020. Based on this valuation, the Plan's total OPEB liability was $480 million; the Plan's Fiduciary Net Position was $465 million resulting in a 96.9% funded status (Plan fiduciary net position as a percent of total OPEB liability) at the measurement date.

The Commission's Net OPEB asset was $150.2 million as of May 31, 2022. This asset was determined by an actuarial valuation as of May 31, 2021. Based on this valuation, the Plan's total OPEB liability was $451 million; the Plan's Fiduciary Net Position was $601 million resulting in a 133.3% funded status (Plan fiduciary net position as a percent of total OPEB liability) at the measurement date.

The Commission began making contributions to the Trust in Fiscal Year 2008 and adopted a Retiree Medical Trust Funding Policy, effective September 17, 2008. In accordance with the Funding Policy, the Commission anticipates approving an annual contribution to the Trust in the amount of the Annual Required Contribution ("***ARC***") as determined by the Commission's actuary in accordance with GASB Statement No. 45, during the approval of its annual operating budget. With the implementation of GASB Statement No. 75, the Commission will now refer to the Actuarially Determined Contribution ("***ADC***") instead of the ARC.

The ADC for Fiscal Year 2021 was $14.0 million which the Commission fully funded. The ADC for Fiscal Year 2022 was $0 due to the funded status of the Plan. The Commission's Fiscal Year 2022 unaudited OPEB contributions were $13.7 million. The contributions were to cover the current year OPEB service costs and to help maintain the 100+% funded status.

The Plan's financial statements are not included in the financial statements of the Commission. For additional information regarding the Benefits and the Plan, including funding status and actuarial methods and assumptions, see Note 11 to the Commission's Financial Statements.

Insurance

The Commission maintains All-Risk Property, Builder's Risk, Public Official bonds, Crime and Fiduciary insurance coverage and is self-insured for Workers' Compensation, Auto Liability, and General Liability claims.

For capital projects, the Commission maintains Builders' Risk insurance that covers buildings and structures, including temporary structures, while being constructed, erected or fabricated on Commission property. This insurance provides coverage against risk of physical damage and/or loss (subject to policy exclusions) to all buildings and structures during construction. Upon completion, a project is then covered under an All-Risk insurance policy that has a $200 million per occurrence policy limit. See "CAPITAL IMPROVEMENTS – Condition of Turnpike System – *Structures; Status of Delaware River Bridge*" herein.

Deductibles range in amount depending on the line of coverage and the nature of the claim. For bridges, tunnels, overpasses, underpasses and viaducts, the deductible is $5 million. For buildings (including contents), toll plazas and equipment, warehouses and similar facilities, the deductible is $1 million. The Commission's All Risk Insurance policy also includes loss of income coverage subject to a seven-day waiting period.

Certain pre-specified construction projects are insured under an "Owner Controlled Insurance Program" until completion. Under these programs, the Commission, contractors and subcontractors are insured for Workers' Compensation, General Liability, Builder's Risk and other project-specific insurance with limits and large deductibles varying by project.

Performance Audit by the Auditor General

The Enabling Acts require the Auditor General of the Commonwealth to conduct an audit of the accounts of the Commission and to review its performance, procedures, operating budget, capital budget and debt every two years. The Act of October 23, 1988, P. L. 1059, No. 122 ("***Act 122***") also requires the Auditor General to conduct a financial audit and a compliance audit of the Commission every four years.

On September 7, 2022, Auditor General Timothy L. DeFoor issued a final report presenting the results of the statutorily required performance audits of the Commission under Act 44 and Act 122 (the "***September 2022 Performance Audit***").

The performance portion of the audit covered the period from June 1, 2018 to June 13, 2022. The Auditor General's office did not conduct its own financial audit but reviewed audits and supporting documentation of the independent firm that audits the Commission's financial statements annually, including working papers for the Fiscal Years ended May 31, 2018 through and including 2021.

The performance audit had three objectives: (1) to determine if the Commission's revenue collections are meeting projected toll revenue expectations in order to meet its payment obligations and planned capital improvement projects; (2) evaluate the Commission's processes for collecting tolls, including but not limited to E-ZPass and Toll-By-Plate, determine both the amount of tolls collected and the amount not collected, and examine possible enforcement mechanisms for uncollected tolls; and (3) evaluate the Commissions vendor contracts and its related policies pertaining to customer service at rest areas for provisions regarding prohibiting racial discrimination and sexual harassment.

The September 2022 Performance Audit presented three findings and 23 recommendations with 21 directed to the Commission and two to the Pennsylvania General Assembly. The three Findings are as follows:

Finding 1. The Commission continues to face significant challenges to raise toll revenue in order to make future toll Act 44/Act 89 Payments to PennDOT under the current Act 44/Act89 financial structure, its associated debt payments, and expenditures for capital projects.

Finding 2. Uncollected tolls have continued to increase and therefore, the Commission must continue to seek new ways to collect tolls due from both in and out-of-state travelers.

Finding 3. The anti-discrimination language in the Commission's contracts for amenities provided to its customers at service plazas is outdated and lacking content.

With respect to Finding 1, the September 2022 Performance Audit recommended that the Commission ensure traffic projections are conservative and realistic; evaluate and scrutinize revenue sources and operating expenses to find ways to increase revenues while reducing costs; evaluate ways to increase passenger car and commercial use of the Turnpike; continue to analyze and manage its debt; and pursue opportunities to collaborate with other state agencies.

Also, with respect to Finding 1, the September 2022 Performance Audit recommended that the Pennsylvania General Assembly immediately re-evaluate Acts 44 and 89 and consider drafting and enacting new legislation to help ensure the current debt burden placed on the Commission is considerably mitigated for the continued viability of the Commission and the toll road system in Pennsylvania. The Auditor General also recommended that the General Assembly refrain from increasing the $50 million annual Act 44/Act 89 Payment scheduled to begin during the Fiscal Year ending May 31, 2023, and further consider removing the Commission's requirement to pay PennDOT $50 million each year through 2057. See "COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS – Other Obligations" herein for more information.

With respect to Finding 2, the September 2022 Performance Audit provided eleven recommendations focused on the Commission continuing to research and offer additional payment options, and working with the Pennsylvania State Police, the General Assembly, PennDOT, other states, and collection agencies to increase administrative and operational tools for improving toll collection enforcement.

With respect to Finding 3, the September 2022 Performance Audit provided five recommendations for amending and administering its contracts, which included, among other things, amending contracts to include current and appropriate anti-discrimination language; establishing policies or procedures to monitor lessees' compliance with non-discrimination provisions; and considering requiring lessees that provide customer service at service plazas to post signage with a customer complaint number.

The September 2022 Performance Audit also reiterated a finding from prior performance audits (2013 and 2016) concerning Commission employees being permitted to ride the Turnpike toll-free, even for personal travel. While the Commission did implement techniques for monitoring usage and identifying potential misuse, the Auditor General recommended that the Commission reconsider its decision to not rescind previously implemented policies that provide for toll-free employee travel.

The full text of the Department of Auditor General's final report and the Commission's response may be found on the Auditor General's website at: https://www.paauditor.gov/Media/Default/Reports/Pennsylvania%20Turnpike%20Commission%20-%20Audit%20Period%20June%201,%202018%20to%20June%2013,%202022.pdf .[22]

Commission Compliance, Legislative and Cultural Affairs Department

In 2009, an Office of Inspector General (the "***OIG***") was created within the Commission to maintain integrity and efficiency at the Commission and to further maintain public confidence in the Commission. In 2012, the OIG merged into the Compliance Department, causing the functions of the former OIG to now fall under the Chief of Compliance, Legislative and Cultural Affairs. The Chief of Compliance, Legislative and Cultural Affairs has the primary responsibility of developing, managing, and executing a comprehensive audit program that examines and promoting the adequacy and effectiveness of the Commission's internal control system. The Compliance Department includes the offices of Internal Audit Services, Advisory Services and Diversity and Inclusion, and provides Code of Conduct and Business Conduct Guidelines training to all Commission employees, construction contractors, and vendors, consultants and other business partners in the construction services sector.

Toll Revenue Enforcement

TRE, formerly the Office of Special Investigations, continues to conduct all internal and external investigations including working with the local District Attorneys' Offices in pursuing criminal prosecutions of the Commission's most egregious toll violators, which as of June 2022 has 237 accounts with criminal charges filed; of those six were withdrawn, 107 have not yet had a preliminary hearing, and 124 have had a hearing.

Labor Relations Investigative Unit

The Labor Relations Investigative Unit ("***LRIU***"), formerly the Office of Special Investigations, has conducted numerous investigations of fraud, waste, abuse and misconduct that have resulted in the termination of Commission employees and a vendor contract. LRIU is also responsible for the enforcement of Commission rules, regulations, policies and strategic planning, and the Commission's Code of Conduct.

[22] The information contained on such website link is not incorporated by reference in this Appendix A.

Environmental, Social and Governance Factors

The following information contained in this section describes certain elements of the Commission's operations relating to environmental, social and governance factors. The information under this subheading is not exhaustive and should be evaluated considering the entirety of the information regarding the Commission, the System, and the Commission's finances and operations set forth in this Appendix A and the forepart of this Official Statement. For information regarding the Commission's long term and strategic planning regarding sustainability and capital and asset management see "THE COMMISSION – Long Term and Strategic Planning" above.

Stormwater Mitigation. The Turnpike System consists of over 2,400 lane miles of roadways throughout the Commonwealth which either directly or indirectly discharge stormwater runoff. For decades, the Commission has taken numerous steps to better control stormwater runoff as well as to limit impurities in runoff across the System. In 2020, the Commission, developed its current Stormwater Asset Management Program to provide a centralized, common operating platform to support infrastructure inspection and evaluation, work order development and tracking, and reporting for all Commission-owned stormwater assets and features. The Commission installs and maintains Stormwater Control Measures ("***SCMs***") to control stormwater runoff from the System and the Commission's supporting facilities. These SCMs are engineered structures or devices designed to slow down, hold, infiltrate, and/or treat stormwater runoff before it enters waterbodies and groundwater.

The Commission's efforts to reduce pollutants in stormwater during construction activities is achieved through its erosion and sedimentation control measures, and in a perpetual manner through post-construction stormwater management. To mitigate the impacts of sediment entering waterways during construction, erosion and sedimentation best management practices are implemented and maintained throughout the course of construction until the vegetative cover is restored, and erosion potentials have diminished. Through its post-construction storm management measures, the Commission develops and implements plans for mitigating increased stormwater runoff from impervious surfaces.

The Commission also meets regularly with executives of both DEP and PennDOT to discuss issues, define direction and explore future collaborative initiatives. The assessment concluded that the Commission is prepared for extreme weather events based on its efforts to improve agency coordination and planning for extreme weather events, and implementation of effective strategies and technology solutions.

Extreme Weather and Climate Resiliency Report. In July 2022 the Commission released the Extreme Weather and Climate Resiliency Report which reflected a comprehensive assessment of the Commission's internal planning, operations, best management practices related to extreme weather events such as flooding, blizzards, hurricanes, and heatwaves, and opportunities to further improve preparedness and responsiveness to create a more resilient System.

Electric and Alternative Fuel Vehicles. Since 2005, the Commission has been involved in various efforts to support and deploy clean and environmentally friendly vehicles. The

Commission obtained propane powered vehicles for every maintenance shed and provided each maintenance shed with a propane vehicle fueling station.

The Commission currently has an agreement with Blink Charging, Co., to provide electric vehicle charging stations at the following service plazas: New Stanton, Oakmont, King of Prussia, Bowmansville and Peter J. Camiel. Additionally, through Applegreen's partnership with Tesla, 40 Tesla superchargers are installed at six service plazas, Hickory Run (both north and south plazas), Bowmansville and Somerset (both north and south plazas) service plazas. The Commission is actively engaged with Applegreen Electric to provide additional EV charging opportunities across the entire system. The Commission is also working in cooperation with FHWA and PennDOT on PA's National Electric Vehicle Infrastructure program. Any charging stations developed pursuant to this program would be installed and operated by Applegreen Electric.

The Commission is also focused on decreasing greenhouse gas emissions from the Commission's fleet of vehicles. This has been accomplished through introduction of federally mandated emissions on dump trucks including exhaust gas recirculation, and diesel exhaust fluids. To decrease idle time emissions, dump trucks were upfitted with idle free systems to keep the cab and certain components warm to prevent long idle times. The Commission previously piloted two different compressed natural gas vehicles within its fleet, with limited success. The Commission plans to incorporate an electric vehicle pilot program for a portion of the Commission's passenger car fleet.

Renewable Energy. Further to its sustainability efforts, the Commission has designed and is constructing a microgrid at its Greensburg maintenance shed which is expected to eliminate both energy and demand charges for electricity at the facility. This project combines natural gas and solar array to supply all power needs to the facility and any excess power will go back to the grid; generating additional revenue for the Commission. The project is scheduled to be operational by the end of November 2021.

Green and Automated Buildings. The Commission works to ensure that each of its new buildings are designed using LEED certification, with the Commission's Central Administration Building being the first large building project incorporating LEED principles. Five of the Commission's facilities hold either a silver or gold LEED certification. The Commission's use of LEED projects is intended to maximize the use of locally sourced sustainable materials and provide the most environmentally friendly and energy efficient heating ventilation and air conditioning ("***HVAC***") systems possible. Other elements of LEED design leveraged by the Commission include daylighting, rainwater collection and reuse for toilet water and truck washing water, waterless urinals, and the most efficient LEED lighting systems with sophisticated controls automatically dim the lights when bright sunlight is available turn the lights off when the space is unoccupied.

The Commission also utilizes Building Automation Systems ("***BAS***") as a remote monitoring and early problem warning system. BAS monitoring is tailored and includes HVAC, water, lighting, commercial power and emergency generator operation, and serves as the first line of defense against leaks and malfunctioning equipment. BAS also aides in the reduction of energy by scheduling of hours of use and maintaining temperature ranges throughout the facility.

Task Force on Social and Racial Justice. Established in August 2020, the Commission's Task Force on Social and Racial Justice (the "***S&RJ Task Force***") is comprised of over 40 employees from various departments throughout the Commission. The S&RJ Task Force is responsible for evaluating the Commission's fair treatment and meaningful involvement of all people regardless of race, color, national origin, income with respect to the development, implementation and enforcement of laws, regulations, and policies. To accomplish its work, the S&RJ Task Force has established five subcommittees: (1) Transportation Equities; (2) Internal Workforce and Hiring Practices; (3) Environmental Justice; (4) Systems, Education, Review and Reform; and (5) Racial and Social Healing Alliances. Each subcommittee is charged with making relevant recommendations on the Commission's practices and policies to ensure that the Commission is not part of the problem, but rather part of the solution in combating systematic racism and inequality.

Cybersecurity. The Commission and many of its vendors and contractors are dependent on information and computing technology to conduct general business operations, including toll transactions, toll collections, and customer account services. While to date the Commission has not experienced a materially disruptive cybersecurity threat, computer hacking, cyber-attacks or other malicious activities directed at the Commission's information systems or those of its vendors or contractors, could disrupt Commission services or cause physical or financial harm to the Commission, in the future. Further, cybersecurity breaches such as leakage or loss of confidential or proprietary data and failure or disruption of information technology systems could materially and adversely affect the Commission’s reputation, which could lead to significant outlays and decreased performance that insurance may not cover.

The Commission has a robust cybersecurity framework that leverages multiple layers of protection including edge and internal firewalls, an intrusion prevention system, security incident and event management, multi-layered anti-virus, malware protection and spam filters. The Commission performs regular security patching and regular internal and external vulnerability scans. Periodic security assessment and penetration testing is performed regularly by qualified third parties.

The Commission has purchased and implemented cybersecurity awareness training and simulated phishing attacks, and has published third-party security requirements that define general security requirements, requirements for vendors providing hosting cloud-based systems, and requirements for vendors providing on-premises systems or devices physically connected to the Commission’s networks. All Commission employees are required to complete annual information technology security training and phishing simulation campaigns are performed regularly. Additionally, the Commission has purchased cyber insurance which also provides immediate access to third party forensic investigation experts to assist the Commission with any data or system breaches.

Although the Commission devotes significant resources to maintain and regularly upgrade its systems and processes that are designed to protect the security of its computer systems, software, networks and other technology assets and the confidentiality, integrity and availability of information belonging to customers, there is no assurance that all these security measures will provide absolute security or prevent the risk of the Commission's finances or operations being negatively impacted by a cybersecurity threat directed at one of the Commission's vendors or contractors. These risks may increase in the future as the Commission continues to utilize AET, mobile payments and other internet-based applications both internally and externally. A successful cybersecurity attack on the Commission or one of its vendors or contractors, could have a material adverse effect on the financial condition and/or the operations of the Commission.

See "INVESTMENT CONSIDERATIONS – Cybersecurity Threats" in the forepart of this Official Statement.

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APPENDIX B

AUDITED FINANCIAL STATEMENTS FOR FISCAL YEARS ENDED MAY 31, 2021 AND 2020

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PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania

Basic Financial Statements
Fiscal Years Ended May 31, 2021 and 2020
With Independent Auditor's Report

MITCHELL TITUS
ACHIEVING EXCELLENCE TOGETHER

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Basic Financial Statements
Fiscal Years Ended May 31, 2021 and 2020

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MITCHELL TITUS

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The Commissioners
Pennsylvania Turnpike Commission

Report on the Financial Statements

We have audited the financial statements of the business-type activities and fiduciary activities of the Pennsylvania Turnpike Commission (the Commission), a component unit of the Commonwealth of Pennsylvania, as of and for the years ended May 31, 2021 and 2020, and the related notes to the financial statements, which collectively comprise the Commission's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

The Commission's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; 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.

Auditor's Responsibility

Our responsibility is to express opinions 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 auditor's 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.

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

Opinions

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and fiduciary activities of the Commission as of May 31, 2021 and 2020, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Adoption of Accounting Pronouncements

As discussed in Note 2 to the basic financial statements, as of June 1, 2019, the Commission adopted Governmental Accounting Standards Board (GASB) Statement No. 84, *Fiduciary Activities*. Our opinions are not modified with respect to this matter.

Emphasis of Matter

As more fully explained in Note 9, the Commission has committed to making significant payments under an Amended Lease and Funding Agreement as required under the terms of Acts 44 and 89. As explained in Note 15, on July 28, 2021, the Commission made its final $450 million payment to PennDOT, as mandated by Act 44 and Act 89. However, the Commission's ability to repay its bonded debt payments, as well as its continuing $50 million annual Act 44 and Act 89 payment from fiscal year 2023 through fiscal year 2057, is dependent on its continuing capability to raise tolls. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the Schedule of Commission's Proportionate Share of Net Pension Liability – Pennsylvania State Employees' Retirement System – Pension Fund, the Schedule of Commission's Contributions – Pennsylvania State Employees' Retirement System – Pension Fund, the Schedule of Changes in the Commission's Net OPEB Liability and Related Ratios, and the Schedule of Commission Contributions to the Other Postemployment Welfare Plan Program on pages 4 through 22 and pages 109 through 114 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 Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Commission's basic financial statements. The Section Information on pages 115 through 128 is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The Section 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. Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements 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 Section Information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Mitchell & Titus, LLP

October 5, 2021

The management of the Pennsylvania Turnpike Commission (hereinafter referred to as the Commission) offers this narrative overview and analysis of the Commission's business-type (enterprise fund) and fiduciary (fiduciary fund) activities for the years ended May 31, 2021 and 2020, which should be read in conjunction with the Commission's financial statements.

Overview of the Basic Financial Statements

This Management's Discussion and Analysis (MD&A) is intended to serve as an introduction to the Commission's enterprise and fiduciary fund financial statements (the financial statements). While the Commission is considered a component unit of the Commonwealth of Pennsylvania (Commonwealth), it is also an enterprise fund. Therefore, the Commission's financial statements are presented in a manner similar to a private-sector business and have been prepared according to accounting principles generally accepted in the United States of America (U.S. GAAP). All of the current year's revenues are recorded when earned and expenses are recorded as they are incurred, regardless of when the cash is received or disbursed.

The Pennsylvania Turnpike Commission (the Employer) maintains an other postemployment welfare plan program (the Plan) for the purpose of providing non-pension other postemployment benefits (OPEB) for employees who meet the age and service requirements outlined in the Employer's plan documents. In accordance with GASB Statement No. 84, *Fiduciary Activities*, the Plan is a fiduciary component unit of the Commission.

The Statements of Net Position present information on all of the Commission's assets and deferred outflows of resources, liabilities and deferred inflows of resources, with the differences being reported as net position. Over time, increases or decreases in net position serve as a relative indicator of the change in financial position of the Commission.

The Statements of Revenues, Expenses, and Changes in Net Position show the result of the Commission's total operations during the fiscal year and reflect both operating and nonoperating activities and capital contributions. Changes in net position (increases or decreases) reflect current year activities and the impact on the overall financial position of the Commission.

The Statements of Cash Flows provide a detailed analysis of all sources and uses of cash. The direct method of cash flows is presented, along with a reconciliation of operating income to net cash provided by operating activities. The Statements of Cash Flows are divided into the following activities sections – operating, investing, capital and related financing, and noncapital financing.

The Statements of Fiduciary Net Position present information on all of the Plan's assets, liabilities and fiduciary net position. Over time, increases or decreases in fiduciary net position serve as a relative indicator of the change in the financial position of the Plan.

The Statements of Changes in Fiduciary Net Position present information about the Plan's additions to, deductions from, and net increase (or decrease) in fiduciary net position. Changes in fiduciary net position (increases or decreases) reflect the current fiscal year's impact upon the overall financial position of the Plan.

Financial Analysis

Notes to the financial statements contain information and offer explanations to the financial statements. The notes are intended to assist the reader in understanding the Commission's financial statements.

Comparative Condensed Statements of Net Position

	May 31		
	2021	**2020**	**2019**
		(In Thousands)	
Assets and deferred outflows of resources			
Current assets	$ 1,460,205	$ 1,437,182	$ 1,729,355
Noncurrent investments	1,255,843	1,219,940	995,525
Capital assets, net of accumulated depreciation	6,676,046	6,410,001	6,139,998
Other assets	32,620	32,521	33,823
Total assets	9,424,714	9,099,644	8,898,701
Total deferred outflows of resources	545,956	626,429	621,105
Total assets and deferred outflows of resources	9,970,670	9,726,073	9,519,806
Liabilities and deferred inflows of resources			
Current liabilities	1,135,109	1,181,489	1,367,934
Debt, net of unamortized premium	15,323,360	14,383,020	13,591,404
Net pension/OPEB liability	303,263	331,034	398,755
Other noncurrent liabilities	278,928	355,661	250,097
Total liabilities	17,040,660	16,251,204	15,608,190
Total deferred inflows of resources	204,978	166,017	153,857
Total liabilities and deferred inflows of resources	17,245,638	16,417,221	15,762,047
Net position			
Net investment in capital assets	(1,115,845)	(903,089)	(623,209)
Restricted for construction purposes	276,847	411,313	331,065
Restricted for debt service	45,913	42,619	51,536
Unrestricted	(6,481,883)	(6,241,991)	(6,001,633)
Total net position	$ (7,274,968)	$ (6,691,148)	$ (6,242,241)

The Commission's total net position decreased $583.8 million and $448.9 million for the fiscal years ended May 31, 2021 and 2020, respectively. The large decreases in net position in both fiscal years were mostly due to the requirements of Act 44, Act 89 and the Amended Lease and Funding Agreement (Amended Funding Agreement) between the Commission and Pennsylvania Department of Transportation (PennDOT) and costs associated with the related debt. Please refer to Note 9, Commitments and Contingencies, of the financial statements and to the Events That Will Impact Financial Position section of this MD&A for additional information regarding Act 44, Act 89 and the Amended Funding Agreement between the Commission and PennDOT. See also Note 7, Debt, in reference to the related debt.

Financial Analysis *(continued)*

Comparative Condensed Statements of Net Position *(continued)*

Restricted net position is restricted for construction projects and debt service as defined in Trust Indentures and applicable bond issue official statements.

The Commission's total assets and deferred outflows of resources increased by $244.6 million in fiscal year 2021. This 2021 increase is mostly related to increases in capital assets of $266.0 million and accounts receivable of $67.5 million. This increase is offset by a decrease in deferred outflow of resources of $80.5 million. The increase in capital assets is mostly related to capital asset additions of $651.4 million, offset by $373.9 million of depreciation expense. The increase in accounts receivable is mostly related to the implementation of All-Electronic Tolling (AET) and the increased use of the Toll By Plate (TBP) invoicing process (See Note 2). The decrease in deferred outflows of resources is mostly related to a decrease in deferred outflows of resources from hedging derivatives which is the result of the cumulative change in the fair values. For additional information, see Note 5, Capital Assets, and Note 9, Commitments & Contingencies.

The Commission's total assets and deferred outflows of resources increased by $206.3 million in fiscal year 2020. This 2020 increase is mostly related to an increase in capital assets of $270.0 million. This increase is offset by a decrease in cash and investments of $64.2 million. The increase in capital assets is mostly related to capital asset additions of $652.6 million, offset by $382.1 million of depreciation expense. The decrease in cash and investments is the result of a drop in revenues in the fourth quarter due to the COVID-19 pandemic plus cash defeasances of certain subordinate bonds in May 2020. For additional information, see Note 4, Cash and Investments, and Note 7, Debt.

Total liabilities and deferred inflows of resources increased by $828.4 million in fiscal year 2021 and by $655.2 million in fiscal year 2020. The increases for both fiscal year 2021 and fiscal year 2020 were mainly related to the issuance of senior debt and subordinate debt. See Note 7, Debt, for additional information regarding the new issuances of debt. Please refer to Note 9, Commitments and Contingencies, of the financial statements and to the Events That Will Impact Financial Position section of this MD&A for additional information regarding Act 44, Act 89 and the Amended Funding Agreement between the Commission and PennDOT.

Financial Analysis *(continued)*

Comparative Condensed Statements of Revenues, Expenses, and Changes in Net Position

	Year ended May 31		
	2021	**2020**	**2019**
		(In Thousands)	
Operating			
Operating revenue	$ 1,231,549	$ 1,283,783	$ 1,336,605
Cost of services	(509,381)	(533,931)	(509,753)
Depreciation	(373,924)	(382,088)	(384,104)
Operating income	348,244	367,764	442,748
Nonoperating revenue (expenses)			
Investment earnings	15,336	90,345	83,072
Other nonoperating revenue	12,996	22,693	22,572
Act 44 payments to PennDOT	(450,000)	(450,000)	(450,000)
Capital assets transferred to Commonwealth	(2,769)	(294)	(162,982)
Interest and bond expense	(671,774)	(652,901)	(620,584)
Nonoperating expenses, net	(1,096,211)	(990,157)	(1,127,922)
Loss before capital contributions	(747,967)	(622,393)	(685,174)
Capital contributions	164,147	173,486	229,386
Decrease in net position	(583,820)	(448,907)	(455,788)
Net position at beginning of year, before restatement	(6,691,148)	(6,242,241)	(5,638,762)
Cumulative effect of change in accounting principle	-	-	(147,691)
Net position at beginning of year, as restated	(6,691,148)	(6,242,241)	(5,786,453)
Net position at end of year	$ (7,274,968)	$ (6,691,148)	$ (6,242,241)

For the fiscal years ended May 31, 2021 and 2020, operating and nonoperating revenues totaled $1,259.9 million and $1,396.8 million, respectively, while operating and nonoperating expenses totaled $2,007.8 million and $2,019.2 million, respectively.

Total operating and nonoperating revenues for fiscal year 2021 were $136.9 million, or 9.8% lower than fiscal year 2020. The decrease in nonoperating revenue is due primarily to a $75.0 million decrease in investment earnings, which is the result of unrealized losses on investments due to increasing interest rates and decreasing values for fixed-income investments in fiscal year 2021. The decrease in operating revenue was the result of the substantial decrease in traffic due to the COVID-19 pandemic, which was partially offset with the January 2021 toll increase of 6.0% (which was originally planned for 5.0%) for all E-ZPass rates and most Toll By Plate locations, as well as the full-year impact of the January 2020 toll increase of 6.0% for cash, E-ZPass and Toll By Plate customers.

Financial Analysis *(continued)*

Comparative Condensed Statements of Revenues, Expenses, and Changes in Net Position *(continued)*

Total operating and nonoperating revenues for fiscal year 2020 were $45.5 million, or 3.2% lower than fiscal year 2019. This decrease in revenue was the result of the substantial decrease in traffic due to the COVID-19 pandemic. Vehicle transactions during the fourth quarter of fiscal year 2020 decreased by more than 45.0% compared to the same period of the prior year. The decrease in revenue from this traffic decline was partially offset with the January 2020 toll increase of 6.0% for cash, E-ZPass and Toll By Plate customers, as well as the full year impact of the January 2019 toll increase of 6.0% for cash, E-ZPass and Toll By Plate customers.

Total operating and nonoperating expenses for fiscal year 2021 were $11.4 million lower than fiscal year 2020. This is due to a $24.6 million decrease in cost of services and a $8.2 million decrease in depreciation offset with an $18.9 million increase in interest and bond expenses and $2.5 increase in capital assets transferred to the Commonwealth.

Total operating and nonoperating expenses for fiscal year 2020 were $108.2 million lower than fiscal year 2019, primarily due to a decrease in capital assets transferred to the Commonwealth of $162.7 million.

Capital contributions decreased by $9.3 million in fiscal year 2021 primarily due to a $9.6 million reduction in Oil Company Franchise Tax revenues. Capital contributions decreased by $55.9 million in fiscal year 2020, primarily due to a $47.9 million decrease in Federal reimbursements and an $8.0 million reduction in Oil Company Franchise Tax revenues (see Note 2).

Capital Assets and Debt Administration

Capital Assets

Capital assets consist of land and intangible assets (right-of-way easements), buildings, improvements, equipment, infrastructure, and assets under construction. Infrastructure assets are typically items that are immovable such as highways, bridges and tunnels. The Commission's investment in capital assets as of May 31, 2021 amounted to $13.4 billion of gross asset value with accumulated depreciation of $6.7 billion, leaving a net book value of $6.7 billion. The net book value of capital assets as of May 31, 2020 was $6.4 billion. Capital assets represented 67.0% and 65.9% of the Commission's total assets and deferred outflows of resources as of May 31, 2021 and 2020, respectively.

Financial Analysis *(continued)*

Capital Assets and Debt Administration *(continued)*

Capital Assets (continued)

Assets under construction at the end of fiscal year 2021 were $2,288.3 million, which was $499.6 million more than in fiscal year 2020. Assets under construction at the end of fiscal year 2020 were $1,788.7 million, which was $298.5 million more than in fiscal year 2019. In fiscal year 2021, $122.0 million of constructed capital assets were completed, which was $200.3 million less than the $322.3 million of constructed capital assets completed in fiscal year 2020. In addition to constructed capital assets, the Commission had capital asset additions of approximately $29.8 million and $31.7 million in fiscal years 2021 and 2020, respectively. In fiscal years 2021 and 2020, these additions related to purchases and capital contributions.

A high priority for the Commission is the ongoing full depth roadway total reconstruction of the east/west Turnpike Mainline and Northeast Extension. This work includes the reconstruction and widening of the roadway, the widening of the median, replacement of both mainline and overhead bridges as well as many safety enhancements. To date, approximately 150 miles of total reconstruction have been completed. Currently, approximately ten miles are in construction and approximately 88 miles are in design. Also, the Commission completed one mile of brand-new roadway and 51 miles of roadway resurfacing during fiscal year 2021, helping to maintain a quality-riding surface with a Turnpike System-wide median IRI (International Roughness Index) of 68, which is rated as good. The Commission also completed additional cashless tolling conversions at two different locations on the system and two slope repair projects.

The Commission constructed five new bridges, completely replaced two aging original bridges with new bridges, redecked or rehabilitated another 28 bridges, constructed one new retaining wall and eliminated one bridge. Of the Commission's bridges, 865 bridges that are inspected biennially, 3.1% are rated structurally deficient which is below the national average of 7.5%. All 26 bridges currently rated structurally deficient are either in construction or design for rehabilitation.

Facility projects continue to focus on environmental and safety compliance, and on the maintenance and repair of existing buildings including HVAC, electrical and plumbing systems based on deficiencies identified during facility condition assessments. The construction of the new Southern Beltway Maintenance Facility, the District Trades building and the Greensburg Maintenance Microgrid was completed. The new Eastern Training Facility and Devault Maintenance Facility are both in construction. Design has started on the new Bowmansville, Harrison City and New Cumberland Maintenance Facilities. Design for a new Trades Building and Pennsylvania State Police Barracks in District 3 has also begun.

Electric vehicle (EV) charging stations have been installed at North Somerset, South Somerset, Bowmansville, Peter J. Camiel and Hickory Run Northbound and Southbound service plazas.

Financial Analysis *(continued)*

Capital Assets and Debt Administration *(continued)*

Capital Assets (continued)

The Mon/Fayette Expressway is open to traffic from the Pennsylvania/West Virginia line to PA 51 in Jefferson Hills Borough, a distance of 53 miles. The preliminary design for the remainder of the Mon/Fayette Expressway project, extending from PA Route 51 to Interstate Route 376 in Pittsburgh, has been completed. The current estimates to complete the final 14 miles of the Mon/Fayette Expressway to Interstate Route 376 are in excess of $2.0 billion. Limited funding provided through Act 89 will be used to advance this project.

The Southern Beltway is a series of three independent projects that extend from the Mon/Fayette Expressway near Finleyville to Interstate 376 (I-376) at the Pittsburgh International Airport. One project constructed as part of the Southern Beltway, a six-mile section of toll road in Allegheny County that connects I-376 to U.S. Route 22 (U.S. 22), is in operation. The project from U.S. 22 to Interstate 79 (I-79) is nearing the completion of construction with expected opening in October 2021. The project from I-79 to Mon/Fayette Expressway is currently in the final design phase.

The Commission has no legal obligation to complete the unfinished portions of the Mon/Fayette Expressway and Southern Beltway projects at this time.

The Commission completed the first of three phases of its Pennsylvania Turnpike/I-95 Interchange Project in September 2018. The main objectives of the Interchange Project are to improve the linkage between I-95 and the Turnpike Mainline to create continuity in the interstate system, relieve congestion on local roads which are currently used by travelers to make the connection between I-95 and the Turnpike Mainline, create additional capacity on the Turnpike Mainline and I-95 to accommodate the transfer of traffic from the local roadway system, and improve travel times through the interchange area.

The first phase of the Interchange Project included preparatory work and construction of a portion of the interchange between I-95 and the Turnpike Mainline, including northbound I-95 to the eastbound Turnpike Mainline and westbound Turnpike Mainline to southbound I-95 and is currently under construction. This phase included construction of a new mainline toll plaza and a cashless tolling plaza westbound, which opened in January 2016. This first phase of the Interchange Project was completed and open to traffic in September 2018. The portion of the Turnpike Mainline from the Interchange Project eastward to the Delaware River Bridge in Bucks County has been redesignated as Interstate 95. The second phase of the Interchange Project will include the completion of the reconstruction and widening of the remaining interchange connectors. The third phase will be the construction of a new wider bridge over the Delaware River, replacing the existing bridge. Funding for the initial design costs of the subsequent phases is included in the Fiscal Year 2022 Capital Plan.

The above paragraphs describe the changes in capital assets occurring during the fiscal years ended May 31, 2021 and 2020. Please refer to the capital assets section in the notes to the financial statements (Note 5) for schedules summarizing changes in capital assets.

Financial Analysis *(continued)*

Capital Assets and Debt Administration *(continued)*

Debt Administration – Mainline

In June 2019, the Commission issued $139,815,000 of 2019 Second Series Senior Revenue Bonds at a variable rate with a maturity date of December 1, 2038. The 2019 Second Series Senior Revenue Bonds were issued to refund a portion of the 2013 Series B Senior Revenue Bonds ($100,000,000), 2014 Series B-1 Senior Revenue Bonds ($39,150,000), and for paying the costs of issuing the 2019 Second Series Senior Revenue Bonds.

In June 2019, the Commission issued $722,970,000 of 2019 Series A Subordinate Revenue Bonds at a fixed rate with a maturity date of December 1, 2049. The 2019 Series A Subordinate Revenue Bonds were issued primarily to finance a portion of the cost of making payments to PennDOT in accordance with Act 44 and Act 89 and for paying the costs of issuing the 2019 Series A Subordinate Revenue Bonds.

In August 2019, the Commission issued $341,325,000 of 2019 Series A Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2049. The 2019 Series A Senior Revenue Bonds were issued to finance the cost of various capital expenditures set forth in the Commission's Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges and for paying the costs of issuing the 2019 Series A Senior Revenue Bonds.

In September 2019, the Commission issued $179,815,000 of the 2019 Forward Delivery Series Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2025. The 2019 Forward Delivery Series Senior Revenue Bonds were issued primarily for the current refunding of the 2009 Series B Senior Revenue Bonds ($190,080,000) and for paying the costs of issuing the 2019 Forward Delivery Series Senior Revenue Bonds.

In November 2019, the Commission issued, as a Direct Borrowing, $52,000,000 2019 EB-5 Loan (Third Tranche) at a fixed rate with a maturity date of November 5, 2024. The Commission is borrowing this money to fund a portion of the costs of certain capital projects included in the Commission's current Ten-Year Capital Plan and for paying the costs of issuing the 2019 EB-5 Loan.

In November 2019, the Commission issued $86,730,000 of 2019 First Series Subordinate Revenue Refunding Bonds (Federally Taxable) at a fixed rate with a maturity date of December 1, 2042. The 2019 First Series Subordinate Revenue Refunding Bonds were issued to provide funds for refunding a portion of the Commission's 2010 Series C-1 Subordinate Revenue Bonds ($1,540,000), 2011 Series B Subordinate Revenue Bonds ($40,130,000), 2012 Series A Subordinate Revenue Bonds ($25,910,000), 2012 Series B Subordinate Revenue Bonds ($12,685,000) and for paying the costs of issuing the 2019 First Series Subordinate Revenue Refunding Bonds.

Financial Analysis *(continued)*

Capital Assets and Debt Administration *(continued)*

Debt Administration – Mainline (continued)

In November 2019, the Commission issued $151,130,000 of 2019 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds (Federally Taxable) at a fixed rate with a maturity date of December 1, 2043. The 2019 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds were issued to provide funds for refunding a portion of the Commission's 2010 Series B-1 Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($13,780,000), 2011 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($23,340,000), 2012 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($28,610,000), 2012 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($35,270,000), and 2013 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($39,765,000) and for paying the costs of issuing the 2019 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds.

In January 2020, the Commission issued, as a Direct Borrowing, $36,500,000 2020 EB-5 Loan (Fourth Tranche) at a fixed rate with a maturity date of January 21, 2025. The Commission is borrowing this money to fund a portion of the costs of certain capital projects included in the Commission's current Ten-Year Capital Plan and for paying the costs of issuing the 2020 EB-5 Loan.

In January 2020, the Commission issued $234,320,000 of 2020 First Series Senior Revenue Bonds (Federally Taxable) at a fixed rate with a maturity date of December 1, 2043. The 2020 First Series Senior Revenue Bonds were issued to refund a portion of the 2012 Series A Senior Revenue Bonds ($99,380,000), 2013 Series C Senior Revenue Bonds ($115,580,000), and for paying the costs of issuing the 2020 First Series Senior Revenue Bonds.

In February 2020, the Commission issued $134,310,000 of 2020 First Series Subordinate Revenue Refunding Bonds (Federally Taxable) at a fixed rate with a maturity date of December 1, 2043. The 2020 First Series Subordinate Revenue Refunding Bonds were issued to provide funds for refunding a portion of the Commission's 2010 Series B-1 Subordinate Revenue Bonds ($11,285,000), 2011 Series B Subordinate Revenue Bonds ($3,820,000), 2012 Series A Subordinate Revenue Bonds ($29,555,000), 2012 Series B Subordinate Revenue Bonds ($29,240,000), 2013 Series A Subordinate Revenue Bonds ($28,555,000), 2013 Series B-1 Subordinate Revenue Bonds ($18,200,000), 2013 Series B-3 Subordinate Revenue Bonds ($10,215,000) and for paying the costs of issuing the 2020 First Series Subordinate Revenue Refunding Bonds.

Financial Analysis *(continued)*

Capital Assets and Debt Administration *(continued)*

Debt Administration – Mainline (continued)

In February of 2020, the Commission issued $92,750,000 of 2020 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds (Federally Taxable) at a fixed rate with a maturity of December 1, 2043. The 2020 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds were issued to provide funds for refunding a portion of the Commission's 2010 Series B-1 Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($8,790,000), 2011 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($25,000), 2012 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($1,805,000), 2012 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($15,230,000), 2013 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($20,330,000), 2013 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($38,080,000) and for paying the costs of issuing the 2020 First Series Motor License Fund-Enhanced Subordinate Revenue Refunding Bonds.

In May 2020, the Commission cash defeased the June 1, 2020 maturity of the Commission's 2008 Series B Subordinate Revenue Bonds ($7,595,000), 2016 First Series Subordinate Revenue Refunding Bonds ($42,020,000), and 2017 Series B-2 Subordinate Revenue Bonds ($210,000).

In June 2020, the Commission issued $225,820,000 of 2020 Series Senior Revenue Bonds at a variable rate with a maturity date of December 1, 2039. The 2020 Series Senior Revenue Bonds were issued to refund a portion of the 2013 Series B Senior Revenue Bonds ($100,000,000), 2014 Series B-1 Senior Revenue Bonds ($100,000,000), 2018 Series A-1 Senior Revenue Bonds ($25,000,000) and for paying the costs of issuing the 2020 Series Senior Revenue Bonds.

In August 2020, the Commission issued $100,500,000 of 2020 Series A Senior Revenue Bonds at a variable rate with a maturity date of December 1, 2050. The 2020 Series A Senior Revenue Bonds were issued primarily to finance the cost of various capital expenditures set forth in the Commission's Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges and for paying the costs of issuing the 2020 Series A Senior Revenue Bonds.

In October 2020, the Commission issued $241,625,000 of 2020 Series B Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2050. The 2020 Series B Senior Revenue Bonds were primarily issued to finance the cost of various capital expenditures set forth in the Commission's Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges and for paying the costs of issuing the 2020 Series B Senior Revenue Bonds.

Financial Analysis *(continued)*

Capital Assets and Debt Administration *(continued)*

Debt Administration – Mainline (continued)

In November 2020, the Commission cash defeased the December 1, 2020 maturity of the Commission's 2011 Series A Senior Revenue Bonds ($15,925,000), 2012 Series A Senior Revenue Bonds ($4,310,000), 2013 Series C Senior Revenue Bonds ($1,500,000), 2014 Series A Senior Revenue Bonds ($455,000), 2014 Series C Senior Revenue Bonds ($2,275,000) , 2015 Series A-1 Senior Revenue Bonds ($490,000), 2015 Series B Senior Revenue Bonds ($1,295,000), 2016 Series A-1 Senior Revenue Bonds ($520,000), 2017 Series A-1 Senior Revenue Bonds ($6,210,000), 2019 Series A Senior Revenue Bonds ($5,405,000), and 2019 Forward Delivery Senior Revenue Bonds ($26,230,000).

In November 2020, the Commission cash defeased the December 1, 2020 maturity of the Commission's 2010 Series C-3 Subordinate Revenue Bonds ($3,045,115 with an accretion value of $4,645,085), 2011 Series B Subordinate Revenue Bonds ($3,735,000), 2012 Series A Subordinate Revenue Bonds ($3,550,000), 2012 Series B Subordinate Revenue Bonds ($3,675,000), 2013 Series A-1 Subordinate Revenue Bonds ($1,445,000), 2013 Series B-1 Subordinate Revenue Bonds ($1,805,000), 2014 Series A-1 Subordinate Revenue Bonds ($2,680,000), 2015 Series B Subordinate Revenue Bonds ($405,000), 2016 Series A-1 Subordinate Revenue Bonds ($380,000), 2016 Third Series Subordinate Revenue Taxable Refunding Bonds ($8,110,000), 2019 First Series Subordinate Revenue Taxable Refunding Bonds ($205,000), and 2020 First Series Subordinate Revenue Taxable Refunding Bonds ($11,845,000).

In January 2021, the Commission issued $465,730,000 of 2021 Series A Subordinate Revenue Bonds at a fixed rate with a maturity date of December 1, 2050. The 2021 Series A Subordinate Revenue Bonds were primarily issued to finance a portion of the costs of making payments to PennDOT in accordance with Act 44 and Act 89 and for paying the costs of issuing the 2021 Series A Subordinate Revenue Bonds.

In March 2021, the Commission made a draw of $150,000,000 on the PNC Bank revolving Line of Credit, as a Direct Borrowing, at a variable rate with a maturity date of June 2, 2021. The draw was utilized to provide funds to repay the 2016 EB-5 Loan 1st-3rd Tranches ($150,000,000).

In April 2021, the Commission issued $250,000,000 of 2021 Series A Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2051. The 2021 Series A Senior Revenue Bonds were issued primarily to repay outstanding amounts under the Commission's revolving Line of Credit with PNC Bank ($150,000,000), repay the 2016 EB-5 Loan Fourth Tranche ($50,000,000), finance the cost of various capital expenditures set forth in the Commission's Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges and for paying the costs of issuing the 2021 Series A Senior Revenue Bonds.

Financial Analysis *(continued)*

Capital Assets and Debt Administration *(continued)*

The preceding paragraphs describe debt activity occurring during the fiscal years ended May 31, 2021 and 2020. Please refer to the debt and commitments and contingencies notes to the financial statements (Notes 7 and 9) for more detailed schedules and descriptions of long-term debt and swap activity.

Events That Will Impact Financial Position

On July 18, 2007, Act 44 was enacted, creating a "public-public partnership" between the Commission and PennDOT to provide funding for roads, bridges and transit throughout the Commonwealth. Subsequently, in order to, among other things, effectuate the provisions of Act 44 requiring the Commission to make substantial annual payments to PennDOT, as in the following paragraphs, the Commission and PennDOT entered into a Lease and Funding Agreement (the Act 44 Funding Agreement), incorporating many of the terms of Act 44.

The Act 44 Funding Agreement also granted the Commission the option to lease the portion of Interstate 80 (I-80) located in the Commonwealth from PennDOT upon, among other things, the approval of the Federal Highway Administration (FHWA) of the conversion of such portion into a toll road (the Conversion). The Conversion was not approved by FHWA and neither the Commission nor PennDOT appealed the decision. The Commission did not exercise its option to lease such portion of I-80, and the period during which the Commission could exercise its option under the Act 44 Funding Agreement lapsed on October 14, 2010 without the Commission effectuating the Conversion or having the ability to do so in the future, leaving all legal, financial and operational responsibility for I-80 solely with PennDOT.

Pursuant to Act 44 and the Act 44 Funding Agreement, the Commission is obligated to make scheduled annual payments to PennDOT (*Act 44/Act 89 Payments*). Originally such payments in the amount of $450.0 million were through 2057, payable in equal quarterly installments, with $200.0 million of the scheduled annual payments supporting road and bridge projects and $250.0 million supporting transit projects throughout the Commonwealth. See the following paragraphs for subsequent changes to such annual payments.

On November 25, 2013, Act 89 was enacted to provide (i) substantial revenue enhancements to support investment in the Commonwealth's aging transportation infrastructure, and (ii) substantial reductions in the Commission's obligations with respect to the Act 44/Act 89 Payments. The revenue enhancements providing additional funds each year for investment in the Commonwealth's transportation infrastructure were fully implemented in fiscal year 2018.

Revisions to the Commission's Act 44/Act 89 Payment obligations enacted under Act 89 were implemented by Amendment Number One to Lease and Funding Agreement (the *Act 89 Amendment* and together with the Act 44 Funding Agreement, the *Original Amended Funding Agreement*) executed by the Commission and PennDOT on April 4, 2014.

Events That Will Impact Financial Position *(continued)*

In accordance with Act 89 and the Original Amended Funding Agreement, the Commission's aggregate annual Act 44/Act 89 Payment to PennDOT for fiscal year 2014 through fiscal year 2022 is $450.0 million, with at least $30.0 million of such annual amount required to be paid from current revenues and the remainder expected to be funded by the proceeds of bonds issued under the Subordinate Revenue Indenture.

The Original Amended Funding Agreement was subsequently further amended, on July 31, 2018, by Amendment Number Two to Lease and Funding Agreement (the *Amendment Two)* and on June 11, 2020, by Amendment Number Three to the Lease and Funding Agreement (the *Amendment Three*, and together with the Original Amended Funding Agreement and Amendment Two, the *Amended Funding Agreement*) both of which were executed by all parties to provide current year adjustments for certain due dates for Act 44/Act 89 Payments in fiscal years 2019 through 2021.

As a result of the materially adverse impact of the COVID-19 pandemic, the Commission and PennDOT agreed, pursuant to Amendment Three, to extend the payment dates for the Commission's July 2020 and October 2020 scheduled payments of $112.5 million each, to January 29, 2021. The Commission ultimately paid the full $450.0 million within fiscal year 2021. All regularly scheduled payments for the fiscal year ended May 31, 2020 were made. For both fiscal years, the amounts are recorded as nonoperating expenses.

Act 89 relieves the Commission from over $15.0 billion in future Act 44/Act 89 Payments to PennDOT during fiscal years 2023 through 2057 (the term of the Amended Funding Agreement), by reducing the Commission's aggregate annual Act 44/Act 89 Payments to PennDOT to $50.0 million, which amount shall be paid from then-current revenues of the Commission.

The provisions of Act 44 and the Amended Funding Agreement require the Commission to provide a financial plan to the Secretary of the Budget of the Commonwealth on, or before, June 1 of each year that describes the Commission's proposed operating and capital expenditures, borrowings, liquidity and other financial management covenants and policies, estimated toll rates and all other revenue and expenditures for the ensuing fiscal year. Act 44 provides that the financial plan shall demonstrate that the operation of the Commission can reasonably be anticipated to result in having sufficient funds to make payments due to PennDOT pursuant to the Amended Funding Agreement and Act 44 during the ensuing and future fiscal years. It is important to note that the financial plan does not cover the funding needs for the Mon/Fayette or the Southern Beltway projects, which are separately financed by certain dedicated tax and fee revenue sources of the Commonwealth.

The Commission delivered to the Secretary of the Budget its Financial Plan for Fiscal Year 2022 on June 1, 2021 (the Fiscal Year 2022 Financial Plan). The Fiscal Year 2022 Financial Plan indicated that in fiscal year 2021, the Commission was able to meet all of its financial covenants and obligations under the Enabling Acts and was able to progress with its then-current Capital Plan.

Events That Will Impact Financial Position *(continued)*

Fiscal Year 2021 Financial Plan

As a result of the impact of the COVID-19 pandemic on the finances and operations of the Commission, the Commission delivered to the Secretary of the Budget its Financial Plan for Fiscal Year 2021 on June 1, 2020 (the Fiscal Year 2021 Financial Plan), and subsequently amended the Fiscal Year 2021 Financial Plan on December 30, 2020 (the Amended Fiscal Year 2021 Financial Plan).

The Fiscal Year 2021 Financial Plan reflected the terms of the Amended Funding Agreement. The Fiscal Year 2021 Financial Plan also assumed the adoption of the Commission's Fiscal Year 2021 Ten-Year Capital Plan which was adopted by the Commission in July 2020. The Fiscal Year 2021 Financial Plan factored then-current adverse effects of COVID-19 pandemic and reflected various cost containment and efficiency measures the Commission implemented to try to mitigate the impact of the COVID-19 pandemic, which included, (i) instituting a hiring freeze for both "non-essential" management and union positions; (ii) reducing capital spending by approximately 15%; (iii) offering an early retirement program to management employees; (iv) cutting operating expenses; (v) implementing a work from home policy where feasible; (vi) transitioning to AET collections; (vii) delaying Act 44/Act 89 Payments until January 29, 2021; and (viii) lowering projected fiscal year 2021 debt service through cash defeasances. Additional measures in the Fiscal Year 2021 Financial Plan included, acceleration of the timing for the planned January 2021 toll increases to October 2020 (which ultimately was not accelerated); an increase of the planned January 2021 toll increase from 5% to 6%; an additional 45% increase for Toll By Plate customers on the ticket system and the Mon-Fayette Expressway; and reducing the annual growth of the Commission's operating budget from the planned 4% annual level to 2% annually for fiscal years 2021-2024. The additional increase for Toll By Plate customers was necessary to mitigate the loss of revenue due to unpaid Toll By Plate transactions.

The Fiscal Year 2021 Financial Plan was based on data contained in the May 2020 Bring Down Letter, and likewise reflected the downward revision to estimated toll revenue and traffic volume versus that which was contained in the April 2019 Bring Down Letter. The Fiscal Year 2021 Financial Plan and the May 2020 Bring Down Letter also assumed a toll increase effective October 2020. The Commission later determined that the planned October 2020 toll increase would instead be effective January 2021. CDM Smith prepared the September 2020 Supplemental Letter to the May 2020 Bring Down Letter addressing the effect of this delay on toll revenue.

As part of the continued efforts to actively respond to the ongoing adverse financial effects of the COVID-19 pandemic and Commission policy determinations, the Commission requested a six-month update from CDM Smith to the May 2020 Bring Down Letter. CDM Smith prepared the December 2020 Bring Down Letter, which included a further downward revision to estimated toll revenue and traffic in fiscal year 2021 and beyond, notably reflecting the impacts of the delay in the previously planned October 2020 toll increase and the early permanent conversion to AET, as implemented on June 2, 2020, which were not contained in the May 2020 Bring Down Letter.

Events That Will Impact Financial Position *(continued)*

Fiscal Year 2021 Financial Plan *(continued)*

The Amended Fiscal Year 2021 Financial Plan reflected the revisions to the 2018 Traffic Study as contained in the December 2020 Bring Down Letter. Minor revisions to the Fiscal Year 2021 operating budget and revisions to the funding of the Ten-Year Capital Plan were also included in the Amended Fiscal Year 2021 Financial Plan.

Fiscal Year 2022 Financial Plan

The Fiscal Year 2022 Financial Plan defines the reasonably expected revenues the Commission will generate necessary to meet required Turnpike operating and maintenance expenses, debt service payments, capital expenses, and liquidity requirements, and includes the adoption of the Commission's Fiscal Year 2022 Ten-Year Capital Plan which was adopted by the Commission in May 2021. The Fiscal Year 2022 Financial Plan indicates that in fiscal year 2021, the Commission was able to meet all of its financial covenants and obligations under the Enabling Acts and was able to progress with its then-current Capital Plan. A copy of the Fiscal Year 2022 Financial Plan is available on the Commission's website.

Like the Fiscal Year 2021 Financial Plan and the Amended Fiscal Year 2021 Financial Plan, the Fiscal Year 2022 Financial Plan continues to factor the current effects of the COVID-19 pandemic, as well as the various cost containment and efficiency measures the Commission has implemented in an attempt to mitigate the impact of the COVID-19 pandemic.

The Fiscal Year 2022 Financial Plan reflects anticipated fiscal year 2022 toll revenues that include the full fiscal year impact of the 6% toll increase implemented in January 2021, the partial fiscal year impact of the anticipated October 2021 implementation of the toll schedule on the Southern Beltway, and the partial fiscal year impact of the anticipated January 2022 toll increase, yielding an average toll rate increase of 5%. In July 2021, the Commissioners approved both the October 2021 toll schedule for the Southern Beltway and the January 2022 toll increases of 5% across the balance of the System. Toll revenues are projected to increase by 16.3% to $1.386 billion in fiscal year 2022, consistent with the Traffic Study. Other revenues, primarily consisting of ETC-related fees, lease and rental fees and concession fees, result in total projected operating revenues of $1.410 billion for fiscal year 2022. The fiscal year 2022 operating budget adopted May 4, 2021, projects fiscal year 2022 operating expenses to be $417 million, which is 2.1% lower than the prior-year budgeted amount of $426 million. The Fiscal Year 2022 Financial Plan projects Senior Revenue Bond debt service coverage for fiscal year 2021 to be 3.41x, and the Subordinate Revenue Bond (as defined herein) and Subordinate Special Revenue Bond (as defined herein) debt service coverage ratios to be 1.63x and 1.48x, respectively.

Events That Will Impact Financial Position *(continued)*

Fiscal Year 2022 Financial Plan *(continued)*

Capital expenditures are budgeted to be $661 million for fiscal year 2022, an increase of $192 million over the budgeted fiscal year 2021 Capital Plan amount. As noted, the Fiscal Year 2022 Capital Plan restores capital investments to a level more consistent with the Commission's $6.52 billion Fiscal Year 2015 Capital Plan and aligns with the projected decrease in Act 44/Act 89 Payments which will increase the Commission's funding capacity. The Fiscal Year 2022 Financial Plan assumes that the Commission will retain a liquidity balance equal to at least 10% of annual budgeted revenues.

To fund its fiscal year 2022 capital expenditures, the Commission expects to utilize $123 million of previously unused bond proceeds, $195 million in pay-as-you-go funding, as well as $343 million in additional Senior Revenue Bond proceeds. Pay-as-you-go funding will be deployed to ensure financial flexibility. Fiscal year 2022 Act 44/Act 89 Payments were paid in full on July 28, 2021. Depending upon market conditions, the Commission may refund additional outstanding debt for savings.

The Fiscal Year 2022 Financial Plan concludes that the Commission will continue to meet all of its indenture covenants and other obligations through the fiscal year 2057. However, as a forward-looking report, the Fiscal Year 2022 Financial Plan makes certain assumptions, including future toll increases, to reach its conclusion that the financial covenants, obligations under the Enabling Acts, and capital needs will be met beyond fiscal year 2022. Key among these assumptions is the Commission's ongoing ability to raise all tolls throughout the System.

The Fiscal Year 2022 Financial Plan assumes the $450.0 million Act 44/Act 89 Payment obligations required by the Enabling Acts through fiscal year 2022 and the reduced level of $50.0 million Act 44/Act 89 Payments from fiscal year 2023 through fiscal year 2057. No assurances can be made by the Commission with respect to the assumptions made or conclusions reached in the Fiscal Year 2022 Financial Plan.

The preceding paragraphs provide a brief overview of Act 44 and Act 89 and their requirements. Please refer to the commitments and contingencies section in the Notes to the Financial Statements (Note 9) for additional information regarding the Commission's commitments under the Amended Funding Agreement. See also Note 15 for Subsequent Events. Furthermore, legislation may be introduced that could affect the Commission and its obligations pursuant to Act 44 and Act 89. However, the Commission cannot predict what other legislation may be considered by the General Assembly during the 2021-2022 or future legislative sessions or if any other proposals or initiatives may lead to the adoption of legislation that may affect the Commission.

Events That Will Impact Financial Position *(continued)*

Litigation

Owner Operator Independent Drivers Association, Inc. v. Pennsylvania Turnpike Commission

On March 15, 2018, several individuals, entities and associations involved in or related to the commercial trucking industry (the Trucking Plaintiffs) filed a class action lawsuit against the Commission, several individuals in their individual capacity and in their official capacity related to the Commission, an individual in her individual capacity and in her official capacity as Chair of the Commission and as Secretary of Transportation, and Governor Wolf, in both his individual and official capacity (the Defendants). The litigation was captioned *Owner Operator Independent Drivers Association, Inc. et al. v. Pennsylvania Turnpike Commission et al.*, No. 1:18-cv-00608-SHR (United States District Court for the Middle District of Pennsylvania) (the Lawsuit). The Trucking Plaintiffs alleged that Act 44, as amended by Act 89 (Act 44/89), violated the Commerce Clause and the right to travel under the U.S. Constitution, either facially or as applied, because the Commission improperly imposes Turnpike tolls beyond that which is necessary for the operation and maintenance of the Turnpike System and that the Commission expends toll revenues for purposes other than the operation and maintenance of the Turnpike System.

The Lawsuit sought, among other things, the following injunctive remedies: (1) a permanent injunction enjoining the Commission from issuing any further bonds or incurring any additional debt for the purpose of making Act 44/89 payments; and (2) a permanent injunction prohibiting the Commission from using toll revenues to make payments on outstanding bonds issued to meet Act 44/89 obligations. Moreover, the lawsuit sought certain monetary damages including a refund of a portion of certain tolls allegedly imposed upon the Trucking Plaintiffs' use of the Turnpike System in excess of what was reasonably necessary to pay for the cost of operating and maintaining the Turnpike System, together with any legally applicable interest and other compensation.

The Commission along with all of the other Defendants vigorously defended Act 44/89 and the propriety of the Commission's imposition and use of the Turnpike toll revenues in court.

On April 4, 2019, Judge Yvette Kane of the United States District Court for the Middle District of Pennsylvania (the District Court) issued a decision in which the District Court determined that tolls assessed by the Commission do not unduly burden interstate commerce or interfere with the constitutional right to travel and the Trucking Plaintiffs' complaint failed to state a claim upon which relief may be granted for violations of the dormant Commerce Clause or the constitutional right to travel. Accordingly, the District Court granted the Defendants' motions to dismiss the Trucking Plaintiffs' complaint. On August 13, 2019, the United States Court of Appeals for the Third Circuit affirmed the decision of the District Court, and subsequently denied the Trucking Plaintiffs' petition both for a panel rehearing and an en banc rehearing.

Events That Will Impact Financial Position *(continued)*

Litigation *(continued)*

Owner Operator Independent Drivers Association, Inc. v. Pennsylvania Turnpike Commission (continued)

On December 11, 2019, the Trucking Plaintiffs filed a petition for a writ of certiorari in the United States Supreme Court (the Supreme Court) asking the Supreme Court to review the decision of the Third Circuit. On January 27, 2020, the Supreme Court denied the Trucking Plaintiffs' petition for a writ of certiorari asking the Supreme Court to review the decision of the Third Circuit. *Owner Operator Independent Drivers Association, Inc. et al. v. Pennsylvania Turnpike Commission et al.*, cert. denied (U.S. Jan 27, 2020) (No. 19-762). This denial by the Supreme Court left undisturbed the favorable decision of the Third Circuit. The Trucking Plaintiffs did not file a petition for rehearing, as permitted by the Supreme Court rules, and the period to file such a petition expired on February 21, 2020. Thus, the class action lawsuit has concluded favorably to the Commission.

Julie E. Thomas v. TransCore, LP & Pennsylvania Turnpike Commission

On April 28, 2021, Julie Thomas (the Plaintiff), an E-ZPass customer and frequent traveler on the System, filed a putative class action lawsuit against the Commission, and TransCore, L.P. (TransCore), as the vendor that provides, operates, and maintains the Electronic Toll Collection Customer Service Center and Violations Processing Center.

The Commission and TransCore were served with the complaint on May 24, 2021. The complaint centers mostly on video tolls (V-Tolls). A V-Toll is an E-ZPass charge that is assessed when, for any reason, the customer's E-ZPass transponder is not read on both the customer's entry and exit from the System, resulting in a toll assessment based upon a video snapshot of the customer's license plate.

The Plaintiff asserts claims for conversion and unjust enrichment against the Commission, as well as additional claims against TransCore. The Plaintiff principally alleges that (i) the V-Tolls charged to her account are excessive and amount to disproportionate fines and penalties, (ii) refunds should be made to the customer's bank accounts, not the E-ZPass account, and (iii) the Commission and TransCore failed to notify E-ZPass customers that newly installed tolling equipment is incompatible with older E-ZPass transponders; resulting in more V-Tolls and overall higher tolls. Based on these allegations, the Plaintiff seeks, among other things, compensatory and punitive damages, as well as attorney's fees and costs, and asks the Court to certify a class action.

On June 14, 2021, TransCore filed a notice of removal seeking to move this matter from Dauphin County Court of Common Pleas. The matter was removed to the U.S. District Court for the Eastern District of Pennsylvania. On June 21, 2021, both the Commission and TransCore filed motions to dismiss. In response, Plaintiff filed a motion to remand the action to state court, which the Commission and TransCore have opposed.

Events That Will Impact Financial Position *(continued)*

Litigation *(continued)*

Julie E. Thomas v. TransCore, LP & Pennsylvania Turnpike Commission (continued)

The Commission cannot, at this time, predict the ultimate outcome, but will continue to assert all available defenses against these allegations in court.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Statements of Net Position – Business-type activities
May 31, 2021 and 2020
(in thousands)

	2021	2020
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES		
Current assets		
Cash and cash equivalents	$ 225,679	$ 198,564
Investments	52,563	78,655
Accounts receivable - net of allowance of $293.5 million and $229.6 million as of May 31, 2021 and 2020, respectively	118,340	65,631
Accrued interest receivable	1,845	2,066
Inventories	19,203	24,685
Restricted current assets		
Cash and cash equivalents	601,489	707,766
Investments	419,095	341,586
Accounts receivable	18,004	3,180
Accrued interest receivable	3,987	15,049
Total current assets	1,460,205	1,437,182
Noncurrent assets		
Investments		
Investments	425,849	354,491
Investments restricted	829,994	865,449
Total investments	1,255,843	1,219,940
Capital assets not being depreciated		
Land and intangibles	442,257	425,643
Assets under construction	2,288,309	1,788,685
Capital assets being depreciated		
Buildings	987,325	983,739
Improvements other than buildings	160,973	151,066
Equipment	581,800	706,803
Infrastructure	8,964,668	8,946,265
Total capital assets before accumulated depreciation	13,425,332	13,002,201
Less: Accumulated depreciation	6,749,286	6,592,200
Total capital assets after accumulated depreciation	6,676,046	6,410,001
Other assets		
Prepaid bond insurance costs	5,536	5,875
Other assets	27,084	26,646
Total other assets	32,620	32,521
Total noncurrent assets	7,964,509	7,662,462
Total assets	9,424,714	9,099,644
Deferred outflows of resources from hedging derivatives	119,058	217,154
Deferred outflows of resources from refunding bonds	305,548	343,723
Deferred outflows of resources from pensions	50,676	37,837
Deferred outflows of resources from OPEB	70,674	27,715
Total deferred outflows of resources	545,956	626,429
Total assets and deferred outflows of resources	$ 9,970,670	$ 9,726,073

The accompanying notes are an integral part of these financial statements.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Statements of Net Position – Business-type activities *(continued)*
May 31, 2021 and 2020
(in thousands)

	2021	2020
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES		
Current liabilities		
Accounts payable and accrued liabilities	$ 549,237	$ 517,240
Current portion of debt	480,170	573,880
Unearned Income	105,702	90,369
Total current liabilities	1,135,109	1,181,489
Noncurrent liabilities		
Debt, less current portion, net of unamortized premium of $1,262.9 million and $1,143.1 million in 2021 and 2020, respectively	15,323,360	14,383,020
Net pension liability	288,472	329,189
Net OPEB liability	14,791	1,845
Other noncurrent liabilities	278,928	355,661
Total noncurrent liabilities	15,905,551	15,069,715
Total liabilities	17,040,660	16,251,204
Deferred inflows of resources from hedging derivatives	7,688	-
Deferred inflows of resources from service concession arrangements	101,028	106,450
Deferred inflows of resources from refunding bonds	8,415	11,634
Deferred inflows of resources from pensions	83,563	42,492
Deferred inflows of resources from OPEB	4,284	5,441
Total deferred inflows of resources	204,978	166,017
Total liabilities and deferred inflows of resources	17,245,638	16,417,221
NET POSITION		
Net investment in capital assets	(1,115,845)	(903,089)
Restricted for construction purposes	276,847	411,313
Restricted for debt service	45,913	42,619
Unrestricted	(6,481,883)	(6,241,991)
Total net position	$ (7,274,968)	$ (6,691,148)

The accompanying notes are an integral part of these financial statements.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Statements of Revenues, Expenses, and Changes in Net Position – Business-type activities
Years Ended May 31, 2021 and 2020
(in thousands)

	2021	2020
Operating revenues		
Fares - net of discounts, adjustments and bad debt expense of $68.4 million and $41.8 million for the years ended May 31, 2021 and 2020, respectively	$ 1,190,419	$ 1,247,779
Other	41,130	36,004
Total operating revenues	1,231,549	1,283,783
Operating expenses		
Cost of services	509,381	533,931
Depreciation	373,924	382,088
Total operating expenses	883,305	916,019
Operating income	348,244	367,764
Nonoperating revenues (expenses)		
Investment earnings	15,336	90,345
Other nonoperating revenues	12,996	22,693
Act 44 and Act 89 payments to PennDOT	(450,000)	(450,000)
Capital assets transferred to the Commonwealth	(2,769)	(294)
Interest and bond expense	(671,774)	(652,901)
Nonoperating expenses, net	(1,096,211)	(990,157)
Loss before capital contributions	(747,967)	(622,393)
Capital contributions	164,147	173,486
Decrease in net position	(583,820)	(448,907)
Net position at beginning of year	(6,691,148)	(6,242,241)
Net position at end of year	$ (7,274,968)	$ (6,691,148)

The accompanying notes are an integral part of these financial statements.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Statements of Cash Flows – Business-type activities
Years Ended May 31, 2021 and 2020
(in thousands)

	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from customer tolls and deposits	$ 1,196,461	$ 1,275,558
Cash payments for goods and services	(394,501)	(354,160)
Cash payments to employees	(154,324)	(161,761)
Cash received from other operating activities	9,082	16,572
Net cash provided by operating activities	656,718	776,209
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from sales and maturities of investments	2,746,488	4,179,110
Interest received on investments	25,335	35,659
Purchase of investments	(2,840,638)	(4,150,842)
Net cash (used in) provided by investing activities	(68,815)	63,927
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Capital grants received from other governments	1,262	5,845
Proceeds from Motor License Registration fees	28,000	28,000
Proceeds from Oil Company Franchise Tax	114,176	141,665
Construction and acquisition of capital assets	(646,603)	(659,425)
Proceeds from sale of capital assets	2,431	2,057
Payments for bond and swap expenses	(7,315)	(5,118)
Payments for cash defeasances	(66,225)	-
Payments for debt refundings	(225,000)	(574,829)
Payments for bond maturities	(28,700)	(109,150)
Repayment of EB-5 Loan	(200,442)	-
Interest paid on debt	(332,533)	(330,711)
Interest subsidy from Build America Bonds	31,633	10,533
Swap suspension payments received	-	2,443
Proceeds from draw on line of credit	150,000	-
Repayment of draw on line of credit	(150,000)	-
Proceeds from debt issuances	936,604	1,073,553
Net cash used in capital and related financing activities	(392,712)	(415,137)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
Cash payments to PennDOT	(450,000)	(900,000)
Payments for bond and swap expenses	(2,744)	(8,636)
Payments for cash defeasances	(43,092)	(51,164)
Payments for debt refundings	-	(481,197)
Payments for debt maturities	(13,075)	(76,905)
Interest paid on debt	(297,054)	(285,859)
Proceeds from debt issuances	531,612	1,285,176
Net cash used in noncapital financing activities	(274,353)	(518,585)
Decrease in cash and cash equivalents	(79,162)	(93,586)
Cash and cash equivalents at beginning of year	906,330	999,916
Cash and cash equivalents at end of year	$ 827,168	$ 906,330

The accompanying notes are an integral part of these financial statements.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Statements of Cash Flows – Business-type activities *(continued)*
Years Ended May 31, 2021 and 2020
(in thousands)

	2021	2020
Reconciliation of operating income to net cash provided by operating activities		
Operating income	$ 348,244	$ 367,764
Adjustments to reconcile operating income to net cash provided by operating activities		
Depreciation	373,924	382,088
Change in operating assets and liabilities		
Accounts receivable	(52,669)	12,989
Inventories	5,482	(5,395)
Other assets	(16)	(7)
Deferred outflows of resources from pensions	(12,839)	38,855
Deferred outflows of resources from OPEB	(42,959)	11,610
Accounts payable and accrued liabilities	25,485	12,652
Net pension liability	(40,717)	(56,632)
Net OPEB liability	12,946	(11,089)
Other noncurrent liabilities	(77)	1,456
Deferred inflows of resources from pensions	41,071	20,961
Deferred inflows of resources from OPEB	(1,157)	957
Net cash provided by operating activities	$ 656,718	$ 776,209
Reconciliation of cash and cash equivalents to the statements of net position		
Cash and cash equivalents	$ 225,679	$ 198,564
Restricted cash and cash equivalents	601,489	707,766
Total cash and cash equivalents	$ 827,168	$ 906,330

Noncash Investing, Capital and Related Financing and Noncapital Financing Activities

The Commission recorded a net decrease of $10.1 million and a net increase of $50.7 million in the fair value of its investments not reported as cash equivalents for the years ended May 31, 2021 and 2020, respectively.

The Commission recorded $58.9 million and $57.7 million for the amortization of bond premiums for the years ended May 31, 2021 and 2020, respectively.

The accompanying notes are an integral part of these financial statements.

Noncash Investing, Capital and Related Financing and Noncapital Financing Activities *(continued)*

As indicated in Note 7, the Commission refunded and cash defeased various bonds in both fiscal years 2021 and 2020. The fiscal year 2021 refundings and cash defeasances resulted in a $5.8 million reclassification from bond premiums (discounts) to deferred inflows of resources from refundings. The fiscal year 2020 refundings and cash defeasances resulted in a $19.1 million reclassification from bond premiums (discounts) to deferred outflows of resources from refunding bonds and a $41.7 million reclassification from bond premiums (discounts) to deferred inflows of resources from refundings. Additionally, the Commission recorded $64.5 million and $40.7 million in expenses for amortization of deferred outflows/inflows of resources from refunding bonds for the years ended May 31, 2021 and 2020, respectively.

The Commission recorded $0.3 million in expenses for amortization of prepaid bond insurance costs for the years ended May 31, 2021 and 2020, respectively.

The Commission recorded an interest expense reduction of $5.9 million and $3.4 million for the years ended May 31, 2021 and 2020, respectively, related to GASB Statement No. 53 entries.

The Commission recognized total capital contributions of $164.1 million for the fiscal year ended May 31, 2021. Cash received of $143.4 million for the fiscal year ended May 31, 2021 is reported in the capital and related financing activities of this statement. The $20.7 million difference between capital contributions and cash received is the result of a $14.9 million increase in receivables related to these capital contributions and a $5.8 million noncash capital contribution related to capital assets provided by service plaza operators. The Commission recognized total capital contributions of $173.5 million for the fiscal year ended May 31, 2020. Cash received of $175.5 million for the fiscal year ended May 31, 2020 is reported in the capital and related financing activities of this statement. The $2.0 million difference between capital contributions and cash received is the result of a $7.8 million decrease in receivables related to these capital contributions and a $5.8 million noncash capital contribution related to capital assets provided by service plaza operators. The Commission entered into agreements with a food and fuel provider to totally reconstruct the service plazas; the service plaza operators provided the capital for the reconstruction in exchange for lower rental rates. See Note 2 for further discussion on capital contributions and Note 6 for further discussion on the service plazas.

During fiscal year 2021, the Commission transferred portable radios with a book value of $2.8 million to the Pennsylvania State Police. During fiscal year 2020, the Commission transferred land with a book value of $0.3 million to the Pennsylvania Game Commission.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Statements of Fiduciary Net Position – Fiduciary activities
May 31, 2021 and 2020

	2021	2020
	(in thousands)	
ASSETS		
Cash and cash equivalents	$ 4,816	$ 10,142
Interest and dividends receivable	360	343
Investments		
Equity – stocks	17,025	13,920
Equity – mutual funds	263,266	169,868
Fixed income – mutual funds	42,326	42,086
Fixed income – U.S. Treasuries	46,490	13,633
Fixed income – U.S. Government agency securities	14,969	10,763
Corporate obligations	22,957	38,173
Limited partnerships		
Real estate	72,700	71,516
Commodities	21,125	18,992
Global tactical asset allocation	47,817	40,835
Private debt	4,212	2,194
Private equity	837	-
Total limited partnerships	146,691	133,537
Hedge fund of funds	43,128	33,658
Total investments	596,852	455,638
Total assets	602,028	466,123
LIABILITIES		
Benefits payable	538	544
Other liabilities	188	155
Total liabilities	726	699
Net position – restricted for OPEB	$ 601,302	$ 465,424

The accompanying notes are an integral part of these financial statements.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Statements of Changes in Fiduciary Net Position – Fiduciary activities
Years Ended May 31, 2021 and 2020

	2021	2020
	(in thousands)	
ADDITIONS		
Employer contributions	$ 47,250	$ 11,730
Net investment income		
Interest, dividends, and capital gains income	8,829	10,039
Change in fair value of investments	101,263	4,943
Investment fees	(878)	(786)
Total net investment income	109,214	14,196
Total additions	156,464	25,926
DEDUCTIONS		
Benefit payments	20,582	20,848
Administrative expenses	4	8
Total deductions	20,586	20,856
Change in fiduciary net position	135,878	5,070
Net position – restricted for OPEB		
Beginning of year	465,424	460,354
End of year	$ 601,302	$ 465,424

The accompanying notes are an integral part of these financial statements.

NOTE 1 FINANCIAL REPORTING ENTITY

Accounting principles generally accepted in the United States (U.S. GAAP) require government financial statements to include the primary government and its component units. Component units of a governmental entity are legally separate entities for which the primary government is considered to be financially accountable and for which the nature and significance of their relationship with the primary government are such that exclusion would cause the combined financial statements to be misleading. The primary government is considered to be financially accountable if it appoints a majority of an organization's governing body and is able to impose its will on that organization or there is a potential for the organization to provide specific financial benefits to or impose specific financial burdens on the primary government.

The Pennsylvania Turnpike Commission (the Commission) was created as an instrumentality of the Commonwealth of Pennsylvania (Commonwealth) on May 21, 1937, with powers to construct, operate, and maintain the Turnpike System and to issue Turnpike revenue bonds, repayable solely from tolls and other Commission revenues. The Commission is considered a component unit of the Commonwealth.

The Commission is composed of five members, one of whom is the Secretary of Transportation. The others are appointed by the Governor with the approval of two-thirds of the Senate.

The Commission maintains an Other Postemployment Welfare Plan Program (the Plan), for the purpose of providing benefits to eligible retirees and their dependents. The Plan is a single-employer, defined benefit plan. The Commission established the Pennsylvania Turnpike Commission Retiree Medical Trust (the Trust) on May 30, 2008 as an irrevocable trust, tax exempt under Section 115 of the Internal Revenue Code, to provide funding of the Plan's other postemployment benefits (OPEB). The Trust is administered by Trustees who are appointed by and serve at the pleasure of the Commission. The chairman and vice chairman of the Trust are appointed by the Trustees and serve two-year terms. In accordance with GASB Statement No. 84, *Fiduciary Activities*, the Plan is a fiduciary component unit of the Commission.

Based on the application of the criteria set forth by the Governmental Accounting Standards Board (GASB), the Commission has determined that it has no other component units based on its review of GASB Statements No. 14, *The Financial Reporting Entity*, No. 39, *Determining Whether Certain Organizations are Component Units – an amendment of GASB Statement No. 14*, No. 61, *The Financial Reporting Entity: Omnibus – an amendment of GASB Statements No. 14 and No. 34*, No. 80, *Blending Requirements for Certain Component Units – an amendment of GASB Statement No. 14* and No. 84, *Fiduciary Activities*.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Commission's business-type activities (enterprise fund) and fiduciary activities (fiduciary fund) have been prepared in conformity with U.S. GAAP as applied to government units. The GASB is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. The more significant of the Commission's accounting policies are described in the following paragraphs:

Basis of Accounting

The Commission's enterprise and fiduciary fund financial statements (the financial statements) are presented on the accrual basis of accounting.

Reclassifications

Certain amounts presented in the prior period have been reclassified to conform to the current year financial statement presentation. Approximately $6.7 million of deferred inflows of resources related to the difference between projected and actual earnings on OPEB plan investments were reclassified to net against the deferred outflows of resources of the same category as of May 31, 2020. In addition, approximately $32.0 million of toll-related bad debt, was reclassified from other operating revenues to fare revenues for the fiscal year ended May 31, 2020. The above reclassifications did not have an impact on net position as of May 31, 2020.

Cash Equivalents

For purposes of the Statements of Cash Flows, the Commission considers all highly liquid debt investment securities that mature within three months of acquisition to be cash equivalents.

Investments

Investments are stated at fair value, with the exception of the following: money market investments are reported at cost which does not materially differ from fair value, certain nonparticipating contracts such as repurchase agreements and other agreements structured as repurchase agreements are reported at cost which does not materially differ from fair value and guaranteed investment contracts are stated at contract value. The Commission categorizes its fair value measurements within the fair value hierarchy established by U.S. GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. See Note 4 for further discussion.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Accounts Receivable

Accounts receivable consist primarily of toll revenue receivables from customers and other E-ZPass agencies, fee revenue receivables from customers and reimbursement receivables from other governments. An allowance for uncollectible accounts receivable is established based on specific identification and historical experience.

Capital Assets

Capital assets consist of land and intangible assets (right-of-way easements), buildings, improvements, equipment, infrastructure, and assets under construction. Infrastructure assets are typically items that are immovable such as highways, bridges, and tunnels. Capital assets are stated at cost. Donated capital assets and capital assets received in a service concession arrangement are measured at acquisition value. Acquisitions of capital assets valued at $15,000 or greater are capitalized. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Intangible assets have an indefinite life and, thus, are not depreciated. The following lives are used:

Buildings	10 – 45 years
Improvements other than buildings	15 – 20 years
Equipment	3 – 40 years
Infrastructure	10 – 50 years

Inventories

Inventories are valued at average cost.

Debt Premium/Discount and Prepaid Insurance Costs

Debt premium/discount is being amortized using the effective interest rate method over the varying terms of the bonds issued. Prepaid bond insurance costs (incurred through bond issuances) are being amortized using the straight-line method over the varying terms of the bonds issued.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Unearned Income

Unearned income is primarily related to E-ZPass customer deposits. E-ZPass customers of the Commission are required to deposit funds in advance of anticipated travel. Since this money is collected prior to the customers' travel and revenue recognition, it is recorded as unearned income. The Commission also has unearned income related to microwave tower leases. The Commission had total unearned income of $106.1 million and $90.9 million for fiscal years ended May 31, 2021 and 2020, respectively. Unearned income recorded as current liabilities was $105.7 million and $90.4 million for the fiscal years ended May 31, 2021 and 2020, respectively. Unearned income recorded as other noncurrent liabilities was $0.4 million and $0.5 million for the fiscal years ended May 31, 2021 and 2020, respectively.

Accounting Estimates

The preparation of the financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual amounts may differ from those estimates.

Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Pennsylvania State Employees' Retirement System (SERS) and additions to/deductions from SERS's fiduciary net position have been determined on the same basis as they are reported by SERS. 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.

Postemployment Benefits Other Than Pensions (OPEB)

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the Pennsylvania Turnpike Commission's Other Postemployment Welfare Plan Program (the Plan) and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, the Plan recognizes benefit payments when due and payable in accordance with the benefit terms. Investments are reported at fair value, except for money market investments, which are reported at cost.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Deferred Outflows/Inflows of Resources

The Statements of Net Position report separate sections for deferred outflows and deferred inflows of resources. These separate financial statement elements represent a consumption or acquisition of net position that applies to a future period(s) and so will not be recognized as an outflow or inflow of resources (expense/revenue) until then. The Commission has five items that qualify for reporting in these categories: deferred outflows/inflows from its hedging derivative instruments, deferred inflows from its service concession arrangements, deferred outflows/inflows from refunding bonds, deferred outflows/inflows related to pensions and deferred outflows/inflows related to other postemployment benefits.

The deferred outflows/inflows of resources related to hedging derivative instruments represent the cumulative change in their fair values. Deferred inflows from the Commission's service concession arrangements represent unamortized capital contributions from service plaza operators and the present value of minimum guaranteed rent payments. Deferred outflows/inflows from refundings are the result of differences in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt. Deferred outflows/inflows of resources related to pensions are described further in Note 8. The components of deferred outflows of resources and deferred inflows of resources, other than the difference between the projected and actual earnings on investments, are amortized into pension expense over a closed period, which reflects the weighted average remaining service life of all SERS members beginning the year in which the deferred amount occurs (current year). The annual difference between the projected and actual earnings on SERS investments is amortized over a five-year closed period, beginning the year in which the difference occurs (current year). Deferred outflows/inflows of resources related to OPEB are described further in Note 11. Investment (gains)/losses are recognized in OPEB expense over a period of five years; economic/demographic (gains)/losses and assumption changes or inputs are recognized over the average remaining service life for all active and inactive members.

Net Position

GASB Statement No. 63 requires the classification of net position into three components – net investment in capital assets; restricted; and unrestricted. These classifications are defined as follows:

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Net Position *(continued)*

Net Investment in Capital Assets – This component of net position consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt are included.

Restricted – This component of net position consists of restricted assets and deferred outflows of resources reduced by liabilities and deferred inflows of resources related to those assets. The restrictions would be imposed by:

- External parties such as creditors, grantors and contributors,
- Laws or regulations of other governments, or
- Restrictions imposed by law through constitutional provisions or enabling legislation.

Unrestricted – This component of net position consists of the net amount of the assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position.

Operating Revenues

Revenues associated with operations of the Turnpike System are considered operating revenues. The principal operating revenues of the Commission are fare revenues from customers, offset by discounts, toll-related bad debt and other adjustments. Other operating revenues include service station, restaurant, property and other rental income, as well as revenue from various sponsorship agreements. Also included are electronic toll collection fees related to E-ZPass and Toll By Plate (TBP) programs, as well as related bad debt expense.

Fare Revenues

Fare revenues are recognized when vehicles exit the Turnpike System.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Operating Revenues *(continued)*

Fare Revenues (continued)

During fiscal year 2016, the Commission implemented TBP, a license plate tolling system for customers without a valid E-ZPass. The TBP program offers cashless, nonstop travel at tolling points throughout the Turnpike System. This system utilizes high-speed cameras over the roadway that capture license plate images as vehicles pass through the tolling point. The registered owner of the vehicle then receives a flat rate invoice in the mail. For fiscal year 2020, approximately 86.8% of the fare revenues were realized through electronic toll collection. For fiscal year 2020, approximately 13.2% of the fare revenues were realized through cash or credit card collection.

Effective March 16, 2020, due to the COVID-19 pandemic, the Commission implemented all-electronic tolling across the system. With existing cameras on the entry lanes, the Commission was able to utilize the TBP system at the remaining tolling points. For fiscal years 2021 and 2020, approximately 15.0% and 2.8%, respectively, of the fare revenues were realized through TBP, which are included as a part of all-electronic tolling.

Operating Expenses

Operating expenses relate directly to operating and maintaining the Turnpike System. The principal operating expenses of the Commission are cost of services and depreciation. Other expenses are considered nonoperating expenses.

Cost of Services

Cost of services includes wages and salaries, benefits, utilities, fuels, professional fees and services, PA State Police services, and purchased goods, including materials and supplies.

Utilization of Resources

When both restricted and unrestricted resources are available for use, the Commission’s policy is to use restricted resources first and then unrestricted resources as needed.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Nonoperating Revenues (Expenses)

Nonoperating revenues include net investment earnings and other miscellaneous revenues not associated with the operations of the Turnpike System. Nonoperating expenses include: Act 44 and Act 89 payments to PennDOT, capital assets transferred to the Commonwealth, interest and bond expenses, and other miscellaneous expenses not associated with the operations of the Turnpike System.

Act 44 and Act 89 Payments to PennDOT

The Commission and PennDOT entered into a Lease and Funding Agreement, as amended, as required under the terms of Act 44 and Act 89. See Note 9 for more information regarding Act 44 and Act 89.

Capital Assets Transferred to the Commonwealth of Pennsylvania

During the fiscal year ended May 31, 2021, the Commission transferred portable radios to the Pennsylvania State Police. The book value of the radios transferred was $2.8 million.

During the fiscal year ended May 31, 2020, the Commission transferred land to the Pennsylvania Game Commission for impacts to grassland habitats resulting from highway projects. The book value of the land transferred was $0.3 million.

Capital Contributions

Capital contributions include: Oil Company Franchise Tax revenues, Motor License Registration Fee revenues, grants from other governments for reimbursement of capital costs for various highway construction projects, capital assets received from other third parties and amortization of deferred inflows of resources for service concession agreements.

Oil Company Franchise Tax Revenues

The Commission receives 14% of the additional 55 mills of the Commonwealth's Oil Company Franchise Tax revenues pursuant to Act 26 established in 1991. The revenues totaled $124.2 million and $133.8 million for the fiscal years ended May 31, 2021 and 2020, respectively. These revenues are kept in a separate fund as required by the applicable bond indenture.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Capital Contributions *(continued)*

Motor License Registration Fee Revenues

The Commission received $28.0 million in registration fee revenue during each of the fiscal years ended May 31, 2021 and 2020 from the Commonwealth's Motor License Fund. These revenues are kept in a separate fund as required by the applicable bond indenture.

Reimbursements from Other Governments

The Commission receives grants from other governments for reimbursement of costs for various highway construction projects. During the fiscal years ended May 31, 2021 and 2020, the Commission recognized $6.1 million and $5.8 million, respectively, as capital contributions from the other governments. During fiscal year 2021, all of the reimbursements, except $24,000, were received from the Federal government. During fiscal year 2020, all of the reimbursements were received from the Federal government.

Other Capital Contributions

The Commission entered into contracts with a food and a fuel provider to totally reconstruct the service plazas. The service plaza operators provided the capital for the reconstruction in exchange for lower rental rates. The Commission recognized capital contribution revenues of $5.8 million related to these agreements for each of the fiscal years ended May 31, 2021 and 2020. See Note 6 for further discussion on service plazas.

Adoption of Accounting Pronouncements

In January 2017, the GASB issued Statement No. 84, *Fiduciary Activities*. The Commission retroactively adopted Statement No. 84 for its fiscal years ended May 31, 2021 and 2020, resulting in the inclusion of Fiduciary Activity financial statements along with the Business-type Activity financial statements of the Commission. Fiduciary Activity financial statements were previously only issued in a stand-alone report. See the additional fiduciary statements as well as additional disclosures within the MD&A section and Note 1.

In August 2018, the GASB issued Statement No. 90, *Majority Equity Interest – An Amendment of GASB Statements No. 14 and No. 61*. The Commission adopted Statement No. 90 for its fiscal year ended May 31, 2021. The adoption of this Statement had no impact on the Commission's financial statements for fiscal year ended May 31, 2021.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Adoption of Accounting Pronouncements *(continued)*

In May 2020, the GASB issued Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*. In accordance with the guidance, the Commission adopted Statement No. 95 immediately. The effective dates of the Accounting Pronouncements Not Yet Adopted have been updated as applicable.

Accounting Pronouncements Not Yet Adopted

In June 2017, the GASB issued Statement No. 87, *Leases*. The Commission is required to adopt Statement No. 87 for the fiscal year ending May 31, 2023.

In May 2019, the GASB issued Statement No. 91, *Conduit Debt Obligations*. The Commission is required to adopt Statement No. 91 for the fiscal year ending May 31, 2023.

In January 2020, the GASB issued Statement No. 92, *Omnibus 2020*. The Commission is required to adopt Statement No. 92 for the fiscal year ending May 31, 2023.

In March 2020, the GASB issued Statement No. 93, *Replacement of Interbank Offered Rates*. The Commission is required to adopt Statement No. 93 for the fiscal year ending May 31, 2023, with the exception of paragraph 11b which is required to be adopted for the fiscal year ending May 31, 2022.

In March 2020, the GASB issued Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*. The Commission is required to adopt Statement No. 94 for the fiscal year ending May 31, 2024.

In May 2020, the GASB issued Statement No. 96, *Subscription-Based Information Technology Arrangements*. The Commission is required to adopt Statement No. 96 for the fiscal year ending May 31, 2024.

In June 2020, the GASB issued Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans – An Amendment of GASB Statements No. 14 and No. 84, and a Supersession of GASB Statement No. 32*. Paragraphs 4 and 5 of this Statement were effective immediately and were included with the other Statement No. 84 disclosures in the Commission's financial statements as of May 31, 2021. The Commission is required to adopt the remainder of Statement No. 97 for the fiscal year ending May 31, 2023.

The Commission has not yet completed the various analyses required to estimate the financial statement impact of these new pronouncements.

NOTE 3 INDENTURE REQUIREMENTS AND RESTRICTIONS

The Commission's debt has been issued under the provisions of five separate Trust Indentures (collectively referred to as Indentures):

- A Senior Trust Indenture dated July 1, 1986, which was amended and restated as of March 1, 2001, as supplemented, between the Commission and U.S. Bank, N.A., as successor Trustee;
- An Oil Franchise Tax Trust Indenture, dated August 1, 1998, as supplemented, between the Commission and U.S. Bank, N.A., as successor Trustee;
- A Registration Fee Revenue Trust Indenture, dated August 1, 2005, between the Commission and U.S. Bank, N.A., as successor Trustee;
- A Subordinate Trust Indenture, dated April 1, 2008 as supplemented, between the Commission and Wells Fargo Bank, N.A., as successor Trustee; and
- A Special Obligation Trust Indenture, dated September 1, 2014, between the Commission and U.S. Bank, N.A., as successor Trustee.

Accordingly, certain activities of the Commission are restricted by these Indentures.

NOTE 4 CASH AND INVESTMENTS

The following table is a summary of cash and cash equivalents and investments by type:

	May 31, 2021	May 31, 2020
	(In Thousands)	
Cash and cash equivalent and investment types		
U.S. Treasuries	$ 1,456,488	$ 1,316,725
GNMA mortgages	864	1,168
Government agency securities	37,777	73,030
Municipal bonds	91,451	39,518
Corporate obligations	125,031	204,816
Total investment securities	1,711,611	1,635,257
Investment derivatives	15,890	4,924
Cash and cash equivalents	827,168	906,330
Total cash and cash equivalents and investments	$ 2,554,669	$ 2,546,511

NOTE 4 CASH AND INVESTMENTS *(continued)*

Cash and Cash Equivalents

Cash and cash equivalents are held in various financial institutions. Cash and cash equivalents are comprised of demand deposits, money market funds and other highly liquid investments that mature within three months of acquisition. The demand deposits are secured under Pennsylvania Act 72 which secures public deposits in excess of the FDIC insurance limits. Cash equivalents consist of permitted investments in accordance with the Indentures as noted under cash equivalents and investment securities.

The following table is a summary of the Commission's cash and cash equivalents:

	Bank Balance	Book Balance
	(In Thousands)	
May 31, 2021		
Demand deposits	$ 32,463	$ 36,249
Money market funds	739,562	739,562
Cash equivalents	51,357	51,357
Total cash and cash equivalents	$ 823,382	$ 827,168
May 31, 2020		
Demand deposits	$ 30,186	$ 32,494
Money market funds	809,903	809,903
Cash equivalents	63,933	63,933
Total cash and cash equivalents	$ 904,022	$ 906,330

Cash Equivalents and Investment Securities

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

- For the fiscal years ended May 31, 2021 and 2020, U.S. Treasuries of $1,456.5 million and $1,316.7 million, respectively, categorized as Level 1 are valued using quoted market prices.

- For the fiscal years ended May 31, 2021 and 2020, GNMA mortgages of $0.9 million and $1.2 million, respectively, categorized as Level 2 are valued using models based on spreads of comparable securities.

NOTE 4 CASH AND INVESTMENTS *(continued)*

Cash Equivalents and Investment Securities *(continued)*

- For the fiscal years ended May 31, 2021 and 2020, government agency securities of $37.8 million and $73.0 million, respectively, categorized as Level 2 are valued using various market and industry inputs. Callable agency-issued debt securities are valued by benchmarking model-derived prices to quoted market prices and trade data for identical or comparable securities. The fair value of agency mortgage pass-through pool securities is model-driven based on spreads of a comparable security. Collateralized mortgage obligations are valued using quoted market prices and trade data adjusted by subsequent changes in related indices for identical or comparable securities.

- For the fiscal years ended May 31, 2021 and 2020, municipal bonds of $91.5 million and $39.5 million, respectively, categorized as Level 2 are valued using recently executed transactions, market price quotations and pricing models that factor in, where applicable, interest rates, bond or credit default swap spreads and volatility.

- For the fiscal years ended May 31, 2021 and 2020, total corporate obligations were $125.0 million and $204.8 million, respectively. Of the May 31, 2021 and 2020 amounts, $18.2 million is a guaranteed investment contract, which is valued at the contract value. The remaining $106.8 million and $186.6 million as of May 31, 2021 and 2020, respectively, categorized as Level 2 are valued using recently executed transactions, market price quotations (where observable), bond spreads, credit default swap spreads, at the money volatility and/or volatility skew obtained from independent external parties, such as vendors and brokers adjusted for any basis difference between cash and derivative instruments. The spread data used are for the same maturity as the bond.

- For the fiscal years ended May 31, 2021 and 2020, investment derivative instruments of $15.9 million and $4.9 million, respectively, categorized as Level 2 are valued using discounted future net cash flows, mid-market values, nonperformance risk and bid/offer spreads. See Note 9 for further discussion.

NOTE 4 CASH AND INVESTMENTS *(continued)*

Cash Equivalents and Investment Securities *(continued)*

The Indentures (as listed in Note 3) permit investments in obligations of, or are guaranteed by, the United States of America, its agencies, and its instrumentalities (United States Government obligations); certificates of deposit issued by institutions insured by the FDIC or fully collateralized with United States Government obligations; investment agreements with certain financial institutions; commercial paper and asset-backed securities rated in the highest category by applicable rating agencies; money market funds and auction rate certificates rated in one of the two highest categories by applicable rating agencies; corporate bonds and medium-term notes with a minimum rating of 'AA-'; investments in bonds or notes issued by any state or municipality which are rated by Moody's Investors Service (Moody's), Standard & Poor's Ratings Group (S&P) and Fitch Investors Service (Fitch) in one of their two highest rating categories; and repurchase agreements with banks or primary government dealers reporting to the Federal Reserve Bank of New York collateralized with obligations of, or guaranteed by, the United States of America.

The Commission has an investment policy that defines guidelines and operational factors governing the investment of financial assets. The policy generally has the same restrictions regarding permitted investments as the Indentures. Permitted investments include:

- U.S. Treasury Bills, Notes, Bonds, Strips;
- Time Deposits issued by a banking association organized and doing business under the laws of the United States of America or of any state that may have a combined capital and surplus of at least $50.0 million;
- Certificates of Deposit that are fully collateralized and issued by a bank, savings and loan or trust company organized under the laws of the United States or any state thereof;
- Investment Agreements with a bank, a bank holding company or a financial institution that has outstanding long-term indebtedness rated 'AA' or better by at least two of the three rating agencies (S&P, Moody's and Fitch);
- Obligations of any federal agencies which obligations are backed by the full faith and credit of the United States of America;
- Senior debt obligations rated a minimum 'AA' by S&P and 'Aa2' by Moody's issued by the following government-sponsored enterprises: Federal Home Loan Bank, Federal Farm Credit Bank, Federal Home Loan Mortgage Corporation and Federal National Mortgage Association;

NOTE 4 CASH AND INVESTMENTS *(continued)*

Cash Equivalents and Investment Securities *(continued)*

- Mortgage-backed securities issued by an approved federal agency and collateralized mortgage obligations so long as such securities are rated a minimum of 'Aa2' by Moody's and 'AA' by S&P;

- Debt obligations of any state or local government entity, whether for itself, or as a conduit issuer, provided that the securities are rated in the 'Aa/AA' category by at least two of S&P, Moody's and Fitch and do not have a rating from any of S&P, Moody's and Fitch below the 'Aa/AA' category (without regard to subcategories of ratings), and provided that if a short-term rating is provided for the securities that they are rated in the top tier by at least two of the three of S&P ('A-1' or better), Moody's ('VMIG1' or 'P1'), and Fitch ('F1') and do not have a rating from any of the three rating agencies below such levels;

- Commercial paper rated by at least two of S&P, Moody's and Fitch and not less than 'A-1/P-1/F-1' by S&P, Moody's and Fitch, respectively;

- Corporate bonds rated 'Aa3/AA-' or better by Moody's and S&P;

- Asset-backed securities rated 'AAA' by Moody's and S&P;

- Repurchase agreements with banks or primary government dealers reporting to the Federal Reserve Bank of New York, collateralized by investments with a minimum 102% valuation in securities of U.S. Treasury bills, notes, bonds, strips, or obligations of any federal agencies or senior debt obligations described above; and

- Share or Certificates in any short-term investment fund that invests not less than 90% of its assets in obligations of U.S. Treasury bills, notes, bonds, strips or time deposits.

All investment ratings shall be based on security ratings at the time of purchase. The portfolio's average credit quality should be rated 'Aa3/AA-' or better by Moody's/S&P. Investments are generally purchased with the intent of holding to maturity with flexibility to restructure and rebalance portfolio holdings to manage risk and take advantage of market opportunities. The investment policy imposes the following additional limitations:

- Investments in any single federal agency, not carrying the full faith and credit of the U.S. Government, are limited to 35% of the portfolio.

- Investments in certificates of deposit and investment agreements in total are limited to 30% of the portfolio.

NOTE 4 CASH AND INVESTMENTS *(continued)*

Cash Equivalents and Investment Securities *(continued)*

- Combined exposure to commercial paper, corporate bonds, and asset-backed securities is limited to 35% of the total portfolio.

- Investments in any single issuer (excluding U.S. Treasury and federal agencies) are limited to 5% of the portfolio.

The Commission's Investment Policy also limits investments to those issues expected to mature within five years at the time of purchase, taking into consideration call, put, prepayment, or other features that may impact maturity. Similarly, the weighted average life of mortgages and asset-backed securities may not be more than five years. As of May 31, 2021 and 2020, the Commission did not hold any securities that were not in compliance with the Investment Policy guidelines.

Credit Risk

The Commission's exposure to credit risk for investment securities is as follows:

Investment Type	AAA	AA	A	A-1	Below A	Total
			Quality Rating as of May 31, 2021 (In Thousands)			
Government agency securities	$ 2,027	$ 35,750	$ -	$ -	$ -	$ 37,777
Municipal bonds	13,958	12,273	14,101	51,119	-	91,451
Corporate obligations	28,406	64,871	16,811	14,878	65	125,031
	$ 44,391	$ 112,894	$ 30,912	$ 65,997	$ 65	$ 254,259

Investment Type	AAA	AA	A	A-1	Below A	Total
			Quality Rating as of May 31, 2020 (In Thousands)			
Government agency securities	$ 5,754	$ 67,276	$ -	$ -	$ -	$ 73,030
Municipal bonds	13,734	8,191	16,098	1,495	-	39,518
Corporate obligations	36,854	132,028	20,978	14,876	80	204,816
	$ 56,342	$ 207,495	$ 37,076	$ 16,371	$ 80	$ 317,364

Investments guaranteed by the full faith of the U.S. Government, such as U.S. Treasuries and GNMA mortgages, are not considered to have credit risk and do not require disclosure of credit quality.

Concentration of Credit Risk

As of May 31, 2021 and 2020, the Commission did not have any investments that violated the 5% limit for a single issuer or the other concentration of credit risk limitations in the Commission's investment policy noted above.

NOTE 4 CASH AND INVESTMENTS *(continued)*

Interest Rate Risk

The effective duration of the Commission's investments, by type, was as follows:

	As of May 31, 2021	
Investment Type	**Fair Value**	**Effective Duration**
	(In Thousands)	*(In Years)*
U.S. Treasuries	$ 1,456,488	2.4230
GNMA mortgages	864	4.3809
Government agency securities	37,777	0.8322
Municipal bonds	91,451	1.2678
Corporate obligations	125,031	1.4657
Total investment securities	$ 1,711,611	

	As of May 31, 2020	
Investment Type	**Fair Value**	**Effective Duration**
	(In Thousands)	*(In Years)*
U.S. Treasuries	$ 1,316,725	2.7168
GNMA mortgages	1,168	4.2897
Government agency securities	73,030	0.6905
Municipal bonds	39,518	2.3269
Corporate obligations	204,816	1.1416
Total investment securities	$ 1,635,257	

Custodial Credit Risk

For deposits and investments, custodial credit risk is the risk that in the event of the failure of the counterparty, the Commission will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. As of May 31, 2021 and 2020, $32.0 million and $29.7 million, respectively, of the Commission's demand deposits were exposed to custodial credit risk, as they were uninsured and collateralized with securities held by an agent of the pledging financial institution but not in the Commission's name. None of the Commission's investments were exposed to custodial credit risk as of May 31, 2021 or 2020.

NOTE 4 CASH AND INVESTMENTS *(continued)*

Investment Derivative Instruments

The following table is a summary of the Commission's investment derivative instruments as of May 31, 2021:

**	Notional Amount *(Thousands)*	Weighted Avg. Mat. *(Years)*	Effective Date	Maturity Date	Terms	Fair Value *(Thousands)*	Counterparty	Credit Ratings Moody's/ S&P's/Fitch
	$ 112,000				Pay SIFMA, receive 63% of 1-month LIBOR + 20 bps	$ (172)	JPMorgan Chase Bank	Aa2/A+/AA
	48,000					(73)	Bank of New York Mellon	Aa2/AA-/AA
A	160,000	8.1	8/14/2003	12/1/2032		(245)		
	80,000				Pay 67% of 1-month LIBOR, receive 60.15% of the 10 year maturity of the USD-ISDA Swap rate	3,214	JPMorgan Chase Bank	Aa2/A+/AA
	80,000					3,237	Royal Bank of Canada	Aa2/AA-/AA
B	160,000	8.0	9/19/2006	11/15/2032		6,451		
C	115,810	10.8	6/1/2010	6/1/2039	Pay SIFMA, receive 99.68% of 3-month LIBOR	4,588	Goldman Sachs MMDP	Aa2/AA-/NR
D	115,810	10.8	6/1/2010	6/1/2039	Pay SIFMA, receive 99.80% of 3-month LIBOR	5,096	Deutsche Bank	A3/BBB+/BBB
						$ 15,890		

1-month LIBOR was 0.08588% as of May 31, 2021.
3-month LIBOR was 0.13138% as of May 31, 2021.
10-year maturity of the USD-ISDA swap rate was 1.556% as of May 31, 2021.
SIFMA was 0.05% as of May 31, 2021.
** Letters are used as references in Note 9 (Commitments and Contingencies).

The following table is a summary of the Commission's investment derivative instruments as of May 31, 2020:

**	Notional Amount *(Thousands)*	Weighted Avg. Mat. *(Years)*	Effective Date	Maturity Date	Terms	Fair Value *(Thousands)*	Counterparty	Credit Ratings Moody's/ S&P's/Fitch
	$ 112,000				Pay SIFMA, receive 63% of 1-month LIBOR + 20 bps	$ (137)	JPMorgan Chase Bank	Aa2/A+/AA
	48,000					(58)	Bank of New York Mellon	Aa2/AA-/AA
A	160,000	9.1	8/14/2003	12/1/2032		(195)		
	80,000				Pay 67% of 1-month LIBOR, receive 60.15% of the 10 year maturity of the USD-ISDA Swap rate	1,943	JPMorgan Chase Bank	Aa2/A+/AA
	80,000					1,969	Royal Bank of Canada	Aa2/AA-/AA
B	160,000	9.0	9/19/2006	11/15/2032		3,912		
C	115,810	11.8	6/1/2010	6/1/2039	Pay SIFMA, receive 99.68% of 3-month LIBOR	566	Goldman Sachs MMDP	Aa2/AA-/NR
D	115,810	11.8	6/1/2010	6/1/2039	Pay SIFMA, receive 99.80% of 3-month LIBOR	641	Deutsche Bank	A3/BBB+/BBB
						$ 4,924		

1-month LIBOR was 0.18250% as of May 31, 2020.
3-month LIBOR was 0.34400% as of May 31, 2020.
10-year maturity of the USD-ISDA swap rate was 0.657% as of May 31, 2020.
SIFMA was 0.14% as of May 31, 2020.
** Letters are used as references in Note 9 (Commitments and Contingencies).

See Note 9 for additional disclosures regarding derivative instruments, including a rollforward from the prior-year balances.

NOTE 5 CAPITAL ASSETS

Summaries of changes to capital assets for the years ended May 31, 2021 and 2020 are as follows:

	Balance May 31, 2020	Additions	Transfers (In Thousands)	Reductions	Balance May 31, 2021
Capital assets not being depreciated (cost)					
Land and intangibles	$ 425,643	$ 16,614	$ -	$ -	$ 442,257
Assets under construction	1,788,685	621,588	(121,964)	-	2,288,309
Total capital assets not being depreciated	2,214,328	638,202	(121,964)	-	2,730,566
Capital assets being depreciated (cost)					
Buildings	983,739	-	3,586	-	987,325
Improvements other than buildings	151,066	-	10,381	474	160,973
Equipment	706,803	13,217	23,719	161,939	581,800
Infrastructure	8,946,265	-	84,278	65,875	8,964,668
Total capital assets being depreciated	10,787,873	13,217	121,964	228,288	10,694,766
Less accumulated depreciation for					
Buildings	459,049	23,157	-	-	482,206
Improvements other than buildings	90,026	6,920	-	473	96,473
Equipment	567,999	34,909	-	150,489	452,419
Infrastructure	5,475,126	308,938	-	65,876	5,718,188
Total accumulated depreciation	6,592,200	373,924	-	216,838	6,749,286
Total capital assets being depreciated, net	4,195,673	(360,707)	121,964	11,450	3,945,480
Total capital assets	$ 6,410,001	$ 277,495	$ -	$ 11,450	$ 6,676,046

	Balance May 31, 2019	Additions	Transfers (In Thousands)	Reductions	Balance May 31, 2020
Capital assets not being depreciated (cost)					
Land and intangibles	$ 405,643	$ 20,420	$ -	$ 420	$ 425,643
Assets under construction	1,490,161	620,870	(322,346)	-	1,788,685
Total capital assets not being depreciated	1,895,804	641,290	(322,346)	420	2,214,328
Capital assets being depreciated (cost)					
Buildings	981,115	-	2,624	-	983,739
Improvements other than buildings	150,306	-	760	-	151,066
Equipment	642,785	11,273	64,253	11,508	706,803
Infrastructure	9,044,067	-	254,709	352,511	8,946,265
Total capital assets being depreciated	10,818,273	11,273	322,346	364,019	10,787,873
Less accumulated depreciation for					
Buildings	435,971	23,078	-	-	459,049
Improvements other than buildings	83,828	6,198	-	-	90,026
Equipment	539,630	39,826	-	11,457	567,999
Infrastructure	5,514,650	312,986	-	352,510	5,475,126
Total accumulated depreciation	6,574,079	382,088	-	363,967	6,592,200
Total capital assets being depreciated, net	4,244,194	(370,815)	322,346	52	4,195,673
Total capital assets	$ 6,139,998	$ 270,475	$ -	$ 472	$ 6,410,001

NOTE 6 SERVICE CONCESSION ARRANGEMENTS

There are 17 service plazas along the Turnpike System providing gasoline and diesel fuel, other automotive supplies and services, and restaurant services. The Commission has entered into long-term service plaza redevelopment agreements with HMSHost Restaurants, LLC and Sunoco Retail LLC to design, reconstruct, finance, operate and maintain all of the service plazas. During fiscal year 2018, the agreement with Sunoco Retail LLC was assigned to 7-Eleven, Inc. All terms of the contract remained the same. The Commission has no responsibility for maintaining the service plazas under the agreements. The Commission maintains the ability to approve and/or modify the services that the operators can provide and the rates that can be charged. The service plaza operators are compensated by the users of the services and share a portion of the revenue with the Commission as rental payments. Upon completion of construction, the reconstructed assets are recognized by the Commission. The current contracts with HMSHost Restaurants, LLC and 7-Eleven, Inc. expire on August 25, 2036 and January 31, 2022, respectively. 7-Eleven Inc.'s lease may be extended for three additional five-year periods. The first extension shall be at the discretion of 7-Eleven, Inc., and the second and third extensions shall be mutually agreed to by both parties.

As of May 31, 2021, the Commission had capitalized $125.4 million in capital assets representing all 17 service plazas that had fully completed construction and recorded deferred inflows of resources of $74.0 million related to these assets in accordance with GASB Statement No. 60. Also, as of May 31, 2021 and in accordance with GASB Statement No. 60, the Commission recognized a receivable and deferred inflow of resources in the amount of $27.0 million for the present value of guaranteed minimum rent payments. Due to the COVID-19 pandemic, in a letter dated April 8, 2020, the Commission waived the payment of minimum annual rent as set forth in the lease agreement for calendar year 2020. The receivable and deferred inflow of resources have been adjusted for this waiver. As of May 31, 2021, all deferred percentage rent payments had been received.

As of May 31, 2020, the Commission had capitalized $125.4 million in capital assets representing all 17 service plazas that had fully completed construction and recorded deferred inflows of resources of $79.9 million related to these assets in accordance with GASB Statement No. 60. Also, as of May 31, 2020 and in accordance with GASB Statement No. 60, the Commission recognized a receivable and deferred inflow of resources in the amount of $26.6 million for the present value of guaranteed minimum rent payments. Due to the COVID-19 pandemic, in a letter dated April 8, 2020, the Commission waived the payment of minimum annual rent as set forth in the lease agreement for calendar year 2020. The receivable and deferred inflow of resources have been adjusted for this waiver.

NOTE 7 DEBT

The following table is a summary of debt outstanding:

	May 31, 2021	May 31, 2020
	(In Thousands)	
Mainline Senior Debt		
Mainline Senior Bonds		
2009 Series A Build America Bonds: Issued $275,000 in July 2009 at 6.105%, due in varying installments through June 1, 2039. Interest paid each June 1 and December 1.	$ 275,000	$ 275,000
2010 Series B Build America Bonds: Issued $600,000 in September 2010 at 5.5%, due in varying installments through December 1, 2049. Interest paid each June 1 and December 1.	600,000	600,000
2011 Series A: Issued $68,660 in April 2011 at 4.00% to 5.00% due in varying installments through December 1, 2023. Interest paid each June 1 and December 1. Partially defeased in May 2019 and November 2020.	36,010	51,935
2012 Series A: Issued $200,215 in July 2012 at 3.00% to 5.00%, due in varying installments through December 1, 2042. Interest paid each June 1 and December 1. Partially refunded in October 2017, December 2017 and January 2020. Partially defeased in May 2019 & November 2020.	15,420	19,730
2013 Series B: Issued $265,155 in July 2013 at a variable rate (based on SIFMA + .40% to 1.27%, reset weekly, paid the 1st of each month). Due in varying installments through December 1, 2020. Partially refunded in June 2015 and June 2019. Fully refunded in June 2020.	-	100,000
2013 Series C: Issued $222,935 in August 2013 at 3.00% to 5.50%, due in varying installments through December 1, 2043. Interest paid each June 1 and December 1. Partially refunded in October 2017, December 2017 and January 2020. Partially defeased in November 2020.	46,635	48,135
2014 Series A: Issued $236,115 in April 2014 at 4.00% to 5.00%, due in varying installments through December 1, 2044. Interest paid each June 1 and December 1. Partially refunded in October 2017. Partially defeased in November 2020.	231,450	231,905
2014 Series B-1: Issued $444,280 in May 2014 at a variable rate (based on SIFMA + .05% to .98%, reset weekly, paid the 1st of each month). Due in varying installments through December 1, 2021. Partially refunded in June 2015, June 2016, October 2017, July 2018, June 2019 and June 2020.	150,000	250,000
2014 Series Refunding: Issued $239,620 in November 2014 at 5.00%, due in varying installments through December 1, 2034. Interest paid each June 1 and December 1.	239,620	239,620
2014 Series C: Issued $294,225 in December 2014 at 2.25% to 5.00%, due in varying installments through December 1, 2044. Interest paid each June 1 and December 1. Partially refunded in October 2017. Partially defeased in November 2020.	281,925	284,200
2015 Series A-1: Issued $385,095 in June 2015 at 4.00% to 5.00%, due in varying installments through December 1, 2045. Interest paid each June 1 and December 1. Partially defeased in November 2020.	384,605	385,095
2015 Series A-2: Issued $115,635 in June 2015 at a variable rate (based on SIFMA + .15% to .90%, reset weekly, paid the 1st of each month). Due in varying installments through December 1, 2021.	25,000	25,000
2015 Series B: Issued $304,005 in December 2015 at 2.50% to 5.00%, due in varying installments through December 1, 2045. Interest paid each June 1 and December 1. Partially defeased in November 2020.	301,515	302,810
2016 Series A-1: Issued $447,850 in June 2016 at 3.00% to 5.00% due in varying installments through December 1, 2046. Interest is paid each June 1 and December 1. Partially defeased in November 2020.	447,330	447,850
2017 Series A-1: Issued $365,895 in October 2017 at 3.00% to 5.00% due in varying installments through December 1, 2047. Interest is paid each June 1 and December 1. Partially defeased in November 2020.	347,995	354,205
2017 Series A-2 Refunding: Issued $133,060 in October 2017 at 5.00% due in varying installments through December 1, 2030. Interest is paid each June 1 and December 1.	133,060	133,060
2018 Series A-1: Issued $182,455 in June 2018 at a variable rate (based on SIFMA + .35% to .60%, reset weekly, paid the 1st of each month). Due in varying installments through December 1, 2023. Partially refunded in June 2020.	157,455	182,455
2018 Series A-2: Issued $307,935 in June 2018 at 5% due in varying installments through December 1, 2048. Interest is paid each June 1 and December 1.	307,935	307,935
2018 Series B: Issued $141,200 in November 2018 at a variable rate (based on SIFMA + .50% to .70 %, reset weekly, paid the 1st of each month). Due in varying installments through December 1, 2023.	141,200	141,200
2019 First Series: Issued $84,365 in February 2019 at 5% due in varying installments through December 1, 2033. Interest is paid each June 1 and December 1.	84,365	84,365
2019 Second Series: Issued $139,815 in June 2019 at a variable rate (determined by the Remarketing Agent in accordance with the procedures detailed in the Bond Official Statement, paid the 1st of each month). Due in one installment on December 1, 2038.	139,815	139,815
2019 Series A: Issued $341,325 in August 2019 at 2.00% to 5.00% due in varying installments through December 1, 2049. Interest is paid each June 1 and December 1. Partially defeased in November 2020.	335,920	341,325
2019 Forward Delivery Series: Issued $179,815 in September 2019 at 5.00% due in varying installments through December 1, 2025. Interest is paid each June 1 and December 1. Partially defeased in November 2020.	153,585	179,815
2020 First Series: Issued $234,320 in January 2020 at 1.81% to 3.44% due in varying installments through December 1, 2043. Interest is paid each June 1 and December 1.	233,885	234,320

NOTE 7 DEBT *(continued)*

The following table is a summary of debt outstanding: *(continued)*

	May 31, 2021	May 31, 2020
	(In Thousands)	
Mainline Senior Debt (continued)		
Mainline Senior Bonds (continued)		
2020 Series: Issued $225,820 in June 2020 at a variable rate (determined by the Remarketing Agent in accordance with the procedures detailed in the Bond Official Statement, paid the 1st of each month). Due in one installment on December 1, 2039.	$ 225,820	$ -
2020 Series A: Issued $100,500 in August 2020 at a variable rate (determined by the Remarketing Agent in accordance with the procedures detailed in the Bond Official Statement, paid the 1st of each month). Due in varying installments through December 1, 2050.	100,500	-
2020 Series B: Issued $241,625 in October 2020 at 5.00% due in varying installments through December 1, 2050. Interest is paid each June 1 and December 1.	241,625	-
2021 Series A: Issued $250,000 in April 2021 at 3.00% to 5.00% due in varying installments through December 1, 2051. Interest is paid each June 1 and December 1.	250,000	-
Total Mainline Senior Bonds	5,887,670	5,359,775
Mainline Senior Direct Placements & Direct Borrowings		
2016 EB-5 Loan (1st-3rd Tranches): Issued $150,000 in March 2016 at 2.00% due on March 18, 2021. Interest is paid each June 1 and December 1. Fully refunded in March 2021.	-	150,000
2016 EB-5 Loan (4th Tranche): Issued $50,000 in May 2016 at 2.00%, due on May 12, 2021. Interest is paid each June 1 and December 1. Fully refunded in April 2021.	-	50,000
2018 EB-5 Loan (1st Tranche): Issued $50,000 in February 2018 at 2.00% due on February 21, 2023. Interest is paid each June 1 and December 1.	50,000	50,000
2018 EB-5 Loan (2nd Tranche): Issued $45,000 in November 2018 at 2.00% due on November 13, 2023. Interest is paid each June 1 and December 1.	45,000	45,000
2019 EB-5 Loan (3rd Tranche): Issued $52,000 in November 2019 at 2.00% due on November 5, 2024. Interest is paid each June 1 and December 1.	52,000	52,000
2020 EB-5 Loan (4th Tranche): Issued $36,500 in January 2020 at 2.00% due on January 21, 2025. Interest is paid each June 1 and December 1.	36,500	36,500
Total Mainline Senior Direct Placements & Direct Borrowings	183,500	383,500
Total Mainline Senior Debt	6,071,170	5,743,275
Mainline Subordinate Debt (consisting of Subordinate Revenue Debt and Motor License Fund-Enhanced Subordinate Special Revenue Debt)		
Mainline Subordinate Revenue Debt		
Mainline Subordinate Bonds		
2009 Series C Subordinate Revenue: Issued $99,998 in July 2009 at 6.25%, due in varying installments through June 1, 2033. Interest compounded semi-annually until June 1, 2016, thereafter paid each June 1 and December 1. Series C issued as Capital Appreciation Bonds (CABs). Compounded interest to be paid at maturity or earlier redemption.	152,355	152,355
2009 Series E Subordinate Revenue: Issued $200,005 in October 2009 at 6.00% to 6.375%, due in varying installments through December 1, 2038. Interest compounded semi-annually until December 1, 2017, thereafter paid each June 1 and December 1. Series E issued as CABs. The compounded interest to be paid at maturity or earlier redemption.	329,975	329,975
2010 Sub-Series C-1, C-2, C-3 Subordinate Revenue: Issued $138,916 in October 2010 at 4.25% to 5.45%. Sub-Series C-1 due in varying installments through December 1, 2040. Sub-Series C-2 issued as convertible CABs. Interest compounded semi-annually until December 1, 2015, thereafter paid each June 1 and December 1. Compound interest paid at maturity or earlier redemption. Sub Series C-3 issued as CABs with interest paid at maturity or earlier redemption. Sub-series C-2 partially refunded in June 2016, July 2017 and final refunding in November 2017. Sub-Series C-1 partially refunded in December 2017 and final refunding in November 2019. Sub-Series C-3 partially defeased in November 2020.	20,684	24,291
2011 Series B Subordinate Revenue: Issued $126,740 in October 2011 at 2.00% to 5.25%, due in varying installments through December 1, 2041. Interest paid each June 1 and December 1. Partially refunded in December 2017, November 2019 and February 2020. Partially defeased in November 2020.	11,315	15,050
2012 Series A Subordinate Revenue: Issued $123,545 in April 2012 at 3.00% to 5.00%, due in varying installments through December 1, 2042. Interest paid each June 1 and December 1. Partially refunded in July 2017, December 2017, November 2019 and February 2020. Partially defeased in November 2020.	9,220	12,770

NOTE 7 DEBT *(continued)*

The following table is a summary of debt outstanding: *(continued)*

	May 31, 2021	May 31, 2020
	(In Thousands)	
Mainline Subordinate Debt (consisting of Subordinate Revenue Debt and Motor License Fund-Enhanced Subordinate Special Revenue Debt) (continued)		
Mainline Subordinate Revenue Debt (continued)		
Mainline Subordinate Bonds		
2012 Series B Subordinate Revenue: Issued $121,065 in October 2012 at 2.00% to 5.00%, due in varying installments through December 1, 2042. Interest paid each June 1 and December 1. Partially refunded in December 2017, November 2019 and February 2020. Partially defeased in November 2020.	$ 51,495	$ 55,170
2013 Series A Subordinate Revenue: Issued $71,702 in April 2013 at 3.125% to 5.00%, due in varying installments through December 1, 2043. Sub-Series A-1 Serial bond interest paid each June 1 and December 1. Sub-Series A-1 Term bond interest paid each June 1 and December 1. Sub-Series A-2 issued as convertible CABs. Interest to be compounded semi-annually until December 1, 2018, thereafter paid each June 1 and December 1. Partially refunded February 2020. Partially defeased in November 2020.	51,520	52,965
2013 Sub-Series B-1, B-2, B-3 Subordinate Revenue: Issued $108,708 in October 2013 at 2.00% to 6.10%, due in varying installments through December 1, 2043. Sub-Series B-1 interest paid each June 1 and December 1. Sub-Series B-2 issued as convertible CABs. Interest to be compounded semi-annually until December 1, 2028, thereafter paid each June 1 and December 1. Compound interest paid at maturity or earlier redemption. Sub-Series B-3 interest paid each June 1 and December 1. Sub-Series B-3 partially refunded in December 2017 and final refunding in February 2020. Sub Series B-1 partially refunded in February 2020. Sub Series B-1 partially defeased in November 2020.	84,168	83,452
2014 Sub-Series A-1, A-2, A-3 Subordinate Revenue: Issued $148,300 in April 2014 at 2.00% to 5.44%, due in varying installments through December 1, 2043. Sub-Series A-1 interest paid each June 1 and December 1. Sub-Series A-2 issued as convertible CABs. Interest to be compounded semi-annually until June 1, 2024, thereafter paid each June 1 and December 1. Compound interest paid at maturity or earlier redemption. Sub-Series B-3 issued as CABs with interest paid at maturity or earlier redemption. Sub-Series A-1 partially defeased in November 2020.	157,690	157,452
2014 Series B Subordinate Revenue: Issued $201,395 in October 2014 at 5.00% to 5.25% due in varying installments through December 1, 2044. Interest paid each June 1 and December 1.	201,395	201,395
2015 Series A-1 Subordinate Revenue: Issued $209,010 in April 2015 at 3.00% to 5.25% due in varying installments through December 1, 2045. Interest is paid each June 1 and December 1.	209,010	209,010
2015 Series B Subordinate Revenue: Issued $192,215 in October 2015 at 4.00% to 5.00% due in varying installments through December 1, 2045. Interest is paid each June 1 and December 1. Partially refunded in July 2017, November 2017 and December 2017. Partially defeased in November 2020.	130,665	131,070
2016 First Series Subordinate Revenue Refunding: Issued $360,990 in February 2016 at 3.00% to 5.00% due in varying installments through June 1, 2038. Interest is paid each June 1 and December 1. Partially defeased in May 2020.	313,210	313,210
2016 Series A-1 Subordinate Revenue: Issued $203,700 in April 2016 at 3.00% to 5.00% due in varying installments through December 1, 2046. Interest is paid each June 1 and December 1. Partially defeased in November 2020.	203,320	203,700
2016 Series A-2 Subordinate Revenue: Issued $185,455 in April 2016 at 5.00% due in varying installments through June 1, 2033. Interest is paid each June 1 and December 1.	185,455	185,455
2016 Second Series Subordinate Revenue Refunding: Issued $649,545 in June 2016 at 3.00% to 5.00% due in varying installments through June 1, 2039. Interest is paid each June 1 and December 1.	649,545	649,545
2016 Third Series Sub-Series A Subordinate Revenue Refunding: Issued $255,455 in October 2016 at 3.375% to 5.00% due in varying installments through December 1, 2041. Interest is paid each June 1 and December 1.	255,455	255,455
2016 Third Series Sub-Series B Subordinate Revenue Refunding (Federally Taxable): Issued $75,755 in October 2016 at 1.175% to 2.928% due in varying installments through December 1, 2025. Interest is paid each June 1 and December 1. Partially defeased in November 2020.	61,550	69,660
2017 Series A Subordinate Revenue: Issued $284,275 in January 2017 at 4.00% to 5.50% due in varying installments through December 1, 2046. Interest is paid each June 1 and December 1.	284,275	284,275
2017 Series B-1 Subordinate Revenue: Issued $379,115 in July 2017 at 5.00% To 5.25%. Due in varying installments through June 1, 2047. Interest paid each June 1 and December 1.	379,115	379,115
2017 Series B-2 Subordinate Revenue: Issued $371,395 in July 2017 at 4.00% to 5.00%. Due in varying installments through June 1, 2039. Interest paid each June 1 and December 1. Partially defeased in May 2020.	370,795	370,795
2017 Second Series Subordinate Revenue Refunding: Issued $150,425 in November 2017 at 5.00%. Due in varying installments through December 1, 2037. Interest paid each June 1 and December 1.	150,425	150,425
2017 Third Series Subordinate Revenue Refunding: Issued $143,585 in December 2017 at 4.00% to 5.00%. Due in varying installments through December 1, 2040. Interest paid each June 1 and December 1.	143,585	143,585
2019 Series A Subordinate Revenue: Issued $722,970 in June 2019 at 4.00% to 5.00%. Due in varying installments through December 1, 2049. Interest paid each June 1 and December 1.	722,970	722,970

NOTE 7 DEBT *(continued)*

The following table is a summary of debt outstanding: *(continued)*

	May 31, 2021	May 31, 2020
	(In Thousands)	
Mainline Subordinate Debt (consisting of Subordinate Revenue Debt and Motor License Fund-Enhanced Subordinate Special Revenue Debt) (continued)		
Mainline Subordinate Revenue Debt (continued)		
Mainline Subordinate Bonds *(continued)*		
2019 First Series Subordinate Revenue Refunding (Federally Taxable): Issued $86,730 in November 2019 at 2.16% to 3.78%. Due in varying installments through December 1, 2042. Interest paid each June 1 and December 1. Partially defeased in November 2020.	$ 86,525	$ 86,730
2020 First Series Subordinate Revenue Refunding (Federally Taxable): Issued $134,310 in February 2020 at 1.81% to 3.45%. Due in varying installments through December 1, 2043. Interest paid each June 1 and December 1. Partially defeased in November 2020.	122,465	134,310
2021 Series A Subordinate Revenue: Issued $465,730 in January 2021 at 3.00% to 4.00%. Due in varying installments through December 1, 2050. Interest paid each June 1 and December 1.	465,730	-
Total Mainline Subordinate Bonds	5,803,912	5,374,185
Mainline Subordinate Direct Placements & Direct Borrowings		
2017 First Series Subordinate Revenue Refunding: Issued $291,850 in May 2017 at a variable rate (based on SIFMA + .60% reset weekly, paid the 1st of each month commencing on June 1, 2017). Due in varying installments through December 1, 2041.	291,850	291,850
Total Mainline Subordinate Direct Placements & Direct Borrowings	291,850	291,850
Total Mainline Subordinate Debt	6,095,762	5,666,035
Motor License Fund-Enhanced Subordinate Special Revenue Debt		
2010 Sub-Series A-1, A-2, A-3 Motor License Fund-Enhanced Subordinate Special Revenue: Issued $187,816 in July 2010 at 4.50% to 5.50%. Sub-Series A-1 due in varying installments through December 1, 2038. Interest paid each June 1 and December 1. Sub-Series A-2 issued as convertible CABs. Interest compounded semi-annually until December 1, 2015, thereafter paid each June 1 and December 1. Compound interest paid at maturity or earlier redemption. Sub-Series A-3 issued as CABs. Compounded interest to be paid at maturity or earlier redemption. Sub-Series A-2 was partially refunded in October 2016 and final refunding in November 2017. Sub-Series A-1 was partially refunded in November 2017 and final refunding in December 2017.	45,821	43,483
2010 Sub-Series B-1, B-2, B-3 Motor License Fund-Enhanced Subordinate Special Revenue: Issued $105,299 in October 2010 at 3.95% to 5.125%, due in varying installments through December 1, 2040. Sub-Series B-1 interest paid each June 1 and December 1. Sub-Series B-2 issued as convertible CABs. Interest compounded semi-annually until December 1, 2015, thereafter paid each June 1 and December 1. Compound interest paid at maturity or earlier redemption. Sub-Series B-3 issued as CABs with interest paid at maturity or earlier redemption. Sub-Series B-2 was partially refunded in October 2016 and July 2017 and final refunding in November 2017. Sub-Series B-1 was partially refunded in December 2017, November 2019 and fully refunded in February 2020.	21,212	24,945
2011 Series B Motor License Fund-Enhanced Subordinate Special Revenue: Issued $98,910 in October 2011 at 3.00% to 5.00%, due in varying installments through December 1, 2041. Interest paid each June 1 and December 1. Partially refunded in July 2017, November 2017, December 2017, November 2019 and February 2020.	3,475	4,930
2012 Series A Motor License Fund-Enhanced Subordinate Special Revenue: Issued $94,935 in April 2012 at 2.00% to 5.00%, due in varying installments through December 1, 2042. Interest paid each June 1 and December 1. Partially refunded in July 2017, November 2017, December 2017, November 2019 and February 2020.	3,690	4,855
2012 Series B Motor License Fund-Enhanced Subordinate Special Revenue: Issued $92,780 in October 2012 at 3.00% to 5.00%, due in varying installments through December 1, 2042. Interest paid each June 1 and December 1. Partially refunded in July 2017 and December 2017, November 2019 and February 2020.	16,755	17,965
2013 Series A Motor License Fund-Enhanced Subordinate Special Revenue: Issued $92,465 in April 2013 at 3.00% to 5.00%, due in varying installments through December 1, 2043. Interest paid each June 1 and December 1. Partially refunded in July 2017, November 2017, December 2017, November 2019 and February 2020.	6,030	7,585
2013 Sub-Series B-1, B-2, B-3 Motor License Fund-Enhanced Subordinate Special Revenue: Issued $101,731 in October 2013 at 2.00% to 5.875%, due in varying installments through December 1, 2043. Sub-Series B-1 interest paid each June 1 and December 1. Sub-Series B-2 issued as convertible CABs. Interest to be compounded semi-annually until December 1, 2028, thereafter paid each June 1 and December 1. Compound interest paid at maturity or earlier redemption. Sub-Series B-3 interest paid each June 1 and December 1. Partially refunded in July 2017, November 2017, December 2017 and February 2020.	46,510	46,129
2014 Series A Motor License Fund-Enhanced Subordinate Special Revenue: Issued $59,740 in April 2014 at 4.50% to 4.90%, due in varying installments through December 1, 2044. Series A were issued as convertible CABs. Interest to be compounded semi-annually until December 1, 2021, thereafter paid each June 1 and December 1. Compound interest paid at maturity or earlier redemption.	82,993	79,231

NOTE 7 DEBT *(continued)*

The following table is a summary of debt outstanding: *(continued)*

	May 31, 2021	May 31, 2020
	(In Thousands)	
Motor License Fund-Enhanced Subordinate Special Revenue Debt (continued)		
2016 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding: Issued $79,865 in October 2016 at 5.00% due in varying installments through December 1, 2036. Interest is paid each June 1 and December 1.	$ 79,865	$ 79,865
2017 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding: Issued $45,390 in July 2017 at 5.00%, due in varying installments through June 1, 2028. Interest due each June 1 and December 1.	45,390	45,390
2017 Second Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding: Issued $243,675 in November 2017 at 5.00%, due in varying installments through December 1, 2041. Interest due each June 1 and December 1.	243,675	243,675
2017 Third Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding: Issued $164,240 in December 2017 at 4.00% to 5.00%, due in varying installments through December 1, 2040. Interest due each June 1 and December 1.	164,240	164,240
2019 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding (Federally Taxable): Issued $151,130 in November 2019 at 2.01% to 3.58%, due in varying installments through December 1, 2043. Interest due each June 1 and December 1.	150,860	151,130
2020 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding (Federally Taxable): Issued $92,750 in February 2020 at 1.76% to 3.25%, due in varying installments through December 1, 2043. Interest due each June 1 and December 1.	91,715	92,750
Total Motor License Fund-Enhanced Subordinate Special Revenue Debt	1,002,231	1,006,173
Total Mainline Subordinate Debt (consisting of Subordinate Revenue Debt and Motor License Fund-Enhanced Subordinate Special Revenue Debt)	7,097,993	6,672,208
Total Mainline Senior and Subordinate Debt	13,169,163	12,415,483
Oil Franchise Tax Senior Debt		
2009 Series A, B, C Oil Franchise Tax Revenue: Issued $164,181 in October 2009. Series A issued at 2.00% to 5.85%, due in varying installments through December 1, 2023. Series B (Build America Bonds, Issuer Subsidy, Federally Taxable) issued at 5.85%, due in varying installments through December 1, 2037. Interest paid each June 1 and December 1. Series C issued as CABs at 5.30%. Interest on the CABs is deferred until maturity on December 1, 2039. Sub-Series A-2 partially refunded in September 2016.	159,436	159,173
2013 Series A Oil Franchise Tax Revenue Refunding: Issued $27,785 in October 2013 at 2.50% to 5.00%, due in varying installments through December 1, 2024. Interest paid each June 1 and December 1.	16,675	23,120
2016 Series A Oil Franchise Tax Revenue Refunding: Issued $198,595 in September 2016 at 4.00% to 5.00% due in varying installments through December 1, 2032. Interest paid each June 1 and December 1.	167,790	171,105
2018 Series A Oil Franchise Tax Revenue : Issued $231,385 in June 2018 at 5.00% to 5.25% due in varying installments through December 1, 2048. Interest paid each June 1 and December 1.	231,385	231,385
Total Oil Franchise Tax Senior Debt	575,286	584,783
Oil Franchise Tax Subordinate Debt		
2009 Series D, E Subordinate Oil Franchise Tax Revenue: Issued $134,065 in October 2009. Series D issued at 2.00% to 5.00%, due in varying installments through December 1, 2027. Series E (Build America Bonds, Issuer Subsidy, Federally Taxable) issued at 6.378%, due in varying installments through December 1, 2037. Sub-Series D-2 partially refunded in September 2016.	121,980	123,045
2013 Series B Subordinate Oil Franchise Tax Revenue: Issued $32,035 in October 2013 at 2.00% and 5.00%, due in varying installments through December 1, 2025. Interest paid each June 1 and December 1.	18,965	24,215
2016 Series B Subordinate Oil Franchise Tax Revenue Refunding: Issued $115,395 in September 2016 at 4.00% to 5.00% due in varying installments through December 1, 2032. Interest paid each June 1 and December 1.	94,465	95,925
2018 Series B Subordinate Oil Franchise Tax Revenue: Issued $210,480 in June 2018 at 5.00% to 5.25% due in varying installments through December 1, 2048. Interest paid each June 1 and December 1.	210,480	210,480
Total Oil Franchise Tax Subordinate Debt	445,890	453,665
Total Oil Franchise Tax Senior and Subordinate Debt	1,021,176	1,038,448

NOTE 7 DEBT *(continued)*

The following table is a summary of debt outstanding: *(continued)*

	May 31, 2021	May 31, 2020
	(In Thousands)	
Motor License Registration Fee Debt		
Motor License Registration Fee Bonds		
2005 Series A: Issued $234,135 in August 2005 at 3.25% to 5.25%, due in varying installments through July 15, 2030. Interest paid each January 15 and July 15. Partially defeased in March 2019.	$ 118,855	$ 128,400
Total Motor License Registration Fee Bonds	118,855	128,400
Motor License Registration Fee Direct Placement & Direct Borrowings		
2005 Series B, C, D: Issued $231,425 in August 2005 and remarketed in October 2015 to a direct placement; modified interest rate in July 2018 and February 2019; current interest rate is a variable rate (based SIFMA + .875%, reset weekly, paid the 15th of each month), due in varying installments through July 15, 2041.	231,425	231,425
Total Motor License Registration Fee Direct Placement & Direct Borrowings	231,425	231,425
Total Motor License Registration Fee Debt Payable	350,280	359,825
Total Debt Payable	14,540,619	13,813,756
Unamortized premium/discount	1,262,911	1,143,144
Total debt, net of unamortized premium/discount	15,803,530	14,956,900
Less: Current portion	480,170	573,880
Debt, noncurrent portion	$ 15,323,360	$ 14,383,020

As of May 31, 2021, the Commission had $706,775 in outstanding Direct Placements and Direct Borrowings. SIFMA was 0.05% on May 31, 2021.

As of May 31, 2020, the Commission had $906,775 in outstanding Direct Placements and Direct Borrowings. SIFMA was 0.14% on May 31, 2020.

The tables below summarize the total additions and total reductions in debt during fiscal years 2021 and 2020. Additions are the result of new debt issuances and bond accretion related to capital appreciation bonds. Reductions are the result of principal payments and bond refundings/defeasances.

	Balance at May 31, 2020	Additions	Reductions	Balance at May 31, 2021	Due Within One Year
			(In Thousands)		
Mainline debt					
Line of credit-PNC	$ -	$ 150,000	$ 150,000	$ -	$ -
Mainline bonds	11,740,133	1,299,285	345,605	12,693,813	450,455
Mainline direct placements and borrowings	675,350	-	200,000	475,350	-
Total Mainline debt	12,415,483	1,449,285	695,605	13,169,163	450,455
Oil Franchise Tax debt					
Oil Franchise Tax bonds	1,038,448	1,448	18,720	1,021,176	19,670
Total Oil Franchise Tax debt	1,038,448	1,448	18,720	1,021,176	19,670
Motor License Registration Fee debt					
Motor License Registration Fee bonds	128,400	-	9,545	118,855	10,045
Motor License Registration Fee direct placements and borrowings	231,425	-	-	231,425	-
Total Motor License Registration Fee debt	359,825	-	9,545	350,280	10,045
	13,813,756	1,450,733	723,870	14,540,619	480,170
Premium (discount), net	1,143,144	184,541	64,774	1,262,911	-
Total	$ 14,956,900	$ 1,635,274	$ 788,644	$ 15,803,530	$ 480,170

NOTE 7 DEBT *(continued)*

	Balance at May 31, 2019	Additions	Reductions *(In Thousands)*	Balance at May 31, 2020	Due Within One Year
Mainline debt					
Mainline bonds	$ 10,830,131	$ 2,098,182	$ 1,188,180	$ 11,740,133	$ 345,615
Mainline direct placements and borrowings	586,850	88,500	-	675,350	200,000
Total Mainline debt	11,416,981	2,186,682	1,188,180	12,415,483	545,615
Oil Franchise Tax debt					
Oil Franchise Tax bonds	1,056,053	1,375	18,980	1,038,448	18,720
Total Oil Franchise Tax debt	1,056,053	1,375	18,980	1,038,448	18,720
Motor License Registration Fee debt					
Motor License Registration Fee bonds	137,470	-	9,070	128,400	9,545
Motor License Registration Fee direct placements and borrowings	231,425	-	-	231,425	-
Total Motor License Registration Fee debt	368,895	-	9,070	359,825	9,545
	12,841,929	2,188,057	1,216,230	13,813,756	573,880
Premium (discount), net	1,074,680	187,064	118,600	1,143,144	-
Totals	$ 13,916,609	$ 2,375,121	$ 1,334,830	$ 14,956,900	$ 573,880

Debt service requirements subsequent to May 31, 2021 related to all sections of debt are as follows:

Year Ending May 31	Bonds: Principal Maturities	Bonds: Interest	Bonds: Total	Direct Borrowings and Direct Placements: Principal Maturities	Direct Borrowings and Direct Placements: Interest *(In Thousands)*	Direct Borrowings and Direct Placements: Total	Total Debt: Principal Maturities	Total Debt: Interest	Total Debt: Total
2022	$ 480,170	$ 607,278	$ 1,087,448	$ -	$ 7,749	$ 7,749	$ 480,170	$ 615,027	$ 1,095,197
2023	259,545	608,189	867,734	50,000	7,971	57,971	309,545	616,160	925,705
2024	469,270	595,501	1,064,771	45,000	6,713	51,713	514,270	602,214	1,116,484
2025	299,955	583,100	883,055	88,500	5,875	94,375	388,455	588,975	977,430
2026	316,660	574,862	891,522	-	4,079	4,079	316,660	578,941	895,601
2027-2031	1,824,357	2,644,937	4,469,294	-	20,402	20,402	1,824,357	2,665,339	4,489,696
2032-2036	2,667,675	2,120,663	4,788,338	91,600	18,036	109,636	2,759,275	2,138,699	4,897,974
2037-2041	3,381,355	1,489,503	4,870,858	340,880	10,779	351,659	3,722,235	1,500,282	5,222,517
2042-2046	2,800,927	741,453	3,542,380	90,795	253	91,048	2,891,722	741,706	3,633,428
2047-2051	1,319,385	149,155	1,468,540	-	-	-	1,319,385	149,155	1,468,540
2052-2056	14,545	582	15,127	-	-	-	14,545	582	15,127
	$ 13,833,844	$ 10,115,223	$ 23,949,067	$ 706,775	$ 81,857	$ 788,632	$ 14,540,619	$ 10,197,080	$ 24,737,699

The Commission’s purpose for issuing debt is as follows:

- Mainline Senior Debt is issued for the purpose of financing the costs of various capital projects in the Commission’s Ten-Year Capital Plan and for refunding outstanding Mainline Senior Debt.

  In fiscal year 2021, the Commission made a draw of $150,000,000 on it’s Line of Credit with PNC. The Commission also issued $817,945,000 of Mainline Senior Debt and $391,683,333 was issued to finance the costs of various capital projects, $426,261,667 was issued to refund and repay outstanding Mainline Senior Debt, and $150,000,000 was issued to repay the Line of Credit.

NOTE 7 DEBT *(continued)*

In fiscal year 2020, the Commission issued $983,775,000 of Mainline Senior Debt; $429,825,000 was issued to finance the costs of various capital projects, and $553,950,000 was issued to refund outstanding Mainline Senior Debt.

- Mainline Subordinate Debt is issued for the purpose of financing a portion of the costs of making payments to the Pennsylvania Department of Transportation in accordance with Act 44 and Act 89 and for refunding outstanding Subordinate Debt. See Note 9 for additional information regarding Act 44 and Act 89.

  In fiscal year 2021, the Commission issued $465,730,000 of Mainline Subordinate Debt; $465,730,000 was issued to finance the costs of Act 44 and Act 89.

  In fiscal year 2020, the Commission issued $1,187,890,000 of Mainline Subordinate Debt; $722,970,000 was issued to finance the costs of Act 44 and Act 89, and $464,920,000 was issued to refund outstanding Mainline Subordinate Debt.

- Oil Franchise Tax Debt and Motor License Registration Fee Debt are issued for the purpose of financing the costs of capital expenditures related to the Mon/Fayette and Southern Beltway expansion projects and to refund outstanding Oil Franchise Tax Debt and Motor License Registration Fee Debt.

  The Commission did not issue any Oil Franchise Tax Debt or Motor License Registration Fee Debt during the fiscal years ending May 31, 2021 and 2020.

The issuance of new debt is conducted in accordance with the terms of the applicable Trust Indenture and approval of the Commissioners.

<u>Mainline Debt Requirements and Recent Activity</u>

The Amended and Restated Trust Indenture of 2001 requires that tolls be adequate to provide funds to cover current expenses and: (1) provide funds in an amount not less than the greater of 130% of the maximum principal and interest requirements for the succeeding year, or (2) 100% of the maximum principal and interest payments for the next fiscal year plus the amount required for maintenance of the Turnpike System as determined by the Commission’s Consulting Engineer. If any deficiencies occur, the Commission is obligated to raise tolls accordingly.

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

As disclosed in Note 3, the Commission's Trust Indentures impose certain restrictions and requirements. The Commission's Trust Indenture for the Turnpike Subordinate Revenue Bonds requires that the Commission establish and maintain schedules of tolls for traffic over the Turnpike System as required by the Senior Indenture and, in addition, the amount paid into the General Reserve Fund of the Senior Indenture in each fiscal year and for each Commission Payment, will be at least sufficient to provide funds in an amount not less than: (1) 115% of the Annual Debt Service for each fiscal year on account of all outstanding Revenue Bonds and Revenue Bonds Parity Obligations; (2) 100% of the Annual Debt Service for such fiscal year on account of all Outstanding Guaranteed Bonds, Guaranteed Bonds Parity Obligations and Subordinated Indebtedness; and (3) any payment by the Commission required by the Subordinate Indenture for restoring a deficiency in the Debt Service Fund within an 18-month period.

The Commission's Mainline Senior Debt (including Direct Placements and Borrowings) contains a provision that in an unresolved event of default and following a vote of the bondholders, outstanding amounts become immediately due if the Commission is unable to make payment.

In fiscal year 2013, the Commission entered into a loan agreement to borrow up to $200.0 million in four tranches of up to $50.0 million each through the Immigrant Investor Program (known as the EB-5 visa program) administered by the U.S. Citizenship and Immigration Services. The Commission is borrowing this money to fund a portion of the I-95 Interchange Project. Such debt is issued under the Senior Indenture on parity with the Turnpike Revenue Bonds. As of May 31, 2020, the Commission had borrowed all $200.0 million under the agreement. In March and May 2021, the Commission repaid all $200.0 million of the EB-5 borrowings under this loan agreement. As of May 31, 2021, there are no outstanding borrowings.

In fiscal year 2017, the Commission entered into a second loan agreement to borrow, over a possible eight-year period, up to $800.0 million in 16 tranches of up to $50.0 million each through the EB-5 visa program. The Commission is borrowing this money to fund a portion of the costs of certain capital projects included in the Commission's current Ten-Year Capital Plan. Such debt, if borrowed, would be issued under the Senior Indenture on parity with the Turnpike Revenue Bonds. The outstanding principal related to these EB-5 borrowings was $183.5 million and $183.5 million as of May 31, 2021 and 2020, respectively.

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

In June 2020, the Commission secured a $200.0 million revolving line of credit from PNC Bank, N. A. with a one-year term. The Commission was authorized to draw this money for general working capital purposes, funding/reimbursing necessary reserves and the payment of debt service on Bonds under the Senior Indenture. In fiscal year 2021, the Commission utilized the Line of Credit to redeem certain outstanding bonds of the Commission. Subsequently, these draws were repaid with the proceeds from the Senior Bonds as discussed in later paragraphs. As of May 31, 2021, there was no outstanding principal related to this Line of Credit.

Under the Commonwealth's Act 44 of 2007, the Commission may issue up to $5.0 billion of Special Revenue Bonds guaranteed by the Commonwealth's Motor License Fund. The Special Revenue Bonds authorized by Act 44 are subject to various limitations, including, among others, the following: the aggregate amount of such Special Revenue Bonds is limited to $5.0 billion; no more than $600.0 million of Special Revenue Bonds may be issued in any calendar year; debt service on the Special Revenue Bonds shall be payable from any available funds of the Commission, but are additionally secured by amounts payable from the Commonwealth's Motor License Fund which is required to pay any debt service shortfall. All Special Revenue Bond debt service payments are subordinate obligations of the Commission payable solely from certain money in, or periodically released from, the General Reserve Fund after meeting all other Commission requirements pursuant to any financial documents, financial covenants, insurance policies, liquidity policies or agreements in effect at the Commission. Pursuant to the Commonwealth's Act 89 of 2013, Special Revenue Bonds may not be issued by the Commission to fund any portion of its annual payment obligation to PennDOT after July 1, 2014, although Special Revenue Refunding Bonds may be issued. The outstanding principal related to these Special Revenue Bonds was $1,002.2 million and $1,006.2 million as of May 31, 2021 and 2020, respectively.

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

The commitment of the Commonwealth's Motor License Fund to provide additional security to pay any Special Revenue Bond debt service shortfall shall continue until the retirement or defeasance of any Special Revenue Bonds or until October 13, 2057, whichever is sooner. To date, the Commission has made all required Special Revenue Bond debt service payments. No funds have been drawn or requested from the Commonwealth's Motor License Fund for Special Revenue Bond debt service during the current reporting period or any prior reporting periods. In the event that the Commonwealth's Motor License Fund would be required to make a Special Revenue Bond debt service payment, a provision of the Amended Lease and Funding Agreement, executed between the Commission and PennDOT, requires the Commission to reimburse the Motor License Fund for any Special Revenue Bond debt service payments plus interest accruing to the date of the Commission's failure to pay the debt service. The obligation of the Commission to reimburse the Motor License Fund for any Special Revenue Bond debt service payment is a subordinate obligation of the Commission and is payable only from amounts, if any, in the Commission's General Reserve Fund as permitted by any Commission financing documents, financial covenants, insurance policies, liquidity policies or agreements in effect at the Commission.

In June 2019, the Commission issued $139,815,000 of 2019 Second Series Senior Revenue Bonds at a variable rate with a maturity date of December 1, 2038. The 2019 Second Series Senior Revenue Bonds were issued to refund a portion of the 2013 Series B Senior Revenue Bonds ($100,000,000), 2014 Series B-1 Senior Revenue Bonds ($39,150,000), and for paying the costs of issuing the 2019 Second Series Senior Revenue Bonds.

In June 2019, the Commission issued $722,970,000 of 2019 Series A Subordinate Revenue Bonds at a fixed rate with a maturity date of December 1, 2049. The 2019 Series A Subordinate Revenue Bonds were issued primarily to finance a portion of the cost of making payments to PennDOT in accordance with Act 44 and Act 89 and for paying the costs of issuing the 2019 Series A Subordinate Revenue Bonds.

In August 2019, the Commission issued $341,325,000 of 2019 Series A Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2049. The 2019 Series A Senior Revenue Bonds were issued to finance the cost of various capital expenditures set forth in the Commission's Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges and for paying the costs of issuing the 2019 Series A Senior Revenue Bonds.

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

In September 2019, the Commission issued $179,815,000 of the 2019 Forward Delivery Series Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2025. The 2019 Forward Delivery Series Senior Revenue Bonds were issued primarily for the current refunding of the 2009 Series B Senior Revenue Bonds ($190,080,000) and for paying the costs of issuing the 2020 Forward Delivery Series Senior Revenue Bonds. The current refunding of 2009 Series B Senior Revenue Bonds allowed the Commission to reduce its debt service by approximately $14.8 million. The transaction resulted in an economic gain of $10.7 million.

In November 2019, the Commission issued, as a Direct Borrowing, $52,000,000 2019 EB-5 Loan (Third Tranche) at a fixed rate with a maturity date of November 5, 2024. The Commission is borrowing this money to fund a portion of the costs of certain capital projects included in the Commission's current Ten-Year Capital Plan and for paying the costs of issuing the 2019 EB-5 Loan.

In November 2019, the Commission issued $86,730,000 of 2019 First Series Subordinate Revenue Refunding Bonds (Federally Taxable) at a fixed rate with a maturity date of December 1, 2042. The 2019 First Series Subordinate Revenue Refunding Bonds were issued to provide funds for refunding a portion of the Commission's 2010 Series C-1 Subordinate Revenue Bonds ($1,540,000), 2011 Series B Subordinate Revenue Bonds ($40,130,000), 2012 Series A Subordinate Revenue Bonds ($25,910,000), 2012 Series B Subordinate Revenue Bonds ($12,685,000) and for paying the costs of issuing the 2019 First Series Subordinate Revenue Refunding Bonds. The advanced refunding of 2010 Series C-1 Subordinate Revenue Bonds, 2011 Series B Subordinate Revenue Bonds, 2012 Series A Subordinate Revenue Bonds, 2012 Series B Subordinate Revenue Bonds, and 2013 Series A Subordinate Revenue Bonds allowed the Commission to reduce its debt service by approximately $12 million. The transaction resulted in an economic gain of $8.4 million.

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

In November 2019, the Commission issued $151,130,000 of 2019 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds (Federally Taxable) at a fixed rate with a maturity date of December 1, 2043. The 2019 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds were issued to provide funds for refunding a portion of the Commission's 2010 Series B-1 Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($13,780,000), 2011 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($23,340,000), 2012 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($28,610,000), 2012 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($35,270,000), and 2013 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($39,765,000) and for paying the costs of issuing the 2019 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds. The advanced refunding of 2010 Series B-1 Motor License Fund-Enhanced Subordinate Special Revenue Bonds, 2011 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds, 2012 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds, 2012 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds, and 2013 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds allowed the Commission to reduce its debt service by approximately $28.1 million. The transaction resulted in an economic gain of $16.7 million.

In January 2020, the Commission issued, as a Direct Borrowing, $36,500,000 2020 EB-5 Loan (Fourth Tranche) at a fixed rate with a maturity date of January 21, 2025. The Commission is borrowing this money to fund a portion of the costs of certain capital projects included in the Commission's current Ten-Year Capital Plan and for paying the costs of issuing the 2020 EB-5 Loan.

In January 2020, the Commission issued $234,320,000 of 2020 First Series Senior Revenue Bonds (Federally Taxable) at a fixed rate with a maturity date of December 1, 2043. The 2020 First Series Senior Revenue Bonds were issued to refund a portion of the 2012 Series A Senior Revenue Bonds ($99,380,000), 2013 Series C Senior Revenue Bonds ($115,580,000), and for paying the costs of issuing the 2020 First Series Senior Revenue Bonds. The advanced refunding 2012 Series A Senior Revenue Bonds and 2013 Series C Senior Revenue Bonds allowed the Commission to reduce its debt service by approximately $44.5 million. The transaction resulted in an economic gain of $25.7 million.

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

In February 2020, the Commission issued $134,310,000 of 2020 First Series Subordinate Revenue Refunding Bonds (Federally Taxable) at a fixed rate with a maturity date of December 1, 2043. The 2020 First Series Subordinate Revenue Refunding Bonds were issued to provide funds for refunding a portion of the Commission's 2010 Series B-1 Subordinate Revenue Bonds ($11,285,000), 2011 Series B Subordinate Revenue Bonds ($3,820,000), 2012 Series A Subordinate Revenue Bonds ($29,555,000), 2012 Series B Subordinate Revenue Bonds ($29,240,000), 2013 Series A Subordinate Revenue Bonds ($28,555,000), 2013 Series B-1 Subordinate Revenue Bonds ($18,200,000), 2013 Series B-3 Subordinate Revenue Bonds ($10,215,000) and for paying the costs of issuing the 2020 First Series Subordinate Revenue Refunding Bonds. The current refunding of 2010 Series B-1 Subordinate Revenue Bonds and the advanced refunding of 2011 Series B Subordinate Revenue Bonds, 2012 Series A Subordinate Revenue Bonds, 2012 Series B Subordinate Revenue Bonds, 2013 Series A Subordinate Revenue Bonds, 2013 Series B-1 Subordinate Revenue Bonds, and 2013 Series B-3 Subordinate Revenue Bonds allowed the Commission to reduce its debt service by approximately $32.4 million. The transaction resulted in an economic gain of $13.8 million.

In February 2020, the Commission issued $92,750,000 of 2020 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds (Federally Taxable) at a fixed rate with a maturity of December 1, 2043. The 2020 First Series Motor License Fund-Enhanced Subordinate Special Revenue Refunding Bonds were issued to provide funds for refunding a portion of the Commission's 2010 Series B-1 Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($8,790,000), 2011 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($25,000), 2012 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($1,805,000), 2012 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($15,230,000), 2013 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($20,330,000), 2013 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds ($38,080,000) and for paying the costs of issuing the 2020 First Series Motor License Fund-Enhanced Subordinate Revenue Refunding Bonds. The advanced refunding of 2010 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds, 2011 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds, 2012 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds, 2012 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds, 2013 Series A Motor License Fund-Enhanced Subordinate Special Revenue Bonds and 2013 Series B Motor License Fund-Enhanced Subordinate Special Revenue Bonds allowed the Commission to reduce its debt service by approximately $21.7 million. The transaction resulted in an economic gain of $13.7 million.

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

In May 2020, the Commission cash defeased the June 1, 2020 maturity of the Commission's 2008 Series B Subordinate Revenue Bonds ($7,595,000), 2016 First Series Subordinate Revenue Refunding Bonds ($42,020,000), and 2017 Series B-2 Subordinate Revenue Bonds ($210,000). This cash defeasance of the Subordinate Revenue Bonds allowed the Commission to reduce its debt service by approximately $51.2 million. The transaction resulted in an economic loss of $0.1 million, which essentially represented transaction fees incurred as a result of the cash defeasance.

In June 2020, the Commission issued $225,820,000 of 2020 Series Senior Revenue Bonds at a variable rate with a maturity date of December 1, 2039. The 2020 Series Senior Revenue Bonds were issued to refund a portion of the 2013 Series B Senior Revenue Bonds ($100,000,000), 2014 Series B-1 Senior Revenue Bonds ($100,000,000), 2018 Series A-1 Senior Revenue Bonds ($25,000,000) and for paying the costs of issuing the 2020 Series Senior Revenue Bonds.

In August 2020, the Commission issued $100,500,000 of 2020 Series A Senior Revenue Bonds at a variable rate with a maturity date of December 1, 2050. The 2020 Series A Senior Revenue Bonds were issued primarily to finance the cost of various capital expenditures set forth in the Commission's Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges and for paying the costs of issuing the 2020 Series A Senior Revenue Bonds.

In October 2020, the Commission issued $241,625,000 of 2020 Series B Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2050. The 2020 Series B Senior Revenue Bonds were primarily issued to finance the cost of various capital expenditures set forth in the Commission's Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges and for paying the costs of issuing the 2020 Series B Senior Revenue Bonds.

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

In November 2020, the Commission cash defeased the December 1, 2020 maturity of the Commission's 2011 Series A Senior Revenue Bonds ($15,925,000), 2012 Series A Senior Revenue Bonds ($4,310,000), 2013 Series C Senior Revenue Bonds ($1,500,000), 2014 Series A Senior Revenue Bonds ($455,000), 2014 Series C Senior Revenue Bonds ($2,275,000), 2015 Series A-1 Senior Revenue Bonds ($490,000), 2015 Series B Senior Revenue Bonds ($1,295,000), 2016 Series A-1 Senior Revenue Bonds ($520,000), 2017 Series A-1 Senior Revenue Bonds ($6,210,000), 2019 Series A Senior Revenue Bonds ($5,405,000), and 2019 Forward Delivery Senior Revenue Bonds ($26,230,000). This cash defeasance of the Senior Revenue Bonds allowed the Commission to reduce its debt service by approximately $66.2 million. The transaction resulted in an economic loss $20,000, which essentially represented transaction fees incurred as a result of the cash defeasance.

In November 2020, the Commission cash defeased the December 1, 2020 maturity of the Commission's 2010 Series C-3 Subordinate Revenue Bonds ($3,045,115 with an accreted value of $4,645,085), 2011 Series B Subordinate Revenue Bonds ($3,735,000), 2012 Series A Subordinate Revenue Bonds ($3,550,000), 2012 Series B Subordinate Revenue Bonds ($3,675,000), 2013 Series A-1 Subordinate Revenue Bonds ($1,445,000), 2013 Series B-1 Subordinate Revenue Bonds ($1,805,000), 2014 Series A-1 Subordinate Revenue Bonds ($2,680,000), 2015 Series B Subordinate Revenue Bonds ($405,000), 2016 Series A-1 Subordinate Revenue Bonds ($380,000), 2016 Third Series Subordinate Revenue Taxable Refunding Bonds ($8,110,000), 2019 First Series Subordinate Revenue Taxable Refunding Bonds ($205,000), and 2020 First Series Subordinate Revenue Taxable Refunding Bonds ($11,845,000). This cash defeasance of the aforementioned Subordinate Revenue Bonds allowed the Commission to reduce its debt service by approximately $43.1 million. The transaction resulted in an economic loss of $20,000, which essentially represented transaction fees incurred as a result of the cash defeasance.

In January 2021, the Commission issued $465,730,000 of 2021 Series A Subordinate Revenue Bonds at a fixed rate with a maturity date of December 1, 2050. The 2021 Series A Subordinate Revenue Bonds were primarily issued to finance a portion of the costs of making payments to PennDOT in accordance with Act 44 and Act 89 and for paying the costs of issuing the 2021 Series A Subordinate Revenue Bonds.

In March 2021, the Commission made a draw of $150,000,000 on the PNC Bank revolving Line of Credit at a variable rate with a maturity date of June 2, 2021. The draw was utilized to provide funds to repay the 2016 EB-5 Loan 1st-3rd Tranches ($150,000,000).

NOTE 7 DEBT *(continued)*

Mainline Debt Requirements and Recent Activity *(continued)*

In April 2021, the Commission issued $250,000,000 of 2021 Series A Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2051. The 2021 Series A Senior Revenue Bonds were issued primarily to repay outstanding amounts under the Commission's revolving Line of Credit with PNC Bank ($150,000,000), repay the 2016 EB-5 Loan Fourth Tranche ($50,000,000), finance the cost of various capital expenditures set forth in the Commission's Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges and for paying the costs of issuing the 2021 Series A Senior Revenue Bonds.

Debt service requirements subsequent to May 31, 2021 related to the Mainline debt are as follows:

	Bonds			Direct Borrowings and Direct Placements			Total Debt		
Year Ending May 31	Principal Maturities	Interest	Total	Principal Maturities	Interest (In Thousands)	Total	Principal Maturities	Interest	Total
2022	$ 450,455	$ 548,814	$ 999,269	$ -	$ 5,567	$ 5,567	$ 450,455	$ 554,381	$ 1,004,836
2023	226,990	551,219	778,209	50,000	5,789	55,789	276,990	557,008	833,998
2024	435,055	540,181	975,236	45,000	4,525	49,525	480,055	544,706	1,024,761
2025	263,515	529,597	793,112	88,500	3,693	92,193	352,015	533,290	885,305
2026	277,480	523,225	800,705	-	1,897	1,897	277,480	525,122	802,602
2027-2031	1,612,312	2,417,931	4,030,243	-	9,485	9,485	1,612,312	2,427,416	4,039,728
2032-2036	2,463,385	1,948,870	4,412,255	-	9,488	9,488	2,463,385	1,958,358	4,421,743
2037-2041	3,196,554	1,330,794	4,527,348	226,970	7,134	234,104	3,423,524	1,337,928	4,761,452
2042-2046	2,559,752	673,037	3,232,789	64,880	212	65,092	2,624,632	673,249	3,297,881
2047-2051	1,193,770	136,221	1,329,991	-	-	-	1,193,770	136,221	1,329,991
2052-2056	14,545	582	15,127	-	-	-	14,545	582	15,127
	$ 12,693,813	$ 9,200,471	$ 21,894,284	$ 475,350	$ 47,790	$ 523,140	$ 13,169,163	$ 9,248,261	$ 22,417,424

Oil Franchise Tax Debt Requirements and Recent Activity

The Oil Franchise Tax Revenue Bonds are secured by a pledge and assignment by the Commission to the Trustee of: (1) all proceeds from the Commission's allocation of the Commonwealth's Oil Company Franchise Tax; (2) the Commission's right to receive its allocation of the Oil Company Franchise Tax and any portion of the allocation actually received by the Commission; (3) all monies deposited into accounts or funds created by the 1998 Indenture, as supplemented; and, (4) all investment earnings on all monies held in accounts and funds established by the 1998 Indenture.

The 1998 Indenture requires the Commission to petition the General Assembly of the Commonwealth of Pennsylvania for additional funds in the event that the Commission's allocation of the Oil Company Franchise Tax is inadequate to pay maximum principal and interest payments for the succeeding year.

NOTE 7 DEBT *(continued)*

Oil Franchise Tax Debt Requirements and Recent Activity *(continued)*

The Commission's Oil Franchise Tax Debt contains a provision that in an unresolved event of default and following a vote of the bondholders, outstanding amounts become immediately due if the Commission is unable to make payment.

Debt service requirements subsequent to May 31, 2021 related to Oil Franchise Tax debt are as follows:

	Bonds			Direct Borrowings and Direct Placements			Total Debt		
Year Ending May 31	Principal Maturities	Interest	Total	Principal Maturities	Interest (In Thousands)	Total	Principal Maturities	Interest	Total
2022	$ 19,670	$ 52,488	$ 72,158	$ -	$ -	$ -	$ 19,670	$ 52,488	$ 72,158
2023	21,980	51,535	73,515	-	-	-	21,980	51,535	73,515
2024	23,090	50,455	73,545	-	-	-	23,090	50,455	73,545
2025	24,725	49,237	73,962	-	-	-	24,725	49,237	73,962
2026	26,850	48,002	74,852	-	-	-	26,850	48,002	74,852
2027-2031	148,980	219,287	368,267	-	-	-	148,980	219,287	368,267
2032-2036	204,290	171,793	376,083	-	-	-	204,290	171,793	376,083
2037-2041	184,801	158,709	343,510	-	-	-	184,801	158,709	343,510
2042-2046	241,175	68,416	309,591	-	-	-	241,175	68,416	309,591
2047-2051	125,615	12,934	138,549	-	-	-	125,615	12,934	138,549
	$ 1,021,176	$ 882,856	$ 1,904,032	$ -	$ -	$ -	$ 1,021,176	$ 882,856	$ 1,904,032

Motor License Registration Fee Debt Requirements and Recent Activity

Pursuant to Section 20 of Act 3, the Commonwealth appropriates $28.0 million of Act 3 revenues to the Commission annually. The $28.0 million is payable to the Commission in the amount of $2.3 million per month. The Motor License Registration Fee Revenue Bonds are secured by a pledge and assignment by the Commission to the Trustee of any receipts, revenues and other moneys received by the Trustee on or after the date of the Indenture from the Commission's allocation of Act 3 revenues and any income earned on any fund or account established pursuant to the Indenture.

The Commission's Motor License Registration Fee Debt (including Direct Placements and Borrowings) contains a provision that in an unresolved event of default and following a vote of the bondholders, outstanding amounts become immediately due if the Commission is unable to make payment.

NOTE 7 DEBT *(continued)*

Motor License Registration Fee Debt Requirements and Recent Activity *(continued)*

Debt service requirements subsequent to May 31, 2021 related to Motor License Registration Fee debt are as follows:

Year Ending May 31	Bonds Principal Maturities	Bonds Interest	Bonds Total	Direct Borrowings and Direct Placements Principal Maturities	Direct Borrowings and Direct Placements Interest	Direct Borrowings and Direct Placements Total	Total Debt Principal Maturities	Total Debt Interest	Total Debt Total
					(In Thousands)				
2022	$ 10,045	$ 5,976	$ 16,021	$ -	$ 2,182	$ 2,182	$ 10,045	$ 8,158	$ 18,203
2023	10,575	5,435	16,010	-	2,182	2,182	10,575	7,617	18,192
2024	11,125	4,865	15,990	-	2,188	2,188	11,125	7,053	18,178
2025	11,715	4,266	15,981	-	2,182	2,182	11,715	6,448	18,163
2026	12,330	3,635	15,965	-	2,182	2,182	12,330	5,817	18,147
2027-2031	63,065	7,719	70,784	-	10,917	10,917	63,065	18,636	81,701
2032-2036	-	-	-	91,600	8,548	100,148	91,600	8,548	100,148
2037-2041	-	-	-	113,910	3,645	117,555	113,910	3,645	117,555
2042-2046	-	-	-	25,915	41	25,956	25,915	41	25,956
	$ 118,855	$ 31,896	$ 150,751	$ 231,425	$ 34,067	$ 265,492	$ 350,280	$ 65,963	$ 416,243

Defeased Bonds

In both the current and prior years, the Commission defeased certain revenue bonds by placing funds in irrevocable trusts to provide for all future debt service payments on the defeased bonds. Accordingly, the trust account assets and the liability for the defeased bonds were not included in the Commission's financial statements. As of May 31, 2021 and 2020, the Commission had $1,313.1 million and $2,199.2 million, respectively, of defeased bonds outstanding.

Arbitrage

The Tax Reform Act of 1986 instituted certain arbitrage restrictions with respect to the issuance of tax-exempt debt bonds after August 31, 1986. Arbitrage regulations deal with the investment of all tax-exempt bond proceeds at an interest yield greater than the interest yield paid to bondholders. Generally, all interest paid to bondholders can be retroactively rendered taxable if rebates are not reported and paid to the Internal Revenue Service (IRS) at least every five years. The arbitrage liability recorded as other noncurrent liabilities is $0.1 million and $0.2 million for the fiscal years ended May 31, 2021 and 2020, respectively.

NOTE 7 DEBT *(continued)*

Swap Payments and Associated Debt

Net swap payments and related debt service requirements related to all sections subsequent to May 31, 2021, assuming current interest rates remain the same for the term of the agreements, are as follows:

	Bonds				Direct Borrowings and Direct Placements				Total Debt			
Year Ending May 31	Principal Maturities	Interest	Hedging	Total	Principal Maturities	Interest	Hedging	Total	Principal Maturities	Interest	Hedging	Total
						(In Thousands)						
2022	$ 261,970	$ 2,585	$ 23,132	$ 287,687	$ -	$ 4,079	$ 16,669	$ 20,748	$ 261,970	$ 6,664	$ 39,801	$ 308,435
2023	2,320	1,521	23,088	26,929	-	4,079	14,666	18,745	2,320	5,600	37,754	45,674
2024	191,325	872	23,042	215,239	-	4,088	14,665	18,753	191,325	4,960	37,707	233,992
2025	2,440	219	22,564	25,223	-	4,076	14,666	18,742	2,440	4,295	37,230	43,965
2026	2,505	219	21,631	24,355	-	4,079	14,667	18,746	2,505	4,298	36,298	43,101
2027-2031	13,520	1,078	85,686	100,284	-	20,402	73,330	93,732	13,520	21,480	159,016	194,016
2032-2036	15,360	1,050	44,817	61,227	91,600	18,036	62,885	172,521	106,960	19,086	107,702	233,748
2037-2041	383,070	550	11,750	395,370	340,880	10,779	35,063	386,722	723,950	11,329	46,813	782,092
2042-2046	19,800	65	3,168	23,033	90,795	253	741	91,789	110,595	318	3,909	114,822
2047-2051	22,480	23	1,115	23,618	-	-	-	-	22,480	23	1,115	23,618
	$ 914,790	$ 8,182	$ 259,993	$ 1,182,965	$ 523,275	$ 69,871	$ 247,352	$ 840,498	$ 1,438,065	$ 78,053	$ 507,345	$ 2,023,463

Mainline net swap payments and related debt service requirements subsequent to May 31, 2021 for the 2014 Series B-1 Senior Revenue Bonds, 2017 First Series Subordinate Revenue Refunding Bonds (Direct Placement), 2018 Series A-1 Senior Revenue Bonds, 2018 Series B Senior, 2019 Second Series Senior revenue Bonds, 2020 Second Series Senior Revenue Bonds and 2021 Series A Senior Revenue Bonds are as follows:

	Bonds				Direct Borrowings and Direct Placements				Total Debt			
Year Ending May 31	Principal Maturities	Interest	Hedging	Total	Principal Maturities	Interest	Hedging	Total	Principal Maturities	Interest	Hedging	Total
						(In Thousands)						
2022	$ 261,970	$ 2,585	$ 23,132	$ 287,687	$ -	$ 1,897	$ 7,061	$ 8,958	$ 261,970	$ 4,482	$ 30,193	$ 296,645
2023	2,320	1,521	23,088	26,929	-	1,897	5,058	6,955	2,320	3,418	28,146	33,884
2024	191,325	872	23,042	215,239	-	1,900	5,058	6,958	191,325	2,772	28,100	222,197
2025	2,440	219	22,564	25,223	-	1,894	5,058	6,952	2,440	2,113	27,622	32,175
2026	2,505	219	21,631	24,355	-	1,897	5,059	6,956	2,505	2,116	26,690	31,311
2027-2031	13,520	1,078	85,686	100,284	-	9,485	25,292	34,777	13,520	10,563	110,978	135,061
2032-2036	15,360	1,050	44,817	61,227	-	9,488	25,291	34,779	15,360	10,538	70,108	96,006
2037-2041	383,070	550	11,750	395,370	226,970	7,134	19,025	253,129	610,040	7,684	30,775	648,499
2042-2046	19,800	65	3,168	23,033	64,880	212	562	65,654	84,680	277	3,730	88,687
2047-2051	22,480	23	1,115	23,618	-	-	-	-	22,480	23	1,115	23,618
	$ 914,790	$ 8,182	$ 259,993	$ 1,182,965	$ 291,850	$ 35,804	$ 97,464	$ 425,118	$ 1,206,640	$ 43,986	$ 357,457	$ 1,608,083

NOTE 7 DEBT *(continued)*

Swap Payments and Associated Debt *(continued)*

Motor License net swap payments and related debt service requirements subsequent to May 31, 2021 for the 2005 Series B, C, and D Motor License Registration Fee Bonds (Direct Placement) are as follows:

	Bonds				Direct Borrowings and Direct Placements				Total Debt			
Year Ending May 31	Principal Maturities	Interest	Hedging	Total	Principal Maturities	Interest (In Thousands)	Hedging	Total	Principal Maturities	Interest	Hedging	Total
2022	$ -	$ -	$ -	$ -	$ -	$ 2,182	$ 9,608	$ 11,790	$ -	$ 2,182	$ 9,608	$ 11,790
2023	-	-	-	-	-	2,182	9,608	11,790	-	2,182	9,608	11,790
2024	-	-	-	-	-	2,188	9,607	11,795	-	2,188	9,607	11,795
2025	-	-	-	-	-	2,182	9,608	11,790	-	2,182	9,608	11,790
2026	-	-	-	-	-	2,182	9,608	11,790	-	2,182	9,608	11,790
2027-2031	-	-	-	-	-	10,917	48,038	58,956	-	10,918	48,038	58,956
2032-2036	-	-	-	-	91,600	8,548	37,594	137,742	91,600	8,548	37,594	137,742
2037-2041	-	-	-	-	113,910	3,645	16,038	133,592	113,910	3,644	16,038	133,592
2042-2046	-	-	-	-	25,915	41	179	26,135	25,915	41	179	26,135
	$ -	$ -	$ -	$ -	$ 231,425	$ 34,067	$ 149,888	$ 415,380	$ 231,425	$ 34,067	$ 149,888	$ 415,380

As rates vary, variable rate bond interest payments and net swap payments will vary.

NOTE 8 RETIREMENT BENEFITS

General Information about the Pension Plan

Plan Description

Pennsylvania State Employees' Retirement System (SERS) is the administrator of two mandatory-participation retirement plans: the Defined Benefit Plan and the Defined Contribution Plan (investment plan). The Defined Benefit Plan is a cost-sharing multiple-employer plan, for which the assets are held in the State Employees' Retirement Fund (pension fund). The investment plan was established by Act 2017-5; the law also established two new side-by-side hybrid defined benefit/defined contribution options and a new defined contribution only option. Assets in the investment plan are held in individual member investment accounts. Both the pension fund and investment plan were established to provide retirement benefits for employees of state government and certain independent agencies. Membership in SERS is mandatory for most Commission (and other state) employees. Additionally, most employees, who first enter SERS membership on or after January 1, 2019 are required to participate in one of the new investment plan options that were established under Act 2017-5 and became effective on this date. Article II of the Commonwealth's constitution assigns the authority to establish and amend the benefit provision of the plan to the General Assembly. Separately issued financial statements for SERS can be obtained at www.sers.pa.gov.

NOTE 8 RETIREMENT BENEFITS *(continued)*

General Information about the Pension Plan *(continued)*

Benefits Provided

SERS provides retirement, death, and disability benefits. Member retirement benefits of the pension plan are determined by taking years of credited service multiplied by final average salary multiplied by years of service multiplied by 2.0% or 2.5% depending on the class of service multiplier. Commission employees participate in one of the following class of service categories: Class A, Class AA, Class A3, Class A4, Class A5 or Class A6. Class A5 and Class A6 became effective January 1, 2019. These classes are considered part of the Hybrid Plan as they include participation in both the pension fund and the investment plan. Employees are also eligible to elect participation solely in the investment plan, under the 401(a) DC class of service. According to the State Employees' Retirement Code (SERC), all obligations of SERS will be assumed by the Commonwealth should SERS terminate.

Contributions

Section 5507 of the SERC (71 Pa. C.S. §5507) requires that all SERS participating employers make contributions to the pension fund on behalf of all active members and annuitants necessary to fund the liabilities and provide the annuity reserves required to pay benefits. Section 5806 of the SERC (71 Pa. C.S. §5806) requires that all SERS-participating employers make contributions to the investment plan that shall be credited to the active participant's individual investment account. SERS funding policy, as set by the State Employees' Retirement Board (SERB), provides for periodic active member contributions at statutory rates for both the pension fund and investment plan. The SERS funding policy also provides for periodic employer contributions at actuarially determined rates based on SERS funding valuation, expressed as a percentage of annual retirement covered payroll, such that they, along with employee contributions and an actuarially determined rate of investment return, are adequate to accumulate assets to pay benefits when due. The Commission's retirement contribution, as a percentage of covered payroll, by class is as follows:

Year Ended June 30	Class A	Class AA	Class A3	Class A4	Class A5*	Class A6*	401(a) DC*
2021	29.48%	36.84%	25.47%	25.47%	19.59%	19.59%	19.56%
2020	28.84%	36.04%	24.92%	24.92%	19.18%	19.18%	19.12%
2019	27.71%	34.63%	23.94%	23.94%	18.42%	18.42%	18.39%

* New plans became effective on January 1, 2019.

NOTE 8 RETIREMENT BENEFITS *(continued)*

General Information about the Pension Plan *(continued)*

Contributions (continued)

Contributions to the pension fund from the Commission were $30.8 million and $37.7 million for the fiscal years ended May 31, 2021 and 2020, respectively. Contributions to the investment plan from the Commission were $85,900 and $97,900 for the fiscal years ended May 31, 2021 and 2020, respectively. Forfeitures related to the investment plan were $600 and $5,000 for the fiscal years ended May 31, 2021 and 2020, respectively. With the passing of Act 2020-94, forfeitures after July 1, 2020 are used to offset future administrative costs of the investment plan.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

As of May 31, 2021, the Commission reported a liability of $288.5 million for its proportionate share of the net pension liability of the pension fund. The net pension liability was measured as of December 31, 2020, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The Commission's proportion of the net pension liability was based on a projected-contribution method. This methodology applies the most recently calculated contribution rates for Commonwealth fiscal year 2021-2022, from the December 31, 2020 funding valuation, to the expected funding payroll for the allocation of the 2020 amounts. As of December 31, 2020, the Commission's proportionate share of the net pension liability was 1.58%, which was a decrease of 0.23% from its proportion measured as of December 31, 2019.

For the fiscal year ended May 31, 2021, the Commission recognized pension expense of $18.3 million related to the pension fund. For the fiscal year ended May 31, 2021, the Commission recognized pension expense of $155,000 related to the investment plan.

NOTE 8 RETIREMENT BENEFITS *(continued)*

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions *(continued)*

As of May 31, 2021, the Commission reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
	(In Thousands)	
Differences between expected and actual experience	$ 2,708	$ 324
Net difference between projected and actual investment earnings on pension plan investments	-	36,908
Changes of assumptions	32,077	-
Differences between employer contributions and proportionate share of contributions	1,197	28
Changes in proportion	360	46,303
Commission contributions subsequent to measurement date	14,334	-
	$ 50,676	$ 83,563

The $14.3 million reported as deferred outflows of resources related to pensions resulting from Commission contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the fiscal year ending May 31, 2022. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as net decreases in pension expense as follows:

Year Ending May 31	
	(in Thousands)
2022	$ (14,972)
2023	(7,302)
2024	(17,398)
2025	(7,161)
2026	(388)

NOTE 8 RETIREMENT BENEFITS *(continued)*

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions *(continued)*

As of May 31, 2020, the Commission reported a liability of $329.2 million for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2019, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The Commission's proportion of the net pension liability was based on a projected-contribution method. This methodology applies the most recently calculated contribution rates for Commonwealth fiscal year 2020-2021, from the December 31, 2019 funding valuation, to the expected funding payroll for the allocation of the 2019 amounts. As of December 31, 2019, the Commission's proportionate share of the net pension liability was 1.81%, which was a decrease of 0.04% from its proportion measured as of December 31, 2018.

For the fiscal year ended May 31, 2020, the Commission recognized pension expense of $40.9 million related to the pension fund. For the fiscal year ended May 31, 2020, the Commission recognized pension expense of $98,100 related to the investment plan.

As of May 31, 2020, the Commission reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
	(In Thousands)	
Differences between expected and actual experience	$ 4,105	$ 2,230
Net difference between projected and actual investment earnings on pension plan investments	-	23,477
Changes of assumptions	12,685	-
Differences between employer contributions and proportionate share of contributions	635	177
Changes in proportion	2,160	16,608
Commission contributions subsequent to measurement date	18,252	-
	$ 37,837	$ 42,492

NOTE 8 RETIREMENT BENEFITS *(continued)*

Actuarial Method and Assumptions

Every five years, SERS is required to conduct an actuarial experience study to determine whether the assumptions used in its annual actuarial valuations remain accurate based on current and anticipated demographic trends and economic conditions. The actuary, under oversight of the Pennsylvania State Employees' Retirement Board (SERB), reviewed economic assumptions (such as the assumed future investment returns and salary increases) as well as demographic assumptions (such as employee turnover, retirement, disability, and death rates). The *19th Investigation of Actuarial Experience* study for the period 2015 – 2019 was released and approved by the SERB in July 2020. The study recommended decreasing the investment rate of return and inflation assumptions to 7.00% and 2.5%, respectively, for 2020 from 7.125% and 2.6%, respectively, for 2019. The study can be viewed at www.SERS.pa.gov.

The actuary and SERB review the investment rate of return annually, in addition to the normal five-year experience study cycle, in recognition of changing market environments to ensure this assumption remains reasonable with each actuarial valuation every year. In June 2019, the SERB approved a reduction in the investment rate of return to 7.125% for the December 31, 2019 valuation from 7.25% for the December 31, 2018 valuation.

The following methods and assumptions were used in the actuarial valuation for the December 31, 2020 and 2019 measurement dates:

	December 31, 2020	**December 31, 2019**
Actuarial cost method	Entry age	Entry age
Amortization method	Straight-line amortization of investments over five years and amortization of assumption changes and non-investment gains/losses over the average expected remaining service lives of all employees that are provided benefits	Straight-line amortization of investments over five years and amortization of assumption changes and non-investment gains/losses over the average expected remaining service lives of all employees that are provided benefits
Investment rate of return	7.00% net of manager fees, including inflation	7.125% net of manager fees, including inflation
Projected salary increases	Average of 4.60% with range of 3.30% - 6.95%, including inflation	Average of 5.60% with range of 3.70% - 8.90%, including inflation
Asset valuation method	Fair (market) value	Fair (market) value
Inflation	2.50%	2.60%
Mortality rate	Projected PubG-2010 and PubNS-2010 Mortality Tables adjusted for actual plan experience and future improvement	Projected RP-2000 Mortality Tables adjusted for actual plan experience and future improvement
Cost-of-living adjustments (COLA)	Ad hoc	Ad hoc

NOTE 8 RETIREMENT BENEFITS *(continued)*

Actuarial Methods and Assumptions *(continued)*

The long-term expected real rate of return on pension plan investments is determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of manager fees 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 geometric real rates of return for each major asset class included in the pension plan's current and target asset allocation as of December 31, 2020 and 2019 are summarized in the following tables:

As of December 31, 2020:

Asset Class	Target Allocation	Long-term Expected Rate of Return
Private Equity	14.00%	6.25%
Private Credit	4.00%	4.25%
Real Estate	8.00%	5.60%
U.S. Equity	25.00%	4.90%
International Developed Markets Equity	13.00%	4.75%
Emerging Markets Equity	4.00%	5.00%
Fixed Income - Core	22.00%	1.50%
Fixed Income - Opportunistic	4.00%	3.00%
Inflation Protection (TIPS)	4.00%	1.50%
Cash	2.00%	0.25%
Total	100.00%	

As of December 31, 2019:

Asset Class	Target Allocation	Long-term Expected Rate of Return
Private Equity	16.00%	7.25%
Global Public Equity	48.00%	5.15%
Real Estate	12.00%	5.26%
Multi-Strategy	10.00%	4.44%
Fixed Income	11.00%	1.26%
Cash	3.00%	-
Total	100.00%	

NOTE 8 RETIREMENT BENEFITS *(continued)*

Discount Rate

The discount rate used to measure the total pension liability was reduced to 7.00% as of December 31, 2020 from 7.125% as of December 31, 2019. The projection of cash flows used to determine the discount rate assumed that employee contributions from pension plan members will be made at the current contribution rate and that contributions from participating employers will be made at actuarially determined rates as set by statute. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current pension plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Commission's Proportionate Share of the Net Pension Liability to Change in the Discount Rate

The following schedules presents the Commission's proportionate share of the 2020 and 2019 net pension liability calculated using the discount rate of 7.00% and 7.125%, respectively. It also shows what the Commission's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

	1.0% Decrease to 6.0%	Current Discount Rate of 7.0%	1.0% Increase to 8.0%
		(in Thousands)	
Commission's share of the net pension liability as of the 12/31/20 measurement date	$ 383,043	$ 288,472	$ 208,526

	1.0% Decrease to 6.125%	Current Discount Rate of 7.125%	1.0% Increase to 8.125%
		(in Thousands)	
Commission's share of the net pension liability as of the 12/31/19 measurement date	$ 418,288	$ 329,189	$ 252,909

NOTE 8 RETIREMENT BENEFITS *(continued)*

Pension Plan Fiduciary Net Position

Detailed information about the pension plan's fiduciary net position is available in the separately issued financial statements for SERS.

Payables to the Pension Plan

As of May 31, 2021 and 2020, the Commission reported a $6.5 million and $18.3 million liability, respectively, within accounts payable and accrued liabilities on the Statement of Net Position for the Commission's share of contributions that had not yet been paid to SERS. As of May 31, 2021 and 2020, $5,900 and 7,800, respectively, of the amount payable to SERS was allocated to the investment plan with the remainder allocated to the pension fund.

NOTE 9 COMMITMENTS AND CONTINGENCIES

Litigation

Owner Operator Independent Drivers Association, Inc. v. Pennsylvania Turnpike Commission

On March 15, 2018, several individuals, entities and associations involved in or related to the commercial trucking industry (the Trucking Plaintiffs) filed a class action lawsuit against the Commission, several individuals in their individual capacity and in their official capacity related to the Commission, an individual in her individual capacity and in her official capacity as Chair of the Commission and as Secretary of Transportation, and Governor Wolf, in both his individual and official capacity (the Defendants). The litigation was captioned *Owner Operator Independent Drivers Association, Inc. et al. v. Pennsylvania Turnpike Commission et al.*, No. 1:18-cv-00608-SHR (United States District Court for the Middle District of Pennsylvania) (the Lawsuit). The Trucking Plaintiffs alleged that Act 44, as amended by Act 89 (Act 44/89), violated the Commerce Clause and the right to travel under the U.S. Constitution, either facially or as applied, because the Commission improperly imposes Turnpike tolls beyond that which is necessary for the operation and maintenance of the Turnpike System and that the Commission expends toll revenues for purposes other than the operation and maintenance of the Turnpike System.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Litigation *(continued)*

Owner Operator Independent Drivers Association, Inc. v. Pennsylvania Turnpike Commission (continued)

The Lawsuit sought, among other things, the following injunctive remedies: (1) a permanent injunction enjoining the Commission from issuing any further bonds or incurring any additional debt for the purpose of making Act 44/89 payments; and (2) a permanent injunction prohibiting the Commission from using toll revenues to make payments on outstanding bonds issued to meet Act 44/89 obligations. Moreover, the lawsuit sought certain monetary damages including a refund of a portion of certain tolls allegedly imposed upon the Trucking Plaintiffs' use of the Turnpike System in excess of what was reasonably necessary to pay for the cost of operating and maintaining the Turnpike System, together with any legally applicable interest and other compensation.

The Commission along with all of the other Defendants vigorously defended Act 44/89 and the propriety of the Commission's imposition and use of the Turnpike toll revenues in court.

On April 4, 2019, Judge Yvette Kane of the United States District Court for the Middle District of Pennsylvania (the District Court) issued a decision in which the District Court determined that tolls assessed by the Commission do not unduly burden interstate commerce or interfere with the constitutional right to travel and the Trucking Plaintiffs' complaint failed to state a claim upon which relief may be granted for violations of the dormant Commerce Clause or the constitutional right to travel. Accordingly, the District Court granted the Defendants' motions to dismiss the Trucking Plaintiffs' complaint. On August 13, 2019, the United States Court of Appeals for the Third Circuit affirmed the decision of the District Court, and subsequently denied the Trucking Plaintiffs' petition both for a panel rehearing and an en banc rehearing.

On December 11, 2019, the Trucking Plaintiffs filed a petition for a writ of certiorari in the United States Supreme Court (the Supreme Court) asking the Supreme Court to review the decision of the Third Circuit. On January 27, 2020, the Supreme Court denied the Trucking Plaintiffs' petition for a writ of certiorari asking the Supreme Court to review the decision of the Third Circuit. *Owner Operator Independent Drivers Association, Inc. et al. v. Pennsylvania Turnpike Commission et al.*, cert. denied (U.S. Jan 27, 2020) (No. 19-762). This denial by the Supreme Court left undisturbed the favorable decision of the Third Circuit. The Trucking Plaintiffs did not file a petition for rehearing, as permitted by the Supreme Court rules, and the period to file such a petition expired on February 21, 2020. Thus, the class action lawsuit has concluded favorably to the Commission.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Litigation *(continued)*

Julie E. Thomas v. TransCore, LP & Pennsylvania Turnpike Commission

On April 28, 2021, Julie Thomas (the Plaintiff), an E-ZPass customer and frequent traveler on the System, filed a putative class action lawsuit against the Commission, and TransCore, L.P. (TransCore), as the vendor that provides, operates, and maintains the Electronic Toll Collection Customer Service Center and Violations Processing Center.

The Commission and TransCore were served with the complaint on May 24, 2021. The complaint centers mostly on video tolls (V-Tolls). A V-Toll is an E-ZPass charge that is assessed when, for any reason, the customer's E-ZPass transponder is not read on both the customer's entry and exit from the System, resulting in a toll assessment based upon a video snapshot of the customer's license plate.

The Plaintiff asserts claims for conversion and unjust enrichment against the Commission, as well as additional claims against TransCore. The Plaintiff principally alleges that (i) the V-Tolls charged to her account are excessive and amount to disproportionate fines and penalties, (ii) refunds should be made to the customer's bank accounts, not the E-ZPass account, and (iii) the Commission and TransCore failed to notify E-ZPass customers that newly installed tolling equipment is incompatible with older E-ZPass transponders; resulting in more V-Tolls and overall higher tolls. Based on these allegations, the Plaintiff seeks, among other things, compensatory and punitive damages, as well as attorney's fees and costs, and asks the Court to certify a class action.

On June 14, 2021, TransCore filed a notice of removal seeking to move this matter from Dauphin County Court of Common Pleas. The matter was removed to the U.S. District Court for the Eastern District of Pennsylvania. On June 21, 2021, both the Commission and TransCore filed motions to dismiss. In response, Plaintiff filed a motion to remand the action to state court, which the Commission and TransCore have opposed.

The Commission cannot, at this time, predict the ultimate outcome, but will continue to assert all available defenses against these allegations in court.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Litigation *(continued)*

The Commission is a defendant in a number of other legal proceedings pertaining to matters normally incidental to routine operations. Such litigation includes, but is not limited to, claims asserted against the Commission arising from alleged torts, alleged breaches of contracts, and condemnation proceedings. Tort claims against the Commission are generally barred by sovereign immunity, except as waived by statute. Further, to the extent waived, damages for any loss are limited by sovereign immunity to $250,000 for each person and $1,000,000 for each accident. Based on the current status of these other legal proceedings, it is the opinion of Commission management and counsel that they will not have a material effect on the Commission's financial position.

All-Electronic Tolling Layoff

Due to the adverse impacts of COVID-19, the Commission determined to move to AET (All-Electronic Tolling) toll collection on March 16, 2020; removing toll collectors from toll booths and relying solely on AET In-Place and E-ZPass tolling across the System. Initially intended to be a temporary response to the COVID-19 pandemic, the Commissioners, on June 2, 2020, unanimously approved the permanent transition to AET toll collection operations. As part of the permanent transition to all-electronic toll collection operations, the Commission also approved the layoff of 492 Fare Collection Department and Ticket Systems Audit Department employees. The resulting layoff of approximately 492 bargaining unit employees was implemented, effective as of June 18, 2020. The Commission so informed representatives of Teamsters Local Union Nos. 77 and 250 (collectively the *Union*) on June 2, 2020. In accordance with terms negotiated with the Union, the laid off employees may receive severance based on their years of seniority upon execution of a release of claims.

On or about June 25, 2020, the Union submitted three grievances challenging the layoff of the bargaining unit employees due to the implementation of AET. In the grievances, the Union contended that the above referenced layoff violated provisions of the applicable collective bargaining agreements and terms of the memorandum of understanding and/or purported oral promises relating to the layoff of employees. In particular, the Union alleged that the Commission was not permitted to lay off employees due to the implementation of AET until January 2022. The Union requested that the laid off employees be reinstated to their former positions and be made whole (including back pay).

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

All-Electronic Tolling Layoff *(continued)*

The Commission vigorously defended its legal and contractual rights to implement AET and to lay off employees due to such implementation, arguing that it had: (a) not violated any provisions of the applicable collective bargaining agreements, (b) not violated any provisions of the memoranda of understanding relating to the layoff of employees, and (c) acted consistently with the applicable provisions of the collective bargaining agreements and memoranda of understanding relating to the layoffs resulting from the implementation of AET.

An arbitration hearing in this matter was held on November 11, 2020. The arbitrator's decision was issued on January 20, 2021, upholding the Commission's right to implement AET and layoff the affected employees and denying the Unions' grievances. The Unions did not appeal the arbitrator's decision.

Laid off employees are eligible to apply for severance within 24 months of their layoff date. These laid off employees are also eligible to continue health benefit coverage in the Commission's group medical insurance plan for up to 24 months after their layoff date. The liabilities related to termination benefits recorded as accounts payable and accrued liabilities were $13.0 million for the fiscal year ended May 31, 2021. This amount was comprised of $2.2 million for severance for employees pending termination and $10.8 million in medical benefits. The effect on pension benefits were reflected in the SERS actuarial valuation as of December 31, 2020 through the change in allocation percentage, portion of the Commission's net pension liability and projected employer contributions, see Note 8. The effect on other postemployment benefits will be included in the full actuarial valuation to be performed as of May 31, 2021 and reported in the Commission's May 31, 2022 financial statements.

Act 44 and Act 89

On July 18, 2007, Act 44 was enacted, creating a "public-public partnership" between the Commission and PennDOT to provide funding for roads, bridges and transit throughout the Commonwealth. Subsequently, in order to, among other things, effectuate the provisions of Act 44 requiring the Commission to make substantial annual payments to PennDOT, as in the following paragraphs, the Commission and PennDOT entered into a Lease and Funding Agreement (the Act 44 Funding Agreement), incorporating many of the terms of Act 44.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Act 44 and Act 89 *(continued)*

The Act 44 Funding Agreement also granted the Commission the option to lease the portion of Interstate 80 (I-80) located in the Commonwealth from PennDOT upon, among other things, the approval of the Federal Highway Administration (FHWA) of the conversion of such portion into a toll road (the Conversion). The Conversion was not approved by FHWA, and neither the Commission nor PennDOT appealed the decision. The Commission did not exercise its option to lease such portion of I-80, and the period during which the Commission could exercise its option under the Act 44 Funding Agreement lapsed on October 14, 2010 without the Commission effectuating the Conversion or having the ability to do so in the future, leaving all legal, financial and operational responsibility for I-80 solely with PennDOT.

Pursuant to Act 44 and the Act 44 Funding Agreement, the Commission is obligated to make scheduled annual payments to PennDOT (*Act 44/Act 89 Payments*). Originally such payments in the amount of $450.0 million were through 2057, payable in equal quarterly installments, with $200.0 million of the scheduled annual payments supporting road and bridge projects and $250.0 million supporting transit projects throughout the Commonwealth. See the following paragraphs for subsequent changes to such annual payments.

On November 25, 2013, Act 89 was enacted to provide (i) substantial revenue enhancements to support investment in the Commonwealth's aging transportation infrastructure, and (ii) substantial reductions in the Commission's obligations with respect to the Act 44/Act 89 Payments. The revenue enhancements providing additional funds each year for investment in the Commonwealth's transportation infrastructure were fully implemented in fiscal year 2018.

Revisions to the Commission's Act 44/Act 89 Payment obligations enacted under Act 89 were implemented by Amendment Number One to Lease and Funding Agreement (the *Act 89 Amendment* and together with the Act 44 Funding Agreement, the *Original Amended Funding Agreement*) executed by the Commission and PennDOT on April 4, 2014.

In accordance with Act 89 and the Original Amended Funding Agreement, the Commission's aggregate annual Act 44/Act 89 Payment to PennDOT for fiscal year 2014 through fiscal year 2022 is $450.0 million, with at least $30.0 million of such annual amount required to be paid from current revenues and the remainder expected to be funded by the proceeds of bonds issued under the Subordinate Revenue Indenture.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Act 44 and Act 89 *(continued)*

The Original Amended Funding Agreement was subsequently further amended, on July 31, 2018, by Amendment Number Two to Lease and Funding Agreement (the *Amendment Two)* and on June 11, 2020, by Amendment Number Three to the Lease and Funding Agreement (the *Amendment Three*, and together with the Original Amended Funding Agreement and Amendment Two, the *Amended Funding Agreement*) both of which were executed by all parties to provide current year adjustments for certain due dates for Act 44/Act 89 Payments in fiscal years 2019 through 2021.

As a result of the materially adverse impact of the COVID-19 pandemic, the Commission and PennDOT agreed, pursuant to Amendment Three, to extend the payment dates for the Commission's July 2020 and October 2020 scheduled payments of $112.5 million each, to January 29, 2021. The Commission ultimately paid the full $450.0 million within fiscal year 2021. All regularly scheduled payments for the fiscal year ended May 31, 2020 were made. For both fiscal years, the amounts are recorded as nonoperating expenses.

Act 89 relieves the Commission from over $15.0 billion in future Act 44/Act 89 Payments to PennDOT during fiscal years 2023 through 2057 (the term of the Amended Funding Agreement), by reducing the Commission's aggregate annual Act 44/Act 89 Payments to PennDOT to $50.0 million, which amount shall be paid from then-current revenues of the Commission.

The Commission is required by the terms of the Amended Funding Agreement and Act 44 to fix and adjust tolls at levels that will generate revenues (together with other available moneys) sufficient to pay, among other things, amounts to PennDOT pursuant to the Amended Funding Agreement when due and other obligations of the Commission, and the Commission has covenanted in the Subordinate Indenture to set tolls at a level sufficient to meet its coverage obligations taking into account any additional debt incurred in order to make such payments.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Act 44 and Act 89 *(continued)*

Due to the significance of the quarterly payments under Act 44 and Act 89, the Commission currently does not have excess cash from operations to fully fund its required payments to PennDOT from current revenues. Therefore, the Commission plans to continue to increase toll rates annually and to issue debt through fiscal year 2022 to finance the majority of these payments. There can be no assurance that the Commission will be able to continue to issue debt on terms that are acceptable, or at all, to finance these obligations. The sole and exclusive remedy for the failure to make the required payments to PennDOT under the Amended Funding Agreement is that all actions of the Commission taken by a vote of the Commissioners thereafter must be approved by a unanimous vote of all Commissioners until such time as the payment is made. However, a unanimous vote is not required if it would prevent the Commission from complying with covenants with “current bondholders, debt holders or creditors.” These voting procedures have never been used as the Commission has not missed any payments under the Amended Funding Agreement.

Act 44 and Act 89 provide that all Act 44/Act 89 Payments shall be subordinate obligations of the Commission payable solely from the General Reserve Fund after meeting all other Commission requirements pursuant to any financial documents, financial covenants, liquidity policies or agreements in effect at the Commission.

Open Purchase Order Commitments

The Commission had open purchase order commitments of approximately $1.0 billion as of each of the fiscal years ended May 31, 2021 and 2020.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Interest Rate Swaps

The fair value and notional amounts of derivative instruments outstanding as of May 31, 2021 and May 31, 2020, classified by type and the changes in fair value of such derivative instruments for the years then ended as reported in the fiscal year 2021 and 2020 financial statements are as follows:

		Changes in Fair Value		Fair Value at May 31, 2021		
	May 31, 2020	Classification	Amount	Classification	Amount	Notional
			(In Thousands)			
Cash flow hedges						
Pay-fixed interest rate swap	$ (217,154)	Deferred (outflows)/inflows	$ 105,784	Noncurrent liabilities	$ (111,370)	$ 1,077,805
Investment derivative instruments						
Basis swaps	4,924	Investment earnings/(losses)	10,966	Noncurrent investments	15,890	551,620
Total PTC	$ (212,230)		$ 116,750		$ (95,480)	

		Changes in Fair Value		Fair Value at May 31, 2020		
	May 31, 2019	Classification	Amount	Classification	Amount	Notional
			(In Thousands)			
Cash flow hedges						
Pay-fixed interest rate swap	$ (126,520)	Deferred (outflows)/inflows	$ (90,634)	Noncurrent liabilities	$ (217,154)	$ 1,077,805
Investment derivative instruments						
Basis swaps	11,866	Investment earnings/(losses)	(6,942)	Noncurrent investments	4,924	551,620
Total PTC	$ (114,654)		$ (97,576)		$ (212,230)	

Fair Values

As of May 31, 2021 and 2020, the fair values of the Commission's derivative instruments were estimated beginning with the mid-market valuation. The mid-market valuation of the Commission's derivative instruments was estimated using the zero-coupon discounting method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve are the market's best estimate of future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for a hypothetical zero-coupon rate bonds due on the date of each future net settlement payments on the swaps.

The fair value under GASB Statement No. 72 is then incorporated into the above described mid-market valuation: 1) the credit risk of either the Commission or its counterparty (for a liability position or asset position, respectively) *i.e.* nonperformance risk; and 2) the bid/offer spread that would be charged to the Commission in order to transact. As the valuations are based on discounting future net cash flows to a single current amount, the approach being utilized is the income approach. The fair values rely primarily on Level 2 Inputs (observable inputs) – such as LIBOR rates to build the yield curve.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Interest Rate Swaps *(continued)*

Recent Activity – Cash Flow Hedges

On June 4, 2019, the Commission issued 2019 Second Series Senior Revenue Bonds; one purpose was to refund a portion of the Commission's outstanding 2014 Series B-1 Senior Revenue Bonds. As a result, the $39.2 million notional amount of the Commission's Mainline Senior SIFMA Fixed Payer swaps associated with the 2014 Series B-1 Senior Revenue Bonds were deemed terminated and are now associated with the 2019 Second Series Senior Revenue Bonds. The fair values at the time of deemed termination were $1.8 million with respect to the Goldman Sachs MMDP swap, $1.8 million with respect to the Merrill Lynch swap and $1.8 million with respect to the Morgan Stanley swap. These amounts are being amortized until December 1, 2038, which is the final maturity of the swaps.

On November 18, 2019, the Commission restructured its cancellable LIBOR Fixed Payer swap with Royal Bank of Canada on the Mainline Subordinate credit by delaying the first exercise date on the Commission's par call option from June 1, 2022 to June 1, 2029. In connection with this change, the fixed rate payable by the Commission beginning June 1, 2022 was lowered from 2.5125% to 1.8265%. The mark-to-market value of the swap at the time of the amendment was negative $12.0 million. This amount will be amortized until December 1, 2041, which is the final maturity of the swap.

On January 17, 2020, the Commission entered into a forward-starting cancellable SIFMA Fixed Payer swap, with an effective date of August 20, 2020, with Barclay's on the Mainline Senior credit, in anticipation of hedging a portion of expected new money variable-rate bonds. The 2020 Series A Senior Revenue Bonds were issued on August 20, 2020.

On June 23, 2020, the Commission issued Series of 2020 Senior Revenue Bonds; one purpose was to refund a portion of the Commission's outstanding 2014 Series B-1 Senior Revenue Bonds. As a result, $100.0 million notional amount of the Commission's Mainline Senior SIFMA Fixed Payer swaps associated with the 2014 Series B-1 Senior Revenue Bonds were deemed terminated and are now associated with the Series of 2020 Senior Revenue Bonds. The fair values at the time of deemed termination were negative $9.0 million with respect to the Goldman Sachs MMDP swap, negative $9.0 million with respect to the Merrill Lynch swap and negative $9.0 million with respect to the Morgan Stanley swap. These amounts are being amortized until December 1, 2038, which is the final maturity of the swaps.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Interest Rate Swaps *(continued)*

Recent Activity – Cash Flow Hedges (continued)

On June 23, 2020, the Commission issued Series of 2020 Senior Revenue Bonds; one purpose was to refund a portion of the Commission's outstanding 2013 Series B Senior Revenue Bonds. As a result, the $67.8 million notional amount of the Commission's Mainline Senior LIBOR Fixed Payer swaps associated with the 2013 Series B Senior Revenue Bonds were deemed terminated and are now associated with the Series of 2020 Senior Revenue Bonds. The fair values at the time of deemed termination were negative $2.0 million with respect to the Bank of America swap, negative $2.0 million with respect to the Bank of New York Mellon swap and negative $4.1 million with respect to the JP Morgan Chase swap. These amounts are being amortized until December 1, 2030, which is the final maturity of the swaps.

Recent Activity – Investment Derivative Instruments

On June 27, 2019, the Commission fully terminated its Mainline LIBOR/CMS basis swaps with JPMorgan Chase Bank and PNC Bank in exchange for receiving termination payments totaling $1.1 million. The notional amounts at the time of termination were as follows:

- JPMorgan Chase Bank - $60.4 million
- PNC Bank - $60.4 million

On July 2, 2019, the Commission fully terminated its Mainline LIBOR/CMS basis swaps with Bank of New York Mellon and Merrill Lynch CS in exchange for receiving termination payments totaling $1.3 million. The notional amounts at the time of termination were as follows:

- Bank of New York Mellon - $75.5 million
- Merrill Lynch CS - $60.4 million

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Interest Rate Swaps *(continued)*

Following is a summary of the hedging derivative instruments in place as of May 31, 2021 and 2020. All items are fixed interest rate swap types. These hedging derivative instruments contain risks and collateral requirements as described below (in thousands).

As of May 31, 2021:

Objective	Notional Amount	Effective Date	Maturity Date	Terms	Counterparty	Moody's/ S&P/Fitch	Book Fair Value
1. Hedge of changes of cash flows on the 2005 Series B, C, D, Bonds	$ 57,860	12/20/2013	7/15/2041	Pay 4.2015%, receive SIFMA	Bank of New York Mellon	Aa2/AA-/AA	$ (14,686)
	57,845	8/17/2005	7/15/2041		JPMorgan Chase Bank	Aa2/A+/AA	(20,980)
	57,860	8/17/2005	7/15/2041		Merrill Lynch CS*	A2/A-/AA-	(20,998)
	57,860	8/17/2005	7/15/2041		Morgan Stanley CS ^	Aa3/A+/NR	(20,998)
	231,425						(77,662)
2. Hedge of changes of cash flows of 2014 Series B-1 Bonds (formerly 2008 Series B-1 & 2011 Series C Bonds)	50,000	5/20/2014	12/1/2038	Pay 4.887%, receive SIFMA	Goldman Sachs MMDP	Aa2/AA-/NR	(8,345)
	50,000	5/20/2014	12/1/2038		Merrill Lynch CS*	A2/A-/AA-	(8,358)
	50,000	5/20/2014	12/1/2038		Morgan Stanley CS ^	Aa3/A+/NR	(8,351)
	150,000						(25,054)
3. Hedge of changes of cash flows on the 2017 Series A Subordinate Bonds	291,850	5/2/2017	12/1/2041	Pay 2.5125% to 06/01/22, 1.8265% thereafter; receive 70.00% of 3-month LIBOR	Royal Bank of Canada	Aa2/AA-/AA	(2,497)
4. Hedge of changes of cash flows of 2018 Series A-1 Bonds (formerly 2014 Series B-1, 2008 Series B-1 & 2011 Series C Bonds)	3,617	6/28/2018	12/1/2038	Pay 4.887%, receive SIFMA	Goldman Sachs MMDP	Aa2/AA-/NR	(406)
	3,617	6/28/2018	12/1/2038		Merrill Lynch CS*	A2/A-/AA-	(406)
	3,616	6/28/2018	12/1/2038		Morgan Stanley CS ^	Aa3/A+/NR	(406)
	10,850						(1,218)
5. Hedge of changes of cash flows of 2018 Series B Bonds (formerly 2017 Series B-2, 2016 Series A-2, 2014 Series B-2 & 2012 Series B Bonds)	21,576	11/6/2018	12/1/2030	Pay 4.403%, receive 67.00% of 1-month LIBOR	Bank of America*	Aa2/A+/AA	(1,876)
	21,576	11/6/2018	12/1/2030		Bank of New York Mellon	Aa2/AA-/AA	(1,875)
	43,125	11/6/2018	12/1/2030		JPMorgan Chase Bank	Aa2/A+/AA	(3,752)
	86,277						(7,503)
6. Hedge of changes of cash flow on the 2nd Series of 2019 (formerly 2014 B-1, formerly 2008 B-1 & 2011 C Bonds)	13,050	6/4/2019	12/1/2038	Pay 4.887%, receive SIFMA	Goldman Sachs MMDP	Aa2/AA-/NR	(579)
	13,050	6/4/2019	12/1/2038		Merrill Lynch CS*	A2/A-/AA-	(580)
	13,050	6/4/2019	12/1/2038		Morgan Stanley CS ^	Aa3/A+/NR	(580)
	39,150						(1,739)
7. Hedge of changes of cash flows on the Series of 2020 Bonds (formerly 2013 Series B, 2009 Series C & 2011 Series D	16,944	6/23/2020	12/1/2030	Pay 4.403%, receive 67.00% of 1-month LIBOR	Bank of America*	Aa2/A+/AA	428
	33,865	6/23/2020	12/1/2030		JPMorgan Chase Bank	Aa2/A+/AA	428
	16,944	6/23/2020	12/1/2030		Bank of New York Mellon	Aa2/AA-/AA	854
	67,753						1,710
8. Hedge of changes of cash flow on the Series of 2020 (formerly 2014 B-1, formerly 2008 B-1 & 2011 C Bonds)	33,333	6/23/2020	12/1/2038	Pay 4.887%, receive SIFMA	Goldman Sachs MMDP	Aa2/AA-/NR	1,975
	33,333	6/23/2020	12/1/2038		Merrill Lynch CS*	A2/A-/AA-	2,007
	33,334	6/23/2020	12/1/2038		Morgan Stanley CS ^	Aa3/A+/NR	1,996
	100,000						5,978
9. Hedge of changes of cash flows on the 2020 Series A Bonds (new money)	100,500	8/20/2020	12/1/2050	Pay 1.995%, receive SIFMA	Barclay's	A1/A/A+	(3,385)
Total	$ 1,077,805						$ (111,370)

1-month LIBOR was 0.08588% as of May 31, 2021.
3-month LIBOR was 0.13138% as of May 31, 2021.
SIFMA was 0.05% as of May 31, 2021.

* On November 15, 2012, the Commission executed an amendment to the swap agreements to include Merrill Lynch Derivative Products as guarantor. Merrill Lynch Derivative Products credit ratings were Aa3/AA/NR (Moody's/S&P/Fitch) as of May 31, 2021.

^ Guaranteed by Morgan Stanley & Co. whose credit ratings at May 31, 2021 were ‘A1/BBB+/A’ (Moody's/S&P/Fitch).

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Interest Rate Swaps *(continued)*

As of May 31, 2020:

Objective	Notional Amount	Effective Date	Maturity Date	Terms	Counterparty	Moody's/ S&P/Fitch	Book Fair Value
1. Hedge of changes of cash flows on the 2005 Series B, C, D, Bonds	$ 57,860	12/20/2013	7/15/2041	Pay 4.2015%, receive SIFMA	Bank of New York Mellon	Aa2/AA-/AA	$ (19,548)
	57,845	8/17/2005	7/15/2041		JPMorgan Chase Bank	Aa2/A+/AA	(25,836)
	57,860	8/17/2005	7/15/2041		Merrill Lynch CS*	A2/A-/A+	(25,843)
	57,860	8/17/2005	7/15/2041		Morgan Stanley CS	A3/BBB+/A	(25,843)
	231,425						(97,070)
2. Hedge of changes of cash flows of 2013 Series B Bonds (formerly 2009 Series C & 2011 Series D Bonds)	16,944	7/23/2013	12/1/2030	Pay 4.403%, receive 67.00% of 1-month LIBOR	Bank of America*	Aa2/A+/AA-	(1,960)
	33,865	7/23/2013	12/1/2030		JPMorgan Chase Bank	Aa2/A+/AA	(3,916)
	16,944	7/23/2013	12/1/2030		Bank of New York Mellon	Aa2/AA-/AA	(1,960)
	67,753						(7,836)
3. Hedge of changes of cash flows of 2014 Series B-1 Bonds (formerly 2008 Series B-1 & 2011 Series C Bonds)	83,333	5/20/2014	12/1/2038	Pay 4.887%, receive SIFMA	Goldman Sachs MMDP	Aa2/AA-/NR	(20,198)
	83,333	5/20/2014	12/1/2038		Merrill Lynch CS*	A2/A-/A+	(20,206)
	83,334	5/20/2014	12/1/2038		Morgan Stanley CS	A3/BBB+/A	(20,195)
	250,000						(60,599)
4. Hedge of changes of cash flows on the 2017 Series A Subordinate Bonds	291,850	5/2/2017	12/1/2041	Pay 2.5125%, receive 70.00% of 3-month LIBOR	Royal Bank of Canada	Aa2/AA-/AA	(24,923)
5. Hedge of changes of cash flows of 2018 Series A-1 Bonds (formerly 2014 Series B-1, 2008 Series B-1 & 2011 Series C Bonds)	3,617	6/28/2018	12/1/2038	Pay 4.887%, receive SIFMA	Goldman Sachs MMDP	Aa2/AA-/NR	(670)
	3,617	6/28/2018	12/1/2038		Merrill Lynch CS*	A2/A-/A+	(669)
	3,616	6/28/2018	12/1/2038		Morgan Stanley CS	A3/BBB+/A	(670)
	10,850						(2,009)
6. Hedge of changes of cash flows of 2018 Series B Bonds (formerly 2017 Series B-2, 2016 Series A-2, 2014 Series B-2 & 2012 Series B Bonds)	21,576	11/6/2018	12/1/2030	Pay 4.403%, receive 67.00% of 1-month LIBOR	Bank of America*	Aa2/A+/AA-	(2,744)
	21,576	11/6/2018	12/1/2030		Bank of New York Mellon	Aa2/AA-/AA	(2,744)
	43,125	11/6/2018	12/1/2030		JPMorgan Chase Bank	Aa2/A+/AA	(5,485)
	86,277						(10,973)
7. Hedge of changes of cash flow on the 2nd Series of 2019 (formerly 2014 B-1, formerly2008 B-1 & 2011 C Bonds)	13,050	6/4/2019	12/1/2038	Pay 4.887%, receive SIFMA	Goldman Sachs MMDP	Aa2/AA-/NR	(1,493)
	13,050	6/4/2019	12/1/2038		Merrill Lynch CS*	A2/A-/A+	(1,493)
	13,050	6/4/2019	12/1/2038		Morgan Stanley CS	A3/BBB+/A	(1,492)
	39,150						(4,478)
8. Hedge of changes of cash flows on the 2020 Series A Bonds (new money)	100,500	8/20/2020	12/1/2050	Pay 1.995%, receive SIFMA	Barclay's	A1/A/A+	(9,266)
Total	$ 1,077,805						$ (217,154)

1-month LIBOR was 0.1825% as of May 31, 2020.
3-month LIBOR was 0.3440% as of May 31, 2020.
SIFMA was 0.14% as of May 31, 2020.

* On November 15, 2012, the Commission executed an amendment to the swap agreements to include Merrill Lynch Derivative Products as guarantor. Merrill Lynch Derivative Products credit ratings were ‘Aa3/AA/NR’ (Moody's/S&P/Fitch) as of May 31, 2020.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Interest Rate Swaps *(continued)*

- ***Credit Risk*** – The Commission is at risk that a counterparty will not fulfill their obligations under the agreement. Specifically, the Commission is exposed to credit risk for hedging derivative instruments that have positive full values from the counterparty and investment derivative instruments (see Note 4) that have positive fair values. As of May 31, 2021, the Commission has credit risk exposure with respect to the (B), (C) and (D) investment derivative instruments listed in Note 4. However, should interest rates change and the fair values of the other swaps become positive, the Commission would have additional credit risk exposure.

  To mitigate the exposure to credit risk, the swap agreements include collateral provisions in the event of downgrades to the swap counterparties' credit ratings along with the values of the swaps exceeding certain thresholds specified in the swap agreement. The Commission's derivative instrument agreements contain netting provisions, under which transactions executed with a single counterparty within a credit are netted to determine collateral amounts. Collateral would be posted with a bank custodian and would be in the form of cash, U.S. Treasury Obligations, or U.S. Government Agency Securities. As of May 31, 2021, the Commission had net credit risk exposure to three counterparties pursuant to the provisions of the respective derivative instrument agreements. One counterparty has posted collateral in the amount of $4.7 million. The other two counterparties were not required to post collateral either due to their credit ratings or because the swap value at year end was below the collateral threshold levels.

- ***Interest Rate Risk*** – The Commission will be exposed to variable interest rates if the swap provider for a variable-to-fixed swap agreement defaults or if a variable-to-fixed swap is terminated.

- ***Market-access Risk*** – The Commission will be exposed to market-access risk for the hedging derivative instruments 2, 4 and 5 in the May 31, 2021 summary of hedging derivative instruments table because the maturity date of these derivative instruments is longer than the maturity date of the related debt.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Interest Rate Swaps *(continued)*

- ***Basis Risk*** – The Commission is exposed to basis risk on its basis swaps because the variable-rate payments received by the Commission on these derivative instruments are based on rates other than the interest rates the Commission pays on these derivative instruments. See the investment derivative instrument schedule in Note 4 for the terms of the interest rate swap agreements. The Commission's exposure to basis risk for the swaps listed in Note 4 is as follows:

  (A) – To the extent SIFMA exceeds 63% of 1-month LIBOR + 20 basis points

  (B) – To the extent 67% of 1-month LIBOR exceeds 60.15% of the 10-year maturity of the USD-ISDA Swap Rate

  (C) – To the extent SIFMA exceeds 99.68% of 3-month LIBOR

  (D) – To the extent SIFMA exceeds 99.80% of 3-month LIBOR

- ***Termination Risk*** – The swap agreements may be terminated due to a number of circumstances and the Commission retains the option to terminate the swaps at any time. If a swap agreement is terminated (by either party), the respective variable-rate bond would no longer carry a synthetic fixed interest rate. Also, if at the time of termination, the swap had a negative fair value, the Commission would be liable to the swap counterparty for a liability equal to the swap's full value. It is generally the Commission's intent at the time of swap execution to maintain the swap transactions for the life of the financing.

- ***Collateral Requirements*** – The Commission's derivative instruments related to its Mainline Turnpike Revenue Bonds require the Commission to post collateral in the form of eligible securities or cash if its senior credit rating falls below specified thresholds. These thresholds vary from agreement to agreement, with most in the 'A3' (Moody's) and 'A-' (S&P and Fitch) levels. The Commission's Mainline Senior Bond rating was 'A1' from Moody's, 'A+' from S&P and 'A+' from Fitch at May 31, 2021. The Commission's Mainline Subordinate Bond rating was 'A3' from Moody's, 'A' from S&P and 'A-' from Fitch as of May 31, 2021. Based on May 31, 2021 full values, the Commission could be required to post $171.2 million in collateral for its derivate instruments if its ratings fall below the agreement thresholds.

NOTE 9 COMMITMENTS AND CONTINGENCIES *(continued)*

Interest Rate Swaps *(continued)*

The Commission's derivative instruments related to its Oil Franchise Tax Revenue Bonds require the Commission to post collateral in the form of eligible securities or cash if its credit rating falls below specified thresholds. These thresholds vary from agreement to agreement, with most in the 'A3' (Moody's) and 'A-' (S&P and Fitch) levels. The Commission's Oil Franchise Tax Senior Bond rating was 'Aa3' from Moody's, 'AA-' from S&P and 'NR' from Fitch as of May 31, 2021. Based on May 31, 2021 full values, the Commission could be required to post $31,800 in collateral for its derivative instruments if its ratings fall below the agreements thresholds.

The Commission's derivative instruments related to its Motor License Registration Fee Revenue Bonds require the Commission to post collateral in the form of eligible securities or cash if its credit rating falls below specified thresholds and/or in the event of certain uncured insurer events of default. These thresholds vary from agreement to agreement. The Commission's Motor License Registration Fee Revenue Bond rating was 'A1' from Moody's, 'A+' from S&P and 'AA-' from Fitch as of May 31, 2021. Based on May 31, 2021 full values, the Commission could be required to post $90.3 million in collateral for its derivative instruments if its ratings fall below the agreement thresholds.

NOTE 10 RELATED-PARTY TRANSACTIONS

The Commission incurred charges of $60.0 million and $57.9 million for the fiscal years ended May 31, 2021 and 2020, respectively, primarily related to its use of the Commonwealth's State Police in patrolling the Turnpike System. In addition, the Commission purchased $2.8 million of radios, which were transferred to the State Police during fiscal year ended May 31, 2021.

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS

Plan Description

The Commission maintains an Other Postemployment Welfare Plan Program (the Plan), for the purpose of providing benefits to eligible retirees and their dependents. The Plan is a single employer, defined benefit plan. The Commission established the Pennsylvania Turnpike Commission Retiree Medical Trust (the Trust) on May 30, 2008 as an irrevocable trust, tax-exempt under Section 115 of the Internal Revenue Code, to provide funding of the Plan's other postemployment benefits (OPEB).

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

Plan Description *(continued)*

The Trust is administered by Trustees who are appointed by and serve at the pleasure of the Commission. The chairman and vice chairman of the Trust are appointed by the Trustees and serve two-year terms. PNC Bank serves as custodian of the assets of the Plan. Disbursement of Plan assets are made by the custodian at the direction of the Trustees. The Plan's financial statements are not included in the financial statements of a public employee retirement system. The Plan issues a stand-alone financial report, which can be obtained by contacting the Commission's Accounting & Financial Reporting Department.

Plan benefit provisions and retiree and dependent contribution rates are established and may be amended by the Commission.

Management and Supervisory Union Employees/Retirees

The benefits funded by the Trust include certain postemployment medical, prescription drug, dental and vision benefits to management and supervisory union employees based upon their age, date of hire and years of service. Eligibility categories include:

- Employees hired before March 1, 2016, who have reached 20 years of service and are under age 60; benefit eligibility changes from 20 to 10 years for retirees 60 years of age or older. The last five years of service must be with the Commission.

- Employees hired on or after March 1, 2016, who have reached 30 years of service and are under age 60; benefit eligibility changes from 30 to 25 years for retirees 60 years of age or older. The last 10 years of service must be with the Commission. (Some current and previous Commonwealth employees hired on or after this date would be grandfathered under the first eligibility category.)

Prior to May 20, 2020, the same coverage and cost was provided to surviving spouses or domestic partners and dependents of management and supervisory union retirees who retired after March 1, 2001. Surviving spouses or domestic partners of retirees who retired on or prior to March 1, 2001, may purchase medical coverage at the group rate and dependents are offered coverage under COBRA. Medicare Part B premiums are paid by the retiree, spouse or dependent if age 65 or over, or under age 65 and disabled. Effective May 20, 2020, domestic partners are no longer eligible to enroll.

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

Plan Description *(continued)*

Non-Supervisory Union Employees/Retirees

The benefits also include certain postemployment medical and prescription drug benefits to non-supervisory union employees who have satisfied the age and/or Credited Service eligibility requirements in the applicable collective bargaining agreement. Credited Service is defined as one year of service earned when an employee works 1,650 hours or more in a calendar year. Eligibility categories include:

- For Local 30 Professionals who were hired prior to January 1, 2011, and retired after February 1, 2005, and for Local 250 and 77 employees who were hired prior to January 27, 2016, and retired after February 1, 2005, the earlier of completion of 20 years of credited service or the later of attainment of age 60 and completion of 10 years of credited service. The last five years of credited service must be with the Commission.

- For Local 30 professionals who were hired on or after January 1, 2011, and for Local 250 and 77 employees who were hired on or after January 27, 2016, the earlier of completion of 30 years of credited service or the later of attainment of age 60 and completion of 25 years of credited service. The last 10 years of credited service must be with the Commission. (Some current and previous Commonwealth employees hired on or after this date for Local 30 professionals would be grandfathered under the first eligibility category.)

The same coverage is provided to spouses or domestic partners and dependents of eligible non-supervisory union retirees until the death of the retiree. Surviving spouses or domestic partners are required to contribute the full cost of coverage and dependents are offered coverage under COBRA.

Employees Covered by Benefit Terms

As of May 31 (the measurement date), the following employees were covered by the benefit terms.

	2020	2019
Inactive plan members or beneficiaries currently receiving benefit payments	1,655	1,626
Inactive plan members entitled to but not yet receiving benefit payments	81	70
Active plan members	1,786	1,812
Total	3,522	3,508

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

Contributions

The Commission has adopted a Retiree Medical Trust Funding Policy, effective September 2008, whereby the Commission anticipates approving an annual contribution to the Trust in the amount of the Annual Required Contribution (ARC) as determined by the Commission's actuary in accordance with GASB Statement No. 45, during the approval of its annual operating budget. With the implementation of GASB Statement No. 75, the Commission revised the policy in June 2020 to now refer to the Actuarially Determined Contribution (ADC) instead of the ARC.

Retiree and spouse contribution rates at May 31, 2020 and 2019 are as follows:

- Management and supervisory union employees who retired prior to July 1, 1998, and union employees who retired prior to October 1, 1997 – the retiree/spouse contributes the full cost of coverage less the Commission's monthly subsidy of $19.28 once the retiree reaches age 65.

- Union employees who retired on October 1, 1997 or later – the retiree/spouse contributes the full cost of coverage less the Commission's monthly subsidy of $73.50 when the retiree or spouse reaches age 65.

- Prior to May 20, 2020, management and supervisory union employees who retired on or after March 1, 2016, and Local 250 and 77 employees who retired after February 1, 2016, as well as Local 30 professionals who retired after January 1, 2014, were required to participate in a wellness program or contribute 5% of the premium if less than age 65. This program was discontinued effective May 20, 2020.

- Surviving spouses and domestic partners are paying 100% of the premiums, except for surviving spouses of management and supervisory union employees who retired after March 1, 2001.

Net OPEB Liability

As of May 31, 2021 and 2020, the Commission recorded a net OPEB liability of $14.8 million and $1.8 million, respectively.

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

Net OPEB Liability *(continued)*

Actuarial Assumptions and Discount Rate

The total OPEB liability reported as of May 31, 2021 was determined by an actuarial valuation as of the valuation date (May 31, 2019), calculated based on the discount rate and actuarial assumptions below, and was then projected forward, using update procedures, to the measurement date (May 31, 2020). The total OPEB liability reported as of May 31, 2020 was determined by an actuarial valuation as of May 31, 2019 which was calculated based on the discount rate and actuarial assumptions below. There have been no significant changes between the valuation dates and the fiscal year ends.

	May 31, 2020	**May 31, 2019**
Discount rate	6.0%	6.0%
Long-term expected rate of return, net of investment expense	6.0%	6.0%

The Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total OPEB liability is equal to the long-term expected rate of return.

The Plan has not had a formal actuarial experience study performed.

Measurement date	**May 31, 2020**	**May 31, 2019**
Actuarial cost method	Entry Age Normal	Entry Age Normal
Inflation	2.5%	2.5%
Salary increases for union members	3.0%	3.0%
Salary increases for management members	3.3%	3.3%
Amortization method	Level dollar amortization over a period of 10 years	
Asset valuation method	Market value plus receivable contributions made attributable to a prior fiscal year	

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

Net OPEB Liability *(continued)*

Actuarial Assumptions and Discount Rate (continued)

The healthcare cost trend assumption is based on the Society of Actuaries Getzen Model version 2017.2, utilizing the baseline assumptions included in the model for medical and prescription drug benefits. Adjustments are applied based on percentage of costs associated with administrative expenses, aging factors, potential excise taxes due to healthcare reform, and other healthcare reform provisions.

The health cost trend assumption for benefits at sample years is as follows:

Valuation Year	Pre-65 Trend	Post-65 Trend
2020	4.9%	4.9%
2025	4.8	4.7
2030	5.5	4.8
2035	5.5	4.8
2040	5.6	4.9
2050	5.2	4.7
2060	5.0	4.9
2070	4.3	4.8

Mortality rates were based on the RP-2014 Total Mortality Tables adjusted to reflect Mortality Improvement Scale MP-2018 and projected forward on a generational basis (based on recommendation of Society of Actuaries' Retirement Plans Experience Committee), with employee rates before benefit commencement and healthy annuitant rates after benefit commencement, and reflecting mortality improvements both before and after the valuation date.

The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. Best estimates of arithmetic real rates of return for each major asset class are summarized in the following tables:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	27%	4.81%
International equity	18%	5.97
Rates/credit	25%	1.82
Real assets	19%	3.67
Multi-asset	10%	2.14
Cash	1%	0.20

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

Changes in the Net OPEB Liability

	Increases (Decreases)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) – (b)
		(in Thousands)	
Balances as of May 31, 2019	$ 462,199	$ 460,354	$ 1,845
Changes for the year			
Service cost	11,141	-	11,141
Interest on OPEB liability	27,723	-	27,723
Benefit payments	(20,848)	(20,848)	-
Employer contributions	-	11,730	(11,730)
Net investment income	-	14,196	(14,196)
Administrative expenses	-	(8)	8
Balances as of May 31, 2020	$ 480,215	$ 465,424	$ 14,791

	Increases (Decreases)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) – (b)
		(in Thousands)	
Balances as of May 31, 2018	$ 437,477	$ 424,543	$ 12,934
Changes for the year			
Service cost	11,254	-	11,254
Interest on OPEB liability	26,371	-	26,371
Effect of economic/ demographic gains or losses	8,487	-	8,487
Effect of assumptions changes or inputs	(4,358)	-	(4,358)
Benefit payments	(17,032)	(17,032)	-
Employer contributions	-	46,056	(46,056)
Net investment income	-	6,789	(6,789)
Administrative expenses	-	(2)	2
Balances as of May 31, 2019	$ 462,199	$ 460,354	$ 1,845

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

Changes in the Net OPEB Liability *(continued)*

Sensitivity Analysis

The following presents the net OPEB liability of the Commission, calculated using the discount rate of 6.0%, as well as what the Commission's net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (5.0%) or one percentage point higher (7.0%) than the current discount rate.

	1% Decrease (5.0%)	Current Discount Rate (6.0%)	1% Increase (7.0%)
		(in Thousands)	
Net OPEB liability (asset) as of May 31, 2020	$ 72,363	$ 14,791	$ (32,836)
Net OPEB liability (asset) as of May 31, 2019	$ 58,238	$ 1,845	$ (44,812)

The following presents the net OPEB liability of the Commission, calculated using the current healthcare cost trend rates as well as what the net OPEB liability would be if it were calculated using trend rates that are one percentage point lower or one percentage point higher than the current trend rates.

	1% Decrease	Current Trend Rate	1% Increase
		(in Thousands)	
Net OPEB (asset) liability as of May 31, 2020	$ (40,979)	$ 14,791	$ 83,566
Net OPEB (asset) liability as of May 31, 2019	$ (48,861)	$ 1,845	$ 64,200

OPEB Plan Fiduciary Net Position

The Statements of Fiduciary Net Position and Statements of Changes in Fiduciary Net Position as of and for the fiscal year ended May 31, 2021 are presented in the Basic Financial Statement section of this report. Further detailed information about the OPEB plan's fiduciary net position is available in the separately issued Pennsylvania Turnpike Commission Other Postemployment Welfare Plan Program financial statements. The stand-alone Plan financial statements can be obtained by contacting the Commission's Accounting & Financial Reporting Department.

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended May 31, 2021, the Commission recognized OPEB expense of $16.1 million. As of May 31, 2021, the Commission reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
	(In Thousands)	
Differences between expected and actual experience	$ 5,658	$ 1,379
Changes of assumptions	-	2,905
Net difference between projected and actual earnings on OPEB plan investments	17,766	-
Contributions subsequent to measurement date	47,250	-
	$ 70,674	$ 4,284

The $47.3 million reported as deferred outflows of resources related to OPEB, resulting from Commission contributions subsequent to the measurement date, will be recognized as a reduction of the net OPEB liability during the fiscal year ending May 31, 2022. Other amounts reported as deferred inflows of resources related to OPEB will be recognized as net increases in OPEB expense as follows:

Year Ending May 31	*(in Thousands)*
2022	$ 4,555
2023	4,555
2024	6,798
2025	3,232
Thereafter	-

NOTE 11 OTHER POSTEMPLOYMENT BENEFITS *(continued)*

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB *(continued)*

For the year ended May 31, 2020, the Commission recognized OPEB expense of $13.2 million. As of May 31, 2020, the Commission reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
	(In Thousands)	
Differences between expected and actual experience	$ 7,072	$ 1,809
Changes of assumptions	-	3,632
Net difference between projected and actual earnings on OPEB plan investments	8,913	-
Contributions subsequent to measurement date	11,730	-
	$ 27,715	$ 5,441

The $11.7 million reported as deferred outflows of resources related to OPEB resulting from Commission contributions subsequent to the measurement date was recognized as a reduction of the net OPEB liability during the fiscal year ended May 31, 2021.

NOTE 12 SELF-INSURANCE

The Commission is exposed to various risks of losses such as theft of, damage to, and destruction of assets, errors and omissions, torts, injuries to employees and natural disasters. The Commission has purchased commercial all risk property insurance and stop loss insurance for employee medical and prescription benefits coverage. The Commission remains self-insured for dental and vision benefits, torts and injuries to employees as well as medical and prescription benefits up to stop loss coverages. No settlements exceeded insurance coverage for each of the past three years.

NOTE 12 SELF-INSURANCE *(continued)*

The Commission recorded a liability of $38.6 million and $38.8 million for loss and loss adjustment expenses for claims relating to workers' compensation, motor vehicle and tort self-insurance that have been incurred and for claims incurred but not reported as of May 31, 2021 and 2020, respectively. The workers' compensation, motor vehicle and tort self-insurance liabilities recorded as accounts payable and accrued liabilities are $3.9 million and $4.0 million for the fiscal years ended May 31, 2021 and 2020, respectively. The workers' compensation, motor vehicle and tort self-insurance liabilities recorded as other noncurrent liabilities are $34.7 million and $34.8 million for the fiscal years ended May 31, 2021 and 2020, respectively. This liability is based on GASB Statement No. 10, *Accounting and Financial Reporting for Risk Financing and Related Insurance Issues*, which requires that a liability for claims be recorded if information prior to the issuance of the financial statements indicates that it is probable that a liability has been incurred at the date of the financial statements and the amount of the loss can be reasonably estimated. The liability is calculated based on the Commission's past loss experience. The liability for vehicle and general tort was not discounted. The liability for workers' compensation was discounted using a rate of 1.5% for both fiscal years ended May 31, 2021 and 2020. The liability includes amounts for claims adjustment expense and is net of any recoveries and subrogation. Recoveries and subrogation were not material for the years ended May 31, 2021 and 2020. The Commission believes the liability established is reasonable and appropriate to provide for settlement of losses and related loss adjustment expenses.

Management believes that its reserve for claims incurred but not reported is determined in accordance with generally accepted actuarial principles and practices. However, estimating the ultimate liability is a complex and judgmental process since the amounts are based on management's informed estimates and judgments using data currently available. As additional experience and data become available regarding claim payments and reporting patterns, legislative developments and economic conditions, the estimates are revised accordingly, and the impact is reflected currently in the Commission's financial statements.

NOTE 12 SELF-INSURANCE *(continued)*

The following tables provide aggregated information on self-insurance liabilities:

	May 31, 2020 Liability	Effects of Discount as of June 1, 2020	Incurred Claims Current Year	Incurred Claims Prior Years	Paid Claims Current Year	Paid Claims Prior Years	Effects of Discount as of May 31, 2021	May 31, 2021 Liability
Year ended May 31, 2021				*(In Thousands)*				
Workers' compensation	$ 8,827	$ 1,169	$ 861	$ 867	$ (442)	$ (2,007)	$ (654)	$ 8,621
Motor vehicle/general tort	29,961	-	27	367	(25)	(394)	-	29,936
	$ 38,788	$ 1,169	$ 888	$ 1,234	$ (467)	$ (2,401)	$ (654)	$ 38,557

	May 31, 2019 Liability	Effects of Discount as of June 1, 2019	Incurred Claims Current Year	Incurred Claims Prior Years	Paid Claims Current Year	Paid Claims Prior Years	Effects of Discount as of May 31, 2020	May 31, 2020 Liability
Year ended May 31, 2020				*(In Thousands)*				
Workers' compensation	$ 8,704	$ 945	$ 1,272	$ 2,434	$ (592)	$ (2,767)	$ (1,169)	$ 8,827
Motor vehicle/general tort	29,209	-	230	1,332	(75)	(735)	-	29,961
	$ 37,913	$ 945	$ 1,502	$ 3,766	$ (667)	$ (3,502)	$ (1,169)	$ 38,788

The foregoing reflects an adjustment for an increase of $1.2 million and an increase of $3.8 million for the fiscal years ended May 31, 2021 and 2020, respectively, in the provision for events of prior fiscal years (Incurred Claims – Prior Years) that resulted from a change in estimate as more information became available.

NOTE 13 COMPENSATED ABSENCES

Sick leave is earned at a rate of 3.08 hours every two weeks, or 10 days per year. Unused sick leave may be carried over from year to year, up to a maximum of 18 days. In November of each year, employees are reimbursed for all accumulated unused sick leave above the maximum. Sick leave payouts were $1.7 million during each of the fiscal years ended May 31, 2021 and 2020.

Vacation leave is earned at varying rates, depending on years of service. Management and supervisory union employees earn between 4.62 and 8.93 hours every two weeks. Non-supervisory union employees earn between 3.08 and 8.93 hours every two weeks.

NOTE 13 COMPENSATED ABSENCES *(continued)*

Upon termination of employment, all unused sick and vacation leave is paid to the employee. The compensated absences liabilities were $17.8 million and $17.4 million for the fiscal years ended May 31, 2021 and 2020, respectively. The compensated absences liabilities recorded as accounts payable and accrued liabilities were $9.8 million and $9.6 million for the fiscal years ended May 31, 2021 and 2020, respectively. The compensated absences liabilities recorded as other noncurrent liabilities were $8.0 million and $7.8 million for the fiscal years ended May 31, 2021 and 2020, respectively.

A summary of changes to compensated absences for the years ended May 31, 2021 and 2020 is as follows:

Fiscal Year Ended May 31	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
			(In Thousands)		
2021	$ 17,386	$ 10,706	$ 10,260	$ 17,832	$ 9,808
2020	15,885	12,562	11,061	17,386	9,562

NOTE 14 LETTERS OF CREDIT

Pennsylvania insurance law requires a letter of credit, surety bond, or escrow from entities that self-insure their Workers' Compensation. As of May 31, 2021, the Commission has one standby letter of credit to satisfy the PA Turnpike's collateral requirement under the expired Owner Controlled Insurance Program (OCIP) with Zurich American Insurance; there have been no draws against the letter of credit. The Letter of Credit is $340,000 with Wells Fargo Bank, N.A. for beneficiary Zurich American Insurance for the Uniontown to Brownsville Phase II OCIP.

In May 2017, in lieu of a letter of credit, the Commission placed $2.0 million into an escrow account with Wells Fargo (naming Liberty Mutual as beneficiary) for the new OCIP on the U.S. 22 to I-79 portion of the Southern Beltway currently under construction.

Supplemental Trust Indenture No. 50 dated as of June 1, 2019, amendment and restatement of the Amended and Restated Indenture of Trust dated as of March 1, 2001, between the Commission and U.S. Bank National Association required a Letter of Credit to be established for the 2019 Second Series Senior Revenue Bonds. The Commission entered into a Letter of Credit with TD Bank, N.A. in the amount of up to $142,205,262 for purposes of paying debt service obligations on the bonds. There were no outstanding draws against the Letter of Credit at May 31, 2021 and 2020.

NOTE 14 LETTERS OF CREDIT *(continued)*

Supplemental Trust Indenture No. 55 dated as of June 1, 2020, amendment and restatement of the Amended and Restated Indenture of Trust dated as of March 1, 2001, between the Commission and U.S. Bank National Association required a Letter of Credit to be established for the 2020 Series Senior Revenue Bonds. The Commission entered into a Letter of Credit with TD Bank, N.A in the amount of up to $229,680,594 for purposes of paying debt service obligations on the bonds. There were no outstanding draws against the Letter of Credit at May 31, 2021.

Supplemental Trust Indenture No. 56 dated as of August 1, 2020, amendment and restatement of the Amended and Restated Indenture of Trust dated as of March 1, 2001, between the Commission and U.S. Bank National Association required a Letter of Credit to be established for the 2020 Series A Senior Revenue Bonds. The Commission entered into a Letter of Credit with Barclays Bank PLC in the amount of up to $102,218,137 for purposes of paying debt service obligations on the bonds. There were no outstanding draws against the Letter of Credit at May 31, 2021.

NOTE 15 SUBSEQUENT EVENTS

On June 3, 2021, the Commission transferred assets with a net book value of $41.4 million to PennDOT. These assets were overhead bridges that carry state roads. The Commission replaced the bridges and, upon completion, ownership and maintenance responsibilities of the bridges are transferred to PennDOT.

On June 9, 2021, the 2020 Line of Credit expired and the Commission executed a new $200.0 million line of credit as a continuing liquidity safeguard from PNC Bank, N.A.

On June 30, 2021, the Commission executed an unwind of the Mainline SIFMA/LIBOR Basis Swap with Deutsche Bank in exchange for receiving a termination amount of $3.6 million. The notional amount of the Deutsche Bank swap at the time of termination was $115.8 million.

On July 14, 2021, the Commission issued $385,800,000 of 2021 Series B Senior Revenue Bonds at a fixed rate with a maturity of December 1, 2051. The 2021 Series B Senior Revenue Bonds were issued to refund a portion of the Commission’s 2014 Series B-1 Senior Revenue Bonds ($150,000,000), 2018 Series A-1 Senior Revenue Bonds ($39,710,000), and 2018 Series B Senior Revenue Bonds ($70,000,000), to finance the cost of various capital expenditures set forth in the Commission’s Ten-Year Capital Plan, including, but not limited to, the reconstruction of roadbed and roadway, the widening, replacing and redecking of certain bridges and/or rehabilitation of certain interchanges, and for paying the costs of issuing the 2021 B Senior Revenue Bonds.

NOTE 15 SUBSEQUENT EVENTS *(continued)*

On July 23, 2021, the Commission executed the Consent to Transfer of Lease Agreement regarding the pending sale of HMSHost Corporation's U.S. motorway business to Irish Buyer, LLC a consortium of Applegreen Ltd. and Blackstone Infrastructure Partners. HMSHost Family Restaurants, LLC shall undergo a formal name change to Applegreen USA Family Restaurants, LLC and would remain the Lessee under the service plaza agreements and continue to support the day-to-day operations.

On July 27, 2021, the Commission issued $393,790,000 of 2021 Series B Subordinate Revenue Bonds at a fixed rate with a maturity date of December 1, 2051. The 2021 Series B Subordinate Revenue Bonds were issued primarily to finance a portion of the cost of making payments to PennDOT in accordance with Act 44 and Act 89 and for paying the cost of issuing the 2021 Series B Subordinate Revenue Bonds.

On July 28, 2021, the Commission made its final $450.0 million payment to PennDOT, as mandated by Act 44 and Act 89.

On September 2, 2021, the Commission issued $327,520,000 2021 Series A Oil Franchise Tax Senior Revenue Bonds at a fixed rate with a maturity date of December 1, 2051. The 2021 Series A Oil Franchise Tax Senior Revenue Bonds were issued to finance the costs of the 2021 Construction Project, refunding of the 2009 Series A Oil Franchise Tax Senior Revenue Bonds ($3,855,000) and for paying the costs of issuing the 2021 Series A Oil Franchise Tax Senior Revenue Bonds.

On September 2, 2021, the Commission issued $201,480,000 2021 Series B Oil Franchise Tax Subordinate Revenue Bonds at a fixed rate with a maturity date of December 1, 2053. The 2021 Series B Oil Franchise Tax Subordinate Revenue Bonds were issued to finance the costs of the 2021 Construction Project, refunding of the 2009 Series D Oil Franchise Tax Subordinate Revenue Bonds ($19,475,000) and for paying the costs of issuing the 2021 Series B Oil Franchise Tax Subordinate Revenue Bonds.

On September 21, 2021, the Commission approved an amendment to the lease agreement with 7-Eleven, Inc. to exercise its option to renew the service plaza lease agreement for an additional five years.

On October 5, 2021, the Commission authorized the approval of the issuance of the Pennsylvania Turnpike Commission's variable- and/or fixed-rate Turnpike Revenue Bonds in an aggregate principal amount not to exceed $500,000,000 in one or more series or sub-series, taxable or tax exempt, for the purpose of financing the costs of various capital expenditures for the Pennsylvania Turnpike system set forth in the Commission's current Ten Year Capital Plan, the refunding of all or a portion of certain outstanding Turnpike Revenue Bonds and funding of necessary reserves.

REQUIRED SUPPLEMENTARY INFORMATION

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Schedule of Commission's Proportionate Share of the Net Pension Liability –
Pennsylvania State Employees' Retirement System – Pension Fund (Unaudited)

Last 10 Fiscal Years*
(Dollar Amounts in Thousands)

	2021	2020	2019	2018	2017	2016	2015
Commission's proportion of the net pension liability	1.57665712%	1.81091910%	1.85214667%	1.90329134%	1.96867410%	1.90799267%	1.99409814%
Commission's proportionate share of the net pension liability	$ 288,472	$ 329,189	$ 385,821	$ 329,112	$ 379,173	$ 346,946	$ 296,271
Commission's covered payroll	108,555	121,643	121,127	120,641	123,365	121,085	121,579
Commission's proportionate share of the net pension liability as a percentage of its covered payroll	265.74%	270.62%	318.53%	272.80%	307.36%	286.53%	243.69%
Plan fiduciary net position as a percentage of the total pension liability	67.0%	63.1%	56.4%	63.0%	57.8%	58.9%	64.8%

* The amounts presented for each fiscal year were determined as of the measurement date (12/31) that occurred within the Commission's fiscal year. The Commission adopted GASB Statement No. 68 on a prospective basis in fiscal year 2015; therefore, only the available years are presented in the above schedule.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Schedule of Commission's Contributions –
Pennsylvania State Employees' Retirement System – Pension Fund (Unaudited)

Last 10 Fiscal Years*
(Dollar Amounts in Thousands)

	2021	2020	2019	2018	2017	2016	2015
Contractually required contribution	$ 30,785	$ 37,699	$ 37,771	$ 38,073	$ 33,303	$ 27,864	$ 22,588
Contributions in relation to the contractually required contribution	(30,785)	(37,699)	(37,771)	(38,073)	(33,303)	(27,864)	(22,588)
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Commission's covered payroll^	$ 97,446	$ 120,107	$ 122,145	$ 122,654	$ 121,778	$ 121,060	$ 121,009
Contributions as a percentage of covered payroll	31.59%	31.39%	30.92%	31.04%	27.35%	23.02%	18.67%

* The amounts presented for each fiscal year were determined as of the measurement date (12/31) that occurred within the Commission's fiscal year. The Commission adopted GASB Statement No. 68 on a prospective basis in fiscal year 2015; therefore, only the available years are presented in the above schedule.

^ Classes A5 and A6 became effective on January 1, 2020 and are now included in covered payroll due to the Hybrid plan including a pension fund contribution component.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Schedule of Changes in the Commission's Net OPEB Liability
and Related Ratios (Unaudited)

Last 10 Fiscal Years*
(Dollar Amounts in Thousands)

Fiscal Year Ended / *Measurement Date*	**05/31/21** / **05/31/20**	**05/31/20** / **05/31/19**	**05/31/19** / **05/31/18**
Total OPEB Liability			
Service cost	$ 11,141	$ 11,254	$ 10,926
Interest on total OPEB liability	27,723	26,371	25,431
Effect of economic/demographic gains or losses	-	8,487	(2,671)
Effect of assumptions changes or inputs	-	(4,358)	-
Benefit payments	(20,848)	(17,032)	(17,984)
Net change in total OPEB liability	18,016	24,722	15,702
Total OPEB liability, beginning	462,199	437,477	421,775
Total OPEB liability, ending (a)	480,215	462,199	437,477
Plan fiduciary net position			
Employer contributions	11,730	46,056	28,171
Net investment income	14,196	6,789	34,322
Benefit payments	(20,848)	(17,032)	(17,984)
Administrative expenses	(8)	(2)	(11)
Net change in plan fiduciary net position	5,070	35,811	44,498
Plan fiduciary net position, beginning	460,354	424,543	380,045
Plan fiduciary net position, ending (b)	465,424	460,354	424,543
Commission's net OPEB liability, ending = (a) – (b)	$ 14,791	$ 1,845	$ 12,934
Plan fiduciary net position as a % of total OPEB liability	96.9%	99.6%	97.0%
Covered-employee payroll	$ 118,560	$ 119,730	$ 119,391
Commission's net OPEB liability as a % of covered payroll	12.5%	1.5%	10.8%

* The Commission adopted GASB Statement No. 75 in fiscal year 2019; therefore, only the available years are presented in the above schedule.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Schedule of Commission Contributions to the Other Postemployment
Welfare Plan Program (Unaudited)

Last 10 Fiscal Years
(Dollar Amounts in Thousands)

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Actuarially determined contribution	$ 14,012	$ 11,729	$ 13,970	$ 8,384	$ 11,121	$ 11,368	$ 12,683	$ 18,353	$ 23,423	$ 28,821
Contributions in relation to the actuarially determined contribution	47,250	11,730	46,056	28,171	28,176	28,143	46,180	44,228	54,768	54,397
Contribution deficiency (excess)	$ (33,238)	$ (1)	$ (32,086)	$ (19,787)	$ (17,055)	$ (16,775)	$ (33,497)	$ (25,875)	$ (31,345)	$ (25,576)
Covered-employee payroll	$ 100,154	$ 118,560	$ 119,730	$ 119,391	$ 117,818	$ 117,391	$ 116,829	$ 118,507	$ 116,716	$ 112,408
Contributions as a % of covered-employee payroll	47.2%	9.9%	38.5%	23.6%	23.9%	24.0%	39.5%	37.3%	46.9%	48.4%

Notes to Schedule

Full actuarial valuations are performed every other year.

The Actuarially Determined Contribution for the fiscal year ended May 31, 2021 was calculated based on a May 31, 2019 full valuation and then projected forward to the May 31, 2020 measurement date. See Note 11 to the financial statements for more information.

The Actuarially Determined Contribution for the fiscal year ended May 31, 2020 was calculated based on a May 31, 2019 full valuation. See Note 11 to the financial statements for more information.

The Actuarially Determined Contribution for the fiscal year ended May 31, 2019 was calculated based on a June 1, 2017 full valuation and then projected forward to the May 31, 2018 measurement date.

The Actuarially Determined Contribution (formerly Annual Required Contribution) for the fiscal year ended May 31, 2018 was calculated based on a January 1, 2017 interim valuation that was rolled forward from the January 1, 2016 full valuation.

The Actuarially Determined Contribution (formerly Annual Required Contribution) for the fiscal year ended May 31, 2017 was calculated based on a January 1, 2016 full valuation.

Notes to Schedule *(continued)*

A summary of the actuarial methods and assumptions used in the full valuations are as follows:

	May 31, 2019 Full Valuation	**June 1, 2017 Full Valuation**	**January 1, 2016 Full Valuation**
Actuarial cost method	Entry Age Normal	Entry Age Normal	Projected-unit credit
Discount rate	6.0%	6.0%	6.5%
Rate of return on assets	6.0%	6.0%	6.5%
Inflation rate	2.5%	2.3%	2.5%
Amortization method	Level dollar amortization over a period of 10 years	Level dollar amortization over a period of 10 years	Level dollar
Amortization period			
▪ - UAAL as of March 1, 2012	N/A	N/A	10 years (closed)
▪ - Subsequent changes	N/A	N/A	10 years (open)
Asset valuation method	Market value plus receivable contributions made attributable to a prior fiscal year	Market value plus receivable contributions made attributable to a prior fiscal year	Fair value
Health cost trend rates	Varying rates between 4.3% and 5.6% for Plan benefits.	Varying rates between 4.3% and 6.3% for medical and pharmacy benefits. 4.0% for dental and vision benefits.	Varying rates between 4.6% and 6.2% for medical and pharmacy benefits. 4.0% for dental and vision benefits.
Salary increases	Union – 3.0%, Management – 3.3%	Union – 3.0%, Management – 3.3%	Not considered as OPEB benefits are not based upon pay.
Mortality	RPH-2014 total Dataset Mortality Tables adjusted to reflect Mortality Improvement Scale MP-2018 and projected forward on a generational basis, with employee rates before benefit commencement and healthy annuitant rates after benefit commencement, and reflecting mortality improvements both before and after the valuation date.	RPH-2014 total Dataset Mortality Tables adjusted to reflect Mortality Improvement Scale MP-2017 from 2006 base year and projected forward on a generational basis, with employee rates before benefit commencement and healthy annuitant rates after benefit commencement, and reflecting mortality improvements both before and after the valuation date.	RP-2000 Healthy Annuitant Mortality Table projected on a generational basis using Scale AA to allow for past and future improvements in mortality. The Employee table is used for pre-retirement. Rates vary by age and gender.

Other Significant Changes

The January 1, 2015 interim valuation used a discount rate of 6.5%. The January 1, 2014 and March 1, 2012 full valuations used a discount rate of 7.0%. The March 1, 2010 and 2008 full valuations used a discount rate of 8.0%. The discount rate and rate of return on assets were equal for all years noted.

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OTHER SUPPLEMENTARY INFORMATION

For accounting purposes, the Commission maintains its records in three sections: Mainline, Oil Franchise, and Motor License. These sections are based on the types of revenues and the associated bond issues.

The Mainline section consists of income and expenses directly associated with the operations of the Turnpike System. In addition, all bonds pledged against this revenue source are included in this section.

The Oil Franchise section consists of revenues received from the Commission's allocation of the Commonwealth's Oil Company Franchise Tax. This revenue is pledged against the Oil Franchise Tax Debt as listed in Note 7 to the financial statements.

The Motor License section consists of an annual income of $28.0 million, which has been provided to the Commission pursuant to Section 20 of Act 3 of the Commonwealth of Pennsylvania. This income is pledged against the Motor License Registration Fee Debt as listed in Note 7 to the financial statements.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Section Information *(continued)*
Schedule of Net Position – Business-type activities

	May 31, 2021			
	Mainline	Oil Franchise	Motor License	Total
		(In Thousands)		
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES				
Current assets:				
Cash and cash equivalents	$ 225,679	$ -	$ -	$ 225,679
Investments	52,563	-	-	52,563
Accounts receivable	118,340	-	-	118,340
Accrued interest receivable	1,845	-	-	1,845
Inventories	19,203	-	-	19,203
Restricted current assets				
Cash and cash equivalents	486,445	100,595	14,449	601,489
Investments	380,546	24,557	13,992	419,095
Accounts receivable	4,822	13,182	-	18,004
Accrued interest receivable	2,978	891	118	3,987
Total current assets	1,292,421	139,225	28,559	1,460,205
Noncurrent assets				
Investments				
Investments	425,849	-	-	425,849
Investments restricted	661,031	133,147	35,816	829,994
Total investments	1,086,880	133,147	35,816	1,255,843
Capital assets not being depreciated				
Land and intangibles	442,257	-	-	442,257
Assets under construction	2,288,309	-	-	2,288,309
Capital assets being depreciated				
Buildings	987,325	-	-	987,325
Improvements other than buildings	160,973	-	-	160,973
Equipment	581,800	-	-	581,800
Infrastructure	8,964,668	-	-	8,964,668
Total capital assets before accumulated depreciation	13,425,332	-	-	13,425,332
Less: Accumulated depreciation	6,749,286	-	-	6,749,286
Total capital assets after accumulated depreciation	6,676,046	-	-	6,676,046
Other assets				
Prepaid bond insurance costs	4,499	13	1,024	5,536
Other assets	27,084	-	-	27,084
Total other assets	31,583	13	1,024	32,620
Total noncurrent assets	7,794,509	133,160	36,840	7,964,509
Total assets	9,086,930	272,385	65,399	9,424,714
Deferred outflows of resources from hedging derivatives	41,396	-	77,662	119,058
Deferred outflows of resources from refunding bonds	282,872	9,792	12,884	305,548
Deferred outflows of resources from pensions	50,676	-	-	50,676
Deferred outflows of resources from OPEB	70,674	-	-	70,674
Total deferred outflows of resources	445,618	9,792	90,546	545,956
Total assets and deferred outflows of resources	$ 9,532,548	$ 282,177	$ 155,945	$ 9,970,670

Schedule of Net Position – Business-type activities *(continued)*

	May 31, 2021			
	Mainline	**Oil Franchise**	**Motor License**	**Total**
	(In Thousands)			
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES				
Current liabilities				
Accounts payable and accrued liabilities	$ 494,410	$ 51,995	$ 2,832	$ 549,237
Current portion of debt	450,455	19,670	10,045	480,170
Unearned income	105,702	-	-	105,702
Total current liabilities	1,050,567	71,665	12,877	1,135,109
Noncurrent liabilities				
Debt, less current portion, net of unamortized premium	13,860,817	1,113,396	349,147	15,323,360
Net pension liability	288,472	-	-	288,472
Net OPEB liability	14,791	-	-	14,791
Other noncurrent liabilities	194,848	-	84,080	278,928
Total noncurrent liabilities	14,358,928	1,113,396	433,227	15,905,551
Total liabilities	15,409,495	1,185,061	446,104	17,040,660
Deferred inflows of resources from hedging derivatives	7,688	-	-	7,688
Deferred inflows of resources from service concession arrangements	101,028	-	-	101,028
Deferred inflows of resources from refunding bonds	7,078	1,337	-	8,415
Deferred inflows of resources from pensions	83,563	-	-	83,563
Deferred inflows of resources from OPEB	4,284	-	-	4,284
Total deferred inflows of resources	203,641	1,337	-	204,978
Total liabilities and deferred inflows of resources	15,613,136	1,186,398	446,104	17,245,638
NET POSITION				
Net investment in capital assets	367,608	(1,131,750)	(351,703)	(1,115,845)
Restricted for construction purposes	-	215,303	61,544	276,847
Restricted for debt service	33,687	12,226	-	45,913
Unrestricted	(6,481,883)	-	-	(6,481,883)
Total net position	$ (6,080,588)	$ (904,221)	$ (290,159)	$ (7,274,968)

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Section Information *(continued)*
Schedule of Revenues, Expenses, and Changes in Net Position – Business-type activities

	May 31, 2021			
	Mainline	Oil Franchise	Motor License	Total
	(In Thousands)			
Operating revenue				
Net fares	$ 1,190,419	$ -	$ -	$ 1,190,419
Other	41,130	-	-	41,130
Total operating revenue	1,231,549	-	-	1,231,549
Operating expenses				
Cost of services	501,782	7,599	-	509,381
Depreciation	373,924	-	-	373,924
Total operating expenses	875,706	7,599	-	883,305
Operating income (loss)	355,843	(7,599)	-	348,244
Nonoperating revenue (expenses)				
Investment earnings (losses)	10,759	4,678	(101)	15,336
Other nonoperating revenue	8,384	4,612	-	12,996
Act 44 and Act 89 payments to PennDOT	(450,000)	-	-	(450,000)
Capital assets transferred to the Commonwealth	(2,769)	-	-	(2,769)
Interest and bond expense	(606,116)	(47,761)	(17,897)	(671,774)
Nonoperating expenses, net	(1,039,742)	(38,471)	(17,998)	(1,096,211)
Loss before capital contributions	(683,899)	(46,070)	(17,998)	(747,967)
Capital contributions	11,969	124,178	28,000	164,147
(Decrease) increase in net position	(671,930)	78,108	10,002	(583,820)
Net position, at beginning of year	(5,646,186)	(744,801)	(300,161)	(6,691,148)
Intersection transfers	237,528	(237,528)	-	-
Net position, at end of year	$ (6,080,588)	$ (904,221)	$ (290,159)	$ (7,274,968)

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Section Information *(continued)*
Schedule of Cash Flows – Business-type activities

	May 31, 2021			
	Mainline	Oil Franchise	Motor License	Total
		(In Thousands)		
CASH FLOWS FROM OPERATING ACTIVITIES				
Cash received from customer tolls and deposits	$ 1,196,461	$ -	$ -	$ 1,196,461
Cash payments for goods and services	(388,620)	(5,881)	-	(394,501)
Cash payments to employees	(152,545)	(1,779)	-	(154,324)
Cash received from other operating activities	9,082	-	-	9,082
Net cash provided by (used in) operating activities	664,378	(7,660)	-	656,718
CASH FLOWS FROM INVESTING ACTIVITIES				
Proceeds from sales and maturities of investments	2,416,147	279,284	51,057	2,746,488
Interest received on investments	19,544	5,126	665	25,335
Purchases of investments	(2,655,856)	(133,383)	(51,399)	(2,840,638)
Net cash (used in) provided by investing activities	(220,165)	151,027	323	(68,815)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES				
Capital grants received from other governments	1,262	-	-	1,262
Proceeds from Motor License Registration fees	-	-	28,000	28,000
Proceeds from Oil Company Franchise Tax	-	114,176	-	114,176
Construction and acquisition of capital assets	(405,105)	(241,498)	-	(646,603)
Proceeds from sale of capital assets	2,431	-	-	2,431
Payments for bond and swap expenses	(7,275)	(40)	-	(7,315)
Payments for cash defeasances	(66,225)	-	-	(66,225)
Payments for debt refundings	(225,000)	-	-	(225,000)
Payments for bond maturities	(435)	(18,720)	(9,545)	(28,700)
Repayment of EB-5 Loan	(200,442)	-	-	(200,442)
Interest paid on debt	(261,865)	(52,384)	(18,284)	(332,533)
Interest subsidy from Build America Bonds	24,719	6,914	-	31,633
Proceeds from draw on line of credit	150,000	-	-	150,000
Repayment of draw on line of credit	(150,000)	-	-	(150,000)
Proceeds from debt issuances	936,604	-	-	936,604
Net cash (used in) provided by capital and related financing activities	(201,331)	(191,552)	171	(392,712)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES				
Cash payments to PennDOT	(450,000)	-	-	(450,000)
Payments for bond and swap expenses	(2,744)	-	-	(2,744)
Payments for cash defeasances	(43,092)	-	-	(43,092)
Payments for debt refundings	-	-	-	-
Payments for debt maturities	(13,075)	-	-	(13,075)
Interest paid on debt	(297,054)	-	-	(297,054)
Proceeds from debt issuances	531,612	-	-	531,612
Net cash used in noncapital financing activities	(274,353)	-	-	(274,353)
(Decrease) increase in cash and cash equivalents	(31,471)	(48,185)	494	(79,162)
Cash and cash equivalents at beginning of year	743,595	148,780	13,955	906,330
Cash and cash equivalents at end of year	$ 712,124	$ 100,595	$ 14,449	$ 827,168

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Section Information *(continued)*
Schedule of Cash Flows – Business-type activities *(continued)*

	May 31, 2021			
	Mainline	Oil Franchise	Motor License	Total
	(In Thousands)			
Reconciliation of operating income (loss) to net cash provided by (used in) operating activities				
Operating income (loss)	$ 355,843	$ (7,599)	$ -	$ 348,244
Adjustments to reconcile operating income to net cash provided by operating activities				
Depreciation	373,924	-	-	373,924
Change in operating assets and liabilities				
Accounts receivable	(52,669)	-	-	(52,669)
Inventories	5,482	-	-	5,482
Other assets	(16)	-	-	(16)
Deferred outflows of resources from pensions	(12,839)	-	-	(12,839)
Deferred outflows of resources from OPEB	(42,959)	-	-	(42,959)
Accounts payable and accrued liabilities	25,611	(126)	-	25,485
Net pension liability	(40,717)	-	-	(40,717)
Net OPEB liability	12,946	-	-	12,946
Other noncurrent liabilities	(142)	65	-	(77)
Deferred inflows of resources from pensions	41,071	-	-	41,071
Deferred inflows of resources from OPEB	(1,157)	-	-	(1,157)
Net cash provided by (used in) operating activities	$ 664,378	$ (7,660)	$ -	$ 656,718
Reconciliation of cash and cash equivalents to the statements of net position				
Cash and cash equivalents	$ 225,679	$ -	$ -	$ 225,679
Restricted cash and cash equivalents	486,445	100,595	14,449	601,489
Total cash and cash equivalents	$ 712,124	$ 100,595	$ 14,449	$ 827,168

Noncash Investing, Capital and Related Financing and Noncapital Financing Activities

The Commission recorded a net decrease of $10.1 million in the fair value of its investments not reported as cash equivalents for the year ended May 31, 2021. Decreases by section were: Mainline, $8.6 million; Oil Franchise, $0.8 million; and Motor License, $0.7 million.

The Commission recorded $58.9 million for the amortization of bond premium for the year ended May 31, 2021. Amortization by section was: Mainline, $50.8 million; Oil Franchise, $7.2 million; and Motor License, $0.9 million.

As indicated in Note 7 to the financial statements (Debt), the Commission refunded and cash defeased various bonds in fiscal year 2021. The fiscal year 2021 refundings and cash defeasances resulted in a $5.8 million reclassification from Mainline bond premiums (discounts) to deferred inflows of resources from refundings. Additionally, the Commission recorded $64.5 million for the amortization of deferred outflows/inflows of resources from refunding bonds for the year ended May 31, 2021. Amortization by section was: Mainline, $63.1 million; Oil Franchise, $0.5 million; and Motor License, $0.9 million.

The Commission recorded $0.3 million for the amortization of prepaid bond insurance costs for the year ended May 31, 2021. Amortization by section was: Mainline, $0.2 million; and Motor License, $0.1 million.

Noncash Investing, Capital and Related Financing and Noncapital Financing Activities *(continued)*

The Commission recorded an interest expense reduction of $5.7 million in the Mainline section and $0.2 million in the Motor License section for the year ended May 31, 2021 related to GASB Statement No. 53 entries.

The Commission recognized total capital contributions of $164.1 million for fiscal year ended May 31, 2021. Cash received of $143.4 million for fiscal year ended May 31, 2021 is reported in the capital and related financing activities of this schedule. The $20.7 million difference between capital contributions and cash received is the result of a $4.9 million net decrease in Mainline receivables and a $10.0 million net decrease in Oil Franchise receivables related to these capital contributions and a $5.8 million Mainline noncash capital contribution related to capital assets provided by service plaza operators. The Commission entered into agreements with a food and fuel provider to totally reconstruct the service plazas; the service plaza operators provided the capital for the reconstruction in exchange for lower rental rates. See Note 2 to the financial statements for further discussion on capital contributions and Note 6 to the financial statements for further discussion on the service plazas.

During fiscal year 2021, the Commission transferred portable radios with a book value of $2.8 million to the Pennsylvania State Police.

The Commission records intersection activity related to revenue, expense, asset and liability transfers between its sections. Some of the intersection entries are related to cash transfers; others are noncash transfers as required. Net intersection transfers for the year ended May 31, 2021 were: to Mainline, $237.5 million and from Oil Franchise, $237.5 million.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Section Information *(continued)*
Schedule of Net Position – Business-type activities

	May 31, 2020			
	Mainline	Oil Franchise	Motor License	Total
	(In Thousands)			
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES				
Current assets:				
Cash and cash equivalents	$ 198,564	$ -	$ -	$ 198,564
Investments	78,655	-	-	78,655
Accounts receivable	65,631	-	-	65,631
Accrued interest receivable	2,066	-	-	2,066
Inventories	24,685	-	-	24,685
Restricted current assets				
Cash and cash equivalents	545,031	148,780	13,955	707,766
Investments	295,525	28,984	17,077	341,586
Accounts receivable	-	3,180	-	3,180
Accrued interest receivable	11,148	3,745	156	15,049
Total current assets	1,221,305	184,689	31,188	1,437,182
Noncurrent assets				
Investments				
Investments	354,491	-	-	354,491
Investments restricted	556,700	275,631	33,118	865,449
Total investments	911,191	275,631	33,118	1,219,940
Capital assets not being depreciated				
Land and intangibles	425,643	-	-	425,643
Assets under construction	1,788,685	-	-	1,788,685
Capital assets being depreciated				
Buildings	983,739	-	-	983,739
Improvements other than buildings	151,066	-	-	151,066
Equipment	706,803	-	-	706,803
Infrastructure	8,946,265	-	-	8,946,265
Total capital assets before accumulated depreciation	13,002,201	-	-	13,002,201
Less: Accumulated depreciation	6,592,200	-	-	6,592,200
Total capital assets after accumulated depreciation	6,410,001	-	-	6,410,001
Other assets				
Prepaid bond insurance costs	4,763	18	1,094	5,875
Other assets	26,646	-	-	26,646
Total other assets	31,409	18	1,094	32,521
Total noncurrent assets	7,352,601	275,649	34,212	7,662,462
Total assets	8,573,906	460,338	65,400	9,099,644
Deferred outflows of resources from hedging derivatives	120,084	-	97,070	217,154
Deferred outflows of resources from refunding bonds	319,193	10,714	13,816	343,723
Deferred outflows of resources from pensions	37,837	-	-	37,837
Deferred outflows of resources from OPEB	27,715	-	-	27,715
Total deferred outflows of resources	504,829	10,714	110,886	626,429
Total assets and deferred outflows of resources	$ 9,078,735	$ 471,052	$ 176,286	$ 9,726,073

Schedule of Net Position – Business-type activities *(continued)*

	May 31, 2020			
	Mainline	**Oil Franchise**	**Motor License**	**Total**
		(In Thousands)		
LIABILITIES AND DEFERRED INFLOWS OF RESOURCES				
Current liabilities				
Accounts payable and accrued liabilities	$ 457,609	$ 56,597	$ 3,034	$ 517,240
Current portion of debt	545,615	18,720	9,545	573,880
Unearned income	90,369	-	-	90,369
Total current liabilities	1,093,593	75,317	12,579	1,181,489
Noncurrent liabilities				
Debt, less current portion, net of unamortized premium	12,884,059	1,138,797	360,164	14,383,020
Net pension liability	329,189	-	-	329,189
Net OPEB liability	1,845	-	-	1,845
Other noncurrent liabilities	252,023	(66)	103,704	355,661
Total noncurrent liabilities	13,467,116	1,138,731	463,868	15,069,715
Total liabilities	14,560,709	1,214,048	476,447	16,251,204
Deferred inflows of resources from service concession arrangements	106,450	-	-	106,450
Deferred inflows of resources from refunding bonds	9,829	1,805	-	11,634
Deferred inflows of resources from pensions	42,492	-	-	42,492
Deferred inflows of resources from OPEB	5,441	-	-	5,441
Total deferred inflows of resources	164,212	1,805	-	166,017
Total liabilities and deferred inflows of resources	14,724,921	1,215,853	476,447	16,417,221
NET POSITION				
Net investment in capital assets	564,948	(1,106,604)	(361,433)	(903,089)
Restricted for construction purposes	-	350,041	61,272	411,313
Restricted for debt service	30,857	11,762	-	42,619
Unrestricted	(6,241,991)	-	-	(6,241,991)
Total net position	$ (5,646,186)	$ (744,801)	$ (300,161)	$ (6,691,148)

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Section Information *(continued)*
Schedule of Revenues, Expenses, and Changes in Net Position – Business-type activities

	May 31, 2020			
	Mainline	**Oil Franchise**	**Motor License**	**Total**
		(In Thousands)		
Operating revenue				
Net fares	$ 1,247,779	$ -	$ -	$ 1,247,779
Other	36,004	-	-	36,004
Total operating revenue	1,283,783	-	-	1,283,783
Operating expenses				
Cost of services	530,740	3,191	-	533,931
Depreciation	382,088	-	-	382,088
Total operating expenses	912,828	3,191	-	916,019
Operating income (loss)	370,955	(3,191)	-	367,764
Nonoperating revenue (expenses)				
Investment earnings	64,177	23,889	2,279	90,345
Other nonoperating revenues	18,091	4,602	-	22,693
Act 44 and Act 89 payments to PennDOT	(450,000)	-	-	(450,000)
Capital assets transferred to the Commonwealth	(294)	-	-	(294)
Interest and bond expense	(585,828)	(48,601)	(18,472)	(652,901)
Nonoperating expenses, net	(953,854)	(20,110)	(16,193)	(990,157)
Loss before capital contributions	(582,899)	(23,301)	(16,193)	(622,393)
Capital contributions	11,688	133,798	28,000	173,486
(Decrease) increase in net position	(571,211)	110,497	11,807	(448,907)
Net position, at beginning of year	(5,333,360)	(595,913)	(312,968)	(6,242,241)
Intersection transfers	258,385	(259,385)	1,000	-
Net position, at end of year	$ (5,646,186)	$ (744,801)	$ (300,161)	$ (6,691,148)

Schedule of Cash Flows – Business-type activities

	May 31, 2020			
	Mainline	**Oil Franchise**	**Motor License**	**Total**
		(In Thousands)		
CASH FLOWS FROM OPERATING ACTIVITIES				
Cash received from customer tolls and deposits	$ 1,275,558	$ -	$ -	$ 1,275,558
Cash payments for goods and services	(353,071)	(1,089)	-	(354,160)
Cash payments to employees	(159,661)	(2,100)	-	(161,761)
Cash received from other operating activities	16,572	-	-	16,572
Net cash provided by (used in) operating activities	779,398	(3,189)	-	776,209
CASH FLOWS FROM INVESTING ACTIVITIES				
Proceeds from sales and maturities of investments	3,212,888	957,528	8,694	4,179,110
Interest received on investments	27,965	6,560	1,134	35,659
Purchases of investments	(3,403,790)	(735,947)	(11,105)	(4,150,842)
Net cash (used in) provided by investing activities	(162,937)	228,141	(1,277)	63,927
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES				
Capital grants received from other governments	5,845	-	-	5,845
Proceeds from Motor License Registration fees	-	-	28,000	28,000
Proceeds from Oil Company Franchise Tax	-	141,665	-	141,665
Intersection cash transfer for debt defeasance	-	(1,000)	1,000	-
Construction and acquisition of capital assets	(404,188)	(255,237)	-	(659,425)
Proceeds from sale of capital assets	2,057	-	-	2,057
Payments for bond and swap expenses	(5,078)	(40)	-	(5,118)
Payments for debt refundings	(574,829)	-	-	(574,829)
Payments for debt maturities	(81,100)	(18,980)	(9,070)	(109,150)
Interest paid on debt	(257,098)	(54,807)	(18,806)	(330,711)
Interest subsidy from Build America Bonds	8,232	2,301	-	10,533
Swap suspension payments received	2,443	-	-	2,443
Proceeds from debt issuances	1,073,553	-	-	1,073,553
Net cash (used in) provided by capital and related financing activities	(230,163)	(186,098)	1,124	(415,137)
CASH FLOWS FROM NONCAPITAL FINANCING				
Cash payments to PennDOT	(900,000)	-	-	(900,000)
Payments for bond and swap expenses	(8,636)	-	-	(8,636)
Payments for cash defeasances	(51,164)	-	-	(51,164)
Payments for debt refundings	(481,197)	-	-	(481,197)
Payments for debt maturities	(76,905)	-	-	(76,905)
Interest paid on debt	(285,859)	-	-	(285,859)
Proceeds from debt issuances	1,285,176	-	-	1,285,176
Net cash used in noncapital financing activities	(518,585)	-	-	(518,585)
(Decrease) increase in cash and cash equivalents	(132,287)	38,854	(153)	(93,586)
Cash and cash equivalents, at beginning of year	875,882	109,926	14,108	999,916
Cash and cash equivalents, at end of year	$ 743,595	$ 148,780	$ 13,955	$ 906,330

	May 31, 2020			
	Mainline	Oil Franchise	Motor License	Total
		(In Thousands)		
Reconciliation of operating income (loss) to net cash provided by (used in) operating activities				
Operating income (loss)	$ 370,955	$ (3,191)	$ -	$ 367,764
Adjustments to reconcile operating income to net cash provided by operating activities				
Depreciation	382,088	-	-	382,088
Change in operating assets and liabilities				
Accounts receivable	12,989	-	-	12,989
Inventories	(5,395)	-	-	(5,395)
Other assets	(7)	-	-	(7)
Deferred outflows of resources from pensions	38,855	-	-	38,855
Deferred outflows of resources from OPEB	11,610	-	-	11,610
Accounts payable and accrued liabilities	12,650	2	-	12,652
Net pension liability	(56,632)	-	-	(56,632)
Net OPEB liability	(11,089)	-	-	(11,089)
Other noncurrent liabilities	1,456	-	-	1,456
Deferred inflows of resources from pensions	20,961	-	-	20,961
Deferred inflows of resources from OPEB	957	-	-	957
Net cash provided by (used in) operating activities	$ 779,398	$ (3,189)	$ -	$ 776,209
Reconciliation of cash and cash equivalents to the statements of net position				
Cash and cash equivalents	$ 198,564	$ -	$ -	$ 198,564
Restricted cash and cash equivalents	545,031	148,780	13,955	707,766
Total cash and cash equivalents	$ 743,595	$ 148,780	$ 13,955	$ 906,330

Noncash Investing, Capital and Related Financing and Noncapital Financing Activities

The Commission recorded a net increase of $50.7 million in the fair value of its investments not reported as cash equivalents for the year ended May 31, 2020. Increases by section were: Mainline, $32.3 million; Oil Franchise, $17.3 million; and Motor License $1.1 million.

The Commission recorded $57.7 million for the amortization of bond premium for the year ended May 31, 2020. Amortization by section was: Mainline, $49.6 million; Oil Franchise, $7.1 million; and Motor License, $1.0 million.

As indicated in Note 7 to the financial statements (Debt), the Commission refunded and cash defeased various bonds in fiscal year 2020. The fiscal year 2020 refundings and cash defeasances resulted in a $19.1 million reclassification from Mainline bond premiums (discounts) to deferred outflows of resources from refunding bonds and a $41.7 million reclassification from Mainline bond premiums (discounts) to deferred inflows of resources from refundings. Additionally, the Commission recorded $40.7 million for the amortization of deferred outflows/inflows of resources from refunding bonds for the year ended May 31, 2020. Amortization by section was: Mainline, $39.3 million; Oil Franchise, $0.5 million; and Motor License, $0.9 million.

The Commission recorded $0.3 million for the amortization of prepaid bond insurance costs for the year ended May 31, 2020. Amortization by section was: Mainline, $0.2 million; and Motor License, $0.1 million.

Noncash Investing, Capital and Related Financing and Noncapital Financing Activities *(continued)*

The Commission recorded an interest expense reduction of $3.2 million in the Mainline section and $0.2 million in the Motor License section for the year ended May 31, 2020 related to GASB Statement No. 53 entries.

The Commission recognized total capital contributions of $173.5 million for fiscal year ended May 31, 2020. Cash received of $175.5 million for fiscal year ended May 31, 2020 is reported in the capital and related financing activities of this schedule. The $2.0 million difference between capital contributions and cash received is the result of a $7.8 million net decrease in Oil Franchise receivables related to these capital contributions and a $5.8 million Mainline noncash capital contribution related to capital assets provided by service plaza operators. The Commission entered into agreements with a food and fuel provider to totally reconstruct the service plazas; the service plaza operators provided the capital for the reconstruction in exchange for lower rental rates. See Note 2 to the financial statements for further discussion on capital contributions and Note 6 to the financial statements for further discussion on the service plazas.

During fiscal year 2020, the Commission transferred land with a book value of $0.3 million from the Mainline section to the PA Game Commission.

The Commission records intersection activity related to revenue, expense, asset and liability transfers between its sections. Some of the intersection entries are related to cash transfers; others are noncash transfers as required. Net intersection transfers for the year ended May 31, 2020 were: to Mainline, $258.4 million; from Oil Franchise, $259.4 million; and to Motor License, $1.0 million.

PENNSYLVANIA TURNPIKE COMMISSION
A Component Unit of the Commonwealth of Pennsylvania
Section Information *(continued)*
Schedules of Cost of Services Detail

The following tables provide additional detail for the costs of services reported in the Statements of Revenues, Expenses, and Changes in Net Position.

Fiscal Year Ended May 31, 2021

	Mainline Operating	Mainline Capital	Total Mainline	Oil Franchise	Motor License	Total
General and administrative	$ 50,861	$ 115,506	$ 166,367	$ 6,731	$ -	$ 173,098
Traffic engineering and operations	3,396	3,888	7,284	-	-	7,284
Service centers	48,334	-	48,334	-	-	48,334
Employee benefits	86,087	10,321	96,408	868	-	97,276
Toll collection	31,261	938	32,199	-	-	32,199
Normal maintenance	74,890	2,197	77,087	-	-	77,087
Facilities and energy mgmt. operations	11,400	7,110	18,510	-	-	18,510
Turnpike patrol	55,593	-	55,593	-	-	55,593
Total cost of services	$ 361,822	$ 139,960	$ 501,782	$ 7,599	$ -	$ 509,381

Fiscal Year Ended May 31, 2020

	Mainline Operating	Mainline Capital	Total Mainline	Oil Franchise	Motor License	Total
General and administrative	$ 52,122	$ 126,510	$ 178,632	$ 1,935	$ -	$ 180,567
Traffic engineering and operations	3,162	2,757	5,919	-	-	5,919
Service centers	41,972	-	41,972	-	-	41,972
Employee benefits	91,161	13,046	104,207	1,256	-	105,463
Toll collection	58,129	1,023	59,152	-	-	59,152
Normal maintenance	64,636	1,448	66,084	-	-	66,084
Facilities and energy mgmt. operations	11,344	9,792	21,136	-	-	21,136
Turnpike patrol	53,638	-	53,638	-	-	53,638
Total cost of services	$ 376,164	$ 154,576	$ 530,740	$ 3,191	$ -	$ 533,931

APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE

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APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE SENIOR INDENTURE

The following sets forth the definitions of certain terms used in the Senior Indenture and a summary of certain provisions of the Senior Indenture. Certain other provisions of the Senior Indenture relating to the 2022A Bonds are summarized in the Official Statement under the sections captioned "DESCRIPTION OF THE 2022A BONDS" and "SECURITY FOR THE 2022A BONDS." Reference should be made to the Senior Indenture for a complete statement of all of these provisions and other provisions which are not summarized in this Official Statement. A copy of the Senior Indenture may be obtained from the Trustee.

DEFINITIONS OF CERTAIN TERMS

In addition to words and terms elsewhere defined in this Official Statement or the Senior Indenture, the following words and terms as used in this Appendix C and the Senior Indenture shall have the following meanings unless the context clearly indicates otherwise:

"Additional Bonds" – Bonds of any Series authorized to be issued under the Senior Indenture.

"Alternate Construction Fund" – a fund as described under "The Senior Indenture—Alternate Construction Fund" in this Appendix C.

"Annual Capital Budget" – the budget adopted by the Commission pursuant to the provisions described under the heading "The Senior Indenture—Covenants of Commission–Annual Operating Budget; Capital Budget" in this Appendix C.

"Annual Debt Service" – (i) the amount of principal and interest paid or payable with respect to Bonds in a Fiscal Year plus (ii) Reimbursement Obligations paid or payable by the Commission in such Fiscal Year (but only to the extent they are not duplicative of such principal and interest), plus (iii) the amounts, if any, paid or payable by the Commission in such Fiscal Year with respect to Approved Swap Agreements, minus (iv) the amounts, if any, paid or payable to the Commission in such Fiscal Year with respect to Approved Swap Agreements, provided that the difference between the amounts described in clauses (iii) and (iv) shall be included only to the extent that such difference would not be recognized as a result of the application of the assumptions set forth below. The following assumptions shall be used to determine the Annual Debt Service becoming due in any Fiscal Year: (a) in determining the principal amount paid or payable with respect to Bonds or Reimbursement Obligations in each Fiscal Year, payment shall be assumed to be made in accordance with any amortization schedule established for such Indebtedness, including amounts paid or payable pursuant to any mandatory redemption schedule for such Indebtedness; (b) if any of the Indebtedness or proposed Indebtedness constitutes Balloon Indebtedness, then such amounts thereof as constitute Balloon Indebtedness shall be treated as if such Indebtedness is to be amortized in substantially equal annual installments of principal and interest over a term of 25 years from the date of issuance of such Indebtedness; anything to the contrary in the Senior Indenture notwithstanding, during the year preceding the final maturity date of such Indebtedness, all of the principal thereof shall be considered to be due on such maturity date unless the Commission provides to the Trustee a certificate of a Financial Consultant certifying that, in its judgment, the Commission will be able to refinance such Balloon Indebtedness, in which event the Balloon Indebtedness shall be amortized over the term of the Indebtedness expected to refinance such Balloon Indebtedness and shall bear the interest rate specified in the certificate of the Financial Consultant; (c) if any of the Indebtedness or proposed Indebtedness constitutes Variable Rate Indebtedness, then interest in future periods shall be based on the Assumed Variable Rate; (d) termination or similar payments under an Approved Swap

Agreement shall not be taken into account in any calculation of Annual Debt Service; and (e) if any cash subsidy payments (the "Subsidy Payments") from the United States Treasury pursuant to Section 54AA or 6431 of the Code (as such Sections were added by Section 1531 of the American Recovery and Reinvestment Act of 2009 (Pub.L. 111-5) pertaining to "Build America Bonds") are scheduled to be received by the Commission with respect to any Bonds which are eligible for such Subsidy Payments, each of the Subsidy Payments may be deducted from the interest payable on such Bonds in the period in which such Subsidy Payment is scheduled to be received.

"Annual Operating Budget" – the budget adopted by the Commission pursuant to the provisions described under the heading "The Senior Indenture-Covenants of the Commission-Annual Operating Budget; Capital Budget" in this Appendix C.

"Applicable Long-Term Indebtedness" – includes Bonds, Additional Bonds, Reimbursement Obligations and obligations of the Commission under Approved Swap Agreements, to the extent the same constitute Long-Term Indebtedness, and excludes Subordinated Indebtedness.

"Approved Swap Agreement" – shall have the meaning set forth below under the heading "The Senior Indenture–Approved and Parity Swap Obligations" in this Appendix C.

"Assumed Variable Rate" – in the case of (a) Outstanding Variable Rate Indebtedness, the average interest rate on such Indebtedness for the most recently completed 12-month period; and (b) proposed Variable Rate Indebtedness, (1) which will, in the opinion of Bond Counsel delivered at the time of the issuance thereof be excluded from gross income for federal income tax purposes, the average of the Bond Market Association Swap Index ("BMA Index") for the 12 months ending 7 days preceding the date of calculation plus 100 basis points, or (2) in the case of Bonds not described in clause (1), the London Interbank Offered Rate ("LIBOR") most closely resembling the reset period for the Variable Rate Indebtedness plus 100 basis points; provided that if the BMA Index or LIBOR shall cease to be published, the index to be used in its place shall be that index which the Commission in consultation with the Financial Consultant determines most closely replicates such index, as set forth in a certificate of a Commission Official filed with the Trustee.

"Authenticating Agent" – that Person designated and authorized to authenticate any series of Bonds or such Person designated by the Authenticating Agent to serve such function, and shall initially be the Trustee.

"Balloon Indebtedness" – Long-Term Indebtedness of which 25% or more of the principal matures in the same Fiscal Year and is not required by the documents pursuant to which such Indebtedness was issued to be amortized by payment or redemption prior to that Fiscal Year, provided that such Indebtedness will not constitute Balloon Indebtedness if the Trustee is provided a certificate of a Commission Official certifying that such Indebtedness is not to be treated as Balloon Indebtedness (because, by way of example, such Indebtedness is intended to serve as "wrap around" Indebtedness).

"Bank" – as to any particular Series of Bonds, each Person (other than a Bond Insurer) providing a letter of credit, a line of credit, a guaranty or another credit or liquidity enhancement facility as designated in the Supplemental Indenture providing for the issuance of such Bonds.

"Bankruptcy Law" – Title 9 of the United States Code, as amended from time to time, and any successor to or replacement of such Title and any other applicable federal or state bankruptcy, insolvency or similar law.

"Bond" or "Bonds" – Bonds outstanding under the Prior Indenture and indebtedness of any kind or class, including bonds, notes, bond anticipation notes, commercial paper and other obligations, issued as Additional Bonds under the applicable provisions of the Senior Indenture, other than Additional Bonds issued as Subordinated Indebtedness. Bonds are also referred to as "Turnpike Revenue Bonds" in the forepart of this Official Statement.

"Bond Buyer Index" – shall mean the Bond Buyer 20-Bond Index as published weekly in "The Bond Buyer". If such Index shall cease to be published, the Financial Consultant shall select another index which shall be reflective of the Commission's fixed borrowing cost.

"Bond Counsel" – any attorney or firm of attorneys whose experience in matters relating to the issuance of obligations by states and their political subdivisions is nationally recognized.

"Bond Documents" – means the Supplemental Indenture, the 2022A Bonds, and any and all future renewals and extensions or restatements of, or amendments or supplements to, any of the foregoing.

"Bond Insurer" – as to any particular maturity or any particular Series of Bonds, the Person undertaking to insure such Bonds as designated in a Supplemental Indenture providing for the issuance of such Bonds.

"Bond Owner," "Bondholder," "Holder," "Owner" or "Registered Owner" (or the lower case version of the same) – the Person in whose name any Bond or Bonds are registered on the books maintained by the Registrar.

"Bond Register" – the register maintained pursuant to the applicable provisions of the Senior Indenture.

"Bond Registrar" – with respect to any series of Bonds, that Person which maintains the bond register or such other entity designated by the Bond Registrar to serve such function and initially shall be the Trustee.

"Book-Entry-Only System" – a system similar to the system described in the Senior Indenture and in the forepart of this Official Statement under "DESCRIPTION OF THE 2022A BONDS – Book-Entry Only System" pursuant to which Bonds are registered in book-entry form.

"Chief Engineer" – the employee of the Commission designated its "Chief Engineer" or any successor title.

"Code" – the Internal Revenue Code of 1986, as amended, and the regulations proposed or in effect with respect thereto.

"Commonwealth" – the Commonwealth of Pennsylvania.

"Commission Official" – any commissioner, director, officer or employee of the Commission authorized to perform specific acts or duties by resolution duly adopted by the Commission.

"Consultant" – a Person who shall be independent, appointed by the Commission as needed, qualified and having a nationwide and favorable reputation for skill and experience in such work for which the Consultant was appointed. In those situations in which a Consultant is appointed to survey risks and to recommend insurance coverage, such Consultant may be a broker or agent with whom the Commission transacts business.

"Consulting Engineers" – the engineer or engineering firm or corporation at the time employed by the Commission under the Senior Indenture.

"Cost" – all or any part of: (a) the cost of construction, reconstruction, restoration, repair and rehabilitation of a Project or portion thereof (including, but not limited to, indemnity and surety bonds, permits, taxes or other municipal or governmental charges lawfully levied or assessed during construction); (b) the cost of acquisition of all real or personal property, rights, rights-of-way, franchises, easements and interests acquired or used for such Project or portion thereof; (c) the cost of demolishing or removing any structures on land so acquired, including the cost of acquiring any land to which the structures may be removed; (d) any cost of borings and other preliminary investigations necessary or incident to determining the feasibility or practicability of constructing such Project and any cost necessary or desirable to satisfy conditions associated with the issuance of any permit for the construction thereof (including the costs of environmental mitigation required in connection therewith); (e) the cost of all machinery and equipment, vehicles, materials and rolling stock; (f) Issuance Costs; (g) interest on Bonds and on any Reimbursement Obligation for the period prior to, during and for a period of up to one year after completion of construction as determined by the Commission, provisions for working capital, reserves for principal and interest and for extensions, enlargements, additions, replacements, renovations and improvements; (h) the cost of architectural, engineering, environmental feasibility, financial and legal services; (i) plans, specifications, estimates and administrative and other expenses which are necessary or incidental to the determination of the feasibility of constructing such Project or portion thereof or incidental to the obtaining of construction contracts or to the construction (including construction administration and inspection), acquisition or financing thereof and which constitute capital costs; (j) Current Expenses, provided that, if applicable, the Trustee has received an opinion of Bond Counsel (which opinion may address either specific Current Expenses or categories of Current Expenses) to the effect that the treatment of such Current Expenses as a Cost will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes; (k) the repayment of any loan or advance for any of the foregoing; and (1) with respect to the use of Bond proceeds, such other costs and expenses as are permitted by the Enabling Acts at the time such Bonds are issued.

"Counsel" – an attorney or law firm (who may be counsel for the Commission) not unsatisfactory to the Trustee.

"Credit Facility" – any letter of credit, line of credit, standby letter of credit, indemnity or surety insurance policy or agreement to purchase a debt obligation or any similar extension of credit, credit enhancement or liquidity support obtained by the Commission from a responsible financial or insurance institution, to provide for or to secure payment of principal and purchase price of, and/or interest on Bonds pursuant to the provisions of a Supplemental Indenture under which such Bonds are issued. The use of such definition is not intended to preclude the Commission from providing the credit or liquidity support with respect to one or more series of Bonds directly rather than through a financial or insurance institution.

"Current Expenses" – the Commission's reasonable and necessary current expenses of maintenance, repair and operation of the System, including, without limiting the generality of the foregoing, all premiums for insurance and payments into any self-insurance reserve fund, all administrative and engineering expenses relating to maintenance, repair and operation of the System, fees and expenses of the Trustee and of the Paying Agents, Policy Costs, legal expenses and any other expenses required to be paid by the Commission as shown in the Annual Operating Budget for the System.

"Debt Service Fund" – the fund created by the Senior Indenture and described under "The Senior Indenture – Debt Service Fund" in this Appendix C.

"Debt Service Reserve Fund" – the fund created by the Senior Indenture and described under "The Senior Indenture—Debt Service Reserve Fund" in this Appendix C.

"Debt Service Reserve Fund Bonds" – shall mean the Long-Term Indebtedness specified by the Commission that is secured by the Debt Service Reserve Fund as described under "The Senior Indenture—Debt Service Reserve Fund" in this Appendix C.

"Debt Service Reserve Requirement" – the amount equal to the Maximum Annual Debt Service on account of all the Debt Service Reserve Fund Bonds.

"Defeasance Obligations" or "Defeasance Securities" – Cash, Government Obligations, Government Obligations which have been stripped by the U.S. Treasury and CATS, TIGRS and similar securities, Resolution Funding Corp. strips which have been stripped by the Federal Reserve Bank of New York, pre-refunded obligations of a state or municipality rated in the highest rating category by the Rating Agency, and Obligations issued by the following agencies which are backed by the full faith and credit of the U.S.: Farmers Home Administration (Certificates of beneficial ownership), Federal Financing Bank, General Services Administration (Participation certificates), U.S. Maritime Administration (Guaranteed Title XI financing), U.S. Department of Housing and Urban Development (Project Notes, Local Authority Bonds and New Communities Debentures - U.S. government guaranteed debentures) and U.S. Public Housing Notes and Bonds (U.S. government guaranteed public housing notes and bonds).

"Depositary" – a bank or trust company designated as such by the Commission to receive moneys under the provisions of the Senior Indenture and approved by the Trustee, and shall include the Trustee.

"DSRF Security" – shall have the meaning set forth under "The Senior Indenture—Debt Service Reserve Fund" in this Appendix C.

"DTC" – The Depository Trust Company, New York, New York.

"Event of Bankruptcy" – the filing of a petition in bankruptcy (or other commencement of a bankruptcy or similar proceedings) by or against the Commission as debtor, under Bankruptcy Law.

"Event of Default" – those events specified under "The Senior Indenture - Events of Default" in this Appendix C and such other events specified in any Supplemental Indenture.

"Financial Consultant" – any financial advisor or firm of financial advisors of favorable national reputation for skill and experience in performing the duties for which a Financial Consultant is required to be employed pursuant to the provisions of the Senior Indenture and who is retained by the Commission as a Financial Consultant for the purposes of the Senior Indenture.

"Fiscal Year" – the period commencing on the first day of June and ending on the last day of May of the following year.

"Fitch" – Fitch, Inc., its successors and assigns, and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, "Fitch" shall be deemed to refer to any other nationally recognized rating agency designated by the Commission.

"General Reserve Fund" – the fund created by the Senior Indenture and described under "The Senior Indenture—General Reserve Fund" in this Appendix C.

"Government Obligations" – (a) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed as to full and timely payment by, the United States of America, (b) obligations issued by a Person controlled or supervised by and acting as an instrumentality of the United States of America, the payment of the principal of and interest on which is fully and unconditionally guaranteed as a full faith and credit obligation of the United States of America (including any securities described in clause (a) above issued or held in book-entry form in the name of the Trustee only on the books of the Department of Treasury of the United States of America), (c) any certificates or any other evidences of an ownership interest in obligations or specified portions thereof (which may consist of specified portions of the interest thereon) of the character described in clause (a) or (b) above, which obligations are held by a bank or trust company organized and existing under the laws of the United States of America or any state thereof in the capacity of custodian, (d) stripped obligations of interest issued by the Resolution Funding Corporation pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 ("FIRREA"), the interest on which, to the extent not paid from other specified sources, is payable when due by the Secretary of the Treasury pursuant to FIRREA, and (e) obligations of any state or political subdivision thereof or any agency or instrumentality of such a state or political subdivision, provided that cash, obligations described in clause (a), (b), (c) or (d) above, or a combination thereof have been irrevocably pledged to and deposited into a segregated escrow account for the payment when due of the principal or redemption price of and interest on such obligations, and provided further that, at the time of purchase, such obligations are rated by the Rating Service in its highest rating category.

"Historical Debt Service Coverage Ratio" – for any period of time, the ratio determined by dividing Net Revenues for such period by the Annual Debt Service for all Applicable Long-Term Indebtedness which is Outstanding during such period.

"Historical Pro Forma Debt Service Coverage Ratio" – for any period of time, the ratio determined by dividing Net Revenues for such period by the Maximum Annual Debt Service for all Applicable Long-Term Indebtedness then Outstanding and the Applicable Long-Term Indebtedness proposed to be issued pursuant to the Senior Indenture pursuant to the provisions described under the section in the forepart of this Official Statement captioned "SECURITY FOR THE 2022A BONDS – Additional Bonds Test."

"Immediate Notice" – notice transmitted by electronic means, in writing, by telecopier or other electronic means or by telephone (promptly confirmed in writing) and received by the Person to whom it was addressed.

"Indebtedness" – any obligation or debt incurred for money borrowed.

"Interest Payment Date" – for the 2022A Bonds is described in the forepart of this Official Statement. If the Interest Payment Date is not a Business Day then the Interest Payment Date shall be the Business Day next succeeding the date specified above.

"Issuance Cost" – costs incurred by or on behalf of the Commission in connection with the issuance of Additional Bonds including, without limitation, the following: payment of financial, legal, accounting and appraisal fees and expenses, the Commission's fees and expenses attributable to the issuance of the Bonds, the cost of printing, engraving and reproduction services, fees and expenses incurred in connection with any Credit Facility and any Approved Swap Obligation, legal fees and expenses for Bond Counsel, Commission's counsel, Trustee's counsel and Underwriter's counsel relating to the issuance of the Bonds, the initial or acceptance fee of the Trustee, and all other fees, charges and expenses incurred in connection with the issuance of the Bonds and the preparation of the Senior Indenture.

"Letter of Representations" – the letter of representations or similar document executed by the Commission and delivered to the Securities Depository (and any amendments thereto or successor agreements) for one or more Series of Book Entry Bonds.

"Long-Term Indebtedness" – all Indebtedness, which is not (a) Short-Term Indebtedness or (b) Subordinated Indebtedness.

"Maximum Annual Debt Service" – at any point in time the maximum amount of Annual Debt Service on all Applicable Long-Term Indebtedness, as required by the context (e.g., whether relating to all such Applicable Long-Term Indebtedness or only specified Applicable Long-Term Indebtedness) paid or payable in the then current or any future Fiscal Year.

"Moody's" – Moody's Investors Service, a corporation organized and existing under the laws of the State of Delaware, its successors and their assigns, and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, "Moody's" shall be deemed to refer to any other nationally recognized rating agency designated by the Commission.

"Net Revenues" – the amount by which total Revenues exceed Current Expenses for any particular period.

"Other Revenues" – any funds received or payable to the Commission, other than Revenues, which the Commission chooses to include as security for Parity Obligations and/or Subordinated Indebtedness pursuant to a Supplemental Indenture.

"Original Indenture" – the Indenture of Trust dated as of July 1, 1986 between the Commission and First Union National Bank, as successor trustee to Fidelity Bank, National Association.

"Outstanding" or "outstanding" in connection with Bonds – all Bonds which have been authenticated and delivered under the Senior Indenture, except: (a) Bonds theretofore cancelled or delivered to the Trustee for cancellation under the Senior Indenture; (b) Bonds which are deemed to be no longer Outstanding in accordance with the provisions described under "The Senior Indenture—Defeasance" in this Appendix C; and (c) Bonds in substitution for which other Bonds have been authenticated and delivered pursuant to the Senior Indenture. In determining whether the owners of a requisite aggregate principal amount of Bonds Outstanding have concurred in any request, demand, authorization, direction, notice, consent or waiver under the provisions of the Senior Indenture, Bonds which are held by or on behalf of the Commission (unless all of the Outstanding Bonds are then owned by the Commission) shall be disregarded for the purpose of any such determination.

"Parity Obligations" – includes Bonds and other obligations of the Commission owed to Secured Owners and excludes Subordinated Indebtedness.

"Parity Swap Agreement" – shall have the meaning set forth under the heading "The Senior Indenture–Approved and Parity Swap Obligations" in this Appendix C.

"Parity Swap Agreement Counterparty" – the counterparty to a Parity Swap Agreement with the Commission or with the Trustee.

“Paying Agent” – with respect to any series of Bonds, that Person appointed pursuant to the Senior Indenture to make payments to Bondholders of interest and/or principal pursuant to the terms of the Senior Indenture, which initially shall be the Trustee.

“Permitted Investments” – (to the extent permitted by law): (a) Government Obligations; (b) obligations issued or guaranteed as to full and timely payment of principal and interest by any agency or Person controlled or supervised by and acting as an instrumentality of the U.S., pursuant to authority granted by the U.S. Congress; (c) obligations of the Governmental National Mortgage Association, Farmers Home Administration, Federal Financing Bank, Federal Housing Administration, Maritime Administration and Public Housing Authorities, provided that the full and timely payment of the principal and interest on such obligations shall be unconditionally guaranteed by the U.S.; (d) obligations of the Federal Intermediate Credit Corporation and of the Federal National Mortgage Association; (e) obligations of the Federal Banks for Cooperation; (f) obligations of Federal Land Banks; (g) obligations of Federal Home Loan Banks; provided that the obligations described in clauses (c) through (g) above shall constitute Permitted Investments only to the extent that the Rating Agency has assigned a rating to such obligations which is not lower than the highest rating assigned by such Rating Agency to any series of comparable Bonds then Outstanding; (h) certificates of deposit of any bank, savings and loan or trust company organized under the laws of the U.S. or any state thereof, including the Trustee or any holder of the Bonds, provided that such certificates of deposit shall be fully collateralized (with a prior perfected security interest), to the extent they are not insured by the Federal Deposit Insurance Corporation, by Permitted Investments described in (a), (b), (c), (d), (e), (f) or (g) above having a market value at all times equal to the uninsured amount of such deposit; (i) money market funds registered under the Investment Company Act of 1940, whose shares are registered under the Securities Act of 1933, including funds for which the Trustee, its parent, its affiliates or its subsidiaries provide investment advisory or other management services, and which are rated by S&P, Moody’s and Fitch in one of their two highest rating categories; (j) investment agreements (which term, for purposes of this clause, shall not include repurchase agreements) with a Qualified Financial Institution; (k) repurchase agreements with banks or primary government dealers reporting to the Federal Reserve Bank of New York (“Repurchasers”), including but not limited to the Trustee and any of its affiliates, provided that each such repurchase agreement results in transfer to the Trustee of legal and equitable title to, or the granting to the Trustee of a prior perfected security interest in, identified Permitted Investments described in (a), (b), (c), (d), (e), (f) or (g) above which are free and clear of any claims by third parties and are segregated in a custodial or trust account held either by the Trustee or by a third party (other than the Repurchaser) as the agent solely of, or in trust solely for the benefit of, the Trustee, provided that Government Obligations acquired pursuant to such repurchase agreements shall be valued at the lower of the then current market value of such Government Obligations or the repurchase price thereof set forth in the applicable repurchase agreement; (1) bonds or notes issued by any state or municipality which are rated by S&P, Moody’s and Fitch in one of their two highest rating categories; (m) commercial paper rated in the highest short-term, note or commercial paper Rating Category by S&P, Moody’s and Fitch; (n) any auction rate certificates which are rated by S&P, Moody’s and Fitch in one of their two highest rating categories; (o) corporate bonds and medium term notes rated at least “AA-” by Moody’s and S&P; (p) asset-backed securities rated in the highest rating category by Moody’s and S&P; and (q) any other investment approved by the Commission for which confirmation is received from the Rating Agency that such investment will not adversely affect such Rating Agency’s rating on such Bonds.

“Person” – an individual, public body, a corporation, a partnership, an association, a joint stock company, a trust and any unincorporated organization.

“Policy Costs” – a periodic fee or charge required to be paid to maintain a DSRF Security.

"Principal Office" – means, with respect to any entity performing functions under any Bond Document, the principal office of that entity or its affiliate at which those functions are performed or the office specifically designated for such functions with respect to the applicable Bond Documents.

"Prior Indenture" – the Original Indenture as supplemented and amended.

"Project" – any improvements to the System or refundings which are authorized by the Enabling Acts or which may be hereafter authorized by law.

"Projected Annual Debt Service" – for any future period of time, shall equal the amount of Maximum Annual Debt Service on all Applicable Long-Term Indebtedness then Outstanding and on any Applicable Long-Term Indebtedness proposed to be issued.

"Projected Debt Service Coverage Ratio" – for the two Fiscal Years following the end of any period during which interest was fully capitalized on the Applicable Long-Term Indebtedness proposed to be issued, the ratio determined by dividing Projected Net Revenues for such period by the Projected Annual Debt Service for such period.

"Projected Net Revenues" – projected Net Revenues for the period in question, taking into account any revisions of the Tolls which have been approved by the Commission and which will be effective during such period and any additional Tolls which the Commission or the Consultant, as appropriate, estimates will be received by the Commission following the completion of any Project then being constructed or proposed to be constructed.

"Purchase Price" – the purchase price payment described in paragraph (a) of the definition of Tender Indebtedness.

"Qualified Financial Institution" – (a) any U.S. domestic institution which is a bank, trust company, national banking association or a corporation, including the Trustee and any of its affiliates, subject to registration with the Board of Governors of the Federal Reserve System under the Bank Holding Company Act of 1956, or a member of the National Association of Securities Dealers, Inc. whose unsecured obligations or uncollateralized long-term debt obligations have been assigned a rating within the two highest rating categories by the Rating Agency or which has issued a letter of credit, contract, agreement or surety bond in support of debt obligations which have been so rated; (b) an insurance company with a claims-paying ability or a corporation whose obligations are guaranteed by an insurance company (in the form of an insurance policy) or by an insurance holding company rated in the highest rating category by the Rating Agency or whose unsecured obligations or uncollateralized long-term debt obligations have been assigned a rating within the highest rating category by the Rating Agency; or (c) any banking institution whose unsecured obligations or uncollateralized long-term debt obligations have been assigned a rating within one of the two highest rating categories by the Rating Agency.

"Rate Covenant" – the requirement to establish and maintain a schedule of Tolls sufficient to provide the funds required pursuant to the Senior Indenture provisions described under "The Senior Indenture—Rate Covenant" in this Appendix C.

"Rating Agency" – Fitch, Moody's, S&P or such other nationally recognized securities rating agency as may be so designated in writing to the Trustee by a Commission Official.

"Rating Category" – each major rating classification established by the Rating Agency, determined without regard to gradations such as "l," "2" and "3" or "plus" and "minus."

"Rebate Fund" – the fund created by the Senior Indenture and described under "The Senior Indenture—Rebate Fund" in this Appendix C.

"Rebate Regulations" – the Treasury Regulations issued under Section 148(f) of the Code.

"Record Date" – for the 2022A Bonds is described in the forepart of this Official Statement.

"Reimbursement Agreement" – an agreement between the Commission and one or more Banks pursuant to which, among other things, such Bank or Banks issue a Credit Facility with respect to Bonds of one or more series and the Commission agrees to reimburse such Bank or Banks for any drawings made thereunder.

"Reimbursement Obligation" – an obligation of the Commission pursuant to a Reimbursement Agreement to repay any amounts drawn under a Credit Facility and to pay interest on such drawn amounts pursuant to such Reimbursement Agreement.

"Reserve Maintenance Fund" – the fund created by the Senior Indenture and described under "The Senior Indenture—Reserve Maintenance Fund" in this Appendix C.

"Reserve Maintenance Fund Requirement" – the amount to be deposited to the credit of the Reserve Maintenance Fund from the Revenues of the Commission pursuant to the provisions described under "The Senior Indenture - Reserve Maintenance Fund" in this Appendix C.

"Revenue Fund" – the fund created by the Senior Indenture and described under "The Senior Indenture—Revenue Fund; Agreements with Other Turnpikes" in this Appendix C.

"Revenues" – (a) all Tolls received by or on behalf of the Commission from the System, (b) any other sources of revenues or funds of the Commission which the Commission chooses to include in the Trust Estate pursuant to a Supplemental Indenture, and (c) the interest and income earned on any fund or account where said interest or income is required to be credited to the Revenue Fund pursuant to the Senior Indenture. As more fully provided in the Senior Indenture, in the event the Commission receives advances or prepayments or otherwise operates or participates in a system in which funds are collected prior to the actual usage of the System, such funds shall not be deemed to be Revenues until the usage occurs or the funds are earned pursuant to the agreement under which the Commission receives such funds.

"S&P" – Standard & Poor's, a division of McGraw-Hill, Inc., a corporation organized and existing under the laws of the State of New York, its successors and their assigns, and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, "S&P" shall be deemed to refer to any other nationally recognized securities rating agency designated by the Commission.

"Secured Owner" – each Person who is a Bondholder of any Bonds, each Parity Swap Agreement Counterparty providing a Parity Swap Agreement, each Bank providing a Credit Facility and each Bond Insurer providing a bond insurance policy with respect to a Parity Obligation.

"Securities Depository" – a Person that is registered as a clearing agency under Section 17A of the Securities Exchange Act of 1934 or whose business is confined to the performance of the functions of a clearing agency with respect to exempted securities, as defined in Section 3(a)(12) of such Act for the purposes of Section 17A thereof.

“Series” – one or more Bonds issued at the same time, or sharing some other common term or characteristic, and designated as a separate series of Bonds.

“Series Issue Date” means, with respect to the 2022A Bonds, the date of original issuance and delivery of the 2022A Bonds.

“Short-Term Indebtedness” – all Indebtedness which matures in less than 365 days and is designated as Short-Term Indebtedness pursuant to the provisions referred to under “The Senior Indenture-Covenants of the Commission-Limitation on Issuance of Additional Bonds and Execution of Swap Agreements” in this Appendix C. In the event a Bank has extended a line of credit or the Commission has undertaken a commercial paper or similar program, only amounts actually borrowed under such line of credit or program and repayable in less than 365 days shall be considered Short-Term Indebtedness and the full amount of such commitment or program shall not be treated as Short-Term Indebtedness to the extent that such facility remains undrawn.

“Special Record Date” – for the 2022A Bonds is described under “The Senior Indenture – Defaulted Interest” in this Appendix C.

“Supplemental Capital Fund” – the fund created by the Senior Indenture and described under “The Senior Indenture-Supplemental Capital Fund” in this Appendix C.

“Subordinated Indebtedness” – Indebtedness incurred pursuant to paragraph (c) of the section in the forepart of this Official Statement captioned “SECURITY FOR THE 2022A BONDS – Additional Bonds Test”.

“Supplemental Indenture” – any Supplemental Indenture to (a) the Senior Indenture, now or hereafter duly authorized and entered into in accordance with the provisions of the Senior Indenture and (b) the Prior Indenture, including any Supplemental Indenture pursuant to which (and only for so long as) Bonds are outstanding thereunder.

“Swap Agreement” – shall have the meaning set forth under the heading “The Senior Indenture– Approved and Parity Swap Obligations” in this Appendix C.

“System” – is described in the forepart of this Official Statement under “PENNSYLVANIA TURNPIKE SYSTEM.”

“Tender Indebtedness” – any Indebtedness or portion thereof: (a) the terms of which include (i) an option or an obligation on the part of the Secured Owner to tender all or a portion of such Indebtedness to the Commission, the Trustee, the Paying Agent or another fiduciary or agent for payment or purchase and (ii) a requirement on the part of the Commission to purchase or cause to be purchased such Indebtedness or portion thereof if properly presented; and (b) which is rated in either (i) one of the two highest long-term Rating Categories by the Rating Agency or (ii) the highest short-term, note or commercial paper Rating Category by the Rating Agency.

“Tolls” – all rates, rents, fees, charges, fines or other income derived by the Commission from vehicular usage of the System, and all rights to receive the same.

“Trust Estate” – (i) all Revenues, (ii) all monies deposited into accounts or funds created by the Senior Indenture and held by or on behalf of the Trustee (other than the Rebate Fund), (iii) any insurance proceeds and other moneys required to be deposited in the Senior Indenture, (iv) all payments received by the Commission pursuant to Parity Swap Agreements, and (v) all investment earnings on all moneys held in accounts and funds established by the Senior Indenture, other than the Rebate Fund.

"Trustee" – the Trustee at the time in question, whether the initial Trustee or a successor.

"U.S." – United States of America.

"Variable Rate Indebtedness" – any Indebtedness the interest rate on which fluctuates from time to time subsequent to the time of incurrence. Variable Rate Indebtedness may include, without limitation, (a) "auction rate" Indebtedness, (b) Tender Indebtedness, (c) commercial paper Indebtedness which is intended to be reissued and refinanced periodically, or (d) other forms of Indebtedness on which the interest fluctuates or is subject to being set or reset from time to time.

THE SENIOR INDENTURE

LIMITED OBLIGATIONS

The Bonds shall be limited obligations of the Commission, payable solely from the Trust Estate. The Bonds shall constitute a valid claim of the respective owners thereof against the Trust Estate, which is pledged to secure the payment of the principal of, redemption premium, if any, and interest on the Bonds, and which shall be utilized for no other purpose, except as expressly authorized in the Senior Indenture. The Bonds shall not constitute general obligations of the Commission and under no circumstances shall the Bonds be payable from, nor shall the holders thereof have any rightful claim to, any income, revenues, funds or assets of the Commission other than those pledged under the Senior Indenture as security for the payment of the Bonds.

ADDITIONAL BONDS

The Commission agrees in the Senior Indenture that it will not issue or incur any other Indebtedness having a parity lien on the Trust Estate except for Additional Bonds issued pursuant to the provisions described below and other Parity Obligations. Additional Bonds may be issued and the Trustee shall authenticate and deliver such Additional Bonds when there have been filed with the Trustee the following:

(a) A copy certified by a Commission Official of the resolution or resolutions of the Commission authorizing (1) the execution and delivery of a Supplemental Indenture providing for, among other things, the date, rate or rates of interest on, interest payment dates, maturity dates and redemption provisions of such Additional Bonds, and (2) the issuance, sale, execution and delivery of the Additional Bonds;

(b) An original executed counterpart of the Supplemental Indenture;

(c) An opinion or opinions of Bond Counsel, addressed to the Commission and the Trustee, to the effect that (1) issuance of the Additional Bonds is permitted under the Senior Indenture, (2) each of the Supplemental Indenture and the Additional Bonds has been duly authorized, executed and delivered and is a valid, binding and enforceable obligation of the Commission, subject to bankruptcy, equitable principles and other standard legal opinion exceptions and (3) subject to the paragraph below, interest on the Additional Bonds is not included in gross income for federal income tax purposes under the Code;

(d) A request and authorization of the Commission, signed by a Commission Official, to the Trustee to authenticate and deliver the Additional Bonds to such Person or persons named therein after confirmation of payment to the Trustee for the account of the Commission of a specified sum (which may include directions as to the disposition of such sum);

(e) A certificate of the Commission, signed by a Commission Official, that the Commission is not in default under the Senior Indenture and evidence satisfactory to the Trustee that, upon issuance of the Additional Bonds, amounts will be deposited in the Funds under the Senior Indenture adequate for the necessary balances therein after issuance of the Additional Bonds (including an amount sufficient to satisfy the Debt Service Reserve Requirement if the Additional Bonds constitute Debt Service Reserve Fund Bonds);

(f) A certificate of the Commission, signed by a Commission Official, identifying the Additional Bonds as Short-Term Indebtedness, Long-Term Indebtedness or Subordinated Indebtedness and demonstrating with reasonable detail that the applicable Senior Indenture provisions described in the section in the forepart of this Official Statement captioned "SECURITY FOR THE 2022A BONDS — Additional Bonds Test" have been met for the issuance of such Additional Bonds; and

(d) Such further documents, moneys and securities as are required by the provisions of the Supplemental Indenture.

Anything in the Senior Indenture to the contrary notwithstanding, Additional Bonds, such as the 2022A Bonds, may bear interest which is included in gross income for federal income tax purposes under the Code, in which event provisions in the Senior Indenture requiring or referencing the exclusion of interest on Bonds of gross income for federal income tax purposes may be ignored or modified, as appropriate, as set forth in an opinion of Bond Counsel.

DEFAULTED INTEREST

Defaulted Interest (as defined in the forepart of this Official Statement) with respect to any 2022A Bond shall cease to be payable to the Owner of such 2022A Bond on the relevant Record Date and shall be payable to the Owner in whose name such 2022A Bond is registered at the close of business on the Special Record Date for the payment of such Defaulted Interest, which Special Record Date shall be fixed in the following manner: the Commission shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each 2022A Bond and the date of the proposed payment (which date shall be such as will enable the Trustee to comply with the next sentence hereof), and shall deposit with the Trustee at the time of such notice an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment; money deposited with the Trustee shall be held in trust for the benefit of the Owners of the 2022A Bonds entitled to such Defaulted Interest. Following receipt of such funds the Trustee shall fix a Special Record Date for the payment of such Defaulted Interest which shall be not more than 15 nor less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Commission of such Special Record Date and, in the name and at the expense of the Commission, shall cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, first-class postage prepaid, to each Owner of a 2022A Bond entitled to such notice at the address of such owner as it appears on the Bond Register not less than 10 days prior to such Special Record Date.

APPROVED AND PARITY SWAP OBLIGATIONS

The Commission may enter into one or more contracts having an interest rate, currency, cash-flow, or other basis desired by the Commission (a "Swap Agreement"), including, without limitation, interest rate swap agreements, currency swap agreements, forward payment conversion agreements, futures contracts, contracts providing for payments based on levels of or changes in interest rates, currency exchange rates, stock or other indices, or contracts to exchange cash flows or a series of payments, and contracts including, without limitation, interest rate floors or caps, options, puts or calls to hedge payment, currency rate, spread or similar exposure. In the event the Commission wishes the payments to be made and received by the Commission under the Swap Agreement to be taken into account in any calculation of Annual Debt Service under the Senior Indenture, the Commission shall file with the Trustee the following on or before entering into the Swap Agreement (in which event such Swap Agreement shall constitute an "Approved Swap Agreement"):

(a) A copy certified by a Commission Official of the resolution or resolutions of the Commission authorizing the execution and delivery of the Swap Agreement (no Supplemental Indenture being required unless the Commission determines it to be necessary or appropriate);

(b) An original executed counterpart of the Swap Agreement;

(c) An opinion of Bond Counsel addressed to the Commission and to the Trustee, to the effect that execution of the Swap Agreement is permitted under the laws of the Commonwealth and will not adversely affect the exclusion from gross income from interest on any Bonds for federal income tax purposes; provided that if the Swap Agreement relates to Bonds being issued and the Swap Agreement is entered into prior to the issuance of such Bonds, the portion of the opinion of Bond Counsel referring to tax-exempt status of the Bonds need not be delivered until such Bonds are issued;

(d) A certificate of the Commission, signed by a Commission Official, that the Commission is not under default under the Senior Indenture;

(e) Evidence that the execution of the Swap Agreement will not result in a reduction or withdrawal of the rating then assigned to any Bonds by the Rating Agency;

(f) Evidence that the provisions with respect to Approved Swap Agreements described in the section in the forepart of this Official Statement captioned "SECURITY FOR THE 2022A BONDS — Additional Bonds Test" have been met; and

(g) Such further documents as are required by the Swap Agreement or Bond Counsel.

In the event the Commission wishes to enter into an Approved Swap Agreement and to have its obligations thereunder be on parity with all Bonds and other Parity Obligations, it shall file with the Trustee the items set forth above, together with a Supplemental Indenture granting such parity position (in which event, such Swap Agreement shall constitute a "Parity Swap Agreement"). Upon entering into a Parity Swap Agreement, unless otherwise provided in the Supplemental Indenture, the Commission shall pay to the Trustee for deposit into the Interest Account the net amount payable, if any, to the Parity Swap Agreement Counterparty as if such amounts were additional amounts of interest due; and the Trustee shall pay on behalf of the Commission to the Parity Swap Agreement Counterparty, to the extent required under the Parity Swap Agreement, amounts deposited in the Interest Account. Net amounts received by the Commission or the Trustee from the counterparty pursuant to a Parity Swap Agreement shall be deposited to the credit of the Interest Account or to such other account as designated by a Commission Official.

Amounts paid by or to the Commission pursuant to Approved Swap Agreements which do not constitute Parity Swap Agreements shall not be required to be made through the Trustee as described in the preceding paragraph (but shall be taken into account in calculation of Annual Debt Service as provided in the definition of such term).

CONVERSIONS OF VARIABLE RATE INDEBTEDNESS TO FIXED RATE INDEBTEDNESS

The Senior Indenture provides that the Commission may convert Variable Rate Indebtedness to a fixed rate if permitted pursuant to the terms thereof and if the Commission was in compliance with the Rate Covenant for the most recently completed Fiscal Year. If the Commission did not meet the Rate Covenant for such Fiscal Year, the Commission must treat the proposed conversion as if it constituted the issuance of Additional Bonds by meeting the requirements set forth in the Senior Indenture (computing the Annual Debt Service with respect to such Variable Rate Indebtedness proposed to be converted as bearing interest at the Bond Buyer Index or such other rate as identified by a Financial Consultant as being more appropriate under the circumstances).

REDEMPTION OF BONDS

The Bonds of any Series issued under the provisions of the Senior Indenture shall be subject to redemption, in whole or in part, and at such times and prices as may be provided in the Supplemental Indenture pursuant to which such Bonds are issued. The provisions for redemption of the 2022A Bonds are described in the forepart of this Official Statement under "DESCRIPTION OF THE 2022A BONDS – Redemption of 2022A Bonds."

NOTICE OF REDEMPTION

The provisions for notice of redemption for the 2022A Bonds are further described in the forepart of this Official Statement under "DESCRIPTION OF THE 2022A BONDS – Redemption of 2022A Bonds."

On or before the date fixed for redemption, subject to the provisions described above, moneys shall be deposited with the Trustee to pay the principal of, redemption premium, if any, and interest accrued to the redemption date on the Bonds called for redemption. Upon the deposit of such moneys, unless the Commission has given notice of rescission as described herein, the Bonds shall cease to bear interest on the redemption date and shall no longer be entitled to the benefits of the Senior Indenture (other than for payment and transfer and exchange) and shall no longer be considered Outstanding.

CONSTRUCTION FUND

The Senior Indenture creates a special fund known as the "Construction Fund", which shall be held in trust by the Trustee. Money shall be deposited to the Construction Fund pursuant to the provisions of the Senior Indenture and from any other sources identified by the Commission. Payment of the costs of the construction portion of any Project shall be made from the Construction Fund. A special account shall be created and identified for each such construction project, although funds, at the written direction of the Commission, may be transferred from one such account in the Construction Fund to another account in such Fund. Moneys in the Construction Fund may be disbursed by the Trustee to the Commission upon the filing by the Commission of a requisition, signed by the Chief Engineer (or his designee) and a Commission Official meeting the requirements of the Senior Indenture.

If at any time a Commission Official shall file with the Trustee a certificate stating that the cost of a Project has been finally determined and that the funds remaining in the account established for such Project exceed the remaining costs of the Project, then an amount equal to such excess shall be transferred to such fund or account as directed in the certificate, provided the same is accompanied by an opinion of

Bond Counsel to the effect that such transfer and/or application will not adversely affect the tax-exempt status of the interest of the applicable Bonds.

RATE COVENANT

The Senior Indenture contains the Rate Covenant which is described in the section in the forepart of this Official Statement captioned "SECURITY FOR THE 2022A BONDS—Rate Covenant."

COVENANTS AS TO TOLLS

The Commission covenants with respect to Tolls as described in the section in the forepart of this Official Statement captioned "SECURITY FOR THE 2022A BONDS—Rate Covenant."

COVENANTS OF THE COMMISSION

In addition to the Rate Covenant and covenants as to Tolls described above, in the Senior Indenture the Commission also makes various other covenants, including the following covenants:

Payment of Principal, Interest and Premium. The Commission covenants in the Senior Indenture that it will promptly pay the principal of, premium, if any, and the interest on every Bond issued under the provisions of the Senior Indenture at the places, on the dates and in the manner provided in the Senior Indenture and in said Bonds. Except as otherwise provided in the Senior Indenture, the principal, interest and premium are payable solely from Revenues, which Revenues are pledged pursuant to the Senior Indenture to the payment thereof in the manner and to the extent provided in the Senior Indenture. Neither the general credit of the Commission nor the general credit nor the taxing power of the Commonwealth or any political subdivision, agency or instrumentality thereof is pledged for the payment of the Bonds.

Annual Operating Budget; Capital Budget. The Commission covenants in the Senior Indenture that on or before the 31st day of May (or such other date as is consistent with the Commission's policies then in effect) in each Fiscal Year it will adopt a budget for the ensuing Fiscal Year (the "Annual Operating Budget"). Copies of each Annual Operating Budget shall be provided to the Trustee. Prior to adopting the Operating Budget, the Commission shall provide a draft of such budget to the Consulting Engineer sufficiently in advance of the adoption of such Annual Operating Budget in order for the Consulting Engineer to provide comments before such adoption. The Commission further covenants in the Senior Indenture that it will prepare each such Annual Operating Budget on the basis of monthly requirements, so that it will be possible to determine the Current Expenses for each month during the Fiscal Year.

If for any reason the Commission shall not have adopted the Annual Operating Budget before the first day of any Fiscal Year, the budget for the preceding Fiscal Year, shall, until the adoption of the Annual Operating Budget, be deemed to be in force and shall be treated as the Annual Operating Budget.

The Commission may adopt an amended or supplemental Annual Operating Budget at any time for the remainder of the then current Fiscal Year. Copies of any such amended or supplemental Annual Operating Budget shall be provided to the Trustee.

The Commission further covenants in the Senior Indenture that it will adopt a capital budget (the "Annual Capital Budget") on or before May 31st of each Fiscal Year. The Annual Capital Budget will detail the Commission's planned capital expenditures over a period of up to 10 years and the portion of capital expenditures expected to be funded from the Reserve Maintenance Fund. The Annual Capital Budget shall include the expected beginning balance in the Reserve Maintenance Fund, the amounts to be transferred by the Trustee to the Reserve Maintenance Fund from the General Reserve Fund, the amount of bond proceeds expected to become available during the Fiscal Year, the amounts expected to be transferred monthly by the Trustee from the Revenue Fund, and the desired year-end balance in the Reserve Maintenance Fund. Prior to adopting the Annual Capital Budget, the Commission shall provide a draft of the capital budget to the Consulting Engineer a sufficient time in advance of the Commission's adoption of the Annual Capital Budget in order for the Consulting Engineer to provide comments before the date of such adoption. The Commission may adopt amendments or supplements to the Annual Capital Budget at any time. Copies of the Annual Capital Budget shall be made provided to the Trustee.

Limitations on Issuance of Additional Bonds and Execution of Approved Swaps. The Commission has covenanted in the Senior Indenture with respect to issuance of Additional Bonds and execution of Approved Swap Agreements as described in the section in the forepart of this Official Statement captioned "SECURITY FOR THE 2022A BONDS—Additional Bonds Test."

Use and Operation of System. The Commission covenants in the Senior Indenture that it will: (a) maintain and operate the System in an efficient and economical manner, (b) maintain the System in good repair and will make all necessary repairs, renewals and replacements, to the extent funds are available therefor under the Senior Indenture, and (c) comply with laws and all rules, regulations, orders and directions of any legislative, executive, administrative or judicial body applicable to such System, subject to the right of the Commission to contest the same in good faith and by appropriate legal proceedings.

Inspection of the System. The Commission shall make arrangements for the System to be inspected at least once every three years by engaging one or more Consultants to conduct the actual inspections and to prepare a report. Such report shall state (a) whether the System has been maintained in good repair, working order and condition since the last inspection report pursuant to this Section and (b) any recommendations which such Consultants may have as to revisions or additions to the Commission's Annual Capital Budget. Copies of such reports shall be filed with the Trustee.

Construction of Projects. The Commission covenants in the Senior Indenture that it will proceed with diligence to construct any Projects in conformity with law and all requirements of all governmental authorities having jurisdiction thereover. Before entering into any construction contract it will secure the approval of the plans and specifications for such contract by a certified engineer or architect, who may be an employee of the Commission, and that it will require each Person, firm or corporation with whom it may contract in connection with the construction of any Project to furnish (1) a performance bond for 100% of the contract amount, and (2) a payment bond for 100% of the contract amount. Each of such bonds shall be executed by one or more responsible surety companies authorized to do business in the Commonwealth. Any proceeds received from such bonds first shall be applied toward the completion of the applicable Project and second shall be deposited in the General Reserve Fund. Construction contracts for labor and/or materials also shall provide that payments thereunder shall not be made by the Commission in excess of 95% of current estimates except that (i) once the work is at least 50% complete, (ii) where waiver of retainage is necessary in the opinion of the Chief Engineer, based on the advice of the Chief Counsel, to comply with or facilitate compliance with state or federal law in order to receive state or federal funds, such retainage may be reduced by the Chief Engineer or another Commission Official to the extent such officer deems such reduction to be necessary or appropriate.

The Commission shall involve the Consulting Engineer or another Consultant to assist in quality assurance matters in connection with design and/or construction of any Project or portion thereof to the extent the Commission determines necessary or appropriate. For purposes of this subsection, "quality assurance" shall be defined to mean those activities, from inception to completion of a Project, which are necessary to ensure that the processes are in place to produce a quality product.

Employment of Consulting Engineers. The Commission covenants in the Senior Indenture to employ an independent engineer or engineering firm or corporation having a national reputation for skill and experience in such work to perform any functions of the Consulting Engineer under the Senior Indenture.

Insurance. The Commission covenants in the Senior Indenture that it will keep the System and its use and operation thereof insured (including through self-insurance) at all times in such amounts, subject to such exceptions and deductibles and against such risks, as are customary for similar organizations. All insurance policies shall be carried with a responsible insurance company or companies authorized to do business in the Commonwealth or shall be provided under a self-insurance program; any self-insurance program shall be actuarially sound in the written opinion of an accredited actuary, which opinion shall be filed with the Trustee at least annually. At any time and from time to time, the Commission may elect to terminate self-insurance of a given type. Upon making such election, the Commission shall, to the extent then deemed necessary by a Consultant, obtain and maintain comparable commercial insurance.

On July 1, 2003 and every three years thereafter (except with respect to self-insurance, which shall be annually), the Commission shall cause a Consultant to certify to the Trustee that (a) it has reviewed the adequacy of the Commission's insurance, listing the types and amounts of insurance, and (b) it finds such coverage to be reasonable and customary for similar organizations. If the Consultant concludes that coverage other than that which is currently carried by the Commission should be carried, the Commission shall obtain such insurance coverage unless it determines in good faith that it is unreasonable or uneconomical to obtain such coverage and certifies the same in writing to the Trustee.

All insurance policies maintained by the Commission shall be available at reasonable times for inspection by the Trustee, its agents and representatives.

The Commission covenants that it will take such actions as it deems necessary to demand, collect and sue for any proceeds that may become due and payable to it under any policy.

Damage or Destruction. Immediately after any damage to or destruction of any part of the System which materially adversely affects the Revenues of the Commission, the Commission will promptly take action to repair, reconstruct or replace the damaged or destroyed property or to otherwise ameliorate the adverse impact on Revenues.

Annual Audit. The Commission covenants in the Senior Indenture that it will cause an annual audit to be made of its books and accounts of each Fiscal Year by an independent certified public accountant. A copy of such audit shall be filed with the Trustee promptly after the receipt by the Commission for such purpose.

Encumbrance of Revenues; Sale, Lease or Other Disposition of Property. The Commission covenants in the Senior Indenture that so long as any Bonds are Outstanding under the Senior Indenture:

(a) (1) It will not create or suffer to be created any lien or charge upon any Revenues, except the lien and charge of the Bonds secured by the Senior Indenture and any Subordinated Indebtedness permitted pursuant to the provisions of the Senior Indenture; and (2) from such Revenues or other funds available under the Senior Indenture, it will pay or cause to be discharged, or will make adequate provision to pay or discharge, within ninety (90) days after the same shall accrue, all lawful claims and demands for labor, materials or supplies which, if unpaid, might by law become a lien upon any Revenues; provided, however, that the Commission shall not be required to pay or discharge, or make provision for such payment or discharge of, any such lien or charge so long as the validity thereof shall be contested in good faith and by appropriate legal proceedings.

(b) The Commission will not sell or otherwise dispose of any real estate or personal property comprising a portion of the System unless the Commission determines (1) such property (i) has become obsolete or worn out or is reasonably expected to become so within one year after the date of such disposition, (ii) is no longer used or useful in the operation of the System or in the generation of Revenues or (iii) is to be or has been replaced by other property; or (2) by resolution that such action will not materially adversely affect the Net Revenues of the Commission.

The Commission shall have the discretion to deposit the proceeds of such sale or disposition in a fund or account held under the Senior Indenture or a Commission account held outside the Senior Indenture, as it deems appropriate. In the event the Commission did not meet the Rate Covenant during the preceding Fiscal Year, however, the Commission shall notify the Trustee of the sale or disposition of any property which generated Net Revenues in excess of one percent of the Commission's Net Revenues during the prior Fiscal Year and all proceeds from such sale or disposition shall be deposited in the Revenue Fund.

(c) The Commission will not lease any real estate or personal property comprising a portion of the System unless the Commission determines by resolution that such action will not materially adversely affect the Net Revenues of the Commission. The rental and other proceeds from any lease shall not be required to be deposited in the Revenue Fund unless the effect of such lease is to reduce Tolls.

Without intending to limit the foregoing, the Commission also may enter into contracts or other forms of agreement for the use of any real estate comprising a portion of the System including, but not limited to, rights of way for telephone, telegraph, optic fiber and other forms of communication, electric, gas transmission and other lines or facilities for utilities, and other uses which do not materially adversely affect the operation of the System and the payments received in connection with the same shall be deposited in such accounts (which may be outside the Senior Indenture) as the Commission shall determine.

CREATION OF FUNDS

In addition to the Construction Fund and the Alternate Construction Fund, and any other funds created by Supplemental Indentures, the Senior Indenture creates the following funds: Operating Account; Revenue Fund; Debt Service Fund; Debt Service Reserve Fund; Reserve Maintenance Fund; General Reserve Fund; and Rebate Fund. Amounts deposited therein shall be held in trust by the Trustee until applied as directed in the Senior Indenture.

REVENUE FUND; AGREEMENTS WITH OTHER TURNPIKES

The Commission covenants in the Senior Indenture that all Revenues will be deposited daily, as far as practicable, with the Trustee or in the name of the Trustee with a Depositary or Depositaries, to the credit of the Revenue Fund.

The Senior Indenture provides that, to the extent now or hereafter authorized by law, the Commission may enter into agreements with any commission, authority or other similar legal body operating a turnpike, whether or not connected to the System, (1) with respect to the establishment of combined schedules of Tolls and/or (2) for the collection and application of Tolls charged for trips over all or a portion of both turnpikes combined, which on the basis of the Revenues to be received by any such agreement will result in the receipt by the Commission of its allocable portion of such Tolls (less fees and expenses associated with such arrangement). To the extent now or hereafter authorized by law, the Commission also may enter into agreements with other Persons with respect to the collection of Tolls or advances or prepayment of Tolls charged for trips over all or a portion of the System, which on the basis of the Revenues to be received by any such agreement will result in the receipt by the Commission of the appropriate Tolls for such trips. Unless approved by a Consultant, no agreement establishing a combined schedule of Tolls shall restrict the ability of the Commission to implement an increase in its Tolls at least annually.

Amounts received by the Commission from such other commission, authority or other similar legal body or Person, in accordance with such agreements, shall be deposited in the Revenue Fund when they constitute Revenues. Such amounts may be held with a Depository or Depositories until they constitute Revenues. Amounts received by the Commission and deposited in the Revenue Fund which are payable by the Commission to such other commission, authority or other similar legal body or Person, in accordance with any such agreements, shall be withdrawn by the Trustee from the Revenue Fund upon delivery to the Trustee of a certificate of a Commission Official that such withdrawal is required pursuant to the terms of an agreement entered into pursuant to this Section and shall be paid by the Trustee in accordance with directions contained in such certificate. Any agreement entered into pursuant to this Section shall be made available for the Trustee upon its request.

Except as otherwise provided in the provisions described above, transfers from the Revenue Fund shall be made to the following funds and in the following order of priority: (1) Rebate Fund; (2) Operating Account; (3) Debt Service Fund; (4) Reserve Maintenance Fund; (5) Debt Service Reserve Fund; and (6) General Reserve Fund (after retaining such funds in the Revenue Fund as are identified in the certificate described below under “General Reserve Fund”).

OPERATING ACCOUNT

The Senior Indenture provides that the Commission shall establish an account known as the “Operating Account” which is described in the section in the forepart of this Official Statement captioned “SECURITY FOR THE 2022A BONDS–Operating Account.”

DEBT SERVICE FUND

The Senior Indenture creates two separate accounts in the Debt Service Fund to be known as the “Interest Account” and the “Principal Account.”

The Trustee and the Commission may create such additional accounts in the Debt Service Fund pursuant to a Supplemental Indenture as they deem necessary or appropriate, including, but not limited to, (a) an account into which drawings on a Credit Facility are to be deposited and from which principal (including redemption price) and Purchase Price of and interest on the Series of Bonds secured by such Credit Facility are to be paid (and upon such payment, amounts on deposit in the Principal and Interest Accounts for such Bonds shall be used to repay the provider of the Credit Facility for such payments), and (b) an account into which payments to the Commission to any Parity Swap Counterparty are to be deposited and from which payments to such Parity Swap Counterparty are to be paid.

The Trustee shall make deposits into the Debt Service Fund as described in the section in the forepart of this Official Statement captioned “SECURITY FOR THE 2022A BONDS – Debt Service Fund.”

The moneys in the Interest and Principal Accounts shall be held by the Trustee in trust for the benefit of the Bonds, to the extent the foregoing are payable from such accounts, and, to said extent and pending application, shall be subject to a lien and charge in favor of the Owners of the Bonds until paid out or transferred as provided in the Senior Indenture. There shall be withdrawn from the Interest Account (and any available capitalized interest) and the Principal Account from time to time and set aside or deposited with the Trustee sufficient money for paying the interest on and the principal of and premium on the Bonds as the same shall become due, except to the extent such interest, principal or other amounts are payable from a fund or account other than the Debt Service Fund as provided in any Supplemental Indenture.

If at the time the Trustee is required to make a withdrawal from the Debt Service Fund the moneys therein shall not be sufficient for such purpose, the Trustee shall withdraw the amount of such deficiency from the moneys on deposit in the following funds or accounts and transfer the same to the Debt Service Fund in the following order: the Debt Service Reserve Fund, the General Reserve Fund, and the Reserve Maintenance Fund.

With respect to any Bonds for which Subsidy Payments are scheduled to be received by the Commission, the Commission shall deposit or cause to be deposited all such Subsidy Payments, as and when received, into a separate account of the Debt Service Fund held for each such Series of Bonds, and such Subsidy Payments shall be applied to pay debt service on the corresponding Series of Bonds with respect to which such Subsidy Payments are received.

RESERVE MAINTENANCE FUND

In each Fiscal Year, after first having made the deposits to the Revenue Fund, Operating Account and Debt Service Fund provided by the provisions described above, the Trustee shall transfer from the Revenue Fund on or before the last Business Day of each month to the credit of the Reserve Maintenance Fund the amount shown in the Annual Capital Budget for the ensuing month. The provisions regarding the Reserve Maintenance Fund are further described in the section in the forepart of this Official Statement captioned "SECURITY FOR THE 2022A BONDS—Reserve Maintenance Fund."

DEBT SERVICE RESERVE FUND

The Senior Indenture establishes a Debt Service Reserve Fund and provides that a special account within the Debt Service Reserve Fund may be created with respect to each series of Debt Service Reserve Fund Bonds issued under the Senior Indenture and any Supplemental Indenture.

In each Fiscal Year, after first having made the deposits to the Operating Account, Debt Service Fund and Reserve Maintenance Fund described above, the Trustee shall transfer from the Revenue Fund on or before the last day of each month to the credit of the Debt Service Reserve Fund (a) the amount, if any, required to make the amount on deposit in the Debt Service Reserve Fund equal to the Debt Service Reserve Requirement which restoration, as implied by the Rate Covenant, is intended to occur within eighteen (18) months; and (b) the amount set forth in a Supplemental Indenture if an amount different from the Debt Service Reserve Requirement is required.

To the extent accounts are created in the Debt Service Reserve Fund for Debt Service Reserve Fund Bonds, the funds and DSRF Security, as hereinafter defined, held therein shall be available to make payments required under the Senior Indenture for the benefit of all Debt Service Reserve Fund Bonds.

Moneys held in the Debt Service Reserve Fund shall be used for the purpose of paying interest on, maturing principal and mandatory sinking fund redemption price of Debt Service Reserve Fund Bonds whenever and to the extent that the moneys held for the credit of the Debt Service Fund shall be insufficient for such purpose. If at any time the moneys and the principal amount of any DSRF Security held in the Debt Service Reserve Fund shall exceed the Debt Service Reserve Requirement, the Commission shall direct whether such excess moneys shall be transferred by the Trustee to the credit of the General Reserve Fund or used to reduce the principal amount of any DSRF Security.

In the event the Trustee shall be required to withdraw funds from the Debt Service Reserve Fund to restore a deficiency in the Debt Service Fund arising with respect to Debt Service Reserve Fund Bonds, the amount of such deficiency shall be allocated pro rata among such Bonds except as provided in the last sentence of the next paragraph.

In lieu of the deposit of moneys into the Debt Service Reserve Fund, the Commission may cause to be provided a surety bond, an insurance policy, a letter of credit or similar financial instrument satisfactory to the Rating Agency (as evidenced by a letter from the Rating Agency confirming that the DSRF Security will not result in the rating on any outstanding Bonds being downgraded) (each, a "DSRF Security") payable to the Trustee for the benefit of the Bondholders in an amount equal to the difference between the Debt Service Reserve Requirement and the amounts then on deposit in the Debt Service Reserve Fund. The DSRF Security shall be payable (upon the giving of notice as required thereunder) on any Interest Payment Date on which moneys will be required to be withdrawn from the Debt Service Reserve Fund and applied to the payment of the principal of or interest on any Bonds to the extent that such withdrawals cannot be made by amounts on deposit in the Debt Service Reserve Fund.

If a disbursement is made pursuant to a DSRF Security, the Commission shall be obligated either (a) to reinstate the maximum limits of such DSRF Security or (b) to deposit into the Debt Service Reserve Fund, funds in the amount of the disbursement made under such DSRF Security, or a combination of such alternatives, as shall provide that the amount credited to the Debt Service Reserve Fund equals the Debt Service Reserve Requirement within a time period of eighteen (18) months.

If the DSRF Security shall cease to have a rating described in the second preceding paragraph, the Commission shall use reasonable efforts to replace such DSRF Security with one having the required rating, but shall not be obligated to pay, or commit to pay, increased fees, expenses or interest in connection with such replacement or to deposit Revenues in the Debt Service Reserve Fund in lieu of replacing such DSRF Security with another.

GENERAL RESERVE FUND

After first having made the deposits to the Operating Account, Debt Service Fund, Reserve Maintenance Fund and Debt Service Reserve Fund described above, the Trustee shall transfer from the Revenue Fund on or before the last Business Day of each year (or more frequently if requested by a Commission Official) to the credit of the General Reserve Fund any funds which a Commission Official determines to be in excess of the amount required to be reserved therein for future transfers to the Debt Service Fund. The provisions regarding the General Reserve Fund are further described in the section in the forepart of this Official Statement captioned "SECURITY FOR THE 2022A BONDS — General Reserve Fund."

SUPPLEMENTAL CAPITAL FUND

The Senior Indenture authorizes the creation of the Supplemental Capital Fund. The Supplemental Capital Fund is for deposit and disbursement of certain funds, together with interest earnings on amounts held in such Supplemental Capital Fund, to be applied by the Commission to the payment of the Cost, on a pay-as-you-go basis from the Commission's generally available Revenues, of improvements, extensions and replacements to the System, or otherwise for any Project which may be identified by the Commission, and not otherwise funded, as set forth in the Commission's ten year capital plan (or other capital plan), including any amendments thereto, or any prior capital plan (collectively, the "Additional Capital Projects").

Monies to be deposited in the Supplemental Capital Fund shall consist of available funds transferred from the General Reserve Fund in accordance with the Senior Indenture in such amounts, and from time to time, as the Commission, in its sole and absolute discretion, shall determine. Proceeds of Bonds, other Parity Obligations and Subordinated Indebtedness shall not be deposited to the Supplemental Capital Fund. Provided that no deficiency exists in any fund or account under the Senior Indenture, monies in the Supplemental Capital Fund may be requisitioned, in accordance with the requisition requirements set forth in the Senior Indenture, in such amounts, and from time to time, as the Commission in its sole and absolute discretion shall determine, to be applied to pay Costs of the Additional Capital Projects.

REBATE FUND

The Senior Indenture authorizes the creation of a Rebate Fund. The Commission covenants in the Senior Indenture to calculate and to pay directly to the government of the United States of America all amounts due for payment of "arbitrage rebate" under Section 148(f) of the Code with respect to any Bonds. Nevertheless, the Commission in the future may deposit with the Trustee or direct the Trustee to deposit in the Rebate Fund amounts held in any Fund under the Senior Indenture for any or all Series of Bonds (which direction shall specify the procedures for collection and payment of amounts due in respect of arbitrage rebate) if (a) required under any amendments to Section 148(f) of the Code or (b) the Commission otherwise determines that the funding of the Rebate Fund is necessary or appropriate. The Rebate Fund is a trust fund but the amounts therein do not constitute part of the Trust Estate. Amounts on deposit in the Rebate Fund may be used solely to make payments to the United States of America under Section 148 of the Code and to pay costs related to the calculation of the amounts due. Upon satisfaction of the Commission's covenants described above, any amounts remaining in the Rebate Fund shall be deposited in the General Reserve Fund.

ALTERNATE CONSTRUCTION FUND

In connection with any Supplemental Indenture executed on or after December 18, 2014 for capital projects where the Commission expects to receive monies from the federal government for reimbursement of costs associated with such capital projects, the Commission shall create a separate Alternate Construction Fund for such Additional Bonds for deposit and disbursement of certain funds which shall not include proceeds of Bonds issued or outstanding under the Senior Indenture. Monies to be deposited in the Alternate Construction Fund shall consist of monies received and identified for deposit thereto by the Commission from the federal government for reimbursement of costs associated with the various capital expenditures to be financed by such Additional Bonds. Monies in an Alternate Construction Fund may only be requisitioned after all the proceeds of such Additional Bonds have been requisitioned from the applicable Account of the Construction Fund.

If at any time a Commission Official shall file with the Trustee a certificate stating that the cost of the applicable capital expenditure has been finally determined and that the funds remaining in the Alternate Construction Fund exceed the remaining costs thereof, then an amount equal to such excess shall be transferred to a fund described in such certificate, provided the same is accompanied by an opinion of Bond Counsel to the effect that such transfer and/or application will not adversely affect the tax-exempt status of the interest of such Additional Bonds.

ADDITIONAL SECURITY; PARITY WITH OTHER PARITY OBLIGATIONS

Except as otherwise provided or permitted in the Senior Indenture, the Trust Estate securing all Bonds issued under the terms of the Senior Indenture shall be shared on a parity with other Parity Obligations on an equal and ratable basis. The Commission may, however, in its discretion, provide additional security or credit enhancement for specified Parity Obligations with no obligation to provide such additional security or credit enhancement to other Parity Obligations, except that no additional security or credit enhancement shall be provided unless there shall have been first delivered to the Trustee an opinion of Bond Counsel that the exclusion from gross income of interest on any Bonds for federal income tax purposes will not be adversely affected thereby. Moreover, the Commission may provide in a Supplemental Indenture that Bonds issued thereunder are not secured, or are secured only in part or only under certain circumstances, by the Trust Estate.

DEPOSITARIES; INVESTMENT OF MONEYS

Except as otherwise provided in the Senior Indenture, all moneys received by the Commission under the provisions of the Senior Indenture shall be deposited with the Trustee or with one or more Depositaries. All moneys deposited under the provisions of the Senior Indenture with the Trustee or any other Depositary shall be held in trust, credited to the particular fund or account to which such moneys belong and applied only in accordance with the provisions of the Senior Indenture. No moneys shall be deposited with any Depositary, other than the Trustee, in an amount exceeding fifty per centum (50%) of the amount which an officer of such Depositary shall certify to the Commission as the combined capital and surplus of such Depositary. All moneys deposited with the Trustee or any other Depositary under the Senior Indenture shall, to the extent not insured, be secured in the manner required or permitted by applicable law.

Moneys held in any of the funds or accounts under the Senior Indenture may be retained uninvested, if deemed necessary by the Commission, as trust funds and secured as provided above or may be invested in Permitted Investments. All investments made pursuant to the Senior Indenture shall be subject to withdrawal or shall mature or be subject to repurchase or redemption by the holder, not later than the earlier of (a) the date or dates set forth for similar investments in the applicable Supplemental Indenture or (b) the date on which the moneys may reasonably be expected to be needed for the purpose of the Senior Indenture.

Investments acquired with the moneys in any fund or account shall be a part of such fund or account and, for the purposes of determining the amount in such fund or account, shall be valued at their then fair market value. The interest or income received on an investment shall remain in the fund or account to which the investment is credited except to the extent otherwise provided in the applicable Supplemental Indenture.

The Trustee shall withdraw, redeem or sell all or a portion of any investment upon receipt of the written direction from the Commission or upon a determination by the Trustee that moneys in such fund or account are to be applied or paid by the Trustee pursuant to the provisions of the Senior Indenture, and the proceeds thereof shall be deposited by the Trustee in the appropriate fund or account. Neither the

Trustee nor the Commission shall be liable or responsible for any depreciation in the value of the Permitted Investments or for any losses incurred upon any unauthorized disposition thereof.

Each fund held under the Senior Indenture shall be valued by the Trustee at least once annually within thirty days after the end of each Fiscal Year.

EVENTS OF DEFAULT

Each of the following is an "Event of Default" under the Senior Indenture:

(a) Default in the payment of any installment of principal, redemption premium, if any, interest or other amount due on any Bond when the same becomes due and payable;

(b) Default in the payment by the Commission of any other Parity Obligation;

(c) Subject to the provisions relating to notice and opportunity to cure certain defaults, default in the performance or breach of any covenant, warranty or representation of the Commission contained in the Senior Indenture (other than a default under (a) and (b) above);

(d) The occurrence of any Event of Default under any Supplemental Indenture; or

(e) (1) The occurrence of an Event of Bankruptcy of the Commission; (2) the appointment of a receiver, liquidator, assignee, custodian, trustee, sequestrator or other similar official of the Commission or of any substantial portion of its property, which appointment shall not have been rescinded or stayed within ninety (90) days after taking effect; or (3) the ordering of the winding up or liquidation of the affairs of the Commission.

No default under paragraph (c) above under "Events of Default" shall constitute an Event of Default until written notice of such default shall have been given to the Commission by the Trustee or by the holders of at least 25% in aggregate principal amount of the Bonds Outstanding, and the Commission shall have had thirty (30) days after receipt of such notice to correct such default or cause such default to be corrected, and shall have failed to do so. In the event, however, that the default is such that it cannot be corrected within such thirty (30) day period, it shall not constitute an Event of Default if corrective action is instituted by the Commission within such period and diligently pursued (as determined by the Trustee) until the default is corrected.

REMEDIES UPON DEFAULT

If an Event of Default occurs and is continuing, the Trustee may, and upon the written request to the Trustee by the holder or holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding shall, subject to the requirement that the Trustee be provided with indemnity satisfactory to it, by written notice to the Commission, declare the principal and interest on of the Bonds to the date of acceleration to be immediately due and payable.

At any time after such a declaration of acceleration has been made and before the entry of a judgment or decree for payment of the money due, the Trustee may, or the holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding, may by written notice to the Commission and the Trustee, and subject to the provision to the Trustee of satisfactory indemnity, direct the Trustee to rescind and annul such declaration and its consequences if: (1) there has been paid to or deposited with the Trustee by or for the account of the Commission, or provision satisfactory to the Trustee has been made for the payment of a sum sufficient to pay: (i) all overdue installments of interest on the Bonds; (ii) the principal of and redemption premium, if any, on any Bonds which have become due other than by such declaration of acceleration and interest thereon; (iii) all amounts due on other Parity Obligations; (iv) to the extent lawful, interest upon overdue installments of interest and redemption premium, if any; and (v) all sums paid or advanced by the Trustee under the Senior Indenture, together with the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel prior to the date of notice of rescission; and (2) all Events of Default, other than those described in paragraphs (a) and (b) above under "Events of Default", if any, which have occasioned such acceleration, have been cured or waived.

No such rescission and annulment shall affect any subsequent default or impair any consequent right.

ADDITIONAL REMEDIES

The Trustee, upon the occurrence of an Event of Default may, and upon the written request of the holders of not less than a majority in aggregate principal amount of the Bonds Outstanding and subject to the requirement that the Trustee be provided with satisfactory indemnity, shall proceed to protect and enforce its rights and the rights of the holders of the Bonds under the Senior Indenture by a suit or suits in equity or at law, either for the specific performance of any covenant or agreement contained in the Senior Indenture or in aid of the execution of any power in the Senior Indenture granted, or for the enforcement of any other appropriate legal or equitable remedy, and the Trustee in reliance upon the advice of counsel may deem most effective to protect and enforce any of the rights or interests of the Bondholders under the Bonds or the Senior Indenture.

Without limiting the generality of the foregoing, the Trustee shall at all times have the power to institute and maintain such proceedings as it may deem expedient: (1) to prevent any impairment of the Trust Estate by any acts which may be unlawful or in violation of the Senior Indenture, and (2) to protect its interests and the interests of the Bondholders in the Trust Estate and in the issues, profits, revenues and other income arising therefrom, including the power to maintain proceedings to restrain the enforcement of or compliance with any governmental enactment, rule or order which may be unconstitutional or otherwise invalid, if the enforcement of, or compliance with, such enactment, rule or order would impair the Trust Estate or be prejudicial to the interests of the Bondholders or the Trustee.

TRUSTEE MAY FILE PROOFS OF CLAIM

In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding under the Bankruptcy Law relating to the Commission, any other obligor upon the Bonds or any property of the Commission, the Trustee (whether or not the principal of the Bonds shall then be due and payable by acceleration or otherwise, and whether or not the Trustee shall have made any demand upon the Commission for the payment of overdue principal, redemption premium, if any, and interest) shall be entitled and empowered, by intervention in such proceeding or other means: (1) to file and prove a claim for the whole amount of the principal, redemption premium, if any, and interest owing and unpaid in respect of the Bonds then Outstanding or for breach of the Senior Indenture and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel) and of the holders allowed in such proceeding; and (2) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same; and any receiver, assignee, trustee, liquidator, sequestrator or similar official in any such judicial proceeding is authorized pursuant to the Senior Indenture by each holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the holders, to pay to the Trustee any amount due it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under the Senior Indenture. No provision of the Senior Indenture empowers the Trustee to authorize or consent to or accept or adopt on behalf of any Bondholders any plan of reorganization, arrangement, adjustment or composition affecting any of the Bonds or the rights of any holder thereof, or to authorize the Trustee to vote in respect of the claim of any holder in any proceeding described in the preceding sentence.

PRIORITY OF PAYMENT FOLLOWING EVENT OF DEFAULT

Any portion of the Trust Estate held or received by the Trustee, by any receiver or by any Bond Owner pursuant to any right given or action taken under the provisions of the Senior Indenture, after payment of the costs and expenses of the proceedings resulting in the collection of such moneys and of the fees, expenses and liabilities incurred by the Trustee and the transfer to Secured Owners (other than Owners of the Bonds) of amounts to which they are entitled by virtue of their parity position, shall be deposited and applied as follows:

(a) If the principal of all the Bonds then Outstanding and the interest accrued thereon has been declared to be due and payable immediately pursuant to the acceleration provisions described above (or, but for any legal prohibition on such declaration of acceleration, such principal and interest would have been declared to be due and payable immediately pursuant to such Section or the provisions of any applicable Reimbursement Agreement) and such declaration has not been rescinded and annulled, there shall be deposited into the Debt Service Fund moneys sufficient to pay the amounts described in clauses (i), (ii) and (iii) below, and all such moneys shall be applied, as promptly as practicable (but subject to the provisions of the last paragraph of this Section), proportionately to: (i) the payment to the persons entitled thereto of all payments of interest then due on the Bonds with interest on overdue installments, if lawful, at their respective rates from the respective dates upon which they became due, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment; (ii) the payment to the persons entitled thereto of the unpaid principal of any of the Bonds which shall have become due (or which but for any legal prohibition on such declaration of acceleration would have become due) with interest on such Bonds at their respective rates from the respective dates upon which they became due and, if the amount available shall not be sufficient to pay in full the Bonds due on any particular date, together with such interest, then to the payment ratably, according to the amount of principal and interest due on such date, in each case to the persons entitled thereto, without any discrimination or privilege; and (iii) the payment of any other amounts then owing under the Senior Indenture; and, after said deposit into the Debt Service Fund, there shall be paid the Subordinated Indebtedness issued or incurred by the Commission pursuant to the Senior Indenture.

(b) If the principal of and interest on all Bonds then Outstanding has not been declared to be due and payable immediately pursuant to the acceleration provisions described above (or deemed to be due and payable as contemplated in paragraph (a) above) or if such a declaration has been rescinded and annulled, then there shall be deposited into the Debt Service Fund moneys sufficient to pay the amounts described in clauses (i), (ii) and (iii) below, and all such moneys shall be applied, as promptly as practicable (but subject to the provisions of the last paragraph of this Section), (i) first, to the payment to the persons entitled thereto of all installments of interest then due on the Bonds, with interest on overdue installments, if lawful, at their respective rates from the respective dates upon which they became due, in the order of maturity and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment; (ii) second, to the payment to the persons entitled thereto of the unpaid principal of any of the Bonds which shall have become due with interest on such Bonds at their respective rates from the respective dates upon which they became due and, if the amount available shall not be sufficient to pay in full the Bonds due on any particular date, together with such interest, then to the payment ratably, according to the amount of principal and interest due on such date, in each case to the persons entitled thereto, without any discrimination or privilege; and (iii) third, to the payment of any other amounts then owing under the Senior Indenture, and, after said deposit into the Debt Service Fund, there shall be paid the Subordinated Indebtedness issued or incurred by the Commission pursuant to the Senior Indenture.

Whenever moneys are to be applied pursuant to the above provisions, such moneys shall be applied at such times, and from time to time, as the Trustee shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Trustee shall apply such funds, it shall fix the date (which shall be an Interest Payment Date unless it shall deem another date more suitable) upon which such application is to be made and upon such date interest on the amounts of principal and interest to be paid on such date shall cease to accrue. The Trustee shall give notice of the deposit with it of any such moneys and of the fixing of any such date by mail to all Owners of Bonds with respect to which the Event of Default occurred and shall not be required to make payment to any Bond Owner until such Bonds shall be presented to the Trustee for appropriate endorsement or for cancellation if fully paid.

BONDHOLDERS MAY DIRECT PROCEEDINGS

The owners of a majority in aggregate principal amount of the Bonds Outstanding shall, subject to the requirement that the Trustee be provided with satisfactory indemnity, have the right, by an instrument or instruments in writing executed and delivered to the Trustee, to direct the method and place of conducting all remedial proceedings by the Trustee under the Senior Indenture, provided that such direction shall not be in conflict with any rule of law or the Senior Indenture and that the Trustee shall have the right to decline to follow any such direction which in the opinion of the Trustee would be unduly prejudicial to the rights of Bondholders not parties to such direction or would subject the Trustee to personal liability or expense. Notwithstanding the foregoing, the Trustee shall have the right to select and retain counsel of its choosing to represent it in any such proceedings. The Trustee may take any other action which is not inconsistent with any direction under this paragraph.

LIMITATIONS ON RIGHTS OF BONDHOLDERS

No Bondholder shall have any right to pursue any other remedy under the Senior Indenture or the Bonds unless: (1) an Event of Default shall have occurred and is continuing; (2) the owners of not less than a majority in aggregate principal amount of all Bonds then Outstanding have requested the Trustee, in writing, to exercise the powers hereinabove granted or to pursue such remedy in its or their name or names; (3) the Trustee has been offered indemnity satisfactory to it against costs, expenses and liabilities reasonably anticipated to be incurred; (4) the Trustee has declined to comply with such request, or has failed to do so, within sixty (60) days after its receipt of such written request and offer of indemnity; and (5) no direction inconsistent with such request has been given to the Trustee during such 60-day period by the holders of a majority in aggregate principal amount of the Bonds Outstanding.

The provisions of the preceding paragraph are conditions precedent to the exercise by any Bondholder of any remedy under the Senior Indenture. The exercise of such rights is further subject to the provisions described under “Bondholders May Direct Proceedings”, “Unconditional Right of Bondholder to Receive Payment” and “Delay or Omission Not Waiver” and certain other provisions of the Senior Indenture. No one or more Bondholders shall have any right in any manner whatever to enforce any right under the Senior Indenture, except in the manner provided in the Senior Indenture. All proceedings at law or in equity with respect to an Event of Default shall be instituted and maintained in the manner provided in the Senior Indenture for the equal and ratable benefit of the Bondholders of all Bonds Outstanding.

RIGHTS AND REMEDIES CUMULATIVE

No right or remedy in the Senior Indenture conferred upon or reserved to the Trustee is intended to be exclusive of any other right or remedy, but each such right or remedy shall, to the extent permitted by law, be cumulative of and in addition to every other right or remedy given under the Senior Indenture or now or hereafter existing at law, in equity or otherwise. The assertion or employment of any right or remedy under the Senior Indenture shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

DELAY OR OMISSION NOT WAIVER

No delay or omission by the Trustee or any Bondholder to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of such Event of Default. Every right and remedy given by the Senior Indenture or by law to the Trustee or the Bondholders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee or the Bondholders, as the case may be.

WAIVER OF DEFAULTS

The holders of a majority in aggregate principal amount of the Outstanding Bonds may, by written notice to the Trustee and subject to the requirement that the Trustee be provided with satisfactory indemnity, waive any existing default or Event of Default and its consequences, except an Event of Default under paragraph (a) or (b) under "Events of Default." Upon any such waiver, the default or Event of Default shall be deemed cured and shall cease to exist for all purposes. No waiver of any default or Event of Default shall extend to or effect any subsequent default or Event of Default or shall impair any right or remedy consequent thereto.

Notwithstanding any provision of the Senior Indenture, in no event shall any Person, other than all of the affected Bondholders, have the ability to waive any Event of Default under the Senior Indenture if such event results or may result, in the opinion of Bond Counsel, in interest on any of the Bonds becoming includable in gross income for federal income tax purposes if the interest on such Bonds was not includable in gross income for federal income tax purposes prior to such event.

NOTICE OF EVENTS OF DEFAULT

If an Event of Default occurs of which the Trustee has or is deemed to have notice under the Senior Indenture, the Trustee shall give Immediate Notice thereof to the Commission. Within 90 days thereafter (unless such Event of Default has been cured or waived), the Trustee shall give notice of such Event of Default to each Bondholder then Outstanding, provided, however, that except in the instance of an Event of Default described in paragraph (a) or (b) above under "Events of Default," the Trustee may withhold such notice if and so long as the Trustee in good faith determines that the withholding of such notice does not materially adversely affect the interests of Bondholders, and provided, further, that notice to Bondholders of any Event of Default under paragraph (c) under "Events of Default" shall be subject to the provisions described above relating to cure of such defaults and shall not be given until the grace period has expired.

THE TRUSTEE; QUALIFICATIONS OF TRUSTEE

The Senior Indenture contains provisions relating to the appointment and duties of the Trustee. The Trustee under the Senior Indenture shall be a corporation or banking association organized and doing business under the laws of the United States of America or of any state, authorized under such laws to exercise corporate trust powers, which has a combined capital and surplus of at least $50,000,000, or is an affiliate of, or has a contractual relationship with, a corporation or banking association meeting such capital and surplus requirement which guarantees the obligations and liabilities of the proposed trustee, and which is subject to supervision or examination by federal or state banking authority. If at any time the Trustee shall cease to be eligible in accordance with the provision described above, it shall resign promptly in the manner and with the effect specified in the Senior Indenture.

RESIGNATION OR REMOVAL OF TRUSTEE; APPOINTMENT OF SUCCESSOR TRUSTEE

No resignation or removal of the Trustee and no appointment of a successor Trustee pursuant to the Senior Indenture shall become effective until the acceptance of appointment by the successor Trustee under the Senior Indenture.

The Trustee may resign at any time by giving written notice to the Commission. Upon receiving such notice of resignation, the Commission shall promptly appoint a successor Trustee by an instrument in writing. If an instrument of acceptance has not been delivered to the resigning Trustee within 30 days after the giving of such notice of resignation, the resigning Trustee or any Bondholder may petition a court of competent jurisdiction for the appointment of a successor Trustee.

Prior to the occurrence and continuance of an Event of Default under the Senior Indenture, or after the curing or waiver of any such Event of Default, the Commission or the holders of a majority in aggregate principal amount of the Outstanding Bonds, may remove the Trustee and shall appoint a successor Trustee. In the event there shall have occurred and be continuing an Event of Default under the Senior Indenture, the holders of a majority in aggregate principal amount of the Outstanding Bonds may remove the Trustee and shall appoint a successor Trustee. In each instance, such removal and appointment shall be accomplished by an instrument or concurrent instruments in writing signed by the Commission or such holders, as the case may be, and delivered to the Trustee, the Commission, the holders of the Outstanding Bonds and the Successor Trustee.

If at any time: (1) the Trustee shall cease to be eligible and qualified under the Senior Indenture and shall fail or refuse to resign after written request to do so by the Commission or the holder of any Bond, or (2) the Trustee shall become incapable of acting or shall be adjudged insolvent, or a receiver of the Trustee or its property shall be appointed, or any public officer shall take charge or control of the Trustee, its property or affairs for the purpose of rehabilitation, conservation or liquidation, then in either such case (i) the Commission may remove the Trustee and appoint a successor Trustee in accordance with the provisions of the immediately preceding paragraph; or (ii) any holder of a Bond then Outstanding may, on behalf of the holders of all Outstanding Bonds, petition a court of competent jurisdiction for removal of the Trustee and appointment of a successor Trustee.

The Commission shall give written notice of each resignation or removal of the Trustee and each appointment of a successor Trustee to each holder of Bonds then Outstanding as listed in the Bond Register. Each such notice shall include the name and address of the applicable corporate trust office of the successor Trustee.

SUPPLEMENTAL INDENTURES WITHOUT BONDHOLDERS' CONSENT

The Senior Indenture provides that the Commission and the Trustee may from time to time and at any time enter into Supplemental Indentures, without the consent of or notice to any Bondholder, to effect any one or more of the following: (a) cure any ambiguity, defect or omission or correct or supplement any provision in the Senior Indenture or in any Supplemental Indenture; (b) grant to or confer upon the Trustee for the benefit of the Bondholders any additional rights, remedies, powers, authority or security that may lawfully be granted to or conferred upon the Bondholders or the Trustee which are not contrary to or inconsistent with the Senior Indenture as then in effect or to subject to the pledge and lien of the Senior Indenture additional revenues, properties or collateral including Defeasance Obligations; (c) add to the covenants and agreements of the Commission in the Senior Indenture other covenants and agreements thereafter to be observed by the Commission or to surrender any right or power in the Senior Indenture reserved to or conferred upon the Commission which are not contrary to or inconsistent with the Senior Indenture as then in effect; (d) permit the appointment of a co-trustee under the Senior Indenture; (e) modify, alter, supplement or amend the Senior Indenture in such manner as shall permit the qualification of the Senior Indenture, if required, under the Trust Indenture Act of 1939, the Securities Act of 1933 or any similar federal statute hereafter in effect; (f) make any other change in the Senior Indenture that is determined by the Trustee not to be materially adverse to the interests of the Bondholders; (g) implement the issuance of Additional Bonds permitted under the Senior Indenture; or (h) if all Bonds in a series are Book Entry Bonds, amend, modify, alter or replace any Letter of Representations or other provisions relating to Book Entry Bonds. The Trustee shall not be obligated to enter into any such Supplemental Indenture which adversely affects the Trustee's own rights, duties or immunities under the Senior Indenture.

SUPPLEMENTAL INDENTURES REQUIRING BONDHOLDERS' CONSENT

The Commission and the Trustee, at any time and from time to time, may execute and deliver a Supplemental Indenture for the purpose of making any modification or amendment to the Senior Indenture, but only with the written consent, given as provided in the Senior Indenture, of the holders of at least a majority in aggregate principal amount of the Bonds Outstanding at the time such consent is given, and in case less than all of the Bonds then Outstanding are affected by the modification or amendment, of the holders of at least a majority in aggregate principal amount of the Bonds 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 so affected remain Outstanding, the consent of the holders 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 under these provisions. Notwithstanding the foregoing, no modification or amendment contained in any such Supplemental Indenture shall permit any of the following, without the consent of each Bondholder whose rights are affected thereby: (a) a change in the terms of stated maturity or redemption of any Bond or of any installment of interest thereon; (b) a reduction in the principal amount of or redemption premium on any Bond or in the rate of interest thereon or a change in the coin or currency in which such Bond is payable; (c) the creation of a lien on or a pledge of any part of the Trust Estate which has priority over or parity with (to the extent not permitted under the Senior Indenture) the lien or pledge granted to the Bondholders under the Senior Indenture (but this provision shall not apply to the release of any part of the Trust Estate as opposed to the creation of a prior or parity lien or pledge); (d) the granting of a preference or priority of any Bond or Bonds over any other Bond or Bonds, except to the extent permitted in the Senior Indenture; (e) a reduction in the aggregate principal amount of Bonds of which the consent of the Bondholders is required to effect any such modification or amendment; or (f) a change in the provisions of the Senior Indenture provisions relating to amendments and supplements. Notwithstanding the foregoing, the holder of any Bond may extend the time for payment of the principal of or interest on such Bond; provided, however, that upon the occurrence of an Event of Default, funds available under the Senior Indenture for the payment of the principal of and interest on the Bonds shall not be applied to any payment so extended until all principal and interest payments which have not been extended have first been paid in full. Notice of any Supplemental Indenture executed pursuant to the provisions described above shall be given to the Bondholders promptly following the execution thereof.

CONSENTS OF BONDHOLDERS AND OPINIONS

Each Supplemental Indenture executed and delivered pursuant to the provisions described under "Supplemental Indentures Requiring Bondholders' Consent" shall take effect only when and as provided below. A copy of such Supplemental Indenture (or brief summary thereof or reference thereto in form approved by the Trustee), together with a request to Bondholders for their consent thereto in form satisfactory to the Trustee, shall be sent by the Trustee to Bondholders, at the expense of the Commission, by first class mail, postage prepaid, provided that a failure to mail such request shall not affect the validity of the Supplemental Indenture when consented to as provided in the Senior Indenture. Such Supplemental Indenture shall not be effective unless and until there shall have been filed with the Trustee (a) the written consents of Bondholders of the percentage of Bonds specified above under "Supplemental Indentures Requiring Bondholders' Consent" given as provided in the Senior Indenture, and (b) an opinion of counsel acceptable to the Trustee stating that (1) the execution of such Supplemental Indenture is authorized or permitted by the Senior Indenture and (2) all conditions precedent to the execution and delivery of such Supplemental Indenture have been complied with, and an opinion of Bond Counsel that the execution and performance of such Supplemental Indenture shall not, in and of itself, adversely affect the federal income tax status of any Bonds, the interest on which is not included in gross income for federal income tax purposes. Any such consent shall be binding upon the Bondholder giving such consent and upon any subsequent holder of such Bonds and of any Bonds issued in exchange therefor or in lieu thereof (whether or not such subsequent Bondholder has notice thereof), unless such consent is revoked in writing by the Bondholder giving such consent or a subsequent holder of such Bonds by filing such revocation with the Trustee prior to the date the Trustee receives the material required in clauses (a) and (b) above.

Notwithstanding anything else in the Senior Indenture, if a Supplemental Indenture is to become effective on the same date as the date of issuance of Additional Bonds, the consents of the underwriters or purchasers of such Additional Bonds shall be counted for purposes of the Senior Indenture.

The Senior Indenture provides that Bonds which are to be disregarded under the last sentence of the definition of "Outstanding" shall not be deemed Outstanding for the purpose of consent or other action or any calculation of Outstanding Bonds provided for in Article X of the Senior Indenture. At the time of any consent or other action taken under Article X of the Senior Indenture or elsewhere in the Senior Indenture, the Commission shall furnish the Trustee a certificate of a Commission Official, upon which the Trustee may rely, describing all Bonds so to be excluded.

DISCHARGE OF BONDS

If (a) the principal of any Bonds and the interest due or to become due thereon, together with any redemption premium required by redemption of any of the Bonds prior to maturity, shall be paid, or is caused to be paid, or is provided for as described below under "Defeasance," at the times and in the manner to which reference is made in the Bonds, according to the true intent and meaning thereof, or the outstanding Bonds shall have been paid and discharged in accordance with the Senior Indenture, and (b) all of the covenants, agreements, obligations, terms and conditions of the Commission under the Senior Indenture shall have been kept, performed and observed and there shall have been paid to the Trustee, the Bond Registrar and the Paying Agents all sums of money due or to become due to them in accordance with the terms and provisions of the Senior Indenture, then the right, title and interest of the Trustee in the

Trust Estate shall thereupon cease and the Trustee, on request of the Commission and at the expense of the Commission, shall release the Senior Indenture and the Trust Estate and shall execute such documents to evidence such release as may be reasonably required by the Commission and shall turn over to the Commission, or to such other Person as may be entitled to receive the same, all balances remaining in any Funds under the Senior Indenture except for amounts required to pay such Bonds or subject to the provisions of the Senior Indenture, held unclaimed in respect of Bonds which have matured or been redeemed pursuant to the Senior Indenture.

If payment or provision therefor is made with respect to less than all of the 2022A Bonds of a maturity, the particular 2022A Bonds within such maturity for which provision for payment shall have been made shall be selected as provided for a partial redemption.

DEFEASANCE

Provision for the payment of 2022A Bonds shall be deemed to have been made when the Trustee holds in the Debt Service Fund or in a separate escrow account (1) cash in an amount sufficient to make all payments (including principal, premium, if any, and interest) specified above with respect to such 2022A Bonds, or (2) direct non-callable obligations of the United States of America and securities fully and unconditionally guaranteed as to the timely payment of principal and interest by the United States of America, to which direct obligation or guarantee the full faith and credit of the United States of America has been pledged, Refcorp interest strips, CATS, TIGRS, STRPS, or defeased municipal bonds rated "AAA" by S&P or "Aaa" by Moody's (or any combination of the foregoing), or (3) any combination of cash and obligations described in clause (2) above the amounts of which and interest thereon, when due, are or will be, in the aggregate, sufficient (together with any earnings thereon) to make all such payments.

Neither the moneys nor the obligations deposited with the Trustee as provided above shall be withdrawn or used for any purpose other than, and such obligations and moneys shall be segregated and held in trust for, the payment of the principal or redemption price of, premium, if any, on and interest on, the 2022A Bonds (or portions thereof) to be no longer entitled to the lien of the Senior Indenture; provided that such moneys, if not then needed for such purpose, shall, to the extent practicable, be invested and reinvested in Government Obligations maturing on or prior to the Interest Payment Date next succeeding the date of investment or reinvestment.

Whenever moneys or obligations shall be deposited with the Trustee for the payment or redemption of 2022A Bonds more than 90 days prior to the date that such 2022A Bonds are to mature or be redeemed, the Trustee shall mail a notice to the Owners of 2022A Bonds for the payment of which such moneys or obligations are being held at their registered addresses stating that such moneys or obligations have been deposited. Such notice shall also be sent by the Trustee to each Rating Agency then rating the 2022A Bonds at the request of the Commission. Notwithstanding the foregoing, no provision for payment shall be deemed to have been made with respect to any 2022A Bonds which are to be redeemed prior to their stated maturity until such 2022A Bonds shall have been irrevocably called or designated for redemption on a date thereafter on which such 2022A Bonds may be redeemed and proper notice of such redemption shall have been given or the Commission shall have given the Trustee, in form satisfactory to the Trustee, irrevocable instructions to give proper notice of such redemption.

In the event of a deposit of moneys or obligations for the payment or redemption of the 2022A Bonds described above, the Commission shall cause to be delivered a verification report of a firm of nationally recognized independent certified public accountant confirming that the above-described requirements have been satisfied. If a forward supply contract is employed in connection with the advance refunding, (i) such verification report shall expressly state that the adequacy of the escrow to accomplish the refunding relies solely on the initial escrowed investments and the maturing principal thereof and interest income thereon and does not assume performance under or compliance with the forward supply contract, and (ii) the applicable escrow agreement shall provide that in the event of any discrepancy or difference between the terms of the forward supply contract and the escrow agreement (or the authorizing document, if no separate escrow agreement is utilized), the terms of the escrow agreement or authorizing document, if applicable, shall be controlling.

At such times as a 2022A Bond shall be deemed to be paid under the Senior Indenture, as aforesaid, it shall no longer be secured by or entitled to the benefits of the Senior Indenture, except for the purposes of any such payment from such money or obligations.

APPENDIX D

FORM OF OPINION OF CO-BOND COUNSEL

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September 28, 2022

To: Pennsylvania Turnpike Commission
Middletown, Pennsylvania

We have served as co-bond counsel to our client the Pennsylvania Turnpike Commission (the "Commission") in connection with the issuance by the Commission of its $254,730,000 Turnpike Revenue Refunding Bonds, Series A of 2022A (the "2022A Bonds"), dated the date of this letter.

The 2022A Bonds are issued pursuant to a resolution adopted by the Commission on May 3, 2022, as amended by a resolution adopted by the Commission on September 6, 2022 (collectively, the "Resolution") and an Amended and Restated Trust Indenture, dated as of March 1, 2001, as amended and supplemented prior to the date hereof (as so amended and supplemented, the "Restated Indenture"), as further supplemented with respect to the 2022A Bonds, by a Supplemental Trust Indenture No. 64, dated as of September 1, 2022 ("Supplemental Indenture No. 64" and, together with the Restated Indenture, the "Indenture"), between the Commission and U.S. Bank Trust Company, National Association, as Trustee. Terms used in capitalized form and not defined herein have the meanings assigned to such terms in the Indenture.

In our capacity as co-bond counsel, we have examined the transcript of proceedings relating to the issuance of the 2022A Bonds, a copy of the signed and authenticated 2022A Bond of the first maturity, the Resolution, the Indenture and such other documents, matters and law as we deem necessary to render the opinions set forth in this letter.

Based on that examination and subject to the limitations set forth below, we are of the opinion that under existing law:

1. The Commission is a validly existing instrumentality of the Commonwealth of Pennsylvania and has the power to enter into the transactions contemplated by Supplemental Indenture No. 64 and to carry out its obligations thereunder.

2. Supplemental Indenture No. 64 has been duly authorized, executed and delivered by the Commission and constitutes the valid and binding obligation of the Commission, enforceable against the Commission in accordance with its terms.

3. The 2022A Bonds have been duly and validly authorized and issued by the Commission and constitute the valid and binding limited obligations of the Commission, enforceable against the Commission in accordance with their terms. The principal of and interest on (collectively, "debt service") the 2022A Bonds are payable from and secured solely by the Trust Estate. The payment of debt service on the 2022A Bonds is not secured by an obligation or pledge of any

moneys raised by taxation, and the 2022A Bonds do not represent or constitute a general obligation or a pledge of the faith and credit of the Commission or a general obligation or a pledge of the faith and credit or taxing power of the Commonwealth of Pennsylvania or any political subdivision thereof. The Commission has no taxing power.

4. Interest on the 2022A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended, and is not an item of tax preference for purposes of the federal alternative minimum tax. Interest on the 2022A Bonds is exempt from Commonwealth of Pennsylvania personal income tax and Commonwealth of Pennsylvania corporate net income tax. We express no opinion as to any other tax consequences regarding the 2022A Bonds.

The opinions stated above are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. In rendering all such opinions, we assume, without independent verification, and rely upon (i) the accuracy of the factual matters represented, warranted or certified in the proceedings and documents we have examined and (ii) the due and legal authorization, execution and delivery of those documents by, and the valid, binding and enforceable nature of those documents upon, any parties other than the Commission.

We express no opinion herein regarding the priority of any lien on the Trust Estate created by the Indenture.

In rendering those opinions with respect to treatment of the interest on the 2022A Bonds under the federal tax laws, we further assume and rely upon compliance with the covenants in the proceedings and documents we have examined, including those of the Commission. Failure to comply with certain of those covenants subsequent to issuance of the 2022A Bonds may cause interest on the 2022A Bonds to be included in gross income for federal income tax purposes retroactively to their date of issuance.

The rights of the owners of the 2022A Bonds and the enforceability of the 2022A Bonds and the Indenture are subject to bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or transfer, and other laws relating to or affecting the rights and remedies of creditors generally; to the application of equitable principles, whether considered in a proceeding at law or in equity; to the exercise of judicial discretion; and to limitations on legal remedies against public entities.

No opinions other than those expressly stated herein are implied or shall be inferred as a result of anything contained in or omitted from this letter. The opinions expressed in this letter are stated only as of the time of its delivery and we disclaim any obligation to revise or supplement this letter thereafter. Our engagement as co-bond counsel in connection with the original issuance and delivery of the 2022A Bonds is concluded upon delivery of this letter.

Respectfully submitted,

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APPENDIX E

DEBT SERVICE REQUIREMENTS OF THE TURNPIKE SENIOR, SUBORDINATE AND SPECIAL REVENUE BONDS

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APPENDIX E - DEBT SERVICE REQUIREMENTS OF THE TURNPIKE SENIOR, SUBORDINATE AND SUBORDINATE SPECIAL REVENUE BONDS

Fiscal Year	Existing Debt Service from Senior Revenue Bonds (Excluding EB-5 Loans)[1,2,3,4,5,7,9]	EB-5 Loans[5,8]	Existing Debt Service from Senior Revenue Bonds (Including EB-5 Loans)[1,2,3,4,5,7,8,9]	Turnpike Revenue Refunding Bonds, Series A of 2022			Total Debt Service from Senior Revenue Bonds (Including EB-5 Loans)[1,2,3,4,5,7,8,9]	Total Debt Service from Subordinate Revenue Bonds[1,4,5,6,7]	Total Debt Service from MLF Enhanced Subordinate Special Revenue Bonds[5,6]	Aggregate Debt Service[1,2,3,4,5,6,7,8,9]
				Principal[5]	Interest[5]	Total[5]				
2023	$ 246,875,963	$ 2,073,889	$ 248,949,852	$ -	$ 2,209,656	$ 2,209,656	$ 251,159,508	$ 157,314,450	$ 33,858,634	$ 442,332,592
2024	388,618,047	5,959,028	394,577,075	-	12,626,606	12,626,606	407,203,681	355,303,951	56,583,298	819,090,930
2025	413,655,050	8,173,306	421,828,355	-	12,626,606	12,626,606	434,454,962	389,312,716	57,913,904	881,681,582
2026	419,243,056	12,020,528	431,263,584	-	12,626,606	12,626,606	443,890,190	412,719,332	58,442,798	915,052,320
2027	399,505,725	12,012,000	411,517,725	-	12,626,606	12,626,606	424,144,331	432,764,814	75,939,497	932,848,642
2028	377,132,067	12,015,000	389,147,067	-	12,626,606	12,626,606	401,773,673	437,306,240	77,469,773	916,549,686
2029	384,158,574	12,020,000	396,178,574	-	12,626,606	12,626,606	408,805,180	447,302,011	79,247,302	935,354,493
2030	396,612,326	12,011,500	408,623,826	7,270,000	12,626,606	19,896,606	428,520,432	448,435,692	77,619,343	954,575,467
2031	400,201,532	12,019,750	412,221,282	11,005,000	12,263,106	23,268,106	435,489,389	452,367,754	79,175,802	967,032,944
2032	348,560,712	12,018,500	360,579,212	65,100,000	11,712,856	76,812,856	437,392,068	453,674,178	81,284,519	972,350,765
2033	348,268,731	12,017,750	360,286,481	72,615,000	8,457,856	81,072,856	441,359,338	455,255,287	83,575,935	980,190,559
2034	354,016,122	12,012,000	366,028,122	64,905,000	4,827,106	69,732,106	435,760,228	460,981,806	85,834,455	982,576,489
2035	430,332,526	12,016,000	442,348,526	-	1,581,856	1,581,856	443,930,382	468,157,095	87,504,466	999,591,943
2036	419,056,336	12,018,750	431,075,086	10,675,000	1,581,856	12,256,856	443,331,942	472,126,109	92,891,562	1,008,349,613
2037	419,454,509	12,014,750	431,469,259	9,955,000	1,048,106	11,003,106	442,472,365	477,873,213	96,006,802	1,016,352,380
2038	432,221,071	12,018,750	444,239,821	-	550,356	550,356	444,790,177	481,937,103	98,415,271	1,025,142,550
2039	437,511,599	12,014,750	449,526,349	-	550,356	550,356	450,076,705	483,839,927	83,156,011	1,017,072,643
2040	385,061,800	12,012,500	397,074,300	-	550,356	550,356	397,624,656	415,807,491	59,066,856	872,499,002
2041	390,381,183	12,016,250	402,397,433	8,685,000	550,356	9,235,356	411,632,790	472,507,843	60,008,620	944,149,252
2042	375,311,045	12,015,000	387,326,045	4,520,000	192,100	4,712,100	392,038,145	469,309,595	53,099,583	914,447,323
2043	386,330,252	12,018,250	398,348,502	-	-	-	398,348,502	347,893,518	38,842,231	785,084,250
2044	401,440,071	12,020,000	413,460,071	-	-	-	413,460,071	325,229,254	24,654,434	763,343,758
2045	356,121,736	12,019,500	368,141,236	-	-	-	368,141,236	271,068,731	5,176,815	644,386,782
2046	298,527,676	12,016,000	310,543,676	-	-	-	310,543,676	254,724,756	-	565,268,432
2047	269,585,962	12,013,750	281,599,712	-	-	-	281,599,712	201,541,681	-	483,141,393
2048	210,169,806	12,016,750	222,186,556	-	-	-	222,186,556	163,053,669	-	385,240,224
2049	187,284,878	12,018,750	199,303,628	-	-	-	199,303,628	159,947,600	-	359,251,228
2050	160,054,317	12,013,750	172,068,067	-	-	-	172,068,067	96,251,200	-	268,319,267
2051	65,198,185	12,021,000	77,219,185	-	-	-	77,219,185	86,631,600	-	163,850,785
2052	44,180,000	12,013,750	56,193,750	-	-	-	56,193,750	24,048,400	-	80,242,150
2053	-	12,016,500	12,016,500	-	-	-	12,016,500	-	-	12,016,500
2054	-	5,827,500	5,827,500	-	-	-	5,827,500	-	-	5,827,500
TOTAL	**$ 10,145,070,854**	**$ 358,495,500**	**$ 10,503,566,354**	**$ 254,730,000**	**$ 134,462,169**	**$ 389,192,169**	**$ 10,892,758,523**	**$ 10,574,687,013**	**$ 1,545,767,909**	**$ 23,013,213,446**

(1) All unswapped variable rate debt is shown at an assumed rate of 4.0% plus the fixed spread. All variable rate debt which is swapped to a fixed rate is shown at the fixed swap rate plus the fixed spread. As only a portion of principal on the Series A-1 of 2018 Bonds is swapped, the interest rate is calculated as a weighted average between a) an assumed rate of 4.0% plus the fixed spread and b) the swap rate plus the fixed spread, based on the outstanding principal amounts of unhedged and hedged bonds. Swap assignments are subject to adjustment by the Commission.

(2) Interest reflects anticipated receipt of federal subsidy with respect to Build America Bonds, subject to applying the 5.7% sequestration reduction through maturity. For information regarding the effects of sequestration on the federal subsidy payable with respect to the Commission's outstanding Build America Bonds, see "INVESTMENT CONSIDERATIONS - Reductions in federal subsidy payable to the Commission for its outstanding Build America Bonds due to sequestration" in this Official Statement.

(3) Reflects planned amortization of Series A-1 of 2018 Bonds, Series B of 2018 Bonds, Second Series of 2019 Bonds, Series of 2020 Bonds, and Series A of 2020 Bonds. To realize this planned amortization, the Commission expects that it will refinance such bonds prior to maturity dates or the expiry of associated Letters of Credit. Future refinancings are subject to market conditions and may be changed by the Commission. See APPENDIX A - "THE PENNSYLVANIA TURNPIKE COMMISSION - COMMISSION INDEBTEDNESS AND OTHER OBLIGATIONS."

(4) Interest net of capitalized interest; does not reflect any expected earnings credited against debt service.

(5) Total may not add due to rounding.

(6) Amounts are inclusive of compounded interest on the Convertible Capital Appreciation Bonds and Capital Appreciation Bonds.

(7) All fixed rate debt, unless subject to an interest rate swap agreement, is shown at the actual interest rate.

(8) Includes four tranches of EB-5 Loans (the tranche issued on February 21, 2018, the tranche issued on November 13, 2018, the tranche issued on November 6, 2019, and the tranche issued on January 22, 2020). First five years of debt service is interest only. Thereafter, assumes 30 year level debt service takeout with Turnpike Revenue Bonds.

(9) Excludes the Purchased Refunded Bonds. See "Refunding Plan" in this Official Statement.

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APPENDIX F

TRAFFIC STUDY

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77 Hartland Street, Suite 201
East Hartford, Connecticut 06108
tel: 860 529-7615

July 8, 2022

Mr. Richard Dreher
Chief Financial Officer
Pennsylvania Turnpike Commission
700 South Eisenhower Boulevard
Middletown, PA 17057

Subject: Pennsylvania Turnpike Commission 2022 Traffic and Toll Revenue Bring Down Letter

Dear Mr. Dreher:

The Pennsylvania Turnpike Commission (PTC or Commission) asked CDM Smith to prepare this *2022 Traffic and Toll Revenue Bring Down Letter* (2022 Bring Down Letter) to be used in support of the Commission's ongoing capital improvement program and other funding requirements. This letter provides an update to the *2021 Traffic and Toll Revenue Bring Down Letter* (2021 Bring Down Letter) dated May 28, 2021. This was the most recent update to a series of traffic and toll revenue forecasts that also includes the *6-Month Update to the 2020 Traffic and Toll Revenue Bring Down Letter* (2020 6-Month Update) dated December 18, 2020; the *2020 Traffic and Toll Revenue Bring Down Letter* (2020 Bring Down Letter), dated May 29, 2020; the *2019 Traffic and Toll Revenue Bring Down Letter* (2019 Bring Down Letter), dated April 29, 2019; and the *2018 Traffic and Toll Revenue Forecast Study* (2018 Forecast Study), dated April 20, 2018.

The 2021 Bring Down Letter included actual data through March 2021 and presented traffic and gross toll revenue forecasts from fiscal year (FY) 2020-21 through FY 2049-50. A fiscal year runs from June 1 through May 31. An additional 14 months of actual data (through May 2022) were available for this 2022 Bring Down Letter. The forecast period for this study is one additional year into the future, now extending through FY 2050-51.

This report will provide a summary of differences between the current traffic and revenue forecast and the one provided in the 2021 Bring Down Letter.

The updated forecasts reflect the following changes from the 2021 Bring Down Letter:

- E-ZPass market share estimates over the forecast period were reviewed and updated as needed.
- Actual traffic and toll revenue data were updated to include information through May 2022.

- A detailed review of COVID-19 related impacts was conducted based on an additional 14 months of actual data. Revised COVID-19 impacts have now been applied to the forecasts. In the previous forecast, no COVID-19 impacts are assumed after FY 2025-26, however the current forecast has lingering COVID-19 impacts throughout the remainder of the forecast period through FY 2050-51. The elevated gas prices that the U.S. has been experiencing since early 2022 are also expected to negatively impact transactions and revenue for much of the remainder of the decade, and thus additional fuel price impacts have been aggregated with COVID-19 impacts through FY 2028-29.

- A review of scheduled major roadway improvements was conducted to determine if there have been any changes since completion of the 2021 Bring Down Letter. Two new projects have been added, and the timing of others has been adjusted. This will be discussed in the Committed Roadway Improvements section of this report.

- The underlying econometric model that was developed as part of the 2018 Forecast Study will continue to be used, as has been the case with all Bring Down Letters since. However, the independent socioeconomic variables (population, employment, gross domestic product [GDP], retail sales, and motor fuel prices) that were used as inputs into the econometric model have been updated with the latest available forecasts. The resultant outputs from the econometric model have been utilized as part of the updated baseline transactions and revenue forecast.

These differences are described in more detail in the sections that follow below.

It is important to note that the intent of this 2022 Bring Down Letter is to review and revise, if warranted, the forecasts developed as part of the 2021 Bring Down Letter. Any adjustments would be made based on the 14 months of new actual traffic and toll revenue experience since the 2021 Bring Down Letter was completed, including COVID-19 impacts, as well as revised assumptions summarized in the bullet points above.

Historical Toll Rate Increases and Current Toll Rates

Table 1 provides a summary of historical toll rate increases on the Turnpike System from 1987 to the most recent increase implemented on January 2, 2022. Rate increases are presented as a percent increase over the prior toll rate for cash/video and E-ZPass. Note that toll rate increases are generally applied systemwide, although occasional exemptions occur, as indicated in Table 1.

Table 1
Historical Toll Rate Increases
Pennsylvania Turnpike

Date	Percent Increase Cash/Video	Percent Increase E-ZPass	Comment
1/2/1987	40.0	NA	E-ZPass was not yet implemented on the Turnpike
6/1/1991	32.0	NA	E-ZPass was not yet implemented on the Turnpike
8/1/2004	42.5	42.5	
1/4/2009	25.0	25.0	No increase on Findlay Connector or MFE between Uniontown and Brownsville
1/3/2010	3.0	3.0	No increase on Findlay Connector
1/2/2011	10.0	3.0	No increase on Findlay Connector
1/1/2012	10.0	0.0	No increase on Findlay Connector
1/6/2013	10.0	2.0	
1/5/2014	12.0	2.0	No increase on Findlay Connector
1/4/2015	5.0	5.0	No increase on Findlay Connector
1/3/2016	6.0	6.0	No increase on Findlay Connector; DRB converted from ticket system to barrier system and rate changes implemented
1/8/2017	6.0	6.0	No increase on Findlay Connector or DRB
1/7/2018	6.0	6.0	No increase on Findlay Connector, DRB, or the Northeast Extension barrier facilities
4/29/2018	6.0	6.0	Northeast Extension barrier facilities only (1)
6/3/2018	6.0	6.0	Findlay Connector only (1)
1/6/2019	6.0	6.0	
10/27/2019	6.0	6.0	BVE, AKH, and Gateway only; additional 45% surcharge over cash rate added to video rate at these locations
1/5/2020	6.0	6.0	No increase on BVE, AKH, or Gateway
1/3/2021	6.0	6.0	Additional 45% surcharge over cash rate added to video rate for Ticket System and MFE
1/2/2022	5.0	5.0	No increase on Southern Beltway

Note: Beginning in 2016, all cash toll rate increases also reflect video toll rate increases.

(1) Toll rate increase coincided with vehicle classification changes from a weight-based to an axle-based system.

Periodic toll rate increases were implemented on the Turnpike System in 1987, 1991, and 2004. Beginning in 2009, annual toll increases have been implemented. During the 2000s decade, E-ZPass was phased into the Turnpike System. Until 2011, cash and E-ZPass toll rates always increased by the same percent. The toll rate schedule implemented on January 2, 2011 created a differential between cash and E-ZPass, as E-ZPass rates were increased by 3.0 percent and cash toll were increased by 10.0 percent. Rate increases differed between cash and E-ZPass in 2012, 2013, and 2014 further increasing the differential between cash and E-ZPass toll rates. After 2014, rate increases have been applied equally to both cash/video and E-ZPass.

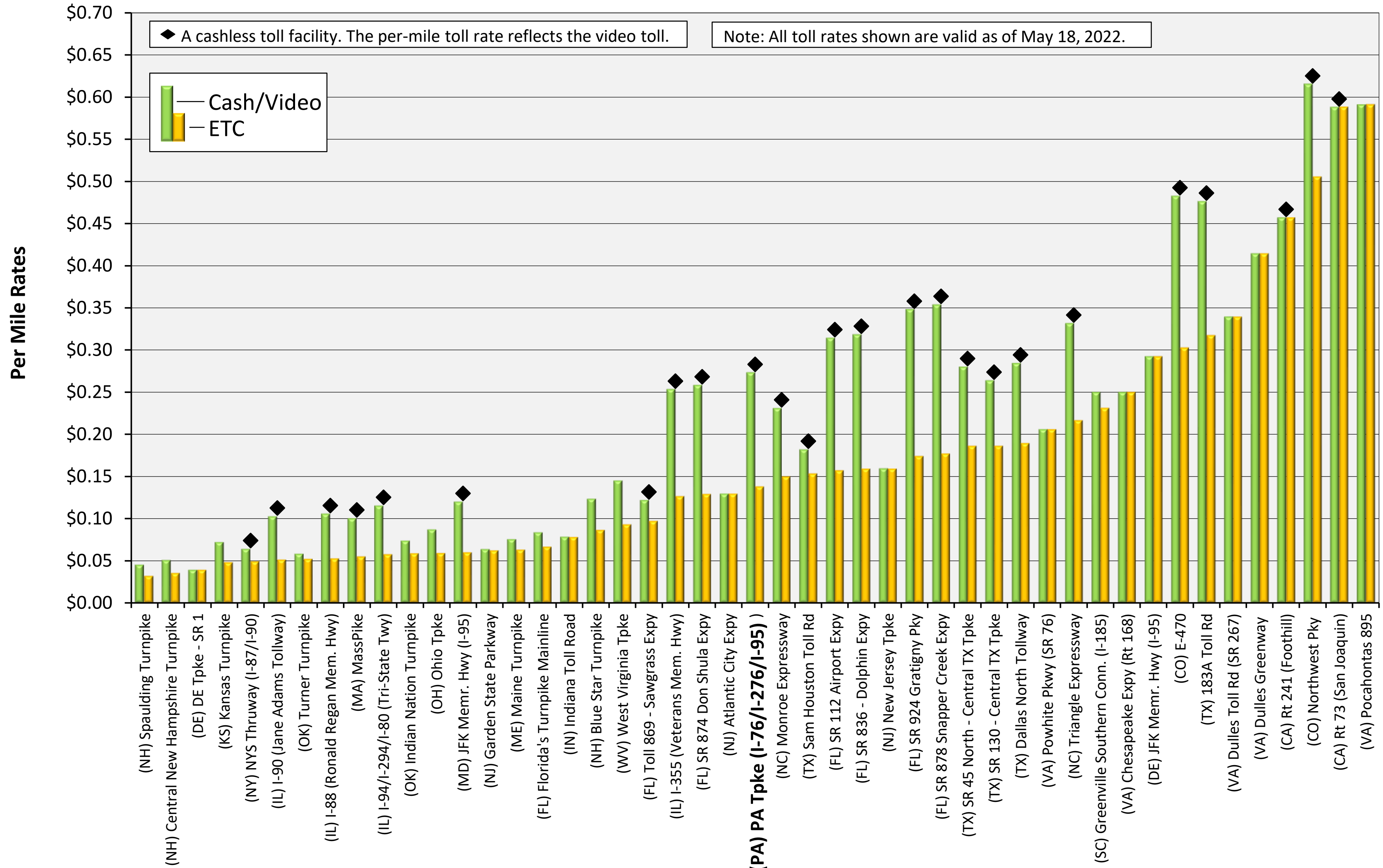
In 2015 toll rates increased by 5.0 percent. From 2016 to 2021, toll rates increased by 6.0 percent annually for both cash/video and E-ZPass. In 2022, the toll rate increase was 5.0 percent. As of June 2020, the entire Pennsylvania Turnpike System is an all-electronic tolling (AET) system; cash is no longer accepted, with all payments being conducted via E-ZPass or video tolling.

PTC policy has also been to implement a video toll surcharge upon conversion to AET; this has generally amounted to an additional 45-percent increase, making video rates about double E-ZPass rates. This 45-percent video surcharge was implemented on the last two components of the Pennsylvania Turnpike System that had previously lacked it, the Ticket System and MFE, in conjunction with the system-wide toll increase that was implemented on January 3, 2021. It is assumed that annual toll rate increases will occur throughout the forecast period, as described in the section Actual and Assumed Toll Rate Increases and shown in Table 13.

Figures 1 and 2 show the 2022 per-mile toll rates for a through-trip on 47 U.S. toll facilities, for passenger cars (PCs) and 5-axle commercial vehicles (CVs), respectively. Per-mile rates are shown for both cash/video and electronic toll collection (ETC) transactions in each figure. If a facility is all electronic (does not accept cash payments), the video toll rate is shown as the equivalent of a cash toll rate. All ETC facilities are marked with a diamond in Figures 1 and 2.

The per-mile through-trip toll rate is shown for the Pennsylvania Turnpike Mainline, which represents a trip on I-76/I-276/I-95 between Ohio and New Jersey. Figure 1 shows that despite 13 consecutive annual toll increases since 2009, PC per-mile toll rates on the Pennsylvania Turnpike System, at 14 cents per mile for E-ZPass customers and 28 cents per mile for video customers, are still very reasonably priced compared to other toll facilities in the U.S. In fact, the Pennsylvania Turnpike's PC ETC per-mile rates fall exactly in the middle of the 47 surveyed facilities.

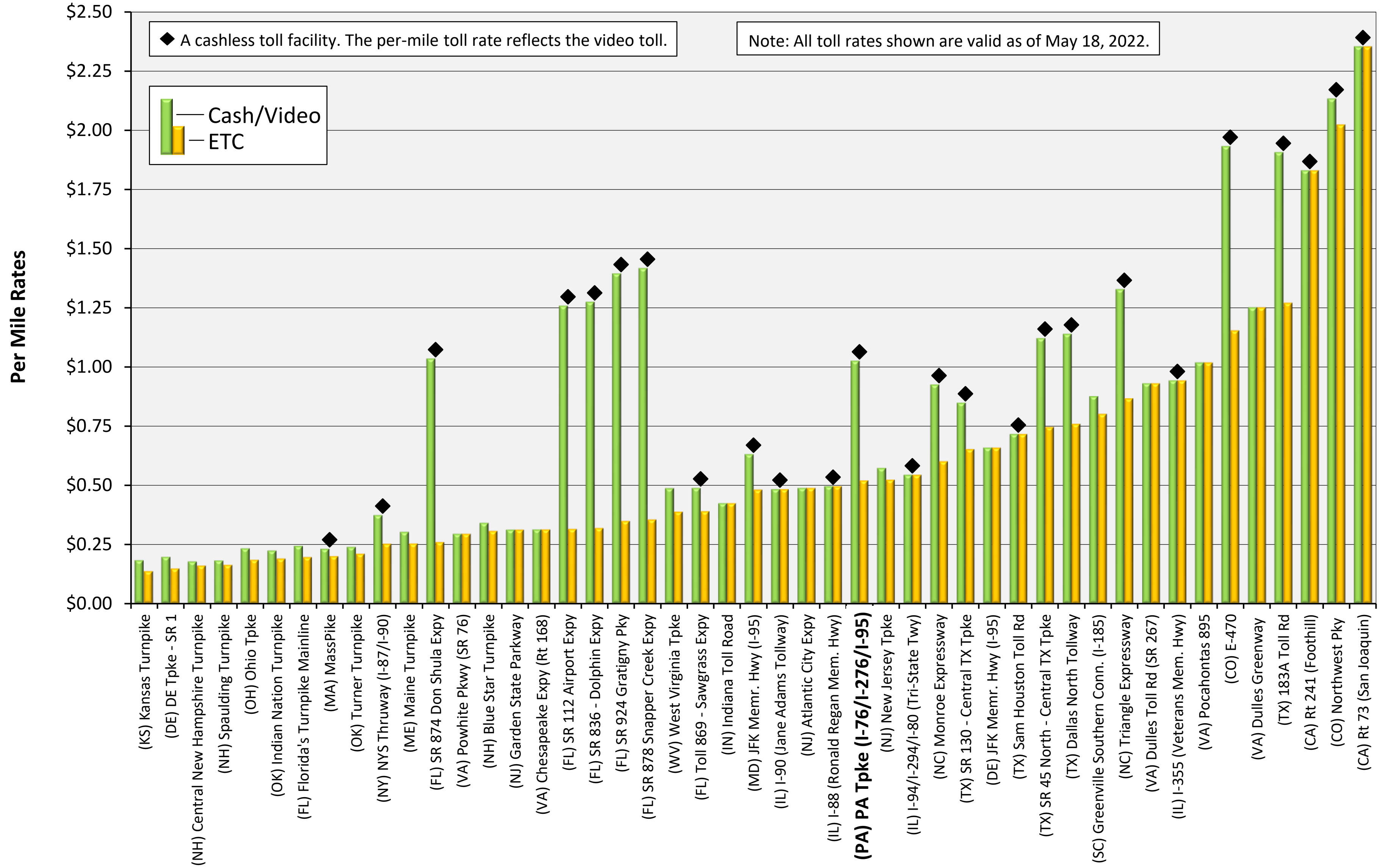
Toll rates for 5-axle CVs (represented by weight class 6 for the Pennsylvania Turnpike Mainline) are equivalent to 52 cents per mile for E-ZPass and $1.06 per mile for video transactions for a through-trip on the Pennsylvania Turnpike Mainline. It should be remembered that the vast majority of both PC and CV trips are made using the more cost-effective E-ZPass payment method. This rate is also competitive with the surveyed peer facilities, ranking 28th of 47 facilities.



COMPARISON OF 2022 PASSENGER CAR PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

CDM Smith

FIGURE 1



COMPARISON OF 2022 FIVE-AXLE VEHICLE PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2

Annual Transaction and Gross Toll Revenue Trends

Table 2 provides a summary of annual systemwide transactions and gross toll revenue trends from FY 1994-95 through FY 2021-22. Notably, this table excludes non-revenue transactions from PTC's non-AET facilities. The Pennsylvania Turnpike System is a large, mature system that has demonstrated long-term growth in transactions and toll revenue. Between FY 1994-95 and FY 2007-08 there was only one toll rate increase (in 2004) and Turnpike transactions and gross toll revenue grew by an average annual rate of 3.0 percent and 5.5 percent, respectively. Conversely, in the 11 years from FY 2008-09 to FY 2018-19, which was the last fiscal year to be completed before the onset of the COVID-19 pandemic, there were toll rate increases every year. During this period Turnpike transactions grew more slowly, by 0.6 percent annually, but due to the annual toll rate increases, Turnpike revenue grew more quickly, by 7.6 percent annually. In the three fiscal years since the start of the pandemic, from FY 2018-19 to FY 2021-22, total transactions fell by a total of 2.5 percent compared to FY 2018-19, an average of 0.9 percent per year. However, due to toll rate increases, total revenue was able to grow over the same period by a total of 17.5 percent, or 5.5 percent per year.

Table 2
Annual Systemwide Traffic and Gross Toll Revenue Trends
Pennsylvania Turnpike System
(in thousands)

	Transactions						Gross Toll Revenue					
Fiscal Year (1)	Cars	Percent Change over Prior Year	Trucks	Percent Change over Prior Year	Total	Percent Change over Prior Year	Cars	Percent Change over Prior Year	Trucks	Percent Change over Prior Year	Total	Percent Change ov Prior Yea
1994-95	114,033	6.9	15,620	9.5	129,653	7.2	$165,850	4.9	$131,749	7.2	$297,599	5.9
1995-96	121,911	6.9	16,719	7.0	138,630	6.9	172,339	3.9	136,269	3.4	308,608	3.7
1996-97	126,654	3.9	17,479	4.5	144,133	4.0	179,303	4.0	140,837	3.4	320,140	3.7
1997-98	132,472	4.6	18,627	6.6	151,099	4.8	186,290	3.9	149,036	5.8	335,326	4.7
1998-99	136,399	3.0	19,833	6.5	156,232	3.4	191,804	3.0	158,761	6.5	350,565	4.5
1999-00	138,762	1.7	21,341	7.6	160,103	2.5	195,301	1.8	172,035	8.4	367,336	4.8
2000-01	141,033	1.6	21,278	(0.3)	162,311	1.4	193,563	(0.9)	172,337	0.2	365,900	(0.4)
2001-02	150,496	6.7	22,298	4.8	172,794	6.5	212,650	9.9	163,101	(5.4)	375,751	2.7
2002-03	156,220	3.8	23,179	4.0	179,399	3.8	219,201	3.1	168,021	3.0	387,222	3.1
2003-04	163,612	4.7	24,407	5.3	188,019	4.8	228,515	4.2	180,229	7.3	408,744	5.6
2004-05	163,316	(0.2)	25,109	2.9	188,425	0.2	309,032	35.2	236,126	31.0	545,158	33.4
2005-06	160,590	(1.7)	25,311	0.8	185,901	(1.3)	321,268	4.0	267,369	13.2	588,637	8.0
2006-07	160,107	(0.3)	25,316	0.0	185,423	(0.3)	322,781	0.5	269,861	0.9	592,642	0.7
2007-08	164,097	2.5	25,455	0.5	189,552	2.2	327,761	1.5	271,165	0.5	598,926	1.1
2008-09	162,638	(0.9)	23,583	(7.4)	186,220	(1.8)	356,345	8.7	259,259	(4.4)	615,605	2.8
2009-10	163,599	0.6	22,933	(2.8)	186,531	0.2	415,981	16.7	302,057	16.5	718,038	16.6
2010-11	165,231	1.0	23,812	3.8	189,043	1.3	435,752	4.8	328,105	8.6	763,856	6.4
2011-12	164,955	(0.2)	24,125	1.3	189,080	0.0	455,133	4.4	342,646	4.4	797,779	4.4
2012-13	163,690	(0.8)	24,207	0.3	187,897	(0.6)	471,514	3.6	350,226	2.2	821,740	3.0
2013-14	163,788	0.1	24,891	2.8	188,679	0.4	497,671	5.5	368,395	5.2	866,066	5.4
2014-15	166,192	1.5	26,144	5.0	192,336	1.9	533,054	7.1	401,197	8.9	934,251	7.9
2015-16 (2)	171,569	3.2	27,319	4.5	198,887	3.4	588,295	10.4	443,325	10.5	1,031,620	10.4
2016-17 (3,4)	172,799	0.7	27,703	1.4	200,501	0.8	638,787	8.6	476,188	7.4	1,114,975	8.1
2017-18 (5)	172,511	(0.2)	28,650	3.4	201,161	0.3	678,741	6.3	524,418	10.1	1,203,158	7.9
2018-19	173,429	0.5	29,625	3.4	203,054	0.9	740,578	9.1	594,808	13.4	1,335,385	11.0
2019-20 (6,7,8)	152,201	(12.2)	29,101	(1.8)	181,302	(10.7)	683,918	(7.7)	605,642	1.8	1,289,561	(3.4)
2020-21 (9)	136,717	(10.2)	30,875	6.1	167,591	(7.6)	610,597	(10.7)	647,972	7.0	1,258,570	(2.4)
2021-22 (10)	164,023	20.0	33,887	9.8	197,910	18.1	820,619	34.4	748,407	15.5	1,569,027	24.7

Average Annual Percent Change

	Transactions			Gross Toll Revenue		
Fiscal Year	Cars	Trucks	Total	Cars	Trucks	Total
FY 1994-95 - FY 2007-08	2.8	3.8	3.0	5.4	5.7	5.5
FY 2007-08 - FY 2018-19	0.5	1.4	0.6	7.7	7.4	7.6
FY 2018-19 - FY 2021-22	(1.8)	4.6	(0.9)	3.5	8.0	5.5
FY 1994-95 - FY 2021-22	1.4	2.9	1.6	6.1	6.6	6.4

(1) Fiscal year beginning June 1.
(2) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.
(5) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier Facilities in April 2018.
(6) Toll by Plate surcharge for I-376 Beaver Valley Expressway was increased in October 2019.
(7) AET conversion was implemented at Gateway Toll Plaza and Turnpike 66 in October 2019.
(8) AET conversion with no surcharge for Toll by Plate was implemented on the Ticket System on March 16, 2020.
(9) AET conversion with no surcharge for Toll by Plate was implemented on the Mon/Fayette Expressway on June 16, 2020.
(10) A 13.2 mile extension of the Southern Beltway opened on October 15, 2021.

Monthly Transactions and Gross Toll Revenue Trends

Tables 3 through 12 present recent monthly transaction and gross toll revenue trends from FY 2018-19 through the end of FY 2021-22 (May 2022) for all PTC facilities. The information is provided for PCs, CVs, and total vehicles. The facilities are summarized in the following order:

- Table 3 – the total Turnpike System (comprised of all the facilities listed below);
- Table 4 – the Ticket System (comprised of I-76/I-276 and I-476);
- Table 5 – the combined Barrier System (comprised of all facilities listed below);
- Table 6 – Turnpike 43 (Mon/Fayette Expressway) (MFE);
- Table 7 – Turnpike 66 (Amos K. Hutchinson Bypass) (AKH);
- Table 8 – Northeast Extension (I-476) barrier plazas;
- Table 9 – Turnpike I-376 (Beaver Valley Expressway) (BVE);
- Table 10 – Turnpike I-576 (Southern Beltway – Findlay Connector);
- Table 11 – Delaware River Bridge (DRB); and
- Table 12 – Gateway Toll Plaza.

As shown in Table 3, total systemwide gross toll revenue decreased by 3.4 percent in FY 2019-20, the last three months of which were impacted by the COVID-19 pandemic. Even though the most significant monthly revenue losses occurred in FY 2019-20, total year revenues declined 2.4 percent further in FY 2020-21, as year-over-year revenues were down in the first nine months of the fiscal year due to being compared against pre-COVID revenues. However, revenue increased greatly in the final three months of the fiscal year (March, April, and May 2021) as traffic had grown significantly compared to the same months in 2020, which were the earliest stages of the pandemic. In FY 2021-22, toll revenue continued to grow and was 24.7 percent greater than the previous fiscal year. In fact, toll revenue in this most recent fiscal year was 17.5 percent higher than in FY 2018-19, which was entirely prior to, and thus unaffected by, the pandemic. CV toll revenue increased by 15.5 percent and PC toll revenue increased by 34.4 percent in FY 2021-22 compared to FY 2020-21. PC growth was stronger than CV growth because PCs were more significantly impacted by the pandemic and experienced steep declines during FY 2020-21, while CV revenue was impacted less severely and had returned to positive growth by September 2020.

It is important to note, however, that the negative impacts of COVID-19 have diminished greatly over time. In April 2020 (which includes the first full month of COVID-19 impacts), total gross toll revenue was 49.2 percent lower than the same month in 2019. That negative impact decreased over each of the next six months, such that October 2020 gross toll revenue was only 9.8 percent lower than the same month in the prior year. While negative revenue impacts grew over the winter months, due to both increasing infection rates (in November, December, and January) and snowstorms (February), March 2021 experienced positive revenue growth for the first time since the start of the pandemic. During this month both PC and CV traffic increased significantly compared to March 2020. As a result, total gross toll revenue was 32.0 higher in March 2021 than it was in March 2020. This large positive result in March 2021 is because this is the first month when growth is compared to a prior year's month that also included COVID-19 impacts.

During the second year of the pandemic, March 2021 through February 2022, year-over-year transactions increased by at least 8.7 percent each month. Excluding January 2022, during which Pennsylvania was hit with both the Omicron variant and multiple snowstorms, transaction growth was at least 14.0 percent each month. Due to the annual toll increases in January 2021 and January 2022, revenue grew even more, with growth of at least 19.9 percent each month. As the pandemic enters its third year, transaction and revenue growth in March, April, and May 2022 continued to be strong, if somewhat less robust than the prior year. In May 2022, the most recent month for which data is available, transactions grew by 7.1 percent and revenue grew by 9.4 percent compared to May 2021.

As previously mentioned, the Ticket System is by far the largest component of both traffic and toll revenue on the Turnpike System. As such, its overall growth patterns generally resemble those for the total system. As shown in Table 4, in FY 2021-22 total transactions increased 17.0 percent from the prior year, while toll revenue increased by 24.5 percent. PC transactions increased by 19.1 percent, while toll revenue grew 34.9 percent. CV transactions grew by 8.1 percent and toll revenue grew 15.3 percent compared to FY 2020-21.

Prior to the impacts of COVID-19 beginning in March 2020, annual year-over-year Ticket System toll transaction growth generally had been slightly negative for PCs and slightly positive for CVs. Annual toll rate increases, however, resulted in significant revenue increases over this time for both PCs and CVs on the Ticket System. As with the total systemwide trends shown in Table 3, the negative impacts of COVID-19 were greatest on the Ticket System in April 2020, when total transactions decreased by 61.3 percent and toll revenue decreased by 50.3 percent. By October 2020, however, the negative impacts were just 15.9 percent for transactions and 11.6 percent for toll revenue. Impacts grew more negative over the winter before rebounding in March, which experienced significant positive growth in both transactions and revenue for both PCs and CVs, although part of the reason for this positive growth was due to comparison against COVID-impacted figures in March 2020. In the 14 months since then, transactions have each continued to grow by at least 3.7 percent each month, while revenue has grown even faster, with growth of at least 8.0 percent each month. Notably, however, the lowest growth figures for both transactions and revenue in these last 14 months occurred in May 2022, the most recent month for which data is available. This may indicate that although growth is still occurring, the rate of growth is slowing, although this cannot be confirmed without a few more months of data. Throughout the pandemic, negative impacts have been more pronounced for PCs than for CVs.

Table 5 provides the same information for all barrier toll facilities combined. Barrier facility toll revenue comprises about 15 percent of total systemwide toll revenue. The negative impacts of COVID-19 on the barrier facilities are similar to those on the Ticket System. However, the recovery rate seems to be somewhat faster for the barrier facilities. During FY 2020-21, barrier facility toll transactions only fell 6.3 percent, compared to 8.0 percent on the Ticket System. In FY 2021-22, barrier system transactions grew 21.1 percent compared to 17.0 percent for the Ticket System. Revenue has behaved similarly, with the barrier system actually experiencing 4.3 percent growth during FY 2020-21, compared to a 3.5 percent decline on the Ticket System. However, barrier facilities' revenue growth only slightly outpaced Ticket System revenue growth in FY 2021-22, 25.6 percent to 24.5 percent. Part of these faster growth rates for the barrier system in FY 2021-22 can be attributable to a 13.2-mile extension of the Southern Beltway that opened on October 15, 2021.

The same information is provided for each individual barrier facility in Tables 6 through 12. As seen in Table 10, growth was particularly strong on the Southern Beltway in FY 2021-22, with transactions and revenue growing 203.7 percent and 223.6 percent, respectively, compared to FY 2020-21. This is due to the aforementioned 13.2-mile extension that opened in October 2021.

Table 3

Total Turnpike System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	15,361	(1.1)	15,187	(31.0)	10,476	36.1	14,263
July	15,566	0.1	15,583	(22.2)	12,131	24.2	15,067
August	16,134	(0.4)	16,071	(21.2)	12,669	17.7	14,906
September	14,503	0.5	14,582	(17.0)	12,106	15.4	13,966
October	15,396	(0.0)	15,389	(18.0)	12,615	17.9	14,877
November	14,242	(0.3)	14,193	(24.9)	10,657	30.6	13,914
December	13,982	(0.5)	13,911	(29.1)	9,864	36.8	13,493
January	12,504	2.6	12,826	(23.1)	9,868	9.3	10,783
February	11,930	4.4	12,458	(30.1)	8,703	30.9	11,392
March	14,018	(33.1)	9,373	24.8	11,699	12.2	13,121
April	14,426	(66.4)	4,845	155.2	12,365	11.7	13,816
May	15,367	(49.4)	7,782	74.3	13,563	6.4	14,425
Total Year	173,429	(12.2)	152,201	(10.2)	136,717	20.0	164,023

Commercial Vehicles

Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	2,596	(1.5)	2,557	3.2	2,639	10.3	2,909
July	2,573	3.7	2,668	1.5	2,709	6.3	2,879
August	2,755	(1.2)	2,722	(2.3)	2,659	10.2	2,931
September	2,418	5.0	2,539	5.4	2,676	7.8	2,885
October	2,732	1.4	2,770	(0.6)	2,754	7.6	2,963
November	2,391	0.5	2,403	1.1	2,429	14.7	2,785
December	2,198	3.3	2,271	5.8	2,402	13.3	2,721
January	2,268	3.7	2,353	(1.0)	2,329	6.1	2,471
February	2,073	5.2	2,182	(4.5)	2,084	18.6	2,472
March	2,372	(0.3)	2,364	15.4	2,727	9.0	2,972
April	2,549	(22.8)	1,968	39.5	2,746	4.8	2,879
May	2,698	(14.6)	2,304	18.1	2,721	11.0	3,019
Total Year	29,625	(1.8)	29,101	6.1	30,875	9.8	33,887

Total Vehicles

Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	17,958	(1.2)	17,744	(26.1)	13,115	30.9	17,173
July	18,138	0.6	18,251	(18.7)	14,840	20.9	17,946
August	18,889	(0.5)	18,793	(18.4)	15,328	16.4	17,837
September	16,921	1.2	17,121	(13.7)	14,782	14.0	16,851
October	18,128	0.2	18,159	(15.4)	15,369	16.1	17,840
November	16,633	(0.2)	16,597	(21.2)	13,086	27.6	16,699
December	16,180	0.0	16,182	(24.2)	12,266	32.2	16,215
January	14,772	2.8	15,179	(19.6)	12,197	8.7	13,255
February	14,003	4.5	14,640	(26.3)	10,787	28.5	13,864
March	16,389	(28.4)	11,736	22.9	14,426	11.6	16,092
April	16,975	(59.9)	6,813	121.8	15,112	10.5	16,696
May	18,065	(44.2)	10,086	61.5	16,284	7.1	17,443
Total Year	203,054	(10.7)	181,302	(7.6)	167,591	18.1	197,910

Toll Revenue (in $1,000s)

Passenger Cars

Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$65,886	8.9	$71,743	(38.6)	$44,023	58.1	$69,587
July	69,178	9.8	75,990	(31.2)	52,311	57.1	82,170
August	70,545	9.6	77,351	(25.6)	57,533	35.3	77,844
September	60,348	8.0	65,184	(21.8)	51,000	28.3	65,449
October	61,611	9.7	67,615	(18.3)	55,274	42.0	78,514
November	59,156	8.3	64,068	(31.2)	44,052	36.6	60,174
December	57,377	10.8	63,565	(33.3)	42,380	68.3	71,327
January	50,969	11.5	56,826	(21.9)	44,355	26.6	56,165
February	49,844	11.1	55,386	(31.7)	37,832	42.8	54,033
March	61,426	(38.8)	37,574	41.0	52,982	18.3	62,696
April	63,940	(73.2)	17,157	247.1	59,547	16.3	69,253
May	70,298	(55.2)	31,458	120.3	69,308	5.9	73,407
Total Year	$740,578	(7.7)	$683,918	(10.7)	$610,597	34.4	$820,619

Commercial Vehicles

Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$49,757	5.4	$52,463	(0.6)	$52,165	18.1	$61,603
July	49,069	10.8	54,375	(3.1)	52,693	16.8	61,533
August	52,369	5.9	55,447	(3.5)	53,492	16.9	62,550
September	47,311	8.5	51,328	1.3	52,003	14.4	59,492
October	52,185	6.0	55,318	0.5	55,607	18.4	65,830
November	47,087	2.5	48,255	1.6	49,006	15.1	56,426
December	43,630	8.3	47,235	8.1	51,038	20.8	61,654
January	48,261	8.1	52,171	(0.5)	51,885	14.2	59,235
February	45,096	8.9	49,120	(2.0)	48,147	19.8	57,698
March	51,729	(5.4)	48,928	25.1	61,207	12.1	68,605
April	52,793	(20.2)	42,127	41.7	59,706	8.1	64,553
May	55,522	(12.0)	48,876	24.9	61,023	13	69,228
Total Year	$594,808	1.8	$605,642	7.0	$647,972	15.5	$748,407

Total Vehicles

Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$115,643	7.4	$124,206	(22.6)	$96,188	36.4	$131,190
July	118,247	10.2	130,365	(19.5)	105,004	36.9	143,703
August	122,914	8.0	132,798	(16.4)	111,025	26.5	140,394
September	107,658	8.2	116,512	(11.6)	103,003	21.3	124,941
October	113,795	8.0	122,933	(9.8)	110,881	30.2	144,344
November	106,243	5.7	112,323	(17.2)	93,058	25.3	116,600
December	101,007	9.7	110,800	(15.7)	93,418	42.3	132,981
January	99,230	9.8	108,997	(11.7)	96,240	19.9	115,400
February	94,940	10.1	104,507	(17.7)	85,979	30.0	111,731
March	113,155	(23.6)	86,502	32.0	114,189	15.0	131,302
April	116,733	(49.2)	59,283	101.2	119,253	12.2	133,806
May	125,820	(36.2)	80,335	62.2	130,332	9.4	142,635
Total Year	$1,335,385	(3.4)	$1,289,561	(2.4)	$1,258,570	24.7	$1,569,027

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion and vehicle classification changes were implemented on the Turnpike I-576 Findlay Connector in June 2018.

(5) AET conversion was implemented on Turnpike 66 Amos K. Hutchinson Bypass and Gateway Toll Plaza in October 2019.

(6) AET conversion was implemented on the Ticket System and Mon/Fayette Expressway in June 2020.

(7) A 13.2 mile extension of the Southern Beltway opened on October 15, 2021.

Table 4

Ticket System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	11,580	(3.3)	11,195	(32.9)	7,508	40.0	10,510	1,939	(2.7)	1,887	4.3	1,968	11.2	2,188	13,519	(3.2)	13,082	(27.6)	9,476	34.0	12,698
July	11,596	(2.0)	11,365	(22.9)	8,757	26.2	11,050	1,915	2.7	1,967	2.8	2,022	7.4	2,171	13,512	(1.3)	13,332	(19.1)	10,779	22.7	13,221
August	12,019	(1.9)	11,786	(22.1)	9,184	18.6	10,890	2,040	(1.7)	2,006	(0.7)	1,993	10.7	2,207	14,059	(1.9)	13,792	(19.0)	11,177	17.2	13,097
September	10,836	(0.6)	10,768	(18.5)	8,772	16.7	10,238	1,790	4.3	1,867	6.9	1,995	9.1	2,176	12,626	0.1	12,635	(14.8)	10,767	15.3	12,414
October	11,483	(0.8)	11,387	(19.1)	9,218	17.4	10,817	2,024	0.4	2,031	1.7	2,066	6.8	2,206	13,506	(0.7)	13,418	(15.9)	11,283	15.4	13,023
November	10,625	(0.5)	10,574	(26.0)	7,829	28.0	10,019	1,784	(0.8)	1,770	3.7	1,836	11.6	2,048	12,409	(0.5)	12,343	(21.7)	9,665	24.9	12,067
December	10,462	(1.1)	10,347	(29.7)	7,269	33.7	9,720	1,650	2.2	1,686	8.4	1,829	9.5	2,002	12,112	(0.7)	12,033	(24.4)	9,097	28.8	11,721
January	9,453	1.8	9,623	(24.1)	7,302	6.3	7,761	1,699	2.7	1,745	1.1	1,765	3.1	1,819	11,152	1.9	11,368	(20.2)	9,067	5.7	9,580
February	8,931	4.8	9,358	(32.1)	6,354	30.1	8,266	1,547	4.5	1,616	(3.3)	1,563	16.2	1,817	10,478	4.7	10,974	(27.9)	7,917	27.4	10,083
March	10,475	(34.2)	6,890	24.5	8,578	10.0	9,433	1,762	0.4	1,768	16.4	2,058	5.3	2,168	12,237	(29.2)	8,658	22.9	10,637	9.1	11,601
April	10,728	(68.2)	3,413	165.9	9,077	8.9	9,884	1,880	(22.0)	1,466	40.5	2,060	1.8	2,098	12,608	(61.3)	4,879	128.2	11,137	7.6	11,982
May	11,371	(51.6)	5,501	81.1	9,962	3.2	10,276	1,990	(14.1)	1,711	19.7	2,047	6.5	2,180	13,361	(46.0)	7,211	66.5	12,009	3.7	12,456
Total Year	129,559	(13.4)	112,207	(11.0)	99,810	19.1	118,865	22,020	(2.3)	21,520	7.8	23,201	8.1	25,078	151,579	(11.8)	133,726	(8.0)	123,011	17.0	143,943

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$56,349	7.6	$60,635	(41.8)	$35,319	62.5	$57,377	$43,898	5.1	$46,135	(2.0)	$45,213	18.6	$53,638	$100,247	6.5	$106,770	(24.6)	$80,532	37.9	$111,015
July	59,123	8.5	64,149	(33.4)	42,697	60.3	68,423	43,294	10.4	47,784	(4.3)	45,733	17.3	53,654	102,417	9.3	111,932	(21.0)	88,430	38.0	122,077
August	60,200	8.8	65,501	(28.3)	46,956	38.1	64,828	46,144	5.5	48,699	(4.5)	46,518	17.4	54,595	106,344	7.4	114,200	(18.1)	93,474	27.8	119,423
September	51,234	7.0	54,814	(24.3)	41,486	29.3	53,642	41,775	7.7	45,003	0.1	45,044	14.7	51,683	93,009	7.3	99,817	(13.3)	86,530	21.7	105,325
October	51,943	9.7	57,006	(21.3)	44,868	44.8	64,959	45,892	5.4	48,375	(0.3)	48,241	18.8	57,319	97,835	7.7	105,381	(11.6)	93,109	31.3	122,279
November	49,943	7.6	53,745	(32.5)	36,264	32.9	48,187	41,520	1.1	41,992	1.6	42,655	13.9	48,605	91,463	4.7	95,737	(17.6)	78,919	22.6	96,792
December	48,312	10.0	53,142	(35.4)	34,329	72.9	59,349	38,457	7.1	41,206	8.0	44,492	20.5	53,632	86,769	8.7	94,348	(16.5)	78,821	43.3	112,981
January	42,828	10.1	47,167	(23.0)	36,314	26.5	45,926	42,586	7.4	45,721	(1.1)	45,231	14.1	51,605	85,414	8.8	92,888	(12.2)	81,545	19.6	97,532
February	41,868	10.5	46,274	(33.2)	30,899	40.9	43,533	39,811	8.3	43,112	(2.3)	42,135	18.8	50,044	81,679	9.4	89,386	(18.3)	73,034	28.1	93,578
March	51,714	(40.2)	30,904	39.5	43,127	17.6	50,734	45,684	(6.7)	42,610	25.4	53,427	11.3	59,456	97,398	(24.5)	73,515	31.3	96,553	14.1	110,190
April	53,860	(75.2)	13,360	265.6	48,848	14.9	56,151	46,431	(21.4)	36,517	42.4	51,990	7.4	55,817	100,291	(50.3)	49,878	102.2	100,838	11.0	111,968
May	59,310	(57.6)	25,131	128.4	57,404	3.8	59,559	48,818	(12.8)	42,565	25.3	53,338	12.5	60,013	108,128	(37.4)	67,696	63.6	110,743	8.0	119,573
Total Year	$626,685	(8.8)	$571,829	(12.8)	$498,511	34.9	$672,668	$524,309	1.0	$529,718	6.5	$564,017	15.3	$650,063	$1,150,994	(4.3)	$1,101,547	(3.5)	$1,062,528	24.5	$1,322,732

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in June 2020.

Table 5
Combined Barrier Facilities - Monthly Transaction and Revenue Trends
Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	3,782	5.5	3,992	(25.6)	2,968	26.5	3,753	657	1.9	670	0.1	671	7.6	722	4,439	5.0	4,661	(21.9)	3,639	23.0	4,475
July	3,970	6.3	4,218	(20.0)	3,374	19.0	4,017	657	6.7	702	(2.1)	687	3.1	709	4,627	6.3	4,920	(17.5)	4,061	16.4	4,725
August	4,115	4.1	4,286	(18.7)	3,484	15.3	4,016	715	0.1	716	(6.9)	667	8.6	724	4,830	3.5	5,002	(17.0)	4,151	14.2	4,741
September	3,667	4.0	3,814	(12.6)	3,334	11.8	3,728	628	6.9	672	1.3	681	4.2	710	4,295	4.4	4,486	(10.5)	4,015	10.5	4,437
October	3,913	2.3	4,001	(15.1)	3,398	19.5	4,060	709	4.3	739	(6.8)	689	10.0	757	4,621	2.6	4,740	(13.8)	4,086	17.9	4,817
November	3,618	0.1	3,620	(21.9)	2,828	37.7	3,895	607	4.3	634	(6.4)	593	24.3	737	4,225	0.7	4,253	(19.6)	3,421	35.4	4,632
December	3,519	1.3	3,564	(27.2)	2,595	45.4	3,774	548	6.7	585	(1.9)	574	25.5	720	4,068	2.0	4,149	(23.6)	3,169	41.8	4,494
January	3,051	5.0	3,203	(19.9)	2,566	17.8	3,022	569	6.8	608	(7.2)	564	15.6	652	3,620	5.3	3,811	(17.9)	3,130	17.4	3,674
February	2,999	3.4	3,101	(24.2)	2,349	33.1	3,126	526	7.5	566	(8.0)	521	25.7	655	3,525	4.0	3,666	(21.7)	2,869	31.8	3,781
March	3,543	(29.9)	2,482	25.7	3,121	18.2	3,687	610	(2.4)	595	12.2	668	20.3	804	4,153	(25.9)	3,078	23.1	3,789	18.5	4,491
April	3,698	(61.3)	1,432	129.7	3,289	19.6	3,932	669	(25.0)	502	36.7	686	13.9	782	4,367	(55.7)	1,934	105.5	3,975	18.6	4,714
May	3,996	(42.9)	2,281	57.9	3,601	15.2	4,148	708	(16.2)	593	13.5	674	24.5	839	4,704	(38.9)	2,875	48.7	4,275	16.7	4,987
Total Year	43,870	(8.8)	39,994	(7.7)	36,906	22.4	45,158	7,605	(0.3)	7,582	1.2	7,674	14.8	8,809	51,475	(7.6)	47,575	(6.3)	44,580	21.1	53,967

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$9,537	16.5	$11,108	(21.6)	$8,704	40.3	$12,210	$5,859	8.0	$6,328	9.9	$6,952	14.6	$7,965	$15,396	13.2	$17,436	(10.2)	$15,656	28.9	$20,175
July	10,055	17.8	11,841	(18.8)	9,614	43.0	13,748	5,775	14.1	6,591	5.6	6,959	13.2	7,879	15,830	16.4	18,433	(10.1)	16,574	30.5	21,627
August	10,344	14.6	11,850	(10.7)	10,577	23.1	13,016	6,225	8.4	6,748	3.4	6,974	14.1	7,955	16,570	12.2	18,598	(5.6)	17,552	19.5	20,971
September	9,114	13.8	10,370	(8.3)	9,514	24.1	11,807	5,535	14.3	6,326	10.0	6,958	12.2	7,809	14,649	14.0	16,696	(1.3)	16,472	19.1	19,616
October	9,668	9.7	10,609	(1.9)	10,406	30.3	13,555	6,293	10.3	6,943	6.1	7,366	15.5	8,510	15,961	10.0	17,552	1.3	17,772	24.2	22,065
November	9,214	12.0	10,323	(24.6)	7,788	53.9	11,987	5,567	12.5	6,263	1.4	6,352	23.1	7,821	14,780	12.2	16,586	(14.8)	14,140	40.1	19,808
December	9,065	15.0	10,423	(22.8)	8,051	48.8	11,978	5,173	16.6	6,029	8.6	6,546	22.5	8,021	14,238	15.6	16,452	(11.3)	14,597	37.0	19,999
January	8,141	18.6	9,659	(16.8)	8,040	27.3	10,238	5,675	13.7	6,450	3.2	6,655	14.7	7,630	13,816	16.6	16,109	(8.8)	14,695	21.6	17,868
February	7,976	14.3	9,112	(23.9)	6,934	51.4	10,500	5,285	13.7	6,009	0.0	6,012	27.3	7,654	13,261	14.0	15,121	(14.4)	12,945	40.2	18,154
March	9,712	(31.3)	6,670	47.8	9,855	21.4	11,963	6,045	4.5	6,317	23.2	7,781	17.6	9,149	15,757	(17.6)	12,987	35.8	17,636	19.7	21,112
April	10,080	(62.3)	3,796	181.8	10,699	22.5	13,103	6,362	(11.8)	5,610	37.5	7,715	13.2	8,736	16,443	(42.8)	9,406	95.8	18,414	18.6	21,839
May	10,988	(42.4)	6,327	88.1	11,904	16.3	13,847	6,704	(5.9)	6,311	21.8	7,685	19.9	9,215	17,691	(28.6)	12,638	55.0	19,589	17.7	23,062
Total Year	$113,893	(1.6)	$112,089	(0.0)	$112,086	32.0	$147,951	$70,498	7.7	$75,925	10.6	$83,955	17.1	$98,344	$184,392	2.0	$188,014	4.3	$196,042	25.6	$246,295

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET Conversions at Findlay Connector, Amos K Hutchinson Bypass, Gateway Toll Plaza, and Mon/Fayette Expressway in June 2018, October 2019, October 2019, and June 2020 respectively.

(5) A 13.2 mile extension of the Southern Beltway opened on October 15, 2021.

Table 6

Turnpike 43 - Mon/Fayette Expressway - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	1,079	(1.6)	1,061	(11.7)	937	12.0	1,050	97	0.0	97	(2.4)	95	(7.1)	88	1,176	(1.5)	1,158	(10.9)	1,032	10.3	1,138
July	1,118	(1.6)	1,099	(5.9)	1,034	4.1	1,076	99	9.7	109	(12.7)	95	(12.9)	83	1,217	(0.7)	1,208	(6.5)	1,129	2.6	1,159
August	1,149	(2.9)	1,116	(7.6)	1,031	7.1	1,105	101	0.1	102	(16.7)	85	(0.5)	84	1,251	(2.7)	1,217	(8.3)	1,116	6.6	1,189
September	1,080	(1.2)	1,067	(3.8)	1,027	7.4	1,103	95	4.0	99	(12.1)	87	(2.6)	84	1,175	(0.8)	1,166	(4.5)	1,114	6.6	1,187
October	1,162	(3.5)	1,121	(6.5)	1,048	10.1	1,154	108	4.0	113	(21.2)	89	(0.4)	88	1,270	(2.9)	1,233	(7.8)	1,137	9.3	1,243
November	1,027	(5.6)	970	(11.4)	859	20.9	1,039	91	(4.3)	87	(18.9)	71	13.4	80	1,118	(5.5)	1,057	(12.0)	930	20.4	1,119
December	967	(2.0)	948	(16.1)	796	30.0	1,034	75	(4.8)	71	(5.8)	67	11.2	75	1,042	(2.2)	1,019	(15.3)	863	28.6	1,109
January	880	1.3	891	(11.0)	793	8.2	859	78	(3.8)	75	(11.7)	66	12.8	75	957	0.9	966	(11.1)	859	8.6	933
February	884	(1.7)	868	(13.7)	749	16.2	871	72	(6.5)	67	(10.1)	61	28.1	78	956	(2.1)	936	(13.4)	810	17.1	949
March	1,015	(23.6)	775	24.0	961	5.3	1,012	87	(12.1)	76	5.4	81	13.9	92	1,102	(22.7)	852	22.3	1,042	6.0	1,104
April	1,053	(51.5)	511	90.3	973	7.5	1,046	99	(31.9)	68	24.8	84	3.0	87	1,152	(49.8)	579	82.6	1,057	7.2	1,133
May	1,111	(31.6)	760	34.9	1,025	6.1	1,087	104	(16.1)	87	(5.8)	82	22.0	100	1,215	(30.3)	847	30.7	1,108	7.2	1,188
Total Year	12,524	(10.7)	11,188	0.4	11,235	10.7	12,437	1,107	(5.1)	1,051	(8.5)	962	5.4	1,014	13,631	(10.2)	12,239	(0.3)	12,196	10.3	13,451

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$1,772	7.5	$1,904	(16.3)	$1,594	33.4	$2,127	$462	8.3	$500	(3.6)	$482	2.2	$493	$2,234	7.6	$2,404	(13.6)	$2,076	26.2	$2,619
July	1,877	6.5	2,000	(12.1)	1,758	29.1	2,269	471	18.0	556	(16.0)	467	1.3	473	2,349	8.8	2,556	(13.0)	2,225	23.2	2,742
August	1,904	3.7	1,974	(8.1)	1,813	20.6	2,187	478	8.9	520	(16.1)	436	7.1	468	2,382	4.7	2,494	(9.8)	2,250	18.0	2,655
September	1,769	7.4	1,901	(9.6)	1,717	24.3	2,134	447	9.8	491	(11.2)	436	7.1	467	2,216	7.9	2,392	(10.0)	2,154	20.8	2,601
October	1,898	4.5	1,983	(2.3)	1,936	32.8	2,570	508	9.3	556	(15.3)	471	14.7	540	2,406	5.5	2,538	(5.2)	2,407	29.2	3,110
November	1,684	0.9	1,700	(16.9)	1,413	45.0	2,049	432	3.3	446	(19.0)	361	26.1	456	2,116	1.4	2,147	(17.3)	1,775	41.2	2,505
December	1,625	3.4	1,680	(11.5)	1,486	47.5	2,193	374	0.8	377	(5.0)	358	27.9	458	1,999	2.9	2,056	(10.3)	1,844	43.7	2,651
January	1,542	9.7	1,692	(6.5)	1,582	23.8	1,958	404	5.7	427	(11.5)	377	21.2	457	1,946	8.9	2,119	(7.5)	1,960	23.3	2,416
February	1,548	5.9	1,639	(11.4)	1,452	36.3	1,978	378	2.8	389	(12.6)	340	44.2	490	1,926	5.3	2,028	(11.7)	1,791	37.8	2,468
March	1,792	(26.1)	1,324	53.2	2,028	7.5	2,181	462	(14.3)	396	18.9	471	20.4	567	2,254	(23.7)	1,720	45.3	2,499	10.0	2,748
April	1,862	(53.1)	873	131.4	2,021	13.7	2,297	513	(29.3)	363	34.1	486	9.8	534	2,376	(48.0)	1,236	102.8	2,507	12.9	2,831
May	1,986	(31.9)	1,352	59.9	2,162	11.2	2,405	543	(16.5)	453	4.8	475	29.9	616	2,529	(28.6)	1,805	46.0	2,637	14.6	3,021
Total Year	$21,261	(5.8)	$20,022	4.7	$20,963	25.7	$26,349	$5,472	0.0	$5,473	(5.7)	$5,161	16.6	$6,018	$26,732	(4.6)	$25,496	2.5	$26,124	23.9	$32,368

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in June 2020.

Table 7

Turnpike 66 - Amos K. Hutchinson Bypass - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	556	(2.7)	541	(12.3)	475	17.3	557	101	(6.1)	95	0.6	95	9.9	105	657	(3.2)	636	(10.4)	570	16.1	662
July	559	(0.7)	555	(7.5)	514	10.6	568	101	(0.9)	100	(1.2)	99	5.3	104	660	(0.7)	655	(6.5)	612	9.7	672
August	583	(1.5)	574	(8.9)	523	8.2	566	108	(3.8)	104	(6.8)	97	9.9	106	691	(1.8)	678	(8.6)	620	8.5	672
September	555	(3.2)	538	(5.6)	508	9.3	555	92	3.0	95	0.3	95	7.3	102	648	(2.3)	633	(4.7)	603	9.0	657
October	580	0.1	581	(10.1)	522	10.8	579	105	(0.7)	105	(8.4)	96	11.7	107	686	(0.0)	686	(9.8)	618	10.9	686
November	531	(3.3)	513	(10.1)	461	14.6	529	86	(0.6)	85	(3.9)	82	18.6	97	617	(2.9)	599	(9.2)	543	15.2	626
December	533	(3.1)	517	(15.8)	435	22.9	535	80	(3.0)	77	(2.3)	75	19.5	90	612	(3.1)	594	(14.1)	510	22.4	625
January	475	2.3	486	(13.1)	422	6.0	448	81	2.0	83	(10.8)	74	7.2	79	556	2.2	569	(12.7)	496	6.2	527
February	461	1.3	467	(13.2)	405	11.1	450	75	1.0	76	(5.8)	71	12.3	80	536	1.3	542	(12.2)	476	11.2	530
March	527	(27.0)	385	33.0	511	(0.7)	508	81	(5.6)	77	21.1	93	7.6	100	608	(24.1)	461	31.0	604	0.6	608
April	538	(50.1)	269	95.2	524	(2.5)	511	93	(28.1)	67	46.3	98	(4.4)	94	631	(46.8)	336	85.4	622	(2.8)	605
May	570	(31.1)	392	41.8	557	(2.9)	540	99	(15.4)	84	15.5	97	7.4	104	669	(28.8)	476	37.2	653	(1.4)	644
Total Year	6,466	(10.0)	5,818	0.7	5,858	8.3	6,345	1,102	(5.1)	1,046	2.4	1,072	9.0	1,168	7,568	(9.3)	6,864	1.0	6,929	8.4	7,513

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$995	4.8	$1,043	(4.8)	$992	20.3	$1,194	$504	(2.1)	$493	(0.7)	$490	16.8	$572	$1,499	2.5	$1,536	(3.5)	$1,482	19.2	$1,766
July	1,004	7.6	1,080	(5.0)	1,027	24.2	1,275	494	2.9	508	(4.2)	487	20.2	586	1,498	6.1	1,588	(4.7)	1,514	22.9	1,861
August	1,036	6.6	1,104	(4.3)	1,057	14.5	1,210	518	2.5	531	(8.3)	487	20.3	586	1,554	5.2	1,636	(5.6)	1,544	16.3	1,796
September	991	3.8	1,029	(2.1)	1,007	13.8	1,146	447	7.4	480	(2.2)	470	13.4	533	1,438	4.9	1,509	(2.1)	1,476	13.7	1,678
October	1,023	1.3	1,036	8.0	1,119	20.5	1,349	518	(3.7)	499	0.7	503	25.5	631	1,541	(0.3)	1,536	5.6	1,622	22.1	1,980
November	934	12.1	1,047	(15.6)	884	27.0	1,123	414	6.9	443	(6.8)	413	30.9	541	1,349	10.5	1,490	(13.0)	1,297	28.3	1,664
December	941	7.1	1,008	(8.1)	926	28.2	1,187	392	0.9	396	(2.0)	388	37.7	534	1,334	5.3	1,404	(6.4)	1,314	31.0	1,722
January	888	8.5	963	(7.6)	890	17.4	1,045	420	1.1	425	(4.2)	407	15.3	469	1,308	6.1	1,388	(6.6)	1,297	16.8	1,514
February	871	3.5	901	(7.7)	832	29.3	1,076	392	(2.9)	381	2.6	391	24.8	488	1,264	1.5	1,283	(4.6)	1,223	27.9	1,564
March	1,004	(30.5)	698	61.7	1,129	4.5	1,180	429	(12.6)	375	39.3	522	13.5	592	1,433	(25.1)	1,073	53.9	1,651	7.3	1,772
April	1,026	(49.8)	515	121.6	1,141	4.8	1,195	485	(28.9)	345	57.7	544	1.2	551	1,511	(43.1)	860	95.9	1,685	3.6	1,746
May	1,090	(25.5)	812	53.4	1,246	1.5	1,264	513	(14.9)	437	25.8	549	12.3	616	1,603	(22.1)	1,249	43.8	1,795	4.8	1,881
Total Year	$11,804	(4.8)	$11,237	9.0	$12,250	16.3	$14,244	$5,528	(3.9)	$5,314	6.4	$5,651	18.6	$6,700	$17,331	(4.5)	$16,551	8.2	$17,901	17.0	$20,944

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in October 2019.

Table 8
Northeast Extension Barrier Plazas - Monthly Transaction and Revenue Trends
Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Commercial Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Total Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	417	10.7	462	(45.5)	252	40.3	353	108	5.4	113	(5.8)	107	6.0	113	525	9.6	575	(37.7)	359	30.1	466
July	488	14.7	560	(40.8)	331	34.2	445	109	12.2	123	(9.8)	111	5.5	117	598	14.3	683	(35.2)	442	27.0	562
August	530	9.3	580	(39.9)	348	24.9	435	121	3.8	126	(14.9)	107	10.6	118	651	8.3	705	(35.4)	455	21.6	553
September	389	8.7	423	(27.6)	307	14.0	350	100	15.2	116	(4.1)	111	3.8	115	490	10.0	539	(22.5)	417	11.3	464
October	397	10.4	438	(29.9)	307	21.3	372	111	7.0	119	(4.4)	113	2.8	117	507	9.7	556	(24.5)	420	16.3	489
November	367	3.6	381	(36.9)	240	37.5	330	96	3.8	100	(3.0)	97	10.3	107	463	3.6	480	(29.9)	337	29.7	437
December	331	2.9	340	(42.2)	197	44.7	284	87	8.5	94	1.2	95	5.6	101	417	4.0	434	(32.8)	292	31.9	385
January	257	9.6	282	(31.8)	192	10.9	213	91	8.5	99	(9.2)	90	2.7	92	348	9.3	381	(25.9)	282	8.3	305
February	262	5.9	277	(37.0)	175	31.5	229	82	10.4	90	(10.3)	81	13.2	92	344	6.9	368	(30.5)	256	25.7	321
March	318	(35.2)	206	17.8	243	8.4	263	95	1.6	96	8.7	105	5.8	111	412	(26.7)	302	14.9	347	7.6	374
April	366	(77.1)	84	231.7	278	14.2	317	103	(20.7)	82	27.2	104	6.3	110	469	(64.8)	165	130.8	381	12.0	427
May	420	(58.1)	176	85.4	326	5.6	345	114	(16.0)	96	10.2	106	8.3	114	534	(49.1)	272	58.9	432	6.3	459
Total Year	4,542	(7.4)	4,208	(24.1)	3,196	23.2	3,937	1,216	2.9	1,252	(2.2)	1,225	6.6	1,306	5,759	(5.2)	5,460	(19.0)	4,421	18.6	5,243

Toll Revenue (in $1,000s)

Month	Passenger Cars 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Commercial Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Total Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$452	17.9	$533	(35.8)	$342	48.1	$507	$607	11.1	$674	5.1	$708	6.8	$756	$1,058	14.0	$1,207	(13.0)	$1,050	20.3	$1,263
July	524	27.8	669	(37.0)	422	56.7	661	595	20.5	717	0.3	719	8.5	780	1,119	23.9	1,386	(17.7)	1,141	26.3	1,441
August	583	18.8	693	(31.1)	477	23.7	591	666	12.4	749	(5.9)	705	11.3	785	1,250	15.4	1,442	(18.0)	1,183	16.3	1,376
September	435	15.0	500	(17.1)	415	22.1	507	566	22.9	695	4.4	726	6.3	771	1,001	19.5	1,195	(4.6)	1,141	12.1	1,278
October	424	22.4	519	(16.2)	435	30.0	565	636	14.9	731	3.4	756	7.8	815	1,060	17.9	1,250	(4.7)	1,191	15.9	1,380
November	392	12.2	440	(30.7)	305	46.0	445	574	10.5	634	1.4	643	16.6	749	965	11.2	1,073	(11.7)	947	26.1	1,194
December	342	14.1	390	(28.5)	279	49.5	417	524	15.1	603	9.2	658	13.9	750	866	14.7	993	(5.6)	937	24.5	1,167
January	302	21.2	366	(25.5)	272	22.6	334	578	15.5	667	(2.4)	651	11.5	726	879	17.5	1,033	(10.6)	924	14.8	1,060
February	306	14.0	349	(30.8)	241	52.0	367	525	15.9	609	(3.1)	590	22.1	721	831	15.2	958	(13.2)	832	30.8	1,088
March	373	(31.3)	256	37.5	352	15.7	407	612	6.6	652	16.6	760	12.8	858	984	(7.8)	908	22.5	1,112	13.8	1,265
April	432	(72.6)	118	246.2	409	20.5	492	649	(9.4)	588	25.6	738	12.6	831	1,081	(34.7)	706	62.5	1,147	15.4	1,324
May	490	(51.6)	237	93.6	459	15.4	530	696	(4.4)	665	11.7	743	14.9	854	1,186	(23.9)	902	33.3	1,203	15.1	1,384
Total Year	$5,054	0.3	$5,070	(13.0)	$4,409	32.1	$5,823	$7,227	10.5	$7,983	5.2	$8,398	11.9	$9,397	$12,281	6.3	$13,053	(1.9)	$12,806	18.8	$15,220

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

Table 9

Turnpike I-376 - Beaver Valley Expressway - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	621	3.7	644	(28.1)	463	22.0	565	127	(3.9)	122	(0.5)	122	6.0	129	748	2.4	766	(23.7)	585	18.7	694
July	643	2.8	661	(23.9)	503	18.2	594	129	(0.7)	128	(2.0)	125	2.3	128	771	2.2	788	(20.4)	628	15.1	722
August	677	(0.2)	675	(24.2)	512	14.4	585	142	(5.2)	134	(9.1)	122	7.1	131	818	(1.1)	809	(21.7)	634	13.0	716
September	619	2.0	632	(17.5)	521	6.3	554	122	2.6	125	2.4	128	(2.8)	124	741	2.1	756	(14.2)	649	4.5	679
October	657	2.0	670	(20.2)	534	7.6	575	140	(5.8)	132	(4.8)	125	4.0	130	796	0.6	801	(17.7)	660	6.9	705
November	591	0.5	593	(28.5)	425	20.9	513	112	(3.1)	108	(7.6)	100	16.6	117	703	(0.1)	702	(25.2)	525	20.1	630
December	582	0.4	585	(32.8)	393	28.1	503	99	(4.8)	94	(4.3)	90	19.8	108	681	(0.3)	678	(28.8)	483	26.5	611
January	519	5.1	545	(28.4)	391	6.8	417	101	(3.5)	97	(8.6)	89	3.7	92	620	3.7	642	(25.4)	479	6.2	509
February	508	2.0	518	(28.5)	370	14.1	423	95	(1.7)	93	(13.6)	80	14.4	92	603	1.4	611	(26.3)	451	14.1	515
March	596	(33.4)	397	23.5	491	5.0	515	109	(13.7)	94	20.2	113	6.5	120	705	(30.3)	491	22.8	604	5.3	635
April	613	(63.1)	226	127.2	513	4.3	535	125	(34.3)	82	49.9	123	(0.4)	123	738	(58.3)	308	106.6	636	3.4	658
May	660	(46.0)	356	52.7	544	1.2	550	133	(22.0)	103	14.0	118	12.4	132	793	(42.0)	460	44.0	662	3.2	683
Total Year	7,286	(10.7)	6,502	(13.0)	5,660	11.9	6,331	1,431	(8.3)	1,312	1.7	1,335	6.8	1,426	8,717	(10.3)	7,815	(10.5)	6,994	10.9	7,757

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$847	12.5	$953	(7.3)	$883	21.5	$1,073	$375	3.0	$386	13.9	$439	8.7	$478	$1,221	9.6	$1,339	(1.2)	$1,322	17.3	$1,550
July	875	15.1	1,007	(10.8)	898	35.1	1,213	373	7.5	401	8.4	434	13.4	493	1,248	12.8	1,408	(5.4)	1,332	28.1	1,706
August	935	7.3	1,003	(5.7)	947	19.1	1,127	415	0.4	417	4.5	435	13.5	494	1,350	5.2	1,420	(2.7)	1,382	17.3	1,621
September	861	11.1	957	(5.3)	907	13.2	1,027	357	10.4	394	13.1	446	1.5	453	1,218	10.9	1,351	0.1	1,353	9.4	1,480
October	892	16.8	1,042	1.6	1,059	14.6	1,213	410	2.7	421	9.5	461	8.8	502	1,302	12.3	1,463	3.8	1,519	12.9	1,715
November	803	34.9	1,083	(34.0)	715	38.4	989	326	15.5	376	(9.7)	340	28.1	435	1,129	29.3	1,459	(27.8)	1,054	35.1	1,424
December	784	34.7	1,057	(26.7)	774	28.9	999	286	14.4	327	(2.4)	319	29.2	412	1,070	29.3	1,384	(21.0)	1,094	29.0	1,411
January	763	29.3	987	(25.5)	735	19.7	880	307	10.5	340	(4.4)	325	9.6	356	1,071	23.9	1,327	(20.1)	1,060	16.6	1,236
February	755	21.3	916	(26.2)	676	33.7	904	302	7.8	326	(13.1)	283	28.5	364	1,057	17.4	1,242	(22.7)	960	32.2	1,268
March	900	(29.2)	637	53.0	975	8.8	1,061	356	(8.3)	327	28.0	418	14.0	477	1,257	(23.3)	964	44.5	1,393	10.3	1,537
April	920	(56.9)	397	152.5	1,001	12.5	1,127	403	(25.7)	299	51.8	455	8.2	492	1,323	(47.4)	696	109.2	1,456	11.2	1,619
May	984	(33.2)	657	67.7	1,102	4.4	1,151	426	(11.9)	376	18.6	446	17.3	523	1,411	(26.7)	1,033	49.8	1,548	8.1	1,674
Total Year	$10,321	3.6	$10,697	(0.2)	$10,671	19.6	$12,763	$4,337	1.2	$4,389	9.4	$4,802	14.1	$5,478	$14,657	2.9	$15,086	2.6	$15,473	17.9	$18,241

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

Table 10

Turnpike I-576 - Southern Beltway - Findlay Connector - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	140	0.5	140	(34.4)	92	33.9	123	22	54.2	33	(5.1)	32	16.7	37	161	7.7	174	(28.7)	124	29.5	160
July	140	5.8	148	(33.7)	98	26.4	124	22	23.0	27	8.7	30	17.5	35	162	8.1	175	(27.1)	128	24.3	159
August	139	7.4	149	(30.6)	104	19.0	123	30	(2.3)	29	4.0	31	15.2	35	169	5.7	179	(24.9)	134	18.1	158
September	124	10.8	137	(23.7)	105	11.7	117	31	(3.2)	30	11.4	33	10.0	36	155	8.0	167	(17.4)	138	11.3	154
October	139	8.6	151	(25.8)	112	166.0	298	25	38.7	35	(16.2)	29	105.8	61	164	13.2	186	(24.0)	141	153.4	358
November	128	4.0	133	(27.6)	96	349.4	433	23	76.8	41	(30.1)	29	233.7	96	151	15.3	174	(28.2)	125	322.7	529
December	124	6.2	132	(29.3)	93	378.1	445	22	70.5	37	(28.7)	27	306.2	108	146	15.8	169	(29.2)	120	362.2	553
January	118	5.9	125	(29.0)	89	300.5	356	22	75.4	39	(11.8)	35	176.2	96	141	17.0	165	(24.9)	124	265.6	452
February	115	3.3	118	(30.2)	83	348.4	370	22	67.1	37	0.0	37	157.4	95	137	13.7	155	(23.0)	120	289.2	466
March	131	(26.9)	96	13.0	108	327.2	463	36	(5.6)	34	(3.6)	33	265.8	120	167	(22.3)	130	8.7	141	312.9	583
April	129	(56.8)	56	100.8	112	337.1	490	38	(45.4)	21	89.7	40	204.5	121	168	(54.2)	77	97.8	152	302.4	611
May	141	(46.5)	75	55.7	117	357.0	536	36	(33.3)	24	41.1	34	287.2	132	177	(43.8)	99	52.2	151	341.3	668
Total Year	1,567	(6.8)	1,461	(17.2)	1,209	220.8	3,879	330	17.7	389	(0.2)	388	150.4	972	1,898	(2.5)	1,850	(13.6)	1,598	203.7	4,852

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$157	11.8	$175	(21.7)	$137	28.6	$177	$56	67.7	$94	14.3	$108	21.6	$131	$213	26.6	$270	(9.1)	$245	25.6	$308
July	162	16.3	188	(29.9)	132	47.7	195	57	38.0	79	26.1	100	25.1	125	219	22.0	267	(13.3)	232	38.0	320
August	168	9.5	184	(19.1)	149	21.7	181	79	6.4	85	25.6	106	17.7	125	247	8.5	268	(5.0)	255	20.0	306
September	147	23.0	181	(21.9)	141	17.3	166	82	4.3	86	26.0	108	18.3	128	230	16.3	267	(6.5)	250	17.8	294
October	164	18.1	193	(11.6)	171	162.0	447	68	46.8	100	(2.1)	98	129.5	225	232	26.5	293	(8.4)	269	150.1	673
November	148	11.9	166	(24.7)	125	463.4	705	61	103.6	124	(24.2)	94	276.5	353	209	38.6	290	(24.5)	219	383.2	1,058
December	145	18.1	171	(13.4)	148	417.9	766	57	86.9	107	(20.4)	86	389.9	419	202	37.7	278	(16.1)	233	407.6	1,185
January	147	20.1	177	(24.7)	133	386.1	647	61	114.8	131	(2.5)	127	194.1	375	208	47.8	307	(15.3)	260	292.1	1,021
February	144	12.1	162	(26.1)	120	447.3	655	63	97.4	125	11.1	138	168.9	372	208	38.0	286	(9.9)	258	298.0	1,027
March	170	(31.3)	116	43.8	167	348.2	751	108	5.4	114	4.0	119	290.8	464	278	(17.0)	231	24.1	286	324.4	1,214
April	165	(49.9)	83	110.3	174	371.0	817	112	(37.1)	71	94.4	138	246.3	476	277	(44.7)	153	103.0	311	315.9	1,294
May	179	(37.1)	113	59.6	180	397.9	894	104	(23.3)	80	56.9	125	311.1	514	283	(32.0)	192	58.5	305	362.3	1,408
Total Year	$1,895	0.7	$1,909	(6.9)	$1,777	260.3	$6,400	$911	31.3	$1,195	12.7	$1,347	175.3	$3,708	$2,806	10.6	$3,104	0.6	$3,123	223.6	$10,108

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion and vehicle classification changes were implemented in June 2018.

(5) The I-576 tolling configuration was changed from six ramp tolls to two mainline toll gantries at the time of AET conversion in June 2018.

(6) A 13.2 mile extension of the Southern Beltway opened on October 15, 2021.

Table 11

Delaware River Bridge - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	645	28.4	828	(35.8)	532	51.6	806	115	8.4	124	5.4	131	12.7	148	760	25.4	953	(30.5)	662	43.9	953
July	664	28.4	853	(25.8)	633	38.9	879	113	17.6	132	2.0	135	5.0	142	777	26.8	985	(22.1)	768	32.9	1,021
August	689	24.0	855	(17.9)	701	26.2	885	120	11.3	134	(2.1)	131	10.7	145	810	22.1	988	(15.8)	832	23.8	1,030
September	616	21.6	748	(15.2)	635	23.5	784	106	17.8	125	7.2	134	8.6	145	722	21.0	873	(12.0)	769	20.9	929
October	700	8.6	760	(15.4)	643	27.3	819	127	10.1	140	(0.9)	139	8.3	150	827	8.9	900	(13.1)	782	23.9	969
November	699	9.2	763	(27.0)	557	42.9	796	117	8.8	127	(0.2)	127	13.6	144	815	9.1	890	(23.2)	683	37.5	939
December	720	6.0	763	(33.2)	510	43.4	732	110	16.3	128	1.6	130	10.1	143	830	7.4	891	(28.2)	640	36.7	875
January	612	8.8	666	(22.8)	514	8.1	555	115	11.5	129	(3.2)	124	3.9	129	727	9.2	794	(19.7)	638	7.2	684
February	586	11.6	653	(34.9)	426	44.3	614	104	13.8	119	(7.4)	110	17.2	129	690	11.9	772	(30.7)	535	38.7	743
March	707	(34.6)	462	30.6	604	16.4	703	117	9.4	128	11.4	143	7.4	153	824	(28.4)	591	26.4	747	14.7	856
April	746	(72.0)	209	216.0	660	19.5	788	125	(15.0)	106	31.3	139	5.7	147	870	(63.8)	315	153.9	799	17.1	935
May	799	(53.3)	373	105.0	764	6.5	814	132	(10.5)	118	17.5	139	8.5	150	931	(47.3)	491	83.9	903	6.8	964
Total Year	8,182	(3.0)	7,934	(9.5)	7,178	27.8	9,174	1,400	7.8	1,509	4.7	1,581	9.2	1,725	9,582	(1.5)	9,443	(7.3)	8,758	24.4	10,899

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$3,291	34.5	$4,425	(29.1)	$3,139	58.6	$4,978	$2,043	14.3	$2,335	16.2	$2,713	16.9	$3,171	$5,334	26.7	$6,760	(13.4)	$5,851	39.3	$8,149
July	3,381	36.9	4,627	(21.7)	3,624	52.3	5,520	1,998	24.2	2,482	10.8	2,750	11.9	3,076	5,379	32.2	7,109	(10.4)	6,374	34.9	8,597
August	3,557	31.8	4,689	(12.8)	4,087	32.1	5,400	2,149	17.7	2,529	6.8	2,702	14.5	3,094	5,706	26.5	7,218	(6.0)	6,788	25.1	8,495
September	3,165	27.8	4,045	(9.0)	3,682	29.9	4,782	1,916	23.6	2,368	15.4	2,734	13.5	3,103	5,081	26.2	6,413	0.0	6,416	22.9	7,885
October	3,560	16.2	4,137	(6.1)	3,886	36.0	5,287	2,275	16.5	2,650	9.0	2,889	14.8	3,315	5,835	16.3	6,787	(0.2)	6,775	27.0	8,602
November	3,577	16.2	4,157	(25.2)	3,110	54.4	4,803	2,076	15.9	2,405	6.8	2,568	18.9	3,052	5,653	16.1	6,562	(13.5)	5,677	38.3	7,854
December	3,631	11.9	4,061	(23.0)	3,126	47.2	4,602	1,968	22.4	2,409	12.6	2,713	16.3	3,154	5,599	15.6	6,470	(9.8)	5,839	32.8	7,756
January	3,293	19.3	3,927	(19.3)	3,169	20.4	3,817	2,159	19.5	2,580	5.2	2,715	10.2	2,993	5,452	19.4	6,508	(9.6)	5,885	15.7	6,809
February	3,164	19.3	3,776	(31.3)	2,593	60.1	4,153	1,967	21.6	2,392	(0.3)	2,384	25.0	2,981	5,131	20.2	6,168	(19.3)	4,978	43.3	7,134
March	3,848	(32.9)	2,583	45.5	3,758	23.4	4,638	2,230	13.8	2,538	22.7	3,114	12.8	3,512	6,078	(15.7)	5,122	34.2	6,872	18.6	8,150
April	4,030	(69.5)	1,230	235.9	4,132	26.2	5,217	2,340	(5.7)	2,206	37.2	3,027	10.8	3,354	6,369	(46.0)	3,437	108.3	7,159	19.7	8,571
May	4,330	(49.2)	2,202	117.3	4,784	12.9	5,403	2,482	0.1	2,484	22.0	3,031	14.1	3,459	6,812	(31.2)	4,686	66.8	7,815	13.4	8,862
Total Year	$42,826	2.4	$43,859	(1.8)	$43,090	36.0	$58,600	$25,603	14.7	$29,379	13.5	$33,339	14.8	$38,264	$68,429	7.0	$73,239	4.4	$76,429	26.7	$96,863

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

Table 12

Gateway Toll Plaza - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Commercial Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Total Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	324	(2.9)	315	(30.9)	217	37.4	299	88	(3.7)	85	5.7	90	13.9	102	412	(3.1)	400	(23.1)	307	30.5	401
July	358	(4.3)	342	(23.6)	261	26.5	331	84	(2.0)	83	12.1	93	8.3	100	442	(3.9)	425	(16.6)	354	21.7	431
August	348	(3.2)	337	(21.4)	265	19.7	317	93	(5.5)	87	8.5	95	9.9	104	441	(3.7)	425	(15.3)	360	17.1	421
September	283	(5.3)	268	(13.5)	232	14.5	265	83	0.8	83	12.2	93	9.3	102	365	(3.9)	351	(7.4)	325	13.0	367
October	279	0.7	281	(17.9)	231	14.1	263	92	5.2	96	0.4	97	7.2	104	371	1.8	378	(13.2)	328	12.0	367
November	275	(2.9)	267	(29.0)	190	34.8	256	83	2.8	85	3.4	88	9.3	96	357	(1.5)	352	(21.2)	277	26.7	351
December	263	6.7	280	(38.8)	172	40.0	240	77	8.5	83	7.3	89	7.2	96	340	7.1	364	(28.2)	261	28.8	336
January	190	9.0	207	(20.5)	165	5.6	174	81	7.3	87	0.1	87	2.8	89	271	8.5	294	(14.4)	252	4.6	264
February	185	7.2	198	(28.8)	141	19.4	168	76	9.3	83	(3.7)	80	10.7	89	261	7.8	281	(21.3)	221	16.3	257
March	249	(35.4)	161	25.9	202	10.1	223	85	5.9	90	13.1	102	5.9	108	334	(24.9)	251	21.3	304	8.7	331
April	253	(69.3)	78	193.9	229	6.6	244	86	(10.4)	77	27.6	98	2.2	100	339	(54.4)	155	111.1	327	5.3	344
May	295	(49.7)	148	80.3	268	3.0	276	90	(10.0)	81	21.7	99	6.9	106	385	(40.4)	230	59.6	366	4.1	381
Total Year	3,302	(12.7)	2,883	(10.8)	2,572	18.8	3,056	1,018	0.4	1,022	8.8	1,111	7.7	1,197	4,320	(9.6)	3,905	(5.7)	3,683	15.5	4,253

Toll Revenue (in $1,000s)

Month	Passenger Cars 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Commercial Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Total Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$2,023	2.6	$2,075	(22.1)	$1,616	33.3	$2,155	$1,813	1.8	$1,845	9.0	$2,012	17.5	$2,364	$3,837	2.2	$3,920	(7.4)	$3,628	24.6	$4,519
July	2,231	1.7	2,269	(22.7)	1,754	49.0	2,614	1,787	3.4	1,848	8.3	2,002	17.2	2,345	4,018	2.5	4,117	(8.8)	3,756	32.0	4,960
August	2,161	1.9	2,203	(7.0)	2,048	13.3	2,321	1,920	(0.1)	1,917	9.6	2,102	14.3	2,402	4,081	1.0	4,120	0.7	4,150	13.8	4,723
September	1,745	0.7	1,757	(6.4)	1,645	24.3	2,045	1,720	5.3	1,811	12.6	2,039	15.5	2,354	3,465	3.0	3,568	3.2	3,683	19.4	4,399
October	1,708	(0.5)	1,699	6.0	1,800	17.9	2,123	1,877	5.8	1,986	10.2	2,189	13.4	2,482	3,584	2.8	3,685	8.3	3,989	15.4	4,605
November	1,675	3.3	1,730	(28.5)	1,237	51.5	1,873	1,685	8.9	1,835	5.4	1,933	15.6	2,235	3,359	6.1	3,565	(11.1)	3,170	29.6	4,108
December	1,597	28.8	2,057	(36.2)	1,312	38.3	1,814	1,571	15.2	1,811	11.8	2,025	13.3	2,294	3,169	22.1	3,868	(13.7)	3,336	23.1	4,109
January	1,206	28.3	1,547	(18.6)	1,259	23.8	1,558	1,746	7.7	1,881	9.1	2,051	9.9	2,253	2,952	16.1	3,427	(3.4)	3,310	15.2	3,811
February	1,187	15.4	1,370	(25.6)	1,019	34.1	1,366	1,657	7.9	1,787	5.5	1,885	18.8	2,239	2,844	11.0	3,157	(8.0)	2,904	24.1	3,605
March	1,626	(35.1)	1,054	37.0	1,445	20.8	1,745	1,848	3.7	1,915	24.1	2,377	12.7	2,680	3,473	(14.5)	2,970	28.7	3,822	15.8	4,426
April	1,646	(64.7)	581	213.7	1,822	7.4	1,957	1,859	(6.6)	1,737	34.0	2,327	7.3	2,497	3,505	(33.9)	2,318	79.0	4,149	7.4	4,454
May	1,928	(50.5)	954	106.6	1,970	11.7	2,200	1,940	(6.3)	1,817	27.5	2,317	13.6	2,632	3,868	(28.4)	2,771	54.7	4,287	12.7	4,832
Total Year	$20,733	(6.9)	$19,295	(1.9)	$18,926	25.6	$23,771	$21,422	3.6	$22,191	13.8	$25,259	13.9	$28,780	$42,155	(1.6)	$41,486	6.5	$44,185	18.9	$52,551

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in October 2019.

Actual and Assumed Toll Rate Increases

Annual toll rate increases are assumed to occur on the entire Turnpike System. The toll rate increases are assumed to occur at 12:01 AM on the first Sunday after January 1 of each year unless otherwise noted. **Table 13** presents the annual percent increases in toll rates for E-ZPass, video, and registered video accounts (RVA) from calendar year 2021 through 2051.

Table 13
Actual and Assumed Percent Changes in Turnpike System Toll Rates
Pennsylvania Turnpike System

Calendar Year (2)	Percent Change in Turnpike System Toll Rates (1)		
	E-ZPass	Video	Registered Video Account (RVA)
2021 (3)	6.00	6.00/45.00 (4)	-15.00 (5)
2022 (3)	5.00 (6)	5.00 (6)	5.00 (6)
2023	5.00	5.00	5.00
2024	5.00	5.00	5.00
2025	5.00	5.00	5.00
2026	4.00	4.00	4.00
2027	3.50	3.50	3.50
2028	3.00	3.00	3.00
2029	3.00	3.00	3.00
2030	3.00	3.00	3.00
2031	3.00	3.00	3.00
2032	3.00	3.00	3.00
2033	3.00	3.00	3.00
2034	3.00	3.00	3.00
2035	3.00	3.00	3.00
2036	3.00	3.00	3.00
2037	3.00	3.00	3.00
2038	3.00	3.00	3.00
2039	3.00	3.00	3.00
2040	3.00	3.00	3.00
2041	3.00	3.00	3.00
2042	3.00	3.00	3.00
2043	3.00	3.00	3.00
2044	3.00	3.00	3.00
2045	3.00	3.00	3.00
2046	3.00	3.00	3.00
2047	3.00	3.00	3.00
2048	3.00	3.00	3.00
2049	3.00	3.00	3.00
2050	3.00	3.00	3.00
2051	3.00	3.00	3.00

(1) Toll rate increases are the same for all facilities and vehicle classes, except where otherwise noted.
(2) Except where otherwise indicated, toll rate increases are applied on or near January 1.
(3) Toll rate increases are actual.
(4) All rates increased by 6%. Video rates increased by an additional 45% on the Ticket System and Mon Fayette Expressway (Turnpike 43) to bring the video rate premium in line with those on PTC's other AET facilities.
(5) Registered video accounts are a new billing option that provides a 15% discount to video customers who pre-register their vehicle and provide electronic payment information.
(6) No increase on the Southern Beltway.

Rate increase assumptions are unchanged since the 2021 Bring Down Letter. With the suspension of cash collection in March and June of 2020 on the Ticket System and MFE, respectively, the Turnpike System now operates entirely under AET. As such, there are no cash rates shown in Table 13 for 2021 and beyond. As discussed above, to make the toll differential between E-ZPass and video rates similar on all toll facilities, in addition to a six-percent toll increase in January 2021, video rates on the Ticket System and MFE also increased by an additional 45 percent. Toll adjustment assumptions for the years 2023 and beyond are proposed and have not yet been formally approved by the PTC Board.

An additional rate tier, registered video account (RVA), has also been added to the rate schedule beginning in 2021. RVA accounts allow for a 15-percent discount off of the video rate for video customers who pre-register their vehicle with PTC and provide electronic payment information. This will allow PTC to process payments automatically without having to send billing invoices.

Actual and Assumed E-ZPass Penetration Rates

Table 14 presents the actual and assumed annual E-ZPass penetration rates from calendar year 2021 through 2051. The first three columns show the E-ZPass market share assumptions for the 2022 Bring Down Letter. These were adjusted slightly on a facility-by-facility basis, by the amount shown in the three rightmost columns, over assumptions used in the 2021 Bring Down Letter.

As shown, assumed E-ZPass market shares in the current analysis are noticeably different from those assumed in the 2021 Bring Down Letter. In both 2021 and thus far in 2022, actual PC and CV E-ZPass market share have been significantly lower than previously estimated. This has resulted in new 2022 estimates being 9.1 (PC) and 6.6 (CV) percent lower than previous estimates. One reason for the lower-than-expected rate of E-ZPass market share is the increased prevalence of telecommuting since the start of the pandemic. Due to consistent users of a facility, such as commuters, being more likely to be E-ZPass customers, the decreased share of commuters on the PTC system has resulted in the remaining user base having lower overall rates of E-ZPass usage.

A second reason for the decline in E-ZPass market share is the reclassification of some types of transactions that has occurred since AET implementation on each of the Turnpike's constituent systems. Any transactions that are not immediately processed as successful roadside E-ZPass transactions are classified as video transactions. However, about one-third of video transactions are actually VTOLLs, which are transactions made by E-ZPass account holders where the transponder is not read properly at the roadside. While these transactions are later linked to an E-ZPass account, they are not counted towards E-ZPass penetration rates.

Since the beginning of the pandemic and the implementation of system-wide AET in the spring of 2020, the system-wide share of VTOLL transactions has increased notably, as illustrated in **Figure 3**. In this figure the yellow line represents the monthly share of system-wide E-ZPass transactions, which declined sharply between April and July of 2020 and has yet to recover. Conversely, the blue line represents the system-wide share of combined E-ZPass and VTOLL transactions. This reflects the true customer base that has an E-ZPass transponder, as by definition all VTOLL transactions must be conducted by an E-ZPass customer. While this larger category also experienced a decline in the spring and summer of 2020, it rebounded more quickly and the long-term trend (represented by the dotted blue line) remains much closer to its pre-pandemic level.

Furthermore, prior to AET implementation, Toll By Plate (video) non-revenue transactions had been excluded from total transaction statistics. These video transactions are now included in the total number of transactions, thus lowering E-ZPass penetration rates.

Over the rest of the forecast period, the E-ZPass market share for both PCs and CVs grows faster than previously assumed, but because of the significant differential between the two forecasts in 2022, E-ZPass market share is estimated to be 5.5 percent lower overall in 2050 than in the previous forecast.

Figure 3
Historic E-ZPass and VToll Transactions
All Vehicles, Total PTC System

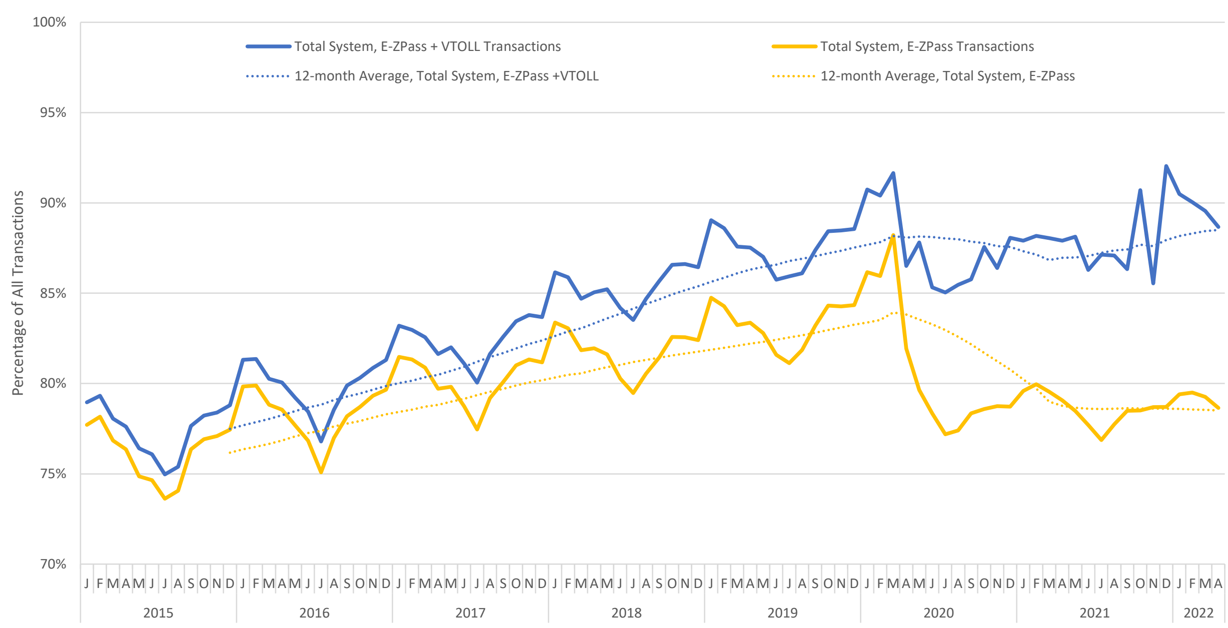


Table 14
Actual and Assumed Percent E-ZPass Penetration
Pennsylvania Turnpike System

Calendar Year		E-ZPass Penetration Rates: 2022 Bring Down Letter: Cars	Trucks	Total	Difference from 2021 Bring Down Letter: Cars	Trucks	Total
2021	(1)	76.0	87.8	78.0	-9.2	-5.4	-8.3
2022		76.8	87.2	78.6	-9.1	-6.6	-8.5
2023		78.3	88.8	80.1	-8.3	-5.4	-7.7
2024		79.9	89.8	81.4	-7.4	-4.9	-7.0
2025		81.3	90.5	82.7	-6.6	-4.6	-6.2
2026		82.0	91.2	83.5	-6.3	-4.3	-6.0
2027		82.6	91.8	84.0	-6.2	-4.0	-5.8
2028		82.7	92.4	84.3	-6.4	-3.8	-6.0
2029		82.9	92.9	84.5	-6.6	-3.3	-6.1
2030		83.0	93.5	84.7	-6.7	-2.8	-6.1
2031		83.2	93.9	84.9	-6.7	-2.4	-6.0
2032		83.3	94.4	85.1	-6.7	-2.0	-5.9
2033		83.5	94.8	85.3	-6.6	-1.6	-5.8
2034		83.6	95.0	85.4	-6.6	-1.5	-5.7
2035		83.7	95.1	85.5	-6.5	-1.4	-5.7
2036		83.8	95.2	85.6	-6.5	-1.4	-5.6
2037		83.9	95.2	85.7	-6.5	-1.4	-5.6
2038		84.0	95.3	85.8	-6.4	-1.4	-5.6
2039		84.1	95.3	85.9	-6.4	-1.4	-5.5
2040		84.2	95.4	86.0	-6.3	-1.4	-5.5
2041		84.2	95.4	86.0	-6.3	-1.4	-5.5
2042		84.3	95.4	86.1	-6.3	-1.4	-5.5
2043		84.3	95.5	86.2	-6.3	-1.4	-5.5
2044		84.4	95.5	86.2	-6.3	-1.4	-5.5
2045		84.4	95.5	86.3	-6.3	-1.4	-5.5
2046		84.5	95.6	86.3	-6.3	-1.4	-5.5
2047		84.5	95.6	86.4	-6.3	-1.4	-5.5
2048		84.5	95.6	86.4	-6.3	-1.4	-5.5
2049		84.6	95.7	86.5	-6.4	-1.4	-5.5
2050		84.6	95.7	86.5	-6.4	-1.4	-5.5
2051		84.7	95.8	86.6			

(1) 2021 E-ZPass penetration rates are actual for the 2022 Bring Down Letter only.

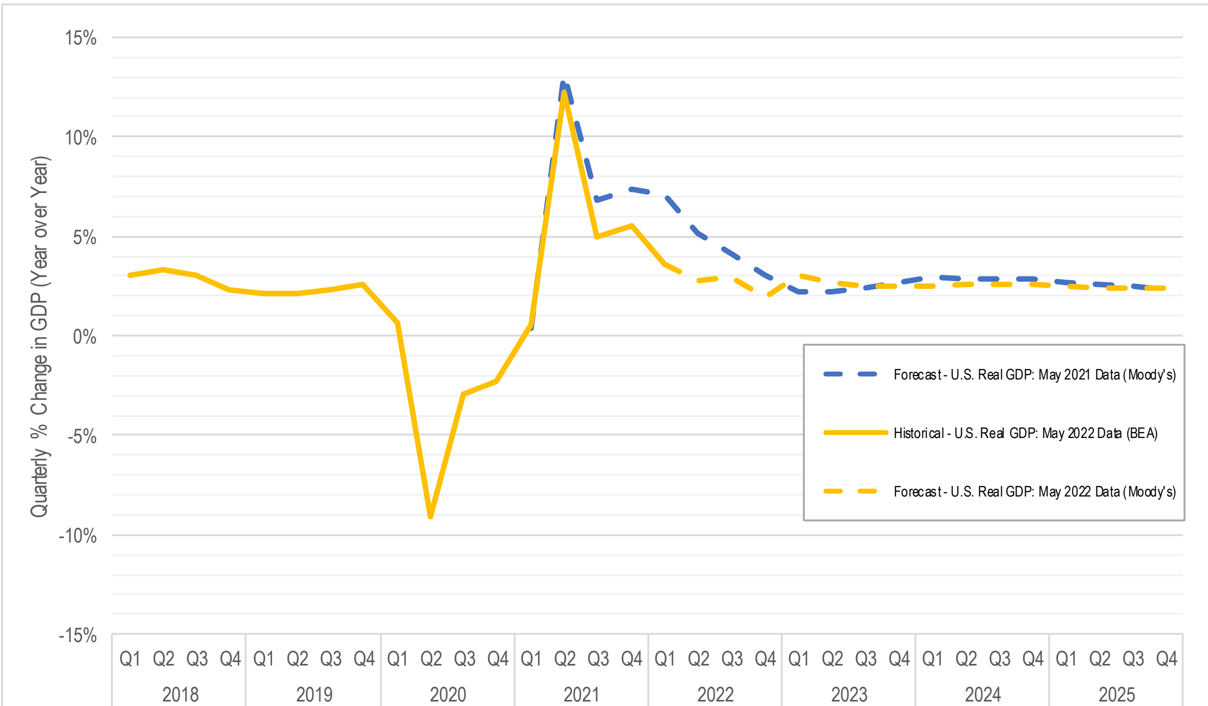
Summary of Changes in Future Year Estimates for U.S. Gross Domestic Product and Pennsylvania Gross State Product

This section presents a comparison of the Gross Domestic Product (GDP) and Pennsylvania Gross State Product (GSP) information available for the 2022 Bring Down Letter with updated forecasts for both measures from Moody's Analytics. This information was a key input in developing estimated growth forecasts for the Turnpike System. All GDP and GSP figures in this section refer to year-over-year comparisons. For example, the fourth quarter 2021 percent change would reflect the fourth quarter of 2021 versus the fourth quarter of 2020.

Figure 4 shows actual and estimated GDP at the time of the 2021 Bring Down Letter as well as the revised figures based on updated Moody's Analytics' forecasts as of May 2022. Since the 2021 Bring Down Letter, actual GDP growth figures have been released for an additional four quarters: the last three quarters of 2021 and the first quarter of 2022. While year-over-year GDP grew in each of these quarters, each also had lower growth than expected at the time of the 2021 Bring Down Letter, including a shrinking GDP between the fourth quarter of 2021 and the first quarter of 2022. The gap between actual and forecast GDP increased each quarter, growing from a 0.9 percent shortfall (12.2 percent actual compared to 13.1 percent forecast) in the second quarter of 2021 to a 3.5 percent shortfall (3.6 percent actual compared to 7.1 percent forecast) in the first quarter of 2022. This indicates that while some economic indicators, such as unemployment, remain strong, overall economic growth has slowed compared to May 2021.

Accordingly, GDP growth through the end of 2022 is now expected to be lower than previously forecast. However, for the first three quarters of 2023 growth is now expected to be higher than previously predicted, largely because GDP growth in 2022 is now expected to be less robust. Longer term, in the latest May 2022 forecast, year-over-year GDP is expected to grow at a steady rate of between 2.4 and 2.6 percent throughout 2024 and 2025, which is a rate similar to, although slightly below, the previously forecast.

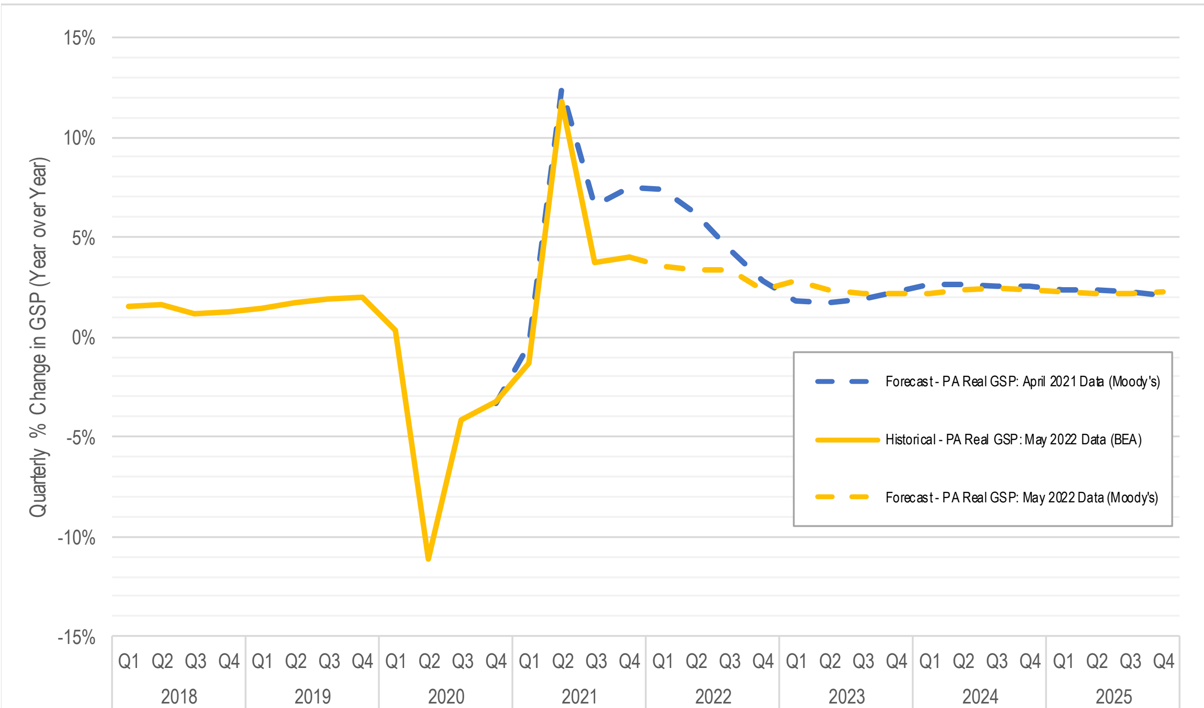
Figure 4
Comparison of May 2021 to May 2022 Quarterly Growth Estimates of U.S. Gross Domestic Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (May 2021 and May 2022 Releases)

Figure 5 shows GSP trend and forecast data for Pennsylvania. However, because GSP data lags GDP data, GSP is actual through only the fourth quarter of 2021. Like GDP, actual GSP growth during 2021 was weaker than predicted at the time of the 2021 Bring Down Letter. First quarter 2021 GSP contracted more than forecast in April 2021 (falling 1.3 percent compared to the 0.4 percent decline forecast) and grew more slowly than forecast in the remaining three quarters of 2021. Similarly to GSP, growth in 2022 is now expected to be notably slower than previously forecast, with slightly stronger growth in 2023 and very similar, albeit slightly lower, growth than previously forecast in both 2024 and 2025.

Figure 5
Comparison of April 2021 and May 2022 Quarterly Growth Estimates of Pennsylvania Gross State Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (April 2021 and May 2022 Releases)

Summary of Trends in Fuel Prices

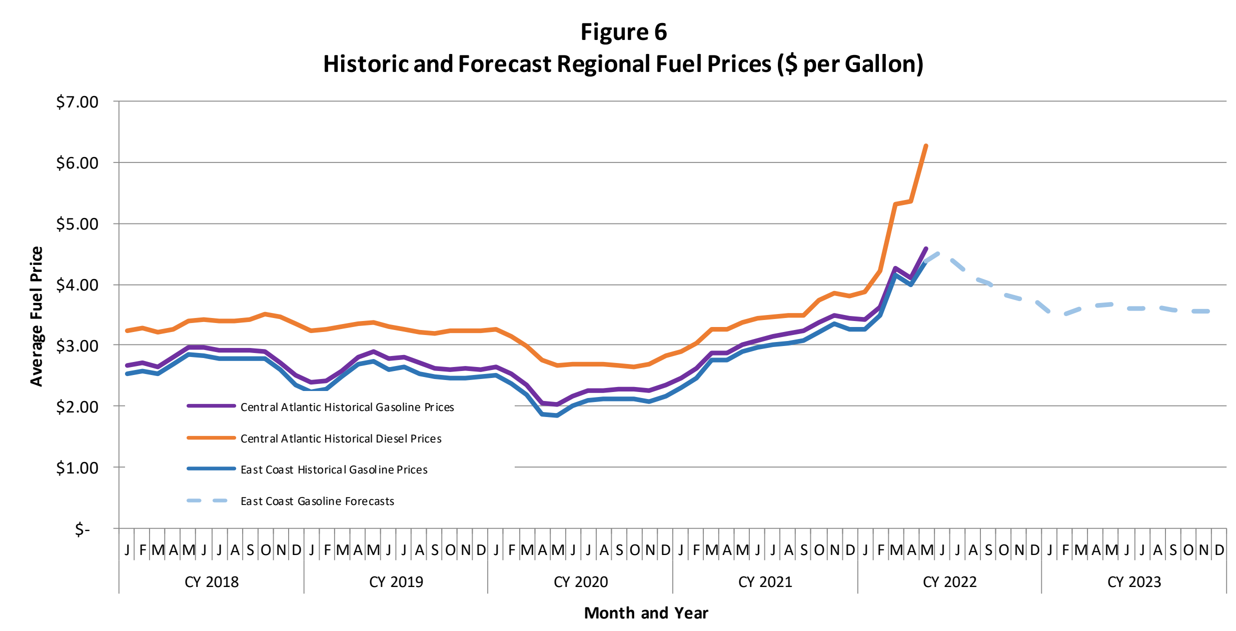
Figure 6 portrays actual gasoline and diesel prices for the central Atlantic region from January 2018 through May 2022. Actual gasoline prices for the east coast are also shown. They closely mirror those for the central Atlantic gasoline prices and are shown here because the Energy Information Administration (EIA) only provides monthly forecasts for this larger region. Figure 6 shows the monthly gasoline price forecast through the end of 2023.

As shown, central Atlantic gasoline and diesel prices have followed generally similar trends throughout this period and have moved in tandem. Prices for both increased slowly in early 2018, reaching a high of $2.97 per gallon for gasoline in May 2018. Diesel prices reached a high of $3.52 per gallon in October 2018. Prices of both gasoline and diesel fell in late 2018 and early 2019. Between February and May 2019 prices rose, with gasoline prices increasing more rapidly than diesel prices. For the remainder of 2019, prices decreased slightly, with diesel prices remaining very stable and gasoline prices experiencing slightly more volatility.

However, in 2020 prices fell sharply, first in response to an early March announcement that Saudi Arabia and Russia would increase oil supply in the coming months, and second, by an extreme worldwide economic slowdown in response to the COVID-19 pandemic. As a result, May 2020 per gallon prices in the Central Atlantic region fell to $2.03 and $2.68 for gasoline and diesel, respectively. Prices then stayed relatively flat for the next several months before beginning to rise quickly through the winter of 2020-21 as the economic effects of the pandemic waned. Prices continued to rise, albeit it a slower rate, through the spring, summer, and fall of 2021. Price increases briefly leveled off in the winter of 2021-22 before sharply increasing in February and, especially, March 2022 in response to uncertainty and disruptions in supply caused by the war in Ukraine and subsequent sanctions against Russia. Rising prices briefly abated in April before another sharp increase in May. During this month, nominal prices reached a high of $4.59 per gallon of gasoline and $6.26 per gallon of diesel in the central Atlantic region.

As noted above, the EIA only forecasts future gasoline prices for the east coast, which is a region that is larger than, and wholly encompasses, the central Atlantic region. Historically, east coast region prices move in tandem with central Atlantic prices but are approximately 10 to 20 cents lower. East coast gasoline prices are forecast to continue rising in June before falling throughout the remainder of 2022 and the first few months of 2023. Prices are then forecast to remain generally stable throughout 2023, at between $3.51 and $3.66 per gallon. Although these prices are significantly lower than current prices, they are also significantly higher than those experienced in the few years prior to 2022. Based on historical trends, central Atlantic prices can be expected to follow the same pattern, but at slightly higher prices.

The May 2022 gasoline prices are about $1.83 higher than forecast at the time of the 2021 Bring Down Letter. Over the remainder of 2022, the current forecast is between $1.23 and $1.94 higher each month than the previous forecast. (A 2023 forecast was not available at the time of the 2021 Bring Down Letter.) The rapid increase in actual gasoline prices over the past few months and forecast slow decline of those prices in the coming 18 months, coupled with the highest inflation experienced in the past 40 years may be tempering desire for travel while these conditions persist, resulting in a less robust economic recovery than expected at the time of the 2021 Bring Down Letter. This largely aligns with the revised GDP and GSP forecasts discussed previously.



Source: U.S. Energy Information Administration, release dates 6/13/2022 (historical) and 6/7/2022 (forecast).
Note: Retail Prices in USD for Regular All Formulations Retail Gasoline and Number 2 Diesel.
Central Atlantic states include Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania.
East Coast states include Central Atlantic and New England states, Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia.

Consumer Confidence

Consumer confidence is an important measure in that it highlights consumer's confidence in making purchases, their willingness to travel more, etc. Higher consumer confidence spurs demand for various goods and services, and it can be inferred that higher demand results in higher traffic on the roadways. Consumer confidence scores are indexed to the year 1985, for which consumer confidence equaled 100.

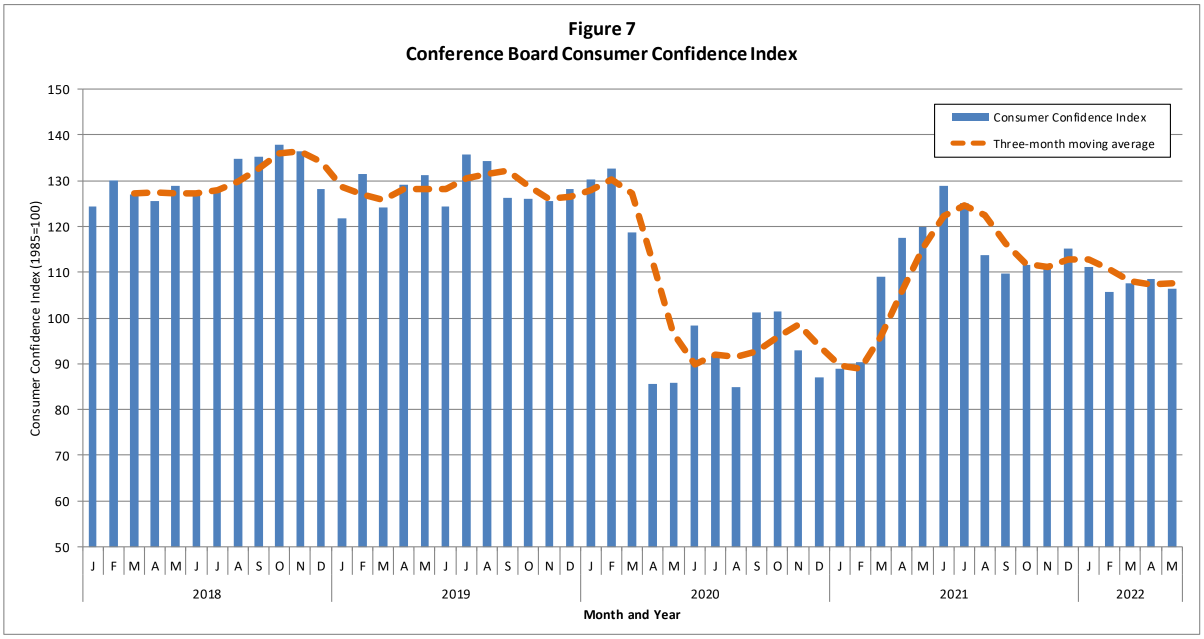
Figure 7 shows the Conference Board Consumer Confidence Index for the period between January 2018 and May 2022. Individual blue bars show index values for each month while the dotted line shows the three-month moving average. Consumer confidence exceeded 120 at the start of 2018 and rose throughout the year, peaking at a high of 137.9 in October 2018, which was the highest level of consumer confidence since September 2000. In 2019, consumer confidence fell slightly compared to 2018 but remained strong compared to historical levels.

Through the first two months of 2020, consumer confidence remained strong, increasing slightly since the end of 2019. However, since then, consumer confidence has fluctuated significantly, generally mirroring the national narrative regarding efforts to contain the COVID-19 pandemic. In 2020 consumer confidence declined sharply in March and even more significantly in April, when it fell to 85.7, reflecting the widespread economic shutdowns that were put in place as a result of the

COVID-19 pandemic. Consumer confidence rose as economic and travel restrictions were lifted in May and June, when it reached 98.3, indicating that consumers' expectations for the economy may have been stabilizing. However, it fell again in July and August, bottoming out at 84.8, reflecting increased COVID-19 infection rates that occurred in much of the southern and western U.S. as those states further loosened restrictions on commercial activities and people moved activities indoors to air-conditioned spaces. The Index once again rose in September and October, reaching 101.4, which was its highest level since March. However, consumer confidence fell to 87.1 by December as infection rates and deaths from COVID-19 reached their highest levels at any point during the pandemic.

In 2021, as the nationwide vaccination campaign began and infection rates began to stabilize, consumer confidence rose slightly to 95.2 in February before jumping significantly to 114.9 in March, its highest level in a year. Consumer confidence rose incrementally in each of the following months, reaching 128.9 in June, which is equivalent to the fairly consistent levels of pre-COVID consumer confidence experienced from 2018 to early 2020. The Index declined in each of the next three months, falling to 109.8 in September, which may be reflective of consumers' concern with the nationwide rise in COVID-19 cases that occurred during the summer due to the Delta variant. In October and November, consumer confidence remained relatively flat, rising slightly in both months to 111.9 in November. During these two months, the rate of new COVID-19 cases generally slowed, prior to the introduction of the Omicron variant in late November. However, consumer confidence rose further to 115.2 in December, despite the unprecedented surge in cases that occurred during the month due to the Omicron variant. This represented the first time that the level of consumer confidence moved in the same direction as the number of COVID-19 cases.

In January 2022, as infection rates continued to grow through the Omicron surge, consumer confidence fell to 111.1, its lowest level since September 2021. In February 2022, as gas prices and inflation surged while COVID-19 cases declined drastically, consumer confidence fell to 105.7. Since then, as fuel prices and inflation continued to rise while employment remained strong, it has remained relatively stable, with a May value of 106.4.



Source: The Conference Board, release date May 31, 2022

Committed Roadway Improvements

Table 15 lists major capacity-enhancing roadway improvements with dedicated funding on the Pennsylvania Turnpike System. Most of these projects are part of PTC's statewide Total Reconstruction Initiative, which is a multi-year project to widen the mainline and the Northeast Extension to six lanes (three in each direction). On the Mainline I-76/I-276 this includes work throughout the Pittsburgh, Somerset, and Philadelphia metro areas. Nearly 130 miles had been completed as of March 2022, with an additional 21 miles under construction or funded. An additional 24 miles of the Northeast Extension have been widened, with 6 more miles scheduled to be completed by 2030. Since the 2021 Bring Down letter, funding has been designated for two mainline widening projects, from mileposts 312 to 316 and 324 to 326, and the widening project for miles A38-A44 on the Northeast Extension has been split into two separate phases. Table 15 has been updated to reflect these changes. No projects have been completed since the 2021 Bring Down Letter, so no projects have been removed from the list. Furthermore, some dates and mileposts were updated to reflect the latest information available from PTC.

Table 15 also highlights five non-widening projects:

- A new cashless tolling interchange between I-276 and Lafayette Street in Montgomery County;
- The opening of additional direct connection ramps between I-95/I-295/I-276 in all directions;
- The construction of two interchanges between I-476 and I-81 to create a Scranton Beltway;
- An eight-mile extension of MFE to PA Route 837 in Allegheny County; and
- A 12.5-mile extension of Findlay Connector (Southern Beltway) in the Pittsburgh area.

These projects will serve to enhance capacity and create additional connections to other routes, all of which are expected to increase the number of travelers, and therefore revenue, on the Pennsylvania Turnpike System. Notably, the Southern Beltway project is now nearly complete. A partial interchange with I-79 (from I-79 northbound to the Southern Beltway westbound and from the Southern Beltway eastbound to I-79 southbound) opened in October 2021. Ramps for all remaining movements opened on June 24, 2022. The forecast incorporates estimated traffic and revenue impacts of the complete Southern Beltway beginning in October 2021, with a ramp-up period extending through 2026.

The other four non-widening projects listed above will have positive impacts on traffic and revenue but are not currently reflected in the traffic and revenue forecast. The scheduled completion date for each of these projects is in either 2028 or 2029, beyond the five-year window in which capacity-enhancing capital projects are typically factored into the forecast.

In addition to PTC-funded projects, the Pennsylvania Department of Transportation's (PennDOT's) Transportation Improvement Program (TIP) was reviewed. This review found no projects on competing or complementary routes that are expected to have an impact on Pennsylvania Turnpike System traffic and revenue.

Table 15
Major Committed Roadway Improvements on the Pennsylvania Turnpike System (1)

Milepost	Counties	Description	Actual or Assumed Start Date	Assumed Completion Date
Mainline I-76/I-276/I-95				
28-31	Allegheny and Butler	Reconstruct and widen to 3 lanes in each direction	May 2020	September 2022
102-109	Somerset County	Reconstruct and widen to 3 lanes in each direction	January 2021	August 2024
126-131	Somerset and Bedford	Reconstruct and widen to 3 lanes in each direction	June 2022	Fall 2026
312-316	Chester	Reconstruct and widen to 3 lanes in each direction	Spring 2023	Fall 2027
324-326	Chester and Montgomery	Reconstruct and widen to 3 lanes in each direction	Fall 2021	Summer 2025
331	Montgomery	Construct a new cashless tolling interchange at Lafayette Street	2025	2028
I-95 Interchange	Bucks	Construct additional ramps to allow for direct connections of I-95/I-295/I-276 in all directions	2024	2029
Northeast Extension I-476				
A38-A43	Montgomery and Bucks	Reconstruct and widen to 3 lanes in each direction	Fall 2021	Fall 2027
A43-A44	Bucks	Reconstruct and widen to 3 lanes in each direction	2027	2030
Scranton Beltway	Lackawanna and Luzerne	Link I-476 to I-81 with two interchanges to create a Scranton Beltway	Winter 2025	Fall 2028
Mon/Fayette Expressway Turnpike 43				
PA-51 to PA Route 837	Allegheny	Construct a eight-mile extension of the existing Turnpike 43 including three new interchanges	Spring 2023	Fall 2028
Southern Beltway Toll 576				
US-22 to I-79	Washington and Allegheny	Construct a 12.5-mile cashless tolling extension of Toll 576 from the southern terminus of the Findlay Connector at US-22 to I-79 including four new interchanges	December 2016	June 2022

(1) The major committed roadway improvement projects listed here are a small subset of all projects listed in PTC's FY 2023 Ten Year Capital Plan.

Econometric Forecasting Update

A Bring Down Letter typically utilizes the same demand growth projections from the previous underlying investment grade study, which, in this case, was in 2018. Since then, the U.S. endured a pandemic and short-term recession, and high inflation, fuel prices, and telecommuting rates, among other changes. Therefore, CDM Smith has updated the econometric model developed in 2018 with current independent projections of socioeconomic variables (e.g., population, gross regional product [GRP], and motor fuel prices, etc.) to better capture existing conditions.

Annual socioeconomic forecast growth for every county was applied to the anchored 2016 values used in the 2018 Forecast Study, which thus retained the historical series, equations, and estimated coefficients, establishing alternative forecast trajectories based on the most-recent independent variable trends in the same terms as the historical inputs in the unaltered equations (e.g., real GRP remains in 2009 dollars). Consequently, the socioeconomic forecasting differences are thus restricted to only growth pattern updates, not historical revisions, inflated dollar-denominated terms, etc. In the 2018 econometric analysis, three variables impact transaction forecasts: fuel prices, population, and real gross regional product (GRP), with the latter as the major variable.

Population was an explanatory variable for Northeast Extension Ticket System PCs. Woods & Poole revised such forecasts downward for Pennsylvania (3 percent by 2050) and the Northeast Extension's 15-county catchment area (7 percent by 2050), resulting in downward forecast revisions.

Real GRP was an explanatory variable for most plaza groupings. Statewide, Woods & Poole's latest forecast was not substantially different from the 2018 Forecast Study, except for adjustments to 2020 and 2021 historical data. However, within the state, some smaller counties had notable long-term growth differences than previously forecast. Such changes are relatively immaterial in catchment areas including larger metropolitan areas with multiple counties as the individual-county changes are dwarfed and/or offset by changes in other counties within the same catchment area.

Of the PTC catchment counties, GRP was most significantly altered in Westmoreland County, east of Pittsburgh with forecast GDP in 2050 now estimated 30 percent higher than in the 2018. As a result, the GRP reallocation noticeably effects Turnpike 43 (MFE), Turnpike 66 (AKH), and I-376 (BVH). **Table 16** includes historical compound average growth rates (CAGR) for various time periods, forecast CAGR from the 2018 Forecast Study, the updated CAGR, and the difference between those two forecasts.

Along the Ticket System, the updates exhibit almost identical trends as previously, although slightly reduced. In western Pennsylvania, the results are effectively identical, whereas in the eastern part of the state, results are reduced slightly by 0.1 to 0.2 percent annually, applied to both passenger and commercial vehicle equations.

The most notable decline is for Northeast Extension Ticket System PCs due to declines in forecast population growth and the relatively large coefficient for that explanatory variable, amplifying the effect on estimate transaction growth. Annual growth forecasts are reduced by 1.4 percent, from 2.0 to 0.6 percent, with the current forecasts more in line with more recent historical growth.

All other barrier system facilities have smaller changes as they have a more localized focus than the Ticket System and are thus explained with narrower catchment areas surrounding the facilities. In particular, the plaza groupings for Turnpike 43 (MFE) and Turnpike 66 (AKH) have a relatively small number of counties within the respective catchment areas and include Westmoreland County, which had the most significant positive adjustment to real GRP compared to the prior forecast.

The traffic and revenue forecast has adopted these growth forecasts and selectively applied and/or adjusted them based on other considerations. Although the downward revision of CAGR that most Turnpike groupings experienced due to revised population and GRP forecasts are seemingly minor, the compounding nature of growth rates and the 30-year time horizon of this traffic and revenue result in this revised econometric forecast being the primary driver of the notable decline in transactions, as compared to the 2021 Bring Down Letter, that is expected throughout the forecast period and is summarized later on in Table 22.

Table 16
Econometric Forecasting Update Results

	History CAGR			Forecast '16-'50 CAGR		
Grouping/Vehicles	'87-'16	'94-'16	'07-'16	2018	2022	Δ
Gateway PC	1.7%	1.4%	1.7%	1.1%	1.1%	0.0%
Pittsburgh PC	0.8%	0.7%	-0.3%	0.5%	0.5%	0.0%
Western Rural PC	0.9%	0.8%	-0.6%	0.5%	0.4%	-0.1%
Eastern Rural PC	2.2%	1.9%	0.4%	1.6%	1.4%	-0.2%
Philadelphia PC	2.1%	1.4%	0.3%	0.9%	0.8%	-0.1%
DRB PC	1.4%	1.3%	0.5%	#N/A	#N/A	#N/A
Northeast Ticket PC	3.0%	2.0%	-0.3%	2.0%	0.6%	-1.4%
Northeast Barrier PC	#N/A	0.4%	-0.4%	0.5%	0.4%	-0.2%
I-376 PC	#N/A	1.7%	-1.4%	1.5%	1.9%	0.5%
PA 66 PC	#N/A	3.0%	-1.1%	0.8%	2.5%	1.8%
Mon Fayette PC	#N/A	3.1%	0.5%	0.5%	1.4%	0.9%
I-576 PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Gateway CV	0.6%	0.7%	0.1%	0.5%	0.4%	-0.1%
Pittsburgh CV	1.4%	1.4%	-0.2%	1.0%	0.8%	-0.1%
Western Rural CV	1.4%	1.5%	-1.3%	0.8%	0.8%	0.0%
Eastern Rural CV	2.6%	2.6%	0.5%	2.0%	1.9%	-0.1%
Philadelphia CV	1.8%	2.3%	0.7%	1.2%	1.1%	-0.1%
DRB CV	1.1%	1.8%	-2.5%	#N/A	#N/A	#N/A
Northeast Ticket CV	4.1%	3.6%	1.3%	2.5%	2.3%	-0.2%
Northeast Barrier CV	#N/A	1.6%	2.1%	0.8%	1.2%	0.4%
I-376 CV	#N/A	4.7%	1.8%	2.4%	2.5%	0.1%
PA 66 CV	#N/A	4.5%	1.7%	0.8%	3.2%	2.4%
Mon Fayette CV	#N/A	6.3%	9.6%	1.8%	2.0%	0.2%
I-576 CV	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Actual Versus Estimated Traffic and Toll Revenue

Table 17 provides a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2021 Bring Down Letter. The analysis period in this table is from April 2021 through May 2022. This 14-month period corresponds to the period for which actual data currently exist but was estimated at the time of the 2021 Bring Down Letter.

For the 14-month period shown in Table 17, total system actual PC transactions and revenue exceeded estimates by 3.2 percent and 4.3 percent, respectively. CV transactions and revenue exceeded estimates by 5.7 percent and 5.8 percent, respectively. For all vehicles, actual transactions were 3.6 percent above estimates, while toll revenue overperformed estimates by 5.0 percent.

Table 17
Comparison of Estimated and Actual Traffic Volumes and Gross Toll Revenue
From April 2021 Through May 2022 (1)
Pennsylvania Turnpike System

	Total Traffic (in Thousands)			Total Gross Toll Revenue (in Thousands)		
Facility	Estimated	Actual	Percent Difference between Actual and Estimated	Estimated	Actual	Percent Difference between Actual and Estimated
			Passenger Cars			
Ticket System	133,809	137,903	3.1	$754,613	$778,921	3.2
Gateway	3,690	3,552	(3.7)	27,520	27,563	0.2
Delaware River Bridge	9,735	10,598	8.9	59,822	67,516	12.9
Turnpike 43	13,458	14,435	7.3	28,360	30,532	7.7
Turnpike 66	7,047	7,426	5.4	14,544	16,631	14.3
Northeast Extension (Barrier)	5,033	4,541	(9.8)	6,779	6,691	(1.3)
Turnpike I-376	7,891	7,388	(6.4)	15,014	14,867	(1.0)
Turnpike I-576	3,422	4,109	20.1	3,888	6,753	73.7
Barrier Subtotal	50,276	52,048	3.5	$155,927	$170,554	9.4
Total System	184,085	189,951	3.2	$910,540	$949,475	4.3
			Commercial Vehicles			
Ticket System	27,466	29,185	6.3	$718,098	$755,392	5.2
Gateway	1,317	1,395	5.9	30,201	33,423	10.7
Delaware River Bridge	1,851	2,003	8.2	39,890	44,322	11.1
Turnpike 43	1,193	1,180	(1.0)	6,824	6,979	2.3
Turnpike 66	1,335	1,363	2.1	7,184	7,793	8.5
Northeast Extension (Barrier)	1,566	1,515	(3.2)	10,918	10,879	(0.4)
Turnpike I-376	1,662	1,667	0.3	6,239	6,378	2.2
Turnpike I-576	853	1,046	22.6	2,294	3,970	73.1
Barrier Subtotal	9,776	10,169	4.0	$103,551	$113,744	9.8
Total System	37,242	39,354	5.7	$821,649	$869,136	5.8
			Total Vehicles			
Ticket System	161,275	167,088	3.6	$1,472,711	$1,534,313	4.2
Gateway	5,007	4,946	(1.2)	57,721	60,987	5.7
Delaware River Bridge	11,585	12,601	8.8	99,713	111,838	12.2
Turnpike 43	14,651	15,615	6.6	35,183	37,511	6.6
Turnpike 66	8,382	8,789	4.8	21,728	24,424	12.4
Northeast Extension (Barrier)	6,600	6,057	(8.2)	17,697	17,570	(0.7)
Turnpike I-376	9,553	9,055	(5.2)	21,253	21,245	(0.0)
Turnpike I-576	4,275	5,155	20.6	6,182	10,723	73.5
Barrier Subtotal	60,052	62,217	3.6	$259,477	$284,298	9.6
Total System	221,327	229,306	3.6	$1,732,188	$1,818,611	5.0

(1) These 14 months correspond to the period for which actual data exists, but was estimated at the time of CDM Smith's 2021 Bring Down Letter.

Table 17 also includes a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2021 Bring Down Letter for each individual Turnpike toll facility. Total transactions for the Ticket System were 3.6 percent higher than the forecast traffic, while actual total revenue was 4.2 percent higher than estimated. For the combined barrier toll facilities, total actual toll transactions exceeded CDM Smith estimates by 3.6 percent and actual toll revenue exceeded estimates by 9.6 percent.

Turnpike I-576's significant overperformance of 20.6 percent on transactions and 73.5 percent on revenue is due to the fact that it partially opened in October 2021, rather than the January 2022 date that was utilized in the forecast. As a result, it had more than two full months of transactions and revenue that were unanticipated at the time of the 2021 Bring Down Letter. However, Turnpike I-576 generates the second-fewest transactions and least revenue of any the Barrier Facilities operated by PTC. Therefore, even if this facility is ignored, the Barrier Systems as a whole still overperformed forecast transactions and revenue by 2.3 and 8.0 percent, respectively.

Estimated COVID-19 Traffic and Toll Revenue Impacts

A key undertaking of this new forecast was to update the traffic and toll revenue impacts related to the COVID-19 pandemic over the forecast period. This section will provide a summary of the underlying assumptions CDM Smith has made in estimating the depth and longevity of the COVID-19 related impacts on Turnpike System traffic and toll revenue. Actual traffic and toll revenue experience through the end of May 2022 was collected as part of this analysis. Pandemic-related impacts began negatively effecting Turnpike System transactions and toll revenue in March 2020. A key assumption in this analysis is that negative traffic and revenue impacts due to the increased prevalence of telecommuting that began during the pandemic will continue through the end of the forecast period in FY 2050-51.

Due to the unpredictable nature of the pandemic and the changing infection rates, changes to operating procedures and capacity restrictions of businesses and schools is an unknown variable. Although future resurgence of the virus could potentially result in the re-establishment of restrictions, very few restrictions seem to have been reinstated, either nationally or within Pennsylvania, while case counts rose throughout the spring of 2022. Similarly, transactions levels were not noticeably impacted during this period either. Accordingly, traffic recovery is assumed to continue through the remainder of 2022.

Compounding the negative transaction and revenue effects of COVID-19, since the fall of 2021 gas prices have risen significantly. Although prices are forecast to decrease over the coming months and years, they are likely to remain elevated above pre-pandemic levels, and thus have a dampening effect on transactions for much of the current decade. Therefore, gasoline prices are estimated to have further negative effects on transactions and revenue from May 2022 through

December 2028. Negative impacts are estimated to range from 0.2 to 0.8 percent of baseline transactions during this period and are included within the total estimated COVID-19 impacts.

Table 18 shows estimated historical and future COVID-19 related impacts on toll revenue between FY 2018-19 and FY 2028-29. Only the final three months of FY 2019-20 (March, April, May) were impacted, but over that time gross toll revenue was estimated to have been reduced by about $143.1 million, or 10.0 percent of annual total gross revenue. While the peak monthly negative impacts occurred in FY 2019-20, the largest annual declines are estimated to have occurred in FY 2020-21 since this included 12 months of negative impacts. As shown in Table 18, total gross toll revenue losses have been $254.2 million, or 16.8 percent of total gross toll revenue for the fiscal year.

Table 18
Estimated Annual Gross Toll Revenue COVID Impacts (1)
Total System
Pennsylvania Turnpike Commission

Fiscal Year (2)	Annual Gross Toll Revenue Impacts (in thousands)			Percentage Impacts on Annual Gross Toll Revenue		
	Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2018-19 (3,4,5)	$0	$0	$0	0.0%	0.0%	0.0%
2019-20 (3,6,7)	(115,318)	(27,781)	(143,099)	(14.4)	(4.4)	(10.0)
2020-21 (3,8)	(231,302)	(22,870)	(254,172)	(27.5)	(3.4)	(16.8)
2021-22 (3,9)	(96,577)	26,094	(70,483)	(10.5)	3.6	(4.3)
2022-23 (10)	(104,898)	13,044	(91,854)	(10.9)	1.7	(5.3)
2023-24 (10)	(77,178)	2,436	(74,742)	(7.6)	0.3	(4.1)
2024-25 (10)	(39,330)	(1,189)	(40,519)	(3.7)	(0.1)	(2.1)
2025-26 (10)	(29,358)	(1,489)	(30,846)	(2.6)	(0.2)	(1.5)
2026-27 (10)	(31,097)	(2,170)	(33,268)	(2.7)	(0.2)	(1.6)
2027-28 (10)	(32,796)	(2,636)	(35,431)	(2.7)	(0.3)	(1.6)
2028-29 (10)	(31,977)	(1,804)	(33,781)	(2.5)	(0.2)	(1.5)

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual revenue experience.
(4) The Findlay Connector converted to AET in early June 2018.
(5) The partial I-95 Interchange (Stage 1) opened in September 2018.
(6) AKH and Gateway converted to AET at the end of October 2019.
(7) Cash collection on Ticket System suspended and converted to AET on March 16, 2020.
(8) Mon-Fayette Expressway converted to AET on June 11, 2020.
(9) Reflects opening of Southern Beltway between US 22 and I-79 beginning in October 2021.
(10) Reflects COVID-19 and related recessionary impacts, including fuel price impacts.

Negative gross toll revenue impacts are estimated to lessen over the following eight years. By FY 2028-29 total gross toll revenue losses are assumed to be only about 1.5 percent of annual gross toll revenue. No fuel price impact is assumed beginning in FY 2029-30, although negative COVID-19 impacts of 1 to 4 percent, depending on the system, is assumed for PCs through the end of the forecast period in FY 2050-51. These negative impacts account for the increased prevalence of telecommuting that is assumed to be a permanent fixture of nationwide traffic patterns.

As shown, CV revenue is assumed to increase between FY 2021-22 and FY 2023-24. This is due to outperformance from CV traffic as well as variations in trip length and size distribution from impacts from the pandemic. These positive impacts are forecasted to decline by FY 2024-25 as CV traffic returns to more normal patterns. The negative impacts to CV revenue beginning in FY 2024-25 are due to the negative impacts of fuel prices outweighing the positive impacts of COVID-19 from that point forward.

Estimated Traffic and Gross Toll Revenue

Updated traffic and gross toll revenue estimates were developed through FY 2050-51 incorporating the following changes into the forecast. All these changes were described in previous sections.

- Actual traffic and revenue experience through May 2022 (Tables 3-12);
- Revised estimates of E-ZPass penetration rates (Table 14);
- Long-range growth of socioeconomic indicators (Table 16); and
- Updated impacts related to COVID-19 and fuel prices (Table 18).

Other assumptions remain unchanged from the 2021 Bring Down Letter, including:

- Future toll increase assumptions (Table 13);
- Other than the completion of the Southern Beltway, there will be no new capacity-enhancing roadway improvements in the next five years (Table 15); and
- Structure of the CV discount program.

Table 19 shows the total traffic and toll revenue for the Ticket System only. Data for FY 2020-21 and FY 2021-22 each reflect a full year of actual experience. Total toll transactions increase from 123.0 million to 183.4 million over the period shown in Table 19, an average annual increase of 1.3 percent. Gross toll revenue increases from $1.1 billion to $4.3 billion by FY 2050-51. This amounts to an average annual increase of 4.8 percent, reflecting the impact of normal growth plus the annual rate adjustments.

The same information is shown for the Barrier System in **Table 20**. Total annual toll transactions are estimated to grow from 44.6 million to 62.7 million over the period shown, an average rate of 1.1 percent. New toll transactions from the initial opening of the Southern Beltway in October 2021 and the opening of all ramps movements between the Southern Beltway and I-79 in June 2022 contribute to total barrier growth rates. Barrier System total revenue is estimated to increase from $196.0 million to $735.0 million over the same period, an annual rate of 4.5 percent, reflecting normal growth plus annual rate adjustments.

Table 19
Estimated Annual Transactions and Gross Toll Revenue (1)
Ticket System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Annual Traffic: Passenger Cars	Annual Traffic: Commercial Vehicles	Annual Traffic: Total Vehicles	Annual Gross Toll Revenue: Passenger Cars	Annual Gross Toll Revenue: Commercial Vehicles	Annual Gross Toll Revenue: Total Vehicles
2020-21	(3)	99,810	23,201	123,011	$498,511	$564,017	$1,062,528
2021-22	(3,4)	118,865	25,078	143,943	672,668	650,063	1,322,732
2022-23	(4)	118,425	23,813	142,238	699,170	675,055	1,374,225
2023-24	(4)	123,124	23,754	146,878	767,673	706,086	1,473,759
2024-25	(4)	129,590	23,851	153,441	849,935	744,786	1,594,721
2025-26	(4)	132,149	23,977	156,126	904,242	783,593	1,687,835
2026-27	(4)	132,770	24,121	156,891	943,216	818,573	1,761,789
2027-28	(4)	133,660	24,268	157,928	981,224	850,806	1,832,030
2028-29	(4)	135,018	24,449	159,467	1,021,430	883,776	1,905,206
2029-30	(4)	136,507	24,685	161,192	1,064,305	920,867	1,985,172
2030-31	(4)	137,552	24,889	162,441	1,105,228	958,085	2,063,313
2031-32	(4)	138,584	25,102	163,686	1,147,546	996,762	2,144,308
2032-33	(4)	139,625	25,312	164,937	1,191,501	1,036,802	2,228,303
2033-34	(4)	140,644	25,532	166,176	1,236,878	1,078,459	2,315,337
2034-35	(4)	141,641	25,780	167,421	1,283,722	1,122,039	2,405,761
2035-36	(4)	142,614	26,041	168,655	1,332,053	1,167,407	2,499,460
2036-37	(4)	143,555	26,300	169,855	1,381,828	1,214,409	2,596,237
2037-38	(4)	144,447	26,553	171,000	1,432,927	1,262,825	2,695,752
2038-39	(4)	145,289	26,795	172,084	1,485,336	1,312,569	2,797,905
2039-40	(4)	146,112	27,035	173,147	1,539,415	1,364,068	2,903,483
2040-41	(4)	146,899	27,274	174,173	1,595,030	1,417,388	3,012,418
2041-42	(4)	147,668	27,511	175,179	1,652,403	1,472,596	3,124,999
2042-43	(4)	148,412	27,747	176,159	1,711,514	1,529,766	3,241,280
2043-44	(4)	149,123	27,981	177,104	1,772,291	1,588,972	3,361,263
2044-45	(4)	149,819	28,215	178,034	1,835,012	1,650,298	3,485,310
2045-46	(4)	150,500	28,447	178,947	1,899,725	1,713,826	3,613,551
2046-47	(4)	151,159	28,679	179,838	1,966,394	1,779,639	3,746,033
2047-48	(4)	151,813	28,911	180,724	2,035,294	1,847,823	3,883,117
2048-49	(4)	152,470	29,145	181,615	2,106,608	1,918,619	4,025,227
2049-50	(4)	153,130	29,381	182,511	2,180,421	1,992,127	4,172,548
2050-51	(4)	153,793	29,619	183,412	2,256,820	2,068,451	4,325,271

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) Reflects COVID-19 and related impacts through FY 2050-51, including fuel price impacts through FY 2028-29.

Table 20
Estimated Annual Transactions and Gross Toll Revenue (1)
Barrier Systems
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Annual Traffic			Annual Gross Toll Revenue		
		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2020-21	(3,4)	36,906	7,674	44,580	$112,086	$83,955	$196,042
2021-22	(3,5,6)	45,158	8,809	53,967	147,951	98,344	246,295
2022-23	(6,7)	46,723	9,290	56,013	155,143	103,453	258,596
2023-24	(6)	47,494	9,348	56,842	164,149	104,860	269,009
2024-25	(6)	48,728	9,454	58,182	174,230	108,195	282,425
2025-26	(6)	49,150	9,556	58,706	183,391	113,805	297,196
2026-27	(6)	49,181	9,651	58,832	191,359	118,689	310,048
2027-28	(6)	49,286	9,747	59,033	198,858	123,415	322,273
2028-29	(6)	49,514	9,861	59,375	206,435	128,475	334,910
2029-30	(6)	49,783	9,999	59,782	214,478	134,124	348,602
2030-31	(6)	49,883	10,121	60,004	222,076	139,784	361,860
2031-32	(6)	49,972	10,242	60,214	229,897	145,649	375,546
2032-33	(6)	50,055	10,362	60,417	237,972	151,724	389,696
2033-34	(6)	50,126	10,481	60,607	246,275	158,021	404,296
2034-35	(6)	50,198	10,599	60,797	254,840	164,527	419,367
2035-36	(6)	50,279	10,697	60,976	263,732	171,163	434,895
2036-37	(6)	50,355	10,765	61,120	272,936	177,924	450,860
2037-38	(6)	50,422	10,830	61,252	282,369	184,899	467,268
2038-39	(6)	50,479	10,894	61,373	292,026	192,081	484,107
2039-40	(6)	50,534	10,959	61,493	301,983	199,528	501,511
2040-41	(6)	50,591	11,026	61,617	312,248	207,251	519,499
2041-42	(6)	50,659	11,092	61,751	322,870	215,245	538,115
2042-43	(6)	50,726	11,157	61,883	333,815	223,522	557,337
2043-44	(6)	50,783	11,221	62,004	345,049	232,091	577,140
2044-45	(6)	50,831	11,285	62,116	356,610	240,964	597,574
2045-46	(6)	50,873	11,348	62,221	368,506	250,153	618,659
2046-47	(6)	50,906	11,410	62,316	380,731	259,668	640,399
2047-48	(6)	50,932	11,472	62,404	393,320	269,523	662,843
2048-49	(6)	50,958	11,534	62,492	406,325	279,752	686,077
2049-50	(6)	50,984	11,596	62,580	419,760	290,369	710,129
2050-51	(6)	51,010	11,658	62,668	433,639	301,389	735,028

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) Mon-Fayette Expressway converted to AET on June 11, 2020.
(5) The Southern Beltway between US 22 and I-79 opened in October 2021.
(6) Reflects COVID-19 and related impacts through FY 2050-51, including fuel price impacts through FY 2028-29.
(7) Reflects opening of all ramp movements between the Southern Beltway and I-79 in June 2022.

Table 21 presents estimated total combined Ticket and Barrier System transactions, gross toll revenue, and toll discounts and adjustments. The vast majority of discounts and adjustments result from commercial account toll adjustments due to PTC's volume discount program. This program provides a 3.0-percent discount to accounts that accrue $20,000 or more in monthly tolls. Discounts and adjustments shown in Table 21 assume no changes to the post-paid commercial volume discount program during the forecast period. Actual discounts and adjustments have been slowly increasing over time and amounted to 1.74 percent of CV gross toll revenue in FY 2021-22. The forecast assumes that the adjustment will continue to gradually increase to 2.01 percent of CV gross toll revenue in FY 2029-30 and then remain at that level for the remainder of the forecast period.

As shown in Table 21, total toll transactions are expected to increase from 167.6 million to 246.1 million over the period shown. This amounts to an average annual growth rate of 1.3 percent. Total net toll revenue is estimated to grow from approximately $1.3 billion in FY 2020-21 to $5.1 billion by FY 2050-51. This reflects an average annual growth rate in gross toll revenue of 4.7 percent. Again, this includes the impact of normal growth plus annual toll rate adjustments.

Table 22 compares the current traffic and net toll revenue forecast with the forecast developed in the 2021 Bring Down Letter. As shown, actual total transactions for FY 2020-21 were 1.6 percent lower than forecast in the 2021 Bring Down Letter. Conversely, actual FY 2021-22 transactions were 4.3 percent higher than previously estimated due to better-than-expected COVID-19 impacts. Over the next four fiscal years, through FY 2025-26, the current forecast estimates that transactions will be between 0.2 and 2.5 percent higher each year than previously estimated. However, in the remainder of the forecast period current forecast total toll transactions are less than those forecast in the 2021 Bring Down Letter. The difference is 0.7 percent in FY 2025-26, growing each successive year to 5.5 percent in FY 2049-50. Previously detailed updates to the econometric forecast account for most of the long-term difference in the forecast, although higher than previously expected gas prices and long-term COVID-19 impacts on passenger vehicles not previously included also contribute to the downward revision.

Differences between the 2021 Bring Down Letter and current forecasts are smaller for annual net toll revenue, however. As was the case with transactions, revenue in FY 2021-22 overperformed the prior estimate, with an even larger difference of 5.5 percent, and is now forecast to be higher each fiscal year through FY 2024-25. Beginning in FY 2025-26, revenue is forecast to be 0.8 percent lower than estimated in the 2021 Bring Down Letter. This discrepancy grows each year through FY 2049-50, when the difference is 4.5 percent and is mostly a result of the lower long-term growth forecast from the updated econometric modeling.

Table 21
Estimated Annual Transactions and Toll Revenue (1)
Total System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Annual Traffic: Passenger Cars	Annual Traffic: Commercial Vehicles	Annual Traffic: Total Vehicles	Annual Gross Toll Revenue: Passenger Cars	Annual Gross Toll Revenue: Commercial Vehicles	Annual Gross Toll Revenue: Total Vehicles	Discounts and Adjustments	Net Toll Revenue
2020-21	(3,4)	136,717	30,875	167,591	$610,597	$647,972	$1,258,570	($11,233)	$1,247,337
2021-22	(3,5,6)	164,023	33,887	197,910	820,619	748,407	1,569,027	(12,997)	1,556,030
2022-23	(6,7)	165,148	33,103	198,251	854,313	778,508	1,632,821	(13,893)	1,618,928
2023-24	(6)	170,618	33,102	203,720	931,822	810,946	1,742,768	(14,878)	1,727,890
2024-25	(6)	178,318	33,305	211,623	1,024,165	852,981	1,877,146	(16,075)	1,861,071
2025-26	(6)	181,299	33,533	214,832	1,087,633	897,398	1,985,031	(17,137)	1,967,894
2026-27	(6)	181,951	33,772	215,723	1,134,575	937,262	2,071,837	(18,133)	2,053,704
2027-28	(6)	182,946	34,015	216,961	1,180,082	974,221	2,154,303	(19,091)	2,135,212
2028-29	(6)	184,532	34,310	218,842	1,227,865	1,012,251	2,240,116	(20,089)	2,220,027
2029-30	(6)	186,290	34,684	220,974	1,278,783	1,054,991	2,333,774	(21,201)	2,312,573
2030-31	(6)	187,435	35,010	222,445	1,327,304	1,097,869	2,425,173	(22,063)	2,403,110
2031-32	(6)	188,556	35,344	223,900	1,377,443	1,142,411	2,519,854	(22,958)	2,496,896
2032-33	(6)	189,680	35,674	225,354	1,429,473	1,188,526	2,617,999	(23,885)	2,594,114
2033-34	(6)	190,770	36,013	226,783	1,483,153	1,236,480	2,719,633	(24,849)	2,694,784
2034-35	(6)	191,839	36,379	228,218	1,538,562	1,286,566	2,825,128	(25,855)	2,799,273
2035-36	(6)	192,893	36,738	229,631	1,595,785	1,338,570	2,934,355	(26,900)	2,907,455
2036-37	(6)	193,910	37,065	230,975	1,654,764	1,392,333	3,047,097	(27,981)	3,019,116
2037-38	(6)	194,869	37,383	232,252	1,715,296	1,447,724	3,163,020	(29,094)	3,133,926
2038-39	(6)	195,768	37,689	233,457	1,777,362	1,504,650	3,282,012	(30,238)	3,251,774
2039-40	(6)	196,646	37,994	234,640	1,841,398	1,563,596	3,404,994	(31,422)	3,373,572
2040-41	(6)	197,490	38,300	235,790	1,907,278	1,624,639	3,531,917	(32,649)	3,499,268
2041-42	(6)	198,327	38,603	236,930	1,975,273	1,687,841	3,663,114	(33,919)	3,629,195
2042-43	(6)	199,138	38,904	238,042	2,045,329	1,753,288	3,798,617	(35,235)	3,763,382
2043-44	(6)	199,906	39,202	239,108	2,117,340	1,821,063	3,938,403	(36,597)	3,901,806
2044-45	(6)	200,650	39,500	240,150	2,191,622	1,891,262	4,082,884	(38,007)	4,044,877
2045-46	(6)	201,373	39,795	241,168	2,268,231	1,963,979	4,232,210	(39,469)	4,192,741
2046-47	(6)	202,065	40,089	242,154	2,347,125	2,039,307	4,386,432	(40,982)	4,345,450
2047-48	(6)	202,745	40,383	243,128	2,428,614	2,117,346	4,545,960	(42,551)	4,503,409
2048-49	(6)	203,428	40,679	244,107	2,512,933	2,198,371	4,711,304	(44,179)	4,667,125
2049-50	(6)	204,114	40,977	245,091	2,600,181	2,282,496	4,882,677	(45,870)	4,836,807
2050-51	(6)	204,803	41,277	246,080	2,690,459	2,369,840	5,060,299	(47,625)	5,012,674

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) Mon-Fayette Expressway converted to AET on June 11, 2020.
(5) The Southern Beltway between US 22 and I-79 opened in October 2021.
(6) Reflects COVID-19 and related impacts through FY 2050-51, including fuel price impacts through FY 2028-29.
(7) Reflects opening of all ramp movements between the Southern Beltway and I-79 in June 2022.

Table 22
Comparison of New Traffic and Revenue
Estimates with those from the 2021 Bring Down Letter
Total System
Pennsylvania Turnpike

Traffic and Toll Revenue in Thousands

	Total Annual Transactions			Annual Net Toll Revenue		
Fiscal Year (1)	Current Estimates (2)	2021 Bring Down Letter (3)	Percent Difference	Current Estimates (2)	2021 Bring Down Letter (3)	Percent Difference
2020-21	167,591	170,245	(1.6)	$1,247,337	$1,241,524	0.5
2021-22	197,910	189,679	4.3	1,556,030	1,474,668	5.5
2022-23	198,251	197,797	0.2	1,618,928	1,608,015	0.7
2023-24	203,720	201,375	1.2	1,727,890	1,724,690	0.2
2024-25	211,623	206,550	2.5	1,861,071	1,852,011	0.5
2025-26	214,832	212,517	1.1	1,967,894	1,983,054	(0.8)
2026-27	215,723	217,189	(0.7)	2,053,704	2,094,597	(2.0)
2027-28	216,961	219,411	(1.1)	2,135,212	2,180,262	(2.1)
2028-29	218,842	221,640	(1.3)	2,220,027	2,264,058	(1.9)
2029-30	220,974	223,881	(1.3)	2,312,573	2,354,571	(1.8)
2030-31	222,445	226,055	(1.6)	2,403,110	2,450,434	(1.9)
2031-32	223,900	228,182	(1.9)	2,496,896	2,550,715	(2.1)
2032-33	225,354	230,279	(2.1)	2,594,114	2,654,690	(2.3)
2033-34	226,783	232,310	(2.4)	2,694,784	2,762,173	(2.4)
2034-35	228,218	234,292	(2.6)	2,799,273	2,873,291	(2.6)
2035-36	229,631	236,230	(2.8)	2,907,455	2,988,177	(2.7)
2036-37	230,975	238,130	(3.0)	3,019,116	3,106,855	(2.8)
2037-38	232,252	239,926	(3.2)	3,133,926	3,228,613	(2.9)
2038-39	233,457	241,679	(3.4)	3,251,774	3,354,433	(3.1)
2039-40	234,640	243,417	(3.6)	3,373,572	3,484,753	(3.2)
2040-41	235,790	245,131	(3.8)	3,499,268	3,619,665	(3.3)
2041-42	236,930	246,814	(4.0)	3,629,195	3,759,262	(3.5)
2042-43	238,042	248,455	(4.2)	3,763,382	3,903,589	(3.6)
2043-44	239,108	250,064	(4.4)	3,901,806	4,052,898	(3.7)
2044-45	240,150	251,642	(4.6)	4,044,877	4,207,362	(3.9)
2045-46	241,168	253,184	(4.7)	4,192,741	4,367,104	(4.0)
2046-47	242,154	254,707	(4.9)	4,345,450	4,532,502	(4.1)
2047-48	243,128	256,214	(5.1)	4,503,409	4,703,807	(4.3)
2048-49	244,107	257,730	(5.3)	4,667,125	4,881,600	(4.4)
2049-50	245,091	259,256	(5.5)	4,836,807	5,066,127	(4.5)
2050-51	246,080			5,012,674		

(1) PTC fiscal year ends May 31.
(2) Reflects actual experience through May 2022.
(3) Reflects actual traffic and revenue experience through March 2021.

Table 23 summarizes the full net revenue forecast, including written off bad debt expenses. Now that the PTC system is fully AET, there is some amount of video tolls that will be uncollectable and written off as a bad debt expense, thereby subtracting from net toll revenue. As transactions are estimated to grow each year, along with higher revenue due to toll increases, so too does bad debt expense. In FY 2021-22, the first full year of AET operation, bad debt expense was $99.0 million and is estimated to grow to $234.1 million in FY 2050-51 recognizing growth in transactions and annual toll increases. Total net toll revenue minus the video bad debt expense is estimated to grow from approximately $1.2 billion in FY 2020-21 to $4.8 billion by FY 2050-51.

Table 23
Total System: Estimated Annual Video Revenue Leakage (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Net Toll Revenue	Estimated Video Revenue Bad Debt Expense	Net Toll Revenue Minus Video Bad Debt Expense
2020-21	(3,4)	$1,247,337	($58,542)	$1,188,795
2021-22	(3,5,6)	1,556,030	(99,014)	1,457,016
2022-23	(6,7)	1,618,928	(107,641)	1,511,287
2023-24	(6)	1,727,890	(108,946)	1,618,944
2024-25	(6)	1,861,071	(112,342)	1,748,729
2025-26	(6)	1,967,894	(113,247)	1,854,647
2026-27	(6)	2,053,704	(113,038)	1,940,666
2027-28	(6)	2,135,212	(114,016)	2,021,196
2028-29	(6)	2,220,027	(116,455)	2,103,572
2029-30	(6)	2,312,573	(119,067)	2,193,506
2030-31	(6)	2,403,110	(121,526)	2,281,584
2031-32	(6)	2,496,896	(124,282)	2,372,614
2032-33	(6)	2,594,114	(127,077)	2,467,037
2033-34	(6)	2,694,784	(130,272)	2,564,512
2034-35	(6)	2,799,273	(134,421)	2,664,852
2035-36	(6)	2,907,455	(139,188)	2,768,267
2036-37	(6)	3,019,116	(144,113)	2,875,003
2037-38	(6)	3,133,926	(149,179)	2,984,747
2038-39	(6)	3,251,774	(154,394)	3,097,380
2039-40	(6)	3,373,572	(159,782)	3,213,790
2040-41	(6)	3,499,268	(165,366)	3,333,902
2041-42	(6)	3,629,195	(171,186)	3,458,009
2042-43	(6)	3,763,382	(177,216)	3,586,166
2043-44	(6)	3,901,806	(183,421)	3,718,385
2044-45	(6)	4,044,877	(189,826)	3,855,051
2045-46	(6)	4,192,741	(196,436)	3,996,305
2046-47	(6)	4,345,450	(203,253)	4,142,197
2047-48	(6)	4,503,409	(210,317)	4,293,092
2048-49	(6)	4,667,125	(217,963)	4,449,162
2049-50	(6)	4,836,807	(225,887)	4,610,920
2050-51	(6)	5,012,674	(234,100)	4,778,574

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) Mon-Fayette Expressway converted to AET on June 11, 2020.
(5) The Southern Beltway between US 22 and I-79 opened in October 2021.
(6) Reflects COVID-19 and related impacts through FY 2050-51, including fuel price impacts through FY 2028-29.
(7) Reflects opening of all ramp movements between the Southern Beltway and I-79 in June 2022.

Fiduciary Disclaimer

CDM Smith used currently-accepted professional practices and procedures in the development of the traffic and revenue estimates in this report. 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 estimates, CDM Smith reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the Pennsylvania Turnpike Commission (PTC). 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 estimates 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 estimates and projections reported herein are based on CDM Smith's experience and judgment and on a review of information obtained from multiple agencies, including PTC. These estimates and projections may not be indicative of actual or future values, and are therefore subject to substantial uncertainty. Certain variables such as future developments, economic cycles, pandemics, government actions, climate change related events, or impacts related to advances in automotive technology etc. cannot be predicted with certainty, and may affect the estimates 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 and other forward-looking statements contained within the report are based on reasonable assumptions as of the date of the report, 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 this report, 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.

The report and its contents are intended solely for use by PTC and designated parties approved by PTC and CDM Smith. Any use by third-parties, other than as noted above, is expressly prohibited. In addition, any publication of the report without the express written consent of CDM Smith is prohibited.

CDM Smith is not, and has not been, a municipal advisor as defined in Federal law (the Dodd Frank Bill) to PTC and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to PTC with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to PTC. PTC 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.

* * *

Sincerely,

Scott A. Allaire

Scott Allaire
Vice President
CDM Smith Inc.

Yogesh Patel, AICP, PMP
Associate
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East Hartford, Connecticut 06108
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May 28, 2021

Mr. Richard Dreher
Chief Financial Officer
Pennsylvania Turnpike Commission
700 South Eisenhower Boulevard
Middletown, PA 17057

Subject: Pennsylvania Turnpike Commission 2021 Traffic and Toll Revenue Bring Down Letter

Dear Mr. Dreher:

The Pennsylvania Turnpike Commission (PTC or Commission) asked CDM Smith to prepare this *2021 Traffic and Toll Revenue Bring Down Letter* (2021 Bring Down Letter) to be used in support of the Commission's ongoing capital improvement program and other funding requirements. This letter provides an update to the *6-Month Update to the 2020 Traffic and Toll Revenue Bring Down Letter* (2020 6-Month Update) dated December 18, 2020, which was the most recent update to a series of traffic and toll revenue forecasts that also includes the *2020 Traffic and Toll Revenue Bring Down Letter* (2020 Bring Down Letter), dated May 29, 2020; the *2019 Traffic and Toll Revenue Bring Down Letter* (2019 Bring Down Letter), dated April 29, 2019; and the *2018 Traffic and Toll Revenue Forecast Study* (2018 Forecast Study), dated April 20, 2018.

The 2020 6-Month Update included actual data through October 2020 and presented traffic and gross toll revenue forecasts from fiscal year (FY) 2020-21 through FY 2049-50. A fiscal year runs from June 1 through May 31. An additional five months of actual data (through March 2021) were available for this 2021 Bring Down Letter. The forecast period for this study remains unchanged from the previous one, extending through FY 2049-50.

This report will provide a summary of differences between the current traffic and revenue forecast and the one provided in the 2020 6-Month Update.

The updated forecasts reflect the following changes from the 2020 6-Month Update:

- E-ZPass market share estimates over the forecast period were reviewed and updated as needed.
- Actual traffic and toll revenue data were updated to include information through March 2021.

- A detailed review of COVID-19 related impacts was conducted based on an additional five months of actual data. Revised COVID-19 impacts have now been applied to the forecasts through FY 2025-26. As with the previous forecast, no COVID-19 impacts are assumed after FY 2025-26.
- A review of scheduled major roadway improvements was conducted to determine if there have been any changes since completion of the 2020 6-Month Update. This review concluded that one project on the list of committed roadway projects has been completed since the 2020 6-Month Update and has thus been removed from the list. No new projects have been added, although the timing of some have been adjusted. This will be discussed in the Committed Roadway Improvements section of this report.

These differences are described in more detail in the sections that follow below.

It is important to note that the intent of this 2021 Bring Down Letter is to review and revise, if warranted, the short-term forecasts developed as part of the 2020 6-Month Update. Any adjustments would be made based on the five months of new actual traffic and toll revenue experience since the 2020 6-Month Update was completed, including COVID-19 impacts, as well as revised assumptions summarized in the bullet points above.

The underlying socioeconomic trends and forecasts for Pennsylvania, the surrounding states, and the United States that formed the basis for the long-term traffic and toll revenue forecasts are provided in the 2018 Forecast Study.

Historical Toll Rate Increases and Current Toll Rates

Table 1 provides a summary of historical toll rate increases on the Turnpike System from 1987 to the most recent increase implemented on January 3, 2021. Rate increases are presented as a percent increase over the prior toll rate for cash/video and E-ZPass. Note that toll rate increases are generally applied systemwide, although occasional exemptions occur, as indicated in Table 1.

Table 1
Historical Toll Rate Increases
Pennsylvania Turnpike

Date	Percent Increase Cash/Video	Percent Increase E-ZPass	Comment
1/2/1987	40.0	NA	E-ZPass was not yet implemented on the Turnpike
6/1/1991	32.0	NA	E-ZPass was not yet implemented on the Turnpike
8/1/2004	42.5	42.5	
1/4/2009	25.0	25.0	No increase on Findlay Connector or MFE between Uniontown and Brownsville
1/3/2010	3.0	3.0	No increase on Findlay Connector
1/2/2011	10.0	3.0	No increase on Findlay Connector
1/1/2012	10.0	0.0	No increase on Findlay Connector
1/6/2013	10.0	2.0	
1/5/2014	12.0	2.0	No increase on Findlay Connector
1/4/2015	5.0	5.0	No increase on Findlay Connector
1/3/2016	6.0	6.0	No increase on Findlay Connector; DRB converted from ticket system to barrier system and rate changes implemented
1/8/2017	6.0	6.0	No increase on Findlay Connector or DRB
1/7/2018	6.0	6.0	No increase on Findlay Connector, DRB, or the Northeast Extension barrier facilities
4/29/2018	6.0	6.0	Northeast Extension barrier facilities only (1)
6/3/2018	6.0	6.0	Findlay Connector only (1)
1/6/2019	6.0	6.0	
10/27/2019	6.0	6.0	BVE, AKH, and Gateway only; additional 45% surcharge over cash rate added to video rate at these locations
1/5/2020	6.0	6.0	No increase on BVE, AKH, or Gateway
1/3/2021	6.0	6.0	Additional 45% surcharge over cash rate added to video rate for Ticket System and MFE

Note: Beginning in 2016, all cash toll rate increases also reflect video toll rate increases.

(1) Toll rate increase coincided with vehicle classification changes from a weight-based to an axle-based system.

Periodic toll rate increases were implemented on the Turnpike System in 1987, 1991, and 2004. Beginning in 2009, annual toll increases have been implemented. During the 2000s decade, E-ZPass was phased into the Turnpike System. Until 2011, cash and E-ZPass toll rates always increased by the same percent. The toll rate schedule implemented on January 2, 2011 created a differential between cash and E-ZPass, as E-ZPass rates were increased by 3.0 percent and cash toll were increased by 10.0 percent. Rate increases differed between cash and E-ZPass in 2012, 2013, and 2014 further increasing the differential between cash and E-ZPass toll rates. After 2014, rate increases have been applied equally to both cash/video and E-ZPass.

In 2015 the toll rates increased by 5.0 percent over the prior year. From 2016 to 2021, toll rates increased by 6.0 percent annually for both cash/video and E-ZPass. As of June 2020, the entire Pennsylvania Turnpike System is an all-electronic tolling (AET) system; cash is no longer accepted, with all payments being conducted via E-ZPass or video tolling.

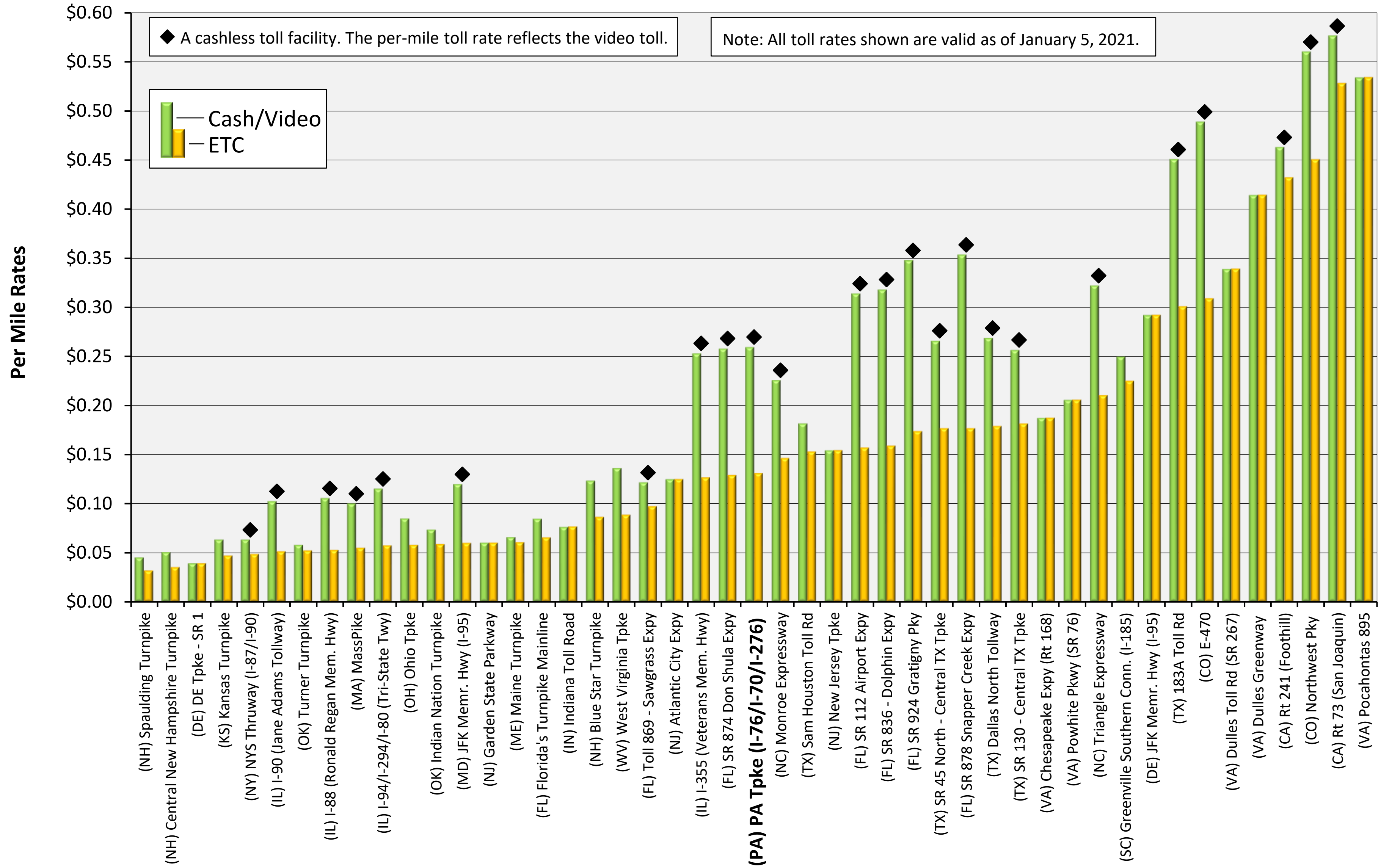
PTC policy has also been to implement a video toll surcharge upon conversion to AET; this has generally amounted to an additional 45 percent increase, making video rates about double E-ZPass rates. This 45-percent video surcharge was implemented on the last two components of the Pennsylvania Turnpike System that had previously lacked it, the Ticket System and MFE. This change was made in conjunction with the system-wide toll increase that was implemented on January 3, 2021.

It is assumed that annual toll rate increases will occur throughout the forecast period, as described in the section Actual and Assumed Toll Rate Increases and shown in Table 13.

Figures 1 and 2 show the 2021 per-mile toll rates for a through-trip on 47 U.S. toll facilities, for passenger cars (PCs) and 5-axle commercial vehicles (CVs), respectively. Per-mile rates are shown for both cash/video and ETC transactions in each figure. If a facility is all electronic (does not accept cash payments), the video toll rate is shown as the equivalent of a cash toll rate. All ETC facilities are marked with a diamond in Figures 1 and 2.

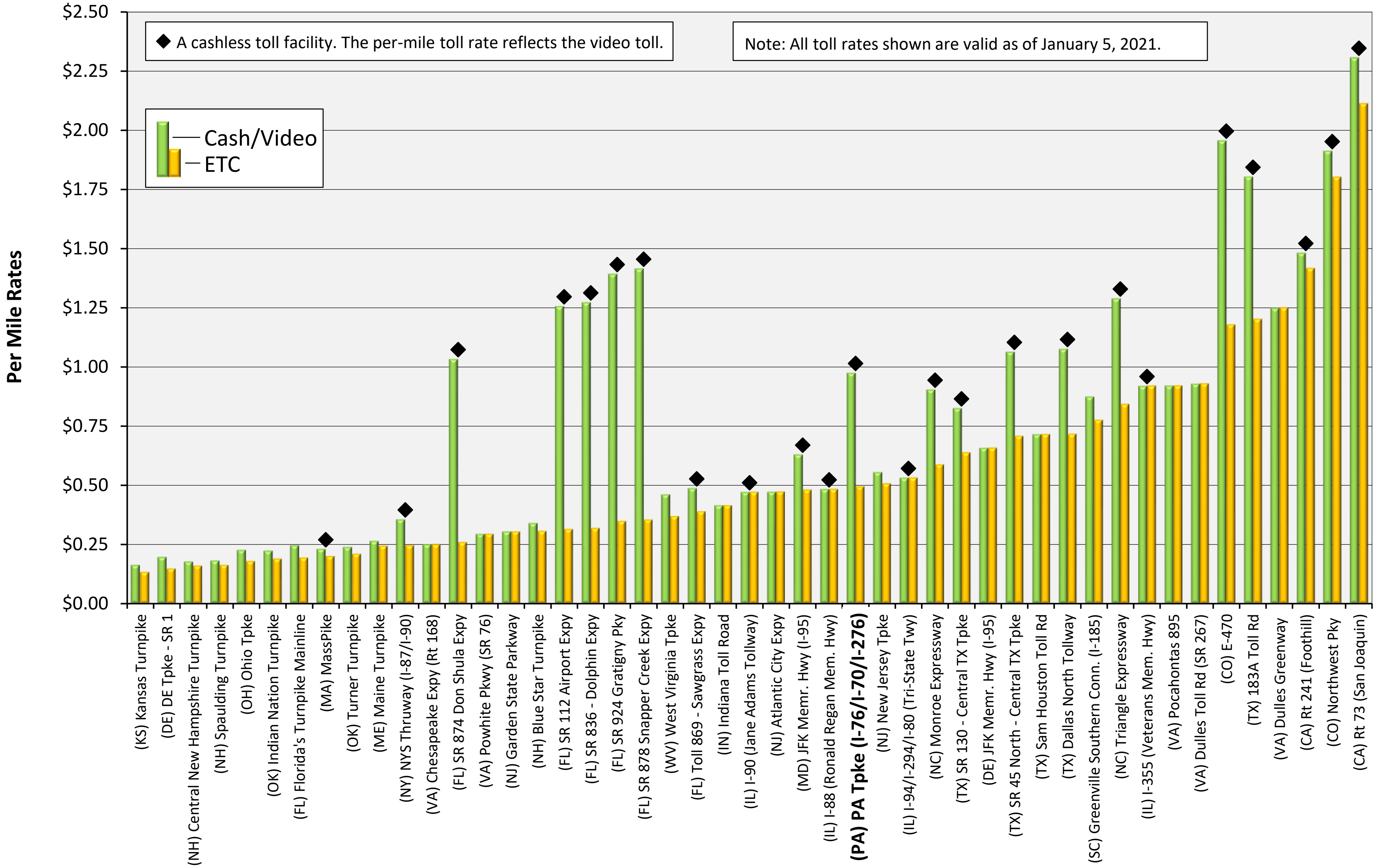
The per-mile through-trip toll rate is shown for the Pennsylvania Turnpike Mainline, which represents a trip on I-76/I-276 between New Jersey and Ohio. Figure 1 shows that even with 13 consecutive annual toll increases since 2009, the PC per-mile toll rates on the Pennsylvania Turnpike System, at 13 cents per mile for E-ZPass customers and 26 cents per mile for video customers, are still very reasonably priced compared to other toll facilities in the U.S.

Toll rates for 5-axle CVs (represented by weight class 6 for the Pennsylvania Turnpike Mainline) are equivalent to 49 cents per mile for E-ZPass and 98 cents per mile for video transactions for a through-trip on the Pennsylvania Turnpike Mainline. It should be remembered that the vast majority of both PC and CV trips are made using the more cost-effective E-ZPass payment method.



COMPARISON OF 2021 PASSENGER CAR PER-MILE THROUGH TRIP TOLL RATES
(DATA SORTED BY ETC TOLL RATES)

FIGURE 1



COMPARISON OF 2021 FIVE-AXLE VEHICLE PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2

Annual Transaction and Gross Toll Revenue Trends

Table 2 provides a summary of annual systemwide transactions and gross toll revenue trends from FY 1994-95 through FY 2019-20. Notably, this table excludes non-revenue transactions from PTC's non-AET facilities. The Pennsylvania Turnpike System is a large, mature system that has demonstrated long-term growth in transactions and toll revenue. Between FY 1999-2000 and FY 2009-10 there were three toll rate increases (2004, 2009, 2010) and Turnpike transactions and gross toll revenue grew by an average annual rate of 1.5 percent and 6.9 percent, respectively. Conversely, in the 10 years from FY 2009-10 to FY 2019-20 there were toll rate increases every year. During this period Turnpike transactions fell by 0.3 percent annually, while Turnpike revenue grew by 6.0 percent annually. The slight 0.3 percent transaction decline during this period is attributable to the significant transaction decline in FY 2019-20 when total transactions declined by 10.6 percent. This decline is attributed to the COVID-19 pandemic, which began affecting traffic and revenue in March 2020.

Table 2
Annual Systemwide Traffic and Gross Toll Revenue Trends
Pennsylvania Turnpike System
(in thousands)

	Transactions						Gross Toll Revenue					
Fiscal Year (1)	Cars	Percent Change over Prior Year	Trucks	Percent Change over Prior Year	Total	Percent Change over Prior Year	Cars	Percent Change over Prior Year	Trucks	Percent Change over Prior Year	Total	Percent Change over Prior Year
1994-95	114,033	6.9	15,620	9.5	129,653	7.2	$165,850	4.9	$131,749	7.2	$297,599	5.9
1995-96	121,911	6.9	16,719	7.0	138,630	6.9	172,339	3.9	136,269	3.4	308,608	3.7
1996-97	126,654	3.9	17,479	4.5	144,133	4.0	179,303	4.0	140,837	3.4	320,140	3.7
1997-98	132,472	4.6	18,627	6.6	151,099	4.8	186,290	3.9	149,036	5.8	335,326	4.7
1998-99	136,399	3.0	19,833	6.5	156,232	3.4	191,804	3.0	158,761	6.5	350,565	4.5
1999-00	138,762	1.7	21,341	7.6	160,103	2.5	195,301	1.8	172,035	8.4	367,336	4.8
2000-01	141,033	1.6	21,278	(0.3)	162,311	1.4	193,563	(0.9)	172,337	0.2	365,900	(0.4)
2001-02	150,496	6.7	22,298	4.8	172,794	6.5	212,650	9.9	163,101	(5.4)	375,751	2.7
2002-03	156,220	3.8	23,179	4.0	179,399	3.8	219,201	3.1	168,021	3.0	387,222	3.1
2003-04	163,612	4.7	24,407	5.3	188,019	4.8	228,515	4.2	180,229	7.3	408,744	5.6
2004-05	163,316	(0.2)	25,109	2.9	188,425	0.2	309,032	35.2	236,126	31.0	545,158	33.4
2005-06	160,590	(1.7)	25,311	0.8	185,901	(1.3)	321,268	4.0	267,369	13.2	588,637	8.0
2006-07	160,107	(0.3)	25,316	0.0	185,423	(0.3)	322,781	0.5	269,861	0.9	592,642	0.7
2007-08	164,097	2.5	25,455	0.5	189,552	2.2	327,761	1.5	271,165	0.5	598,926	1.1
2008-09	162,638	(0.9)	23,583	(7.4)	186,220	(1.8)	356,345	8.7	259,259	(4.4)	615,605	2.8
2009-10	163,599	0.6	22,933	(2.8)	186,531	0.2	415,981	16.7	302,057	16.5	718,038	16.6
2010-11	165,231	1.0	23,812	3.8	189,043	1.3	435,752	4.8	328,105	8.6	763,856	6.4
2011-12	164,955	(0.2)	24,125	1.3	189,080	0.0	455,133	4.4	342,646	4.4	797,779	4.4
2012-13	163,690	(0.8)	24,207	0.3	187,897	(0.6)	471,514	3.6	350,226	2.2	821,740	3.0
2013-14	163,788	0.1	24,891	2.8	188,679	0.4	497,671	5.5	368,395	5.2	866,066	5.4
2014-15	166,192	1.5	26,144	5.0	192,336	1.9	533,054	7.1	401,197	8.9	934,251	7.9
2015-16 (2)	171,569	3.2	27,319	4.5	198,887	3.4	588,295	10.4	443,325	10.5	1,031,620	10.4
2016-17 (3,4)	172,799	0.7	27,703	1.4	200,501	0.8	638,787	8.6	476,188	7.4	1,114,975	8.1
2017-18 (5)	172,512	(0.2)	28,650	3.4	201,162	0.3	678,741	6.3	524,418	10.1	1,203,158	7.9
2018-19 (6,7)	173,429	0.5	29,625	3.4	203,054	0.9	740,578	9.1	594,808	13.4	1,335,385	11.0
2019-20 (8,9)	152,301	(12.2)	29,269	(1.2)	181,570	(10.6)	683,918	(7.7)	605,642	1.8	1,289,561	(3.4)

Average Annual Percent Change

	Transactions			Gross Toll Revenue		
Fiscal Year	Cars	Trucks	Total	Cars	Trucks	Total
FY 1999-2000 - FY 2009-10	1.7	0.7	1.5	7.9	5.8	6.9
FY 2009-10 - FY 2019-20	(0.7)	2.5	(0.3)	5.1	7.2	6.0
FY 1994-95 - FY 2019-20	1.2	2.5	1.4	5.8	6.3	6.0

(1) Fiscal year beginning June 1.
(2) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.
(5) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier Facilities in April 2018.
(6) Toll by Plate surcharge for I-376 Beaver Valley Expressway was increased in October 2019.
(7) AET conversion was implemented at Gateway Toll Plaza and Turnpike 66 in October 2019.
(8) AET conversion with no surcharge for Toll by Plate was implemented on the Ticket System on March 16, 2020.
(9) AET conversion with no surcharge for Toll by Plate was implemented on the Mon/Fayette Expressway on June 16, 2020.

Note: Refer to Table 1 for toll rate increase information.

Monthly Transactions and Gross Toll Revenue Trends

Tables 3 through 12 present recent monthly transaction and gross toll revenue trends from FY 2017-18 through March 2021 for all PTC facilities. The information is provided for PCs, CVs, and total vehicles. For comparative purposes, subtotals are provided for June through March for each fiscal year. The facilities are summarized in the following order:

- Table 3 – the total Turnpike System (comprised of all the facilities listed below);
- Table 4 – the Ticket System (comprised of I-76/I-276 and I-476);
- Table 5 – the combined Barrier System (comprised of all facilities listed below);
- Table 6 – Turnpike 43 (Mon/Fayette Expressway) (MFE);
- Table 7 – Turnpike 66 (Amos K. Hutchinson Bypass) (AKH);
- Table 8 – Northeast Extension (I-476) barrier plazas;
- Table 9 – Turnpike I-376 (Beaver Valley Expressway) (BVE);
- Table 10 – Turnpike I-576 (Southern Beltway – Findlay Connector);
- Table 11 – Delaware River Bridge (DRB); and
- Table 12 – Gateway Toll Plaza.

As shown in Table 3, total systemwide gross toll revenue increased by 11.0 percent in FY 2018-19 and decreased by 3.4 percent in FY 2019-20, the last three months of which were impacted by the COVID-19 pandemic. Year-to-date (June 2020 through March 2021) toll revenue has declined by 12.3 percent compared to the same period in the prior year. CV toll revenue increased by 2.4 percent and PC toll revenue decreased by 24.2 percent from June 2020 through March 2021 compared to the same time period in the prior year. In this year-to-date comparison, nine of the 10 months in the current fiscal year are being compared to a period prior to the COVID-19 pandemic (June 2019 through February 2020), resulting in significant negative impacts to both toll transactions and toll revenue.

It is important to note, however, that the negative impacts of COVID-19 have diminished greatly over time. In April 2020 (which includes the first full month of COVID-19 impacts), total gross toll revenue was 49.2 percent lower than the same month in 2019. That negative impact decreased over each of the next six months, such that October 2020 gross toll revenue was only 9.8 percent lower than the same month in the prior year. While negative revenue impacts grew over the winter months, due to both increasing infection rates (in November, December, and January) and snowstorms (February), March 2021 experienced positive revenue growth for the first time since the start of the pandemic. During this month both PC and CV traffic increased significantly compared to March 2020. As a result, total gross toll revenue was 32.0 higher in March 2021 than it was in March 2020. This large positive result in March 2021 is because this is the first month when growth is compared to a prior year's month that also included COVID-19 impacts.

As shown in Table 3, PCs have been affected far more greatly by COVID-19 than have CVs. Thus far in FY 2020-21, PC gross toll revenue has declined 24.2 percent while CV gross toll revenue has grown by 2.4 percent.

As previously mentioned, the Ticket System is by far the largest component of both traffic and toll revenue on the Turnpike System. As such, its overall growth patterns generally resemble those for the total system. As shown in Table 4, for the FY 2020-21 year-to-date period, total transactions decreased 16.5 percent compared to the same period in the prior year (toll revenue decreased by 13.5 percent). PC transactions decreased by 20.9 percent (with toll revenue falling 26.5 percent) during this period, while CV activity has increased by 8.0 percent (with toll revenue increasing 1.8 percent) compared to the same ten-month period in FY 2019-20.

Prior to the impacts of COVID-19 beginning in March 2020, Ticket System toll transaction growth generally had been slightly negative for PCs and slightly positive for CVs over the period shown in Table 4. Annual toll rate increases, however, resulted in significant revenue increases over this time for the Ticket System. In FY 2018-19, while total transactions decreased by 0.5 percent compared to the previous year, toll revenue increased by 10.4 percent (8.1 percent for PCs and 13.3 percent for CVs). This same general trend continued into FY 2019-20 until March 2020 when the impacts of COVID-19 become evident. As with the total systemwide trends shown in Table 3, the negative impacts of COVID-19 are greatest on the Ticket System in April 2020 with total transactions decreasing by 60.5 percent and toll revenue down by 50.3 percent. By October 2020, however, the negative impacts were just 14.5 percent for transactions and 11.6 percent for toll revenue. Impacts grew more negative over the winter before rebounding in March, which experienced significant positive growth in both transactions and revenue for both PCs and CVs. Throughout the pandemic, negative impacts have been more pronounced for PCs than for CVs.

Table 5 provides the same information for all barrier toll facilities combined. Barrier facility toll revenue contributes about 15 percent of total systemwide toll revenue. The negative impacts of COVID-19 on the barrier facilities are similar to those on the Ticket System. However, the recovery rate seems to be somewhat faster for the barrier facilities. For the latest ten-month period shown for FY 2020-21, total barrier facility toll transactions are down by 13.6 percent compared to 16.5 percent for the Ticket System. Over the same period, total barrier facility toll revenue is down only 4.8 percent compared to 13.5 percent for the Ticket System. The same information is provided for each individual barrier facility in Tables 6 through 12.

Table 3

Total Turnpike System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	15,438	(0.5)	15,361	(1.1)	15,187	(30.1)	10,616
July	15,522	0.3	15,566	0.1	15,583	(21.1)	12,292
August	15,957	1.1	16,134	(0.4)	16,071	(20.2)	12,824
September	14,724	(1.5)	14,503	0.5	14,582	(16.0)	12,248
October	15,221	1.2	15,396	(0.0)	15,389	(17.1)	12,758
November	14,317	(0.5)	14,242	(0.3)	14,193	(24.0)	10,783
December	13,746	1.7	13,982	(0.5)	13,911	(28.1)	9,998
January	12,542	(0.3)	12,504	2.6	12,826	(22.1)	9,987
February	11,958	(0.2)	11,930	4.4	12,459	(29.2)	8,826
March	13,591	3.1	14,018	(32.5)	9,463	25.0	11,834
April	14,259	1.2	14,426	(66.4)	4,845		
May	15,237	0.9	15,367	(49.3)	7,791		
Total Year	172,512	0.5	173,429	(12.2)	152,301		
Jun-Mar	143,016	0.4	143,636	(2.8)	139,665	(19.7)	112,167

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	2,575	0.9	2,596	(1.5)	2,557	7.0	2,735
July	2,419	6.3	2,573	3.7	2,668	5.2	2,806
August	2,662	3.5	2,755	(1.2)	2,722	1.5	2,764
September	2,431	(0.5)	2,418	5.0	2,539	9.2	2,773
October	2,547	7.3	2,732	1.4	2,770	3.1	2,856
November	2,323	3.0	2,391	0.5	2,403	5.4	2,533
December	2,146	2.5	2,198	3.3	2,271	10.8	2,516
January	2,175	4.3	2,268	3.7	2,353	3.1	2,426
February	2,034	1.9	2,073	5.2	2,182	0.3	2,188
March	2,295	3.4	2,372	1.6	2,410	17.5	2,832
April	2,387	6.8	2,549	(20.7)	2,021		
May	2,657	1.6	2,698	(12.1)	2,372		
Total Year	28,650	3.4	29,625	(1.2)	29,269		
Jun-Mar	23,606	3.3	24,377	2.0	24,875	6.2	26,429

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	18,013	(0.3)	17,958	(1.2)	17,744	(24.8)	13,351
July	17,942	1.1	18,138	0.6	18,251	(17.3)	15,098
August	18,619	1.5	18,889	(0.5)	18,793	(17.1)	15,587
September	17,156	(1.4)	16,921	1.2	17,121	(12.3)	15,021
October	17,768	2.0	18,128	0.2	18,159	(14.0)	15,615
November	16,640	(0.0)	16,633	(0.2)	16,597	(19.8)	13,317
December	15,891	1.8	16,180	0.0	16,182	(22.7)	12,514
January	14,718	0.4	14,772	2.8	15,179	(18.2)	12,413
February	13,992	0.1	14,003	4.5	14,640	(24.8)	11,015
March	15,886	3.2	16,389	(27.6)	11,873	23.5	14,666
April	16,646	2.0	16,975	(59.5)	6,866		
May	17,893	1.0	18,065	(43.7)	10,164		
Total Year	201,162	0.9	203,054	(10.6)	181,570		
Jun-Mar	166,623	0.8	168,014	(2.1)	164,539	(15.8)	138,597

Toll Revenue (in $1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$61,877	6.5	$65,886	8.9	$71,743	(38.6)	$44,023
July	65,722	5.3	69,178	9.8	75,990	(31.2)	52,311
August	64,611	9.2	70,545	9.6	77,351	(25.6)	57,533
September	56,620	6.6	60,348	8.0	65,184	(21.8)	51,000
October	57,806	6.6	61,611	9.7	67,615	(18.3)	55,274
November	55,122	7.3	59,156	8.3	64,068	(31.2)	44,052
December	52,345	9.6	57,377	10.8	63,565	(33.3)	42,380
January	46,741	9.0	50,969	11.5	56,826	(21.9)	44,355
February	44,576	11.8	49,844	11.1	55,386	(31.7)	37,832
March	53,737	14.3	61,426	(38.8)	37,574	41.0	52,982
April	57,201	11.8	63,940	(73.2)	17,157		
May	62,381	12.7	70,298	(55.2)	31,458		
Total Year	$678,741	9.1	$740,578	(7.7)	$683,918		
Jun-Mar	559,158	8.4	606,340	4.8	635,303	(24.2)	$481,742

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$44,643	11.5	$49,757	5.4	$52,463	(0.6)	$52,165
July	41,947	17.0	49,069	10.8	54,375	(3.1)	52,693
August	46,210	13.3	52,369	5.9	55,447	(3.5)	53,492
September	42,371	11.7	47,311	8.5	51,328	1.3	52,003
October	44,599	17.0	52,185	6.0	55,318	0.5	55,607
November	40,944	15.0	47,087	2.5	48,255	1.6	49,006
December	39,000	11.9	43,630	8.3	47,235	8.1	51,038
January	42,222	14.3	48,261	8.1	52,171	(0.5)	51,885
February	40,130	12.4	45,096	8.9	49,120	(2.0)	48,147
March	45,627	13.4	51,729	(5.4)	48,928	25.1	61,207
April	46,057	14.6	52,793	(20.2)	42,127		
May	50,666	9.6	55,522	(12.0)	48,876		
Total Year	$524,418	13.4	$594,808	1.8	$605,642		
Jun-Mar	427,694	13.7	486,493	5.8	514,639	2.4	$527,243

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$106,521	8.6	$115,643	7.4	$124,206	(22.6)	$96,188
July	107,669	9.8	118,247	10.2	130,365	(19.5)	105,004
August	110,821	10.9	122,914	8.0	132,798	(16.4)	111,025
September	98,991	8.8	107,658	8.2	116,512	(11.6)	103,003
October	102,405	11.1	113,795	8.0	122,933	(9.8)	110,881
November	96,066	10.6	106,243	5.7	112,323	(17.2)	93,058
December	91,344	10.6	101,007	9.7	110,800	(15.7)	93,418
January	88,964	11.5	99,230	9.8	108,997	(11.7)	96,240
February	84,707	12.1	94,940	10.1	104,507	(17.7)	85,979
March	99,364	13.9	113,155	(23.6)	86,502	32.0	114,189
April	103,259	13.0	116,733	(49.2)	59,283		
May	113,047	11.3	125,820	(36.2)	80,335		
Total Year	$1,203,158	11.0	$1,335,385	(3.4)	$1,289,561		
Jun-Mar	986,852	10.7	1,092,833	5.2	1,149,943	(12.3)	$1,008,986

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(5) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.

(6) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier facilities in April 2018.

(7) AET conversion and vehicle classification changes were implemented on the Turnpike I-576 Findlay Connector in June 2018.

(8) AET conversion was implemented on Turnpike 66 Amos K. Hutchinson Bypass and Gateway Toll Plaza in October 2019.

(9) AET conversion was implemented on the Ticket System and Mon/Fayette Expressway in June 2020.

Table 4

Ticket System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Commercial Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Total Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	11,695	(1.0)	11,580	(3.3)	11,195	(31.9)	7,621	1,938	0.0	1,939	(2.7)	1,887	8.3	2,043	13,633	(0.8)	13,519	(3.2)	13,082	(26.1)	9,664
July	11,654	(0.5)	11,596	(2.0)	11,365	(21.8)	8,884	1,817	5.4	1,915	2.7	1,967	6.5	2,095	13,471	0.3	13,512	(1.3)	13,332	(17.6)	10,979
August	12,015	0.0	12,019	(1.9)	11,786	(21.1)	9,305	1,995	2.3	2,040	(1.7)	2,006	3.3	2,072	14,009	0.4	14,059	(1.9)	13,792	(17.5)	11,377
September	11,110	(2.5)	10,836	(0.6)	10,768	(17.5)	8,879	1,823	(1.8)	1,790	4.3	1,867	10.7	2,067	12,933	(2.4)	12,626	0.1	12,635	(13.4)	10,947
October	11,547	(0.6)	11,483	(0.8)	11,387	(18.1)	9,326	1,913	5.8	2,024	0.4	2,031	5.4	2,141	13,459	0.4	13,506	(0.7)	13,418	(14.5)	11,467
November	10,905	(2.6)	10,625	(0.5)	10,574	(25.0)	7,926	1,754	1.7	1,784	(0.8)	1,770	8.3	1,917	12,659	(2.0)	12,409	(0.5)	12,343	(20.3)	9,843
December	10,464	(0.0)	10,463	(1.1)	10,347	(28.8)	7,364	1,638	0.8	1,650	2.2	1,686	13.6	1,916	12,102	0.1	12,113	(0.7)	12,033	(22.9)	9,280
January	9,655	(2.1)	9,453	1.8	9,623	(23.2)	7,390	1,658	2.5	1,699	2.7	1,745	5.3	1,837	11,313	(1.4)	11,152	1.9	11,368	(18.8)	9,227
February	9,152	(2.4)	8,931	4.8	9,358	(31.2)	6,440	1,539	0.5	1,547	4.5	1,616	1.5	1,640	10,691	(2.0)	10,478	4.7	10,974	(26.4)	8,080
March	10,288	1.8	10,475	(32.9)	7,032	23.4	8,680	1,732	1.7	1,762	2.8	1,811	18.0	2,137	12,020	1.8	12,237	(27.7)	8,843	22.3	10,817
April	10,836	(1.0)	10,728	(67.7)	3,463			1,795	4.7	1,880	(19.5)	1,513			12,631	(0.2)	12,608	(60.5)	4,977		
May	11,485	(1.0)	11,371	(50.9)	5,583			1,981	0.5	1,990	(11.0)	1,770			13,465	(0.8)	13,361	(45.0)	7,354		
Total Year	130,805	(1.0)	129,559	(13.2)	112,482			21,582	2.0	22,020	(1.6)	21,670			152,387	(0.5)	151,579	(11.5)	134,151		
Jun-Mar	108,485	(0.9)	107,460	(3.7)	103,435	(20.9)	81,814	17,806	1.9	18,150	1.3	18,386	8.0	19,866	126,290	(0.5)	125,610	(3.0)	121,821	(16.5)	101,680

Toll Revenue (in $1,000s)

Month	Passenger Cars 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Commercial Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Total Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$52,913	6.5	$56,349	7.6	$60,635	(41.8)	$35,319	$39,308	11.7	$43,898	5.1	$46,135	(2.0)	$45,213	$92,221	8.7	$100,247	6.5	$106,770	(24.6)	$80,532
July	56,299	5.0	59,123	8.5	64,149	(33.4)	42,697	36,939	17.2	43,294	10.4	47,784	(4.3)	45,733	93,238	9.8	102,417	9.3	111,932	(21.0)	88,430
August	55,199	9.1	60,200	8.8	65,501	(28.3)	46,956	40,669	13.5	46,144	5.5	48,699	(4.5)	46,518	95,868	10.9	106,344	7.4	114,200	(18.1)	93,474
September	48,195	6.3	51,234	7.0	54,814	(24.3)	41,486	37,290	12.0	41,775	7.7	45,003	0.1	45,044	85,485	8.8	93,009	7.3	99,817	(13.3)	86,530
October	49,321	5.3	51,943	9.7	57,006	(21.3)	44,868	39,232	17.0	45,892	5.4	48,375	(0.3)	48,241	88,553	10.5	97,835	7.7	105,381	(11.6)	93,109
November	47,189	5.8	49,943	7.6	53,745	(32.5)	36,264	35,991	15.4	41,520	1.1	41,992	1.6	42,655	83,181	10.0	91,463	4.7	95,737	(17.6)	78,919
December	44,599	8.3	48,312	10.0	53,142	(35.4)	34,329	34,402	11.8	38,457	7.1	41,206	8.0	44,492	79,001	9.8	86,769	8.7	94,348	(16.5)	78,821
January	39,895	7.4	42,828	10.1	47,167	(23.0)	36,314	37,423	13.8	42,586	7.4	45,721	(1.1)	45,231	77,318	10.5	85,414	8.8	92,888	(12.2)	81,545
February	38,015	10.1	41,868	10.5	46,274	(33.2)	30,899	35,551	12.0	39,811	8.3	43,112	(2.3)	42,135	73,566	11.0	81,679	9.4	89,386	(18.3)	73,034
March	45,839	12.8	51,714	(40.2)	30,904	39.5	43,127	40,462	12.9	45,684	(6.7)	42,610	25.4	53,427	86,301	12.9	97,398	(24.5)	73,515	31.3	96,553
April	48,924	10.1	53,860	(75.2)	13,360			40,759	13.9	46,431	(21.4)	36,517			89,683	11.8	100,291	(50.3)	49,878		
May	53,304	11.3	59,310	(57.6)	25,131			44,726	9.1	48,818	(12.8)	42,565			98,030	10.3	108,128	(37.4)	67,696		
Total Year	$579,692	8.1	$626,685	(8.8)	$571,829			$462,754	13.3	$524,309	1.0	$529,718			$1,042,446	10.4	$1,150,994	(4.3)	$1,101,547		
Jun-Mar	477,465	7.6	513,514	3.9	533,337	(26.5)	$392,259	377,268	13.7	429,060	5.0	450,636	1.8	$458,689	854,732	10.3	942,575	4.4	983,973	(13.5)	$850,947

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(5) AET conversion occurred in June 2020.

Table 5

Combined Barrier Facilities - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	3,743	1.0	3,782	5.5	3,992	(25.0)	2,996
July	3,869	2.6	3,970	6.3	4,218	(19.2)	3,409
August	3,942	4.4	4,115	4.1	4,286	(17.9)	3,519
September	3,614	1.5	3,667	4.0	3,814	(11.7)	3,368
October	3,674	6.5	3,913	2.3	4,001	(14.2)	3,433
November	3,412	6.0	3,618	0.1	3,620	(21.1)	2,857
December	3,282	7.2	3,519	1.3	3,564	(26.1)	2,634
January	2,887	5.7	3,051	5.0	3,203	(18.9)	2,597
February	2,806	6.9	2,999	3.4	3,101	(23.0)	2,386
March	3,303	7.3	3,543	(31.4)	2,431	29.7	3,154
April	3,423	8.0	3,698	(62.6)	1,382		
May	3,752	6.5	3,996	(44.7)	2,208		
Total Year	41,707	5.2	43,870	(9.2)	39,819		
Jun-Mar	34,532	4.8	36,176	0.1	36,230	(16.2)	30,353

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	636	3.3	657	1.9	670	3.3	692
July	602	9.2	657	6.7	702	1.3	711
August	667	7.1	715	0.1	716	(3.4)	692
September	609	3.2	628	6.9	672	5.0	705
October	635	11.6	709	4.3	739	(3.3)	715
November	569	6.8	607	4.3	634	(2.7)	617
December	508	7.9	548	6.7	585	2.6	600
January	517	10.0	569	6.8	608	(3.2)	589
February	495	6.4	526	7.5	566	(3.0)	549
March	562	8.5	610	(1.9)	598	16.1	695
April	592	13.1	669	(24.1)	508		
May	676	4.7	708	(14.9)	602		
Total Year	7,068	7.6	7,605	(0.1)	7,599		
Jun-Mar	5,801	7.4	6,227	4.2	6,489	1.2	6,564

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	4,379	1.4	4,439	5.0	4,661	(20.9)	3,688
July	4,471	3.5	4,627	6.3	4,920	(16.3)	4,120
August	4,610	4.8	4,830	3.5	5,002	(15.8)	4,211
September	4,223	1.7	4,295	4.4	4,486	(9.2)	4,074
October	4,309	7.3	4,621	2.6	4,740	(12.5)	4,147
November	3,981	6.1	4,225	0.7	4,253	(18.3)	3,474
December	3,790	7.3	4,068	2.0	4,149	(22.0)	3,235
January	3,404	6.3	3,620	5.3	3,811	(16.4)	3,186
February	3,301	6.8	3,525	4.0	3,666	(19.9)	2,935
March	3,865	7.4	4,153	(27.0)	3,030	27.0	3,849
April	4,015	8.8	4,367	(56.7)	1,890		
May	4,428	6.2	4,704	(40.3)	2,810		
Total Year	48,775	5.5	51,475	(7.9)	47,418		
Jun-Mar	40,332	5.1	42,404	0.7	42,719	(13.6)	36,917

Toll Revenue (in $1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$8,964	6.4	$9,537	16.5	$11,108	(21.6)	$8,704
July	9,422	6.7	10,055	17.8	11,841	(18.8)	9,614
August	9,413	9.9	10,344	14.6	11,850	(10.7)	10,577
September	8,425	8.2	9,114	13.8	10,370	(8.3)	9,514
October	8,485	13.9	9,668	9.7	10,609	(1.9)	10,406
November	7,933	16.1	9,214	12.0	10,323	(24.6)	7,788
December	7,746	17.0	9,065	15.0	10,423	(22.8)	8,051
January	6,847	18.9	8,141	18.6	9,659	(16.8)	8,040
February	6,561	21.6	7,976	14.3	9,112	(23.9)	6,934
March	7,898	23.0	9,712	(31.3)	6,670	47.8	9,855
April	8,277	21.8	10,080	(62.3)	3,796		
May	9,078	21.0	10,988	(42.4)	6,327		
Total Year	$99,048	15.0	$113,893	(1.6)	$112,089		
Jun-Mar	81,694	13.6	92,825	9.8	101,966	(12.2)	$89,483

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$5,335	9.8	$5,859	8.0	$6,328	9.9	$6,952
July	5,009	15.3	5,775	14.1	6,591	5.6	6,959
August	5,541	12.4	6,225	8.4	6,748	3.4	6,974
September	5,082	8.9	5,535	14.3	6,326	10.0	6,958
October	5,368	17.2	6,293	10.3	6,943	6.1	7,366
November	4,952	12.4	5,567	12.5	6,263	1.4	6,352
December	4,597	12.5	5,173	16.6	6,029	8.6	6,546
January	4,799	18.2	5,675	13.7	6,450	3.2	6,655
February	4,580	15.4	5,285	13.7	6,009	0.0	6,012
March	5,165	17.0	6,045	4.5	6,317	23.2	7,781
April	5,298	20.1	6,362	(11.8)	5,610		
May	5,940	12.9	6,704	(5.9)	6,311		
Total Year	$61,664	14.3	$70,498	7.7	$75,925		
Jun-Mar	50,426	13.9	57,432	11.4	64,004	7.1	$68,555

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$14,299	7.7	$15,396	13.2	$17,436	(10.2)	$15,656
July	14,431	9.7	15,830	16.4	18,433	(10.1)	16,574
August	14,953	10.8	16,570	12.2	18,598	(5.6)	17,552
September	13,507	8.5	14,649	14.0	16,696	(1.3)	16,472
October	13,853	15.2	15,961	10.0	17,552	1.3	17,772
November	12,885	14.7	14,780	12.2	16,586	(14.8)	14,140
December	12,343	15.4	14,238	15.6	16,452	(11.3)	14,597
January	11,646	18.6	13,816	16.6	16,109	(8.8)	14,695
February	11,141	19.0	13,261	14.0	15,121	(14.4)	12,945
March	13,063	20.6	15,757	(17.6)	12,987	35.8	17,636
April	13,575	21.1	16,443	(42.8)	9,406		
May	15,017	17.8	17,691	(28.6)	12,638		
Total Year	$160,712	14.7	$184,392	2.0	$188,014		
Jun-Mar	132,120	13.7	150,258	10.5	165,970	(4.8)	$158,038

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(5) AET Conversions at Beaver Valley Expressway, NE Extension Barrier Plazas, Findlay Connector, Amos K Hutchinson Bypass, Gateway Toll Plaza, and Mon/Fayette Expressway in May 2017, April 2018, June 2018, October 2019, October 2019, and June 2020 respectively.

Table 6

Turnpike 43 - Mon/Fayette Expressway - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Commercial Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Total Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	1,072	0.7	1,079	(1.6)	1,061	(11.0)	944	97	(0.1)	97	0.0	97	0.8	98	1,169	0.6	1,176	(1.5)	1,158	(10.0)	1,042
July	1,068	4.7	1,118	(1.6)	1,099	(4.9)	1,045	94	6.2	99	9.7	109	(8.9)	99	1,161	4.8	1,217	(0.7)	1,208	(5.3)	1,144
August	1,116	3.0	1,149	(2.9)	1,116	(6.6)	1,042	107	(5.6)	101	0.1	102	(12.5)	89	1,223	2.3	1,251	(2.7)	1,217	(7.1)	1,131
September	1,076	0.4	1,080	(1.2)	1,067	(2.7)	1,039	97	(2.5)	95	4.0	99	(8.1)	91	1,173	0.2	1,175	(0.8)	1,166	(3.1)	1,129
October	1,116	4.1	1,162	(3.5)	1,121	(5.4)	1,060	103	5.6	108	4.0	113	(17.8)	93	1,219	4.2	1,270	(2.9)	1,233	(6.5)	1,152
November	980	4.8	1,027	(5.6)	970	(10.4)	869	86	5.9	91	(4.3)	87	(15.2)	74	1,066	4.9	1,118	(5.5)	1,057	(10.8)	943
December	952	1.6	967	(2.0)	948	(14.6)	810	71	4.6	75	(4.8)	71	0.8	72	1,023	1.8	1,042	(2.2)	1,019	(13.5)	882
January	876	0.4	880	1.3	891	(9.9)	803	71	10.1	78	(3.8)	75	(6.4)	70	947	1.1	957	0.9	966	(9.6)	873
February	870	1.5	884	(1.7)	868	(12.1)	763	71	0.9	72	(6.5)	67	(3.0)	65	942	1.5	956	(2.1)	936	(11.5)	828
March	995	2.0	1,015	(30.4)	706	37.5	971	78	11.4	87	(18.7)	71	20.2	85	1,073	2.7	1,102	(29.5)	777	36.0	1,056
April	1,026	2.7	1,053	(57.2)	451			88	13.1	99	(37.5)	62			1,113	3.5	1,152	(55.5)	513		
May	1,098	1.3	1,111	(39.6)	671			106	(2.0)	104	(22.6)	81			1,204	1.0	1,215	(38.2)	751		
Total Year	12,244	2.3	12,524	(12.4)	10,970			1,070	3.5	1,107	(6.7)	1,033			13,313	2.4	13,631	(11.9)	12,003		
Jun-Mar	10,120	2.4	10,360	(4.9)	9,848	(5.1)	9,346	876	3.2	904	(1.5)	890	(6.2)	835	10,996	2.4	11,264	(4.7)	10,738	(5.2)	10,182

Toll Revenue (in $1,000s)

Month	Passenger Cars 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Commercial Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Total Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$1,659	6.8	$1,772	7.5	$1,904	(16.3)	$1,594	$426	8.5	$462	8.3	$500	(3.6)	$482	$2,085	7.1	$2,234	7.6	$2,404	(13.6)	$2,076
July	1,671	12.4	1,877	6.5	2,000	(12.1)	1,758	400	17.8	471	18.0	556	(16.0)	467	2,071	13.4	2,349	8.8	2,556	(13.0)	2,225
August	1,722	10.6	1,904	3.7	1,974	(8.1)	1,813	457	4.6	478	8.9	520	(16.1)	436	2,179	9.3	2,382	4.7	2,494	(9.8)	2,250
September	1,642	7.8	1,769	7.4	1,901	(9.6)	1,717	418	6.9	447	9.8	491	(11.2)	436	2,060	7.6	2,216	7.9	2,392	(10.0)	2,154
October	1,711	10.9	1,898	4.5	1,983	(2.3)	1,936	437	16.3	508	9.3	556	(15.3)	471	2,148	12.0	2,406	5.5	2,538	(5.2)	2,407
November	1,496	12.6	1,684	0.9	1,700	(16.9)	1,413	373	16.0	432	3.3	446	(19.0)	361	1,869	13.3	2,116	1.4	2,147	(17.3)	1,775
December	1,446	12.4	1,625	3.4	1,680	(11.5)	1,486	316	18.3	374	0.8	377	(5.0)	358	1,762	13.5	1,999	2.9	2,056	(10.3)	1,844
January	1,399	10.2	1,542	9.7	1,692	(6.5)	1,582	331	22.1	404	5.7	427	(11.5)	377	1,730	12.5	1,946	8.9	2,119	(7.5)	1,960
February	1,403	10.4	1,548	5.9	1,639	(11.4)	1,452	343	10.4	378	2.8	389	(12.6)	340	1,746	10.4	1,926	5.3	2,028	(11.7)	1,791
March	1,602	11.9	1,792	(26.1)	1,324	53.2	2,028	380	21.5	462	(14.3)	396	18.9	471	1,982	13.7	2,254	(23.7)	1,720	45.3	2,499
April	1,672	11.4	1,862	(53.1)	873			421	22.1	513	(29.3)	363			2,093	13.5	2,376	(48.0)	1,236		
May	1,798	10.4	1,986	(31.9)	1,352			499	8.7	543	(16.5)	453			2,298	10.1	2,529	(28.6)	1,805		
Total Year	$19,222	10.6	$21,261	(5.8)	$20,022			$4,800	14.0	$5,472	0.0	$5,473			$24,021	11.3	$26,732	(4.6)	$25,496		
Jun-Mar	15,751	10.5	17,412	2.2	17,796	(5.7)	$16,781	3,880	13.8	4,416	5.5	4,658	(9.8)	$4,200	19,631	11.2	21,828	2.9	22,454	(6.6)	$20,980

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in June 2020.

Table 7

Turnpike 66 - Amos K. Hutchinson Bypass - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Commercial Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Total Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	567	(1.9)	556	(2.7)	541	(11.5)	479	100	1.0	101	(6.1)	95	3.1	97	667	(1.5)	657	(3.2)	636	(9.3)	577
July	553	1.1	559	(0.7)	555	(6.6)	518	94	7.2	101	(0.9)	100	1.3	101	647	2.0	660	(0.7)	655	(5.4)	620
August	578	0.8	583	(1.5)	574	(8.1)	528	104	3.6	108	(3.8)	104	(4.2)	100	682	1.2	691	(1.8)	678	(7.5)	627
September	558	(0.5)	555	(3.2)	538	(4.8)	512	95	(2.5)	92	3.0	95	3.0	98	653	(0.8)	648	(2.3)	633	(3.6)	610
October	575	1.0	580	0.1	581	(9.4)	527	98	8.1	105	(0.7)	105	(5.7)	99	672	2.0	686	(0.0)	686	(8.8)	625
November	537	(1.2)	531	(3.3)	513	(9.4)	465	84	2.4	86	(0.6)	85	(1.0)	84	621	(0.7)	617	(2.9)	599	(8.2)	550
December	529	0.7	533	(3.1)	517	(14.7)	441	74	7.8	80	(3.0)	77	1.1	78	603	1.6	612	(3.1)	594	(12.7)	519
January	482	(1.4)	475	2.3	486	(12.2)	426	77	5.7	81	2.0	83	(8.0)	76	558	(0.4)	556	2.2	569	(11.6)	503
February	460	0.1	461	1.3	467	(12.1)	410	71	5.6	75	1.0	76	(2.5)	74	531	0.8	536	1.3	542	(10.7)	484
March	533	(1.2)	527	(26.5)	387	33.2	516	84	(3.3)	81	(4.0)	78	22.2	95	617	(1.5)	608	(23.5)	465	31.4	611
April	536	0.3	538	(49.6)	271			90	3.8	93	(26.4)	69			626	0.8	631	(46.1)	340		
May	579	(1.6)	570	(30.4)	396			101	(2.4)	99	(13.4)	86			680	(1.7)	669	(27.9)	482		
Total Year	6,486	(0.3)	6,466	(9.9)	5,827			1,071	2.9	1,102	(4.6)	1,051			7,556	0.2	7,568	(9.1)	6,878		
Jun-Mar	5,371	(0.2)	5,359	(3.7)	5,159	(6.5)	4,822	879	3.4	910	(1.4)	897	0.6	902	6,250	0.3	6,269	(3.4)	6,056	(5.5)	5,725

Toll Revenue (in $1,000s)

Month	Passenger Cars 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Commercial Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	Total Vehicles 2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$951	4.6	$995	4.8	$1,043	(4.8)	$992	$452	11.4	$504	(2.1)	$493	(0.7)	$490	$1,403	6.8	$1,499	2.5	$1,536	(3.5)	$1,482
July	938	7.1	1,004	7.6	1,080	(5.0)	1,027	426	15.9	494	2.9	508	(4.2)	487	1,364	9.8	1,498	6.1	1,588	(4.7)	1,514
August	964	7.4	1,036	6.6	1,104	(4.3)	1,057	473	9.6	518	2.5	531	(8.3)	487	1,437	8.2	1,554	5.2	1,636	(5.6)	1,544
September	931	6.4	991	3.8	1,029	(2.1)	1,007	434	3.1	447	7.4	480	(2.2)	470	1,364	5.4	1,438	4.9	1,509	(2.1)	1,476
October	960	6.5	1,023	1.3	1,036	8.0	1,119	445	16.4	518	(3.7)	499	0.7	503	1,405	9.7	1,541	(0.3)	1,536	5.6	1,622
November	892	4.8	934	12.1	1,047	(15.6)	884	389	6.4	414	6.9	443	(6.8)	413	1,281	5.3	1,349	10.5	1,490	(13.0)	1,297
December	879	7.0	941	7.1	1,008	(8.1)	926	341	15.0	392	0.9	396	(2.0)	388	1,220	9.3	1,334	5.3	1,404	(6.4)	1,314
January	829	7.1	888	8.5	963	(7.6)	890	373	12.6	420	1.1	425	(4.2)	407	1,202	8.8	1,308	6.1	1,388	(6.6)	1,297
February	804	8.3	871	3.5	901	(7.7)	832	354	10.9	392	(2.9)	381	2.6	391	1,158	9.1	1,264	1.5	1,283	(4.6)	1,223
March	935	7.4	1,004	(30.5)	698	61.7	1,129	414	3.5	429	(12.6)	375	39.3	522	1,350	6.2	1,433	(25.1)	1,073	53.9	1,651
April	946	8.4	1,026	(49.8)	515			446	8.9	485	(28.9)	345			1,392	8.6	1,511	(43.1)	860		
May	1,024	6.5	1,090	(25.5)	812			493	3.9	513	(14.9)	437			1,518	5.6	1,603	(22.1)	1,249		
Total Year	$11,054	6.8	$11,804	(4.8)	$11,237			$5,041	9.7	$5,528	(3.9)	$5,314			$16,095	7.7	$17,331	(4.5)	$16,551		
Jun-Mar	9,083	6.6	9,687	2.3	9,910	(0.5)	$9,863	4,102	10.4	4,529	0.1	4,532	0.6	$4,558	13,185	7.8	14,217	1.6	14,442	(0.1)	$14,421

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in October 2019.

Table 8
Northeast Extension Barrier Plazas - Monthly Transaction and Revenue Trends
Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	420	(0.7)	417	10.7	462	(45.0)	254	104	3.5	108	5.4	113	(2.8)	110	524	0.1	525	9.6	575	(36.7)	364
July	494	(1.2)	488	14.7	560	(40.4)	334	101	8.6	109	12.2	123	(7.0)	114	595	0.5	598	14.3	683	(34.4)	448
August	481	10.3	530	9.3	580	(39.5)	351	107	13.0	121	3.8	126	(12.3)	110	588	10.8	651	8.3	705	(34.6)	461
September	390	(0.1)	389	8.7	423	(27.1)	309	96	4.8	100	15.2	116	(1.3)	114	486	0.9	490	10.0	539	(21.6)	423
October	380	4.4	397	10.4	438	(29.4)	309	97	14.8	111	7.0	119	(1.3)	117	476	6.5	507	9.7	556	(23.4)	426
November	364	1.0	367	3.6	381	(36.5)	242	91	6.0	96	3.8	100	(0.2)	99	454	2.0	463	3.6	480	(29.0)	341
December	323	2.3	331	2.9	340	(41.6)	198	83	4.9	87	8.5	94	4.5	98	406	2.8	417	4.0	434	(31.6)	297
January	258	(0.2)	257	9.6	282	(31.1)	194	88	3.5	91	8.5	99	(6.2)	92	345	0.8	348	9.3	381	(24.7)	287
February	256	2.3	262	5.9	277	(36.3)	177	80	2.0	82	10.4	90	(6.3)	85	337	2.2	344	6.9	368	(28.9)	262
March	305	4.0	318	(34.5)	208	17.5	244	89	6.9	95	3.0	98	10.2	108	394	4.6	412	(25.9)	306	15.2	352
April	338	8.3	366	(76.9)	85			91	13.4	103	(18.9)	83			429	9.4	469	(64.1)	168		
May	400	5.1	420	(57.7)	178			107	6.8	114	(13.6)	99			507	5.4	534	(48.3)	276		
Total Year	4,409	3.0	4,542	(7.3)	4,213			1,132	7.5	1,216	3.4	1,258			5,540	3.9	5,759	(5.0)	5,471		
Jun-Mar	3,671	2.3	3,756	5.2	3,951	(33.9)	2,612	934	7.0	1,000	7.7	1,076	(2.6)	1,048	4,605	3.3	4,756	5.7	5,027	(27.2)	3,660

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$413	9.4	$452	17.9	$533	(35.8)	$342	$506	19.7	$607	11.1	$674	5.1	$708	$920	15.1	$1,058	14.0	$1,207	(13.0)	$1,050
July	500	4.7	524	27.8	669	(37.0)	422	484	22.9	595	20.5	717	0.3	719	984	13.7	1,119	23.9	1,386	(17.7)	1,141
August	479	21.7	583	18.8	693	(31.1)	477	516	29.2	666	12.4	749	(5.9)	705	995	25.6	1,250	15.4	1,442	(18.0)	1,183
September	384	13.4	435	15.0	500	(17.1)	415	462	22.3	566	22.9	695	4.4	726	846	18.3	1,001	19.5	1,195	(4.6)	1,141
October	371	14.1	424	22.4	519	(16.2)	435	476	33.7	636	14.9	731	3.4	756	847	25.1	1,060	17.9	1,250	(4.7)	1,191
November	353	11.1	392	12.2	440	(30.7)	305	454	26.3	574	10.5	634	1.4	643	807	19.7	965	11.2	1,073	(11.7)	947
December	312	9.4	342	14.1	390	(28.5)	279	417	25.6	524	15.1	603	9.2	658	729	18.7	866	14.7	993	(5.6)	937
January	249	21.1	302	21.2	366	(25.5)	272	450	28.3	578	15.5	667	(2.4)	651	699	25.7	879	17.5	1,033	(10.6)	924
February	248	23.5	306	14.0	349	(30.8)	241	414	26.9	525	15.9	609	(3.1)	590	661	25.7	831	15.2	958	(13.2)	832
March	297	25.3	373	(31.3)	256	37.5	352	457	34.0	612	6.6	652	16.6	760	754	30.6	984	(7.8)	908	22.5	1,112
April	336	28.3	432	(72.6)	118			468	38.7	649	(9.4)	588			805	34.3	1,081	(34.7)	706		
May	422	16.1	490	(51.6)	237			620	12.3	696	(4.4)	665			1,042	13.8	1,186	(23.9)	902		
Total Year	$4,366	15.8	$5,054	0.3	$5,070			$5,724	26.2	$7,227	10.5	$7,983			$10,090	21.7	$12,281	6.3	$13,053		
Jun-Mar	3,607	14.6	4,132	14.1	4,714	(24.9)	$3,541	4,636	26.9	5,882	14.4	6,730	2.8	$6,916	8,243	21.5	10,014	14.3	11,445	(8.6)	$10,457

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion and vehicle classification changes were implemented in April 2018.

Table 9
Turnpike I-376 - Beaver Valley Expressway - Monthly Transaction and Revenue Trends
Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	592	4.8	621	3.7	644	(27.2)	469	126	1.4	127	(3.9)	122	2.4	125	718	4.2	748	2.4	766	(22.5)	594
July	593	8.4	643	2.8	661	(23.1)	508	114	12.8	129	(0.7)	128	1.6	130	707	9.1	771	2.2	788	(19.1)	638
August	604	12.1	677	(0.2)	675	(23.3)	518	127	11.5	142	(5.2)	134	(6.0)	126	730	12.0	818	(1.1)	809	(20.5)	644
September	583	6.2	619	2.0	632	(16.5)	527	118	2.7	122	2.6	125	5.6	132	702	5.6	741	2.1	756	(12.9)	659
October	577	13.7	657	2.0	670	(19.3)	540	120	16.0	140	(5.8)	132	(1.5)	130	698	14.1	796	0.6	801	(16.4)	670
November	541	9.2	591	0.5	593	(27.6)	430	105	6.6	112	(3.1)	108	(4.7)	103	646	8.8	703	(0.1)	702	(24.0)	533
December	534	9.1	582	0.4	585	(31.5)	400	91	8.2	99	(4.8)	94	(0.7)	93	625	9.0	681	(0.3)	678	(27.3)	493
January	478	8.5	519	5.1	545	(27.3)	396	90	11.5	101	(3.5)	97	(5.4)	92	569	9.0	620	3.7	642	(24.0)	488
February	465	9.3	508	2.0	518	(27.3)	377	91	4.2	95	(1.7)	93	(10.5)	83	556	8.4	603	1.4	611	(24.8)	460
March	552	8.1	596	(32.5)	402	23.4	496	106	2.9	109	(12.2)	96	21.7	116	658	7.2	705	(29.4)	498	23.0	613
April	568	7.9	613	(62.7)	229			115	8.8	125	(32.9)	84			683	8.0	738	(57.7)	312		
May	623	5.9	660	(45.4)	360			132	0.7	133	(19.7)	106			755	5.0	793	(41.1)	467		
Total Year	6,711	8.6	7,286	(10.6)	6,514			1,335	7.2	1,431	(7.8)	1,319			8,046	8.3	8,717	(10.1)	7,833		
Jun-Mar	5,519	8.9	6,013	(1.5)	5,925	(21.3)	4,662	1,088	7.8	1,173	(3.8)	1,128	0.2	1,130	6,608	8.8	7,186	(1.8)	7,054	(17.9)	5,792

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$771	9.8	$847	12.5	$953	(7.3)	$883	$369	1.6	$375	3.0	$386	13.9	$439	$1,140	7.2	$1,221	9.6	$1,339	(1.2)	$1,322
July	780	12.2	875	15.1	1,007	(10.8)	898	332	12.3	373	7.5	401	8.4	434	1,112	12.3	1,248	12.8	1,408	(5.4)	1,332
August	787	18.7	935	7.3	1,003	(5.7)	947	366	13.5	415	0.4	417	4.5	435	1,153	17.1	1,350	5.2	1,420	(2.7)	1,382
September	748	15.0	861	11.1	957	(5.3)	907	349	2.3	357	10.4	394	13.1	446	1,098	11.0	1,218	10.9	1,351	0.1	1,353
October	749	19.2	892	16.8	1,042	1.6	1,059	341	20.1	410	2.7	421	9.5	461	1,090	19.5	1,302	12.3	1,463	3.8	1,519
November	695	15.5	803	34.9	1,083	(34.0)	715	304	7.1	326	15.5	376	(9.7)	340	999	13.0	1,129	29.3	1,459	(27.8)	1,054
December	683	14.8	784	34.7	1,057	(26.7)	774	268	6.8	286	14.4	327	(2.4)	319	951	12.6	1,070	29.3	1,384	(21.0)	1,094
January	642	18.9	763	29.3	987	(25.5)	735	266	15.4	307	10.5	340	(4.4)	325	908	17.9	1,071	23.9	1,327	(20.1)	1,060
February	623	21.2	755	21.3	916	(26.2)	676	278	8.6	302	7.8	326	(13.1)	283	901	17.3	1,057	17.4	1,242	(22.7)	960
March	748	20.4	900	(29.2)	637	53.0	975	324	10.1	356	(8.3)	327	28.0	418	1,071	17.3	1,257	(23.3)	964	44.5	1,393
April	781	17.8	920	(56.9)	397			345	16.9	403	(25.7)	299			1,126	17.5	1,323	(47.4)	696		
May	837	17.5	984	(33.2)	657			389	9.7	426	(11.9)	376			1,226	15.0	1,411	(26.7)	1,033		
Total Year	$8,845	16.7	$10,321	3.6	$10,697			$3,931	10.3	$4,337	1.2	$4,389			$12,776	14.7	$14,657	2.9	$15,086		
Jun-Mar	7,226	16.5	8,416	14.6	9,643	(11.1)	$8,568	3,198	9.7	3,507	5.9	3,714	5.0	$3,901	10,424	14.4	11,924	12.0	13,357	(6.6)	$12,469

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in May 2017.

Table 10

Turnpike I-576 - Southern Beltway - Findlay Connector - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	157	(11.0)	140	0.5	140	(33.3)	94	19	16.5	22	54.2	33	(0.7)	33	175	(8.1)	161	7.7	174	(27.1)	127
July	158	(11.2)	140	5.8	148	(32.7)	100	20	8.8	22	23.0	27	14.2	31	178	(8.9)	162	8.1	175	(25.4)	131
August	172	(19.3)	139	7.4	149	(29.5)	105	23	28.8	30	(2.3)	29	10.7	33	196	(13.6)	169	5.7	179	(22.9)	138
September	154	(19.3)	124	10.8	137	(22.4)	107	22	37.1	31	(3.2)	30	18.5	35	176	(12.2)	155	8.0	167	(15.1)	142
October	164	(15.5)	139	8.6	151	(24.4)	114	22	17.2	25	38.7	35	(10.2)	32	186	(11.7)	164	13.2	186	(21.7)	146
November	148	(13.4)	128	4.0	133	(26.2)	98	19	21.8	23	76.8	41	(22.9)	32	167	(9.4)	151	15.3	174	(25.4)	130
December	140	(11.5)	124	6.2	132	(27.2)	96	17	31.7	22	70.5	37	(22.3)	29	157	(6.9)	146	15.8	169	(26.1)	125
January	131	(9.7)	118	5.9	125	(27.4)	91	16	38.6	22	75.4	39	(5.4)	37	147	(4.4)	141	17.0	165	(22.2)	128
February	122	(5.8)	115	3.3	118	(28.2)	85	16	37.2	22	67.1	37	7.9	40	138	(0.7)	137	13.7	155	(19.6)	125
March	143	(8.2)	131	(25.2)	98	12.5	110	20	82.3	36	(3.8)	35	(0.1)	35	163	2.8	167	(20.6)	133	9.2	145
April	140	(8.0)	129	(56.1)	57			20	87.3	38	(43.0)	22			161	4.2	168	(53.1)	79		
May	151	(6.7)	141	(45.7)	77			25	45.4	36	(30.8)	25			176	0.7	177	(42.6)	102		
Total Year	1,779	(11.9)	1,567	(6.5)	1,465			240	37.9	330	18.5	391			2,019	(6.0)	1,898	(2.2)	1,857		
Jun-Mar	1,488	(12.8)	1,297	2.7	1,332	(25.0)	999	194	31.7	256	34.7	345	(2.4)	336	1,682	(7.7)	1,553	8.0	1,677	(20.3)	1,335

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$110	42.4	$157	11.8	$175	(21.7)	$137	$42	35.5	$56	67.7	$94	14.3	$108	$152	40.5	$213	26.6	$270	(9.1)	$245
July	114	41.3	162	16.3	188	(29.9)	132	44	29.2	57	38.0	79	26.1	100	159	38.0	219	22.0	267	(13.3)	232
August	123	36.9	168	9.5	184	(19.1)	149	51	57.3	79	6.4	85	25.6	106	173	42.8	247	8.5	268	(5.0)	255
September	108	36.4	147	23.0	181	(21.9)	141	48	70.1	82	4.3	86	26.0	108	156	46.8	230	16.3	267	(6.5)	250
October	116	40.6	164	18.1	193	(11.6)	171	48	41.6	68	46.8	100	(2.1)	98	165	40.9	232	26.5	293	(8.4)	269
November	103	43.8	148	11.9	166	(24.7)	125	43	42.8	61	103.6	124	(24.2)	94	146	43.5	209	38.6	290	(24.5)	219
December	101	43.3	145	18.1	171	(13.4)	148	38	52.3	57	86.9	107	(20.4)	86	139	45.8	202	37.7	278	(16.1)	233
January	91	62.4	147	20.1	177	(24.7)	133	37	64.5	61	114.8	131	(2.5)	127	128	63.0	208	47.8	307	(15.3)	260
February	85	70.1	144	12.1	162	(26.1)	120	36	72.9	63	97.4	125	11.1	138	121	70.9	208	38.0	286	(9.9)	258
March	101	68.5	170	(31.3)	116	43.8	167	44	147.2	108	5.4	114	4.0	119	144	92.3	278	(17.0)	231	24.1	286
April	98	68.0	165	(49.9)	83			46	146.9	112	(37.1)	71			144	93.1	277	(44.7)	153		
May	106	69.6	179	(37.1)	113			54	93.7	104	(23.3)	80			159	77.7	283	(32.0)	192		
Total Year	$1,255	51.0	$1,895	0.7	$1,909			$530	71.8	$911	31.3	$1,195			$1,785	57.2	$2,806	10.6	$3,104		
Jun-Mar	1,052	47.5	1,551	10.5	1,714	(16.9)	$1,423	431	61.2	694	50.5	1,045	3.8	$1,084	1,483	51.5	2,246	22.8	2,759	(9.1)	$2,508

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion and vehicle classification changes were implemented in June 2018.

(5) The I-576 tolling configuration was changed from six ramp tolls to two mainline toll gantries at the time of AET conversion in June 2018.

Table 11

Delaware River Bridge - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	601	7.3	645	28.4	828	(35.4)	536	104	10.1	115	8.4	124	9.4	136	705	7.7	760	25.4	953	(29.5)	671
July	637	4.3	664	28.4	853	(25.2)	638	98	14.5	113	17.6	132	5.8	140	735	5.7	777	26.8	985	(21.1)	778
August	650	6.0	689	24.0	855	(17.3)	707	109	10.6	120	11.3	134	1.9	136	759	6.7	810	22.1	988	(14.7)	843
September	577	6.6	616	21.6	748	(14.6)	639	101	5.5	106	17.8	125	11.6	140	678	6.5	722	21.0	873	(10.8)	779
October	583	20.1	700	8.6	760	(14.8)	648	108	17.5	127	10.1	140	3.5	145	691	19.7	827	8.9	900	(11.9)	793
November	563	24.1	699	9.2	763	(26.5)	561	103	13.1	117	8.8	127	4.6	133	666	22.4	815	9.1	890	(22.1)	693
December	543	32.6	720	6.0	763	(32.6)	515	96	14.1	110	16.3	128	6.8	137	639	29.8	830	7.4	891	(26.9)	651
January	467	31.0	612	8.8	666	(22.2)	518	96	20.0	115	11.5	129	1.7	131	563	29.1	727	9.2	794	(18.3)	649
February	446	31.4	586	11.6	653	(34.2)	430	90	16.1	104	13.8	119	(2.3)	116	535	28.8	690	11.9	772	(29.3)	546
March	519	36.3	707	(34.1)	466	30.7	609	102	14.9	117	11.5	131	15.1	150	621	32.8	824	(27.6)	597	27.3	760
April	561	33.0	746	(71.8)	211			104	19.7	125	(12.3)	109			665	30.9	870	(63.3)	320		
May	611	30.8	799	(53.0)	376			115	14.2	132	(7.1)	123			727	28.1	931	(46.5)	498		
Total Year	6,758	21.1	8,182	(2.9)	7,942			1,227	14.1	1,400	8.5	1,520			7,984	20.0	9,582	(1.3)	9,462		
Jun-Mar	5,586	18.8	6,637	10.8	7,356	(21.1)	5,800	1,007	13.6	1,144	12.6	1,288	5.8	1,363	6,593	18.0	7,781	11.1	8,644	(17.1)	7,163

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$3,098	6.2	$3,291	34.5	$4,425	(29.1)	$3,139	$1,879	8.7	$2,043	14.3	$2,335	16.2	$2,713	$4,978	7.2	$5,334	26.7	$6,760	(13.4)	$5,851
July	3,260	3.7	3,381	36.9	4,627	(21.7)	3,624	1,767	13.0	1,998	24.2	2,482	10.8	2,750	5,027	7.0	5,379	32.2	7,109	(10.4)	6,374
August	3,337	6.6	3,557	31.8	4,689	(12.8)	4,087	1,952	10.1	2,149	17.7	2,529	6.8	2,702	5,289	7.9	5,706	26.5	7,218	(6.0)	6,788
September	3,000	5.5	3,165	27.8	4,045	(9.0)	3,682	1,831	4.7	1,916	23.6	2,368	15.4	2,734	4,831	5.2	5,081	26.2	6,413	0.0	6,416
October	2,962	20.2	3,560	16.2	4,137	(6.1)	3,886	1,938	17.4	2,275	16.5	2,650	9.0	2,889	4,900	19.1	5,835	16.3	6,787	(0.2)	6,775
November	2,783	28.5	3,577	16.2	4,157	(25.2)	3,110	1,821	14.0	2,076	15.9	2,405	6.8	2,568	4,604	22.8	5,653	16.1	6,562	(13.5)	5,677
December	2,827	28.4	3,631	11.9	4,061	(23.0)	3,126	1,754	12.2	1,968	22.4	2,409	12.6	2,713	4,581	22.2	5,599	15.6	6,470	(9.8)	5,839
January	2,461	33.8	3,293	19.3	3,927	(19.3)	3,169	1,720	25.5	2,159	19.5	2,580	5.2	2,715	4,181	30.4	5,452	19.4	6,508	(9.6)	5,885
February	2,265	39.7	3,164	19.3	3,776	(31.3)	2,593	1,621	21.4	1,967	21.6	2,392	(0.3)	2,384	3,886	32.1	5,131	20.2	6,168	(19.3)	4,978
March	2,639	45.8	3,848	(32.9)	2,583	45.5	3,758	1,825	22.2	2,230	13.8	2,538	22.7	3,114	4,464	36.1	6,078	(15.7)	5,122	34.2	6,872
April	2,879	40.0	4,030	(69.5)	1,230			1,858	25.9	2,340	(5.7)	2,206			4,737	34.5	6,369	(46.0)	3,437		
May	3,104	39.5	4,330	(49.2)	2,202			2,049	21.1	2,482	0.1	2,484			5,154	32.2	6,812	(31.2)	4,686		
Total Year	$34,615	23.7	$42,826	2.4	$43,859			$22,016	16.3	$25,603	14.7	$29,379			$56,631	20.8	$68,429	7.0	$73,239		
Jun-Mar	28,633	20.4	34,467	17.3	40,428	(15.5)	$34,174	18,108	14.8	20,781	18.8	24,689	10.5	$27,281	46,741	18.2	55,248	17.9	65,117	(5.6)	$61,454

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

Table 12

Gateway Toll Plaza - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	334	(2.8)	324	(2.9)	315	(29.9)	221	87	1.4	88	(3.7)	85	8.6	92	421	(2.0)	412	(3.1)	400	(21.7)	313
July	367	(2.5)	358	(4.3)	342	(22.3)	266	81	4.2	84	(2.0)	83	15.4	95	448	(1.3)	442	(3.9)	425	(15.0)	361
August	342	1.8	348	(3.2)	337	(20.1)	269	90	3.3	93	(5.5)	87	12.0	98	432	2.1	441	(3.7)	425	(13.5)	367
September	276	2.3	283	(5.3)	268	(12.1)	236	80	3.5	83	0.8	83	15.8	96	356	2.5	365	(3.9)	351	(5.5)	332
October	279	0.0	279	0.7	281	(16.6)	235	88	4.7	92	5.2	96	3.9	100	367	1.1	371	1.8	378	(11.4)	335
November	280	(1.7)	275	(2.9)	267	(27.9)	193	81	1.6	83	2.8	85	7.3	91	361	(0.9)	357	(1.5)	352	(19.4)	284
December	261	0.8	263	6.7	280	(37.6)	175	76	1.2	77	8.5	83	11.9	93	337	0.9	340	7.1	364	(26.3)	268
January	195	(2.5)	190	9.0	207	(19.1)	168	80	1.7	81	7.3	87	3.8	90	275	(1.3)	271	8.5	294	(12.3)	258
February	187	(1.2)	185	7.2	198	(26.9)	145	75	1.5	76	9.3	83	2.3	85	262	(0.5)	261	7.8	281	(18.3)	230
March	256	(2.8)	249	(34.5)	163	26.5	206	84	1.0	85	7.4	92	15.9	106	341	(1.9)	334	(23.8)	255	22.7	312
April	254	(0.3)	253	(68.9)	79			84	2.2	86	(8.4)	79			338	0.3	339	(53.5)	158		
May	290	1.6	295	(49.0)	151			90	0.6	90	(7.7)	83			380	1.4	385	(39.3)	234		
Total Year	3,322	(0.6)	3,302	(12.5)	2,888			995	2.2	1,018	0.9	1,027			4,317	0.1	4,320	(9.4)	3,915		
Jun-Mar	2,777	(0.8)	2,754	(3.5)	2,659	(20.6)	2,112	821	2.4	841	2.8	865	9.6	948	3,598	(0.1)	3,595	(2.0)	3,524	(13.2)	3,060

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$1,962	3.1	$2,023	2.6	$2,075	(22.1)	$1,616	$1,661	9.2	$1,813	1.8	$1,845	9.0	$2,012	$3,623	5.9	$3,837	2.2	$3,920	(7.4)	$3,628
July	2,159	3.3	2,231	1.7	2,269	(22.7)	1,754	1,554	15.0	1,787	3.4	1,848	8.3	2,002	3,713	8.2	4,018	2.5	4,117	(8.8)	3,756
August	2,000	8.1	2,161	1.9	2,203	(7.0)	2,048	1,728	11.1	1,920	(0.1)	1,917	9.6	2,102	3,728	9.5	4,081	1.0	4,120	0.7	4,150
September	1,612	8.2	1,745	0.7	1,757	(6.4)	1,645	1,539	11.8	1,720	5.3	1,811	12.6	2,039	3,151	10.0	3,465	3.0	3,568	3.2	3,683
October	1,615	5.7	1,708	(0.5)	1,699	6.0	1,800	1,682	11.6	1,877	5.8	1,986	10.2	2,189	3,297	8.7	3,584	2.8	3,685	8.3	3,989
November	1,610	4.0	1,675	3.3	1,730	(28.5)	1,237	1,569	7.4	1,685	8.9	1,835	5.4	1,933	3,179	5.7	3,359	6.1	3,565	(11.1)	3,170
December	1,497	6.7	1,597	28.8	2,057	(36.2)	1,312	1,464	7.4	1,571	15.2	1,811	11.8	2,025	2,961	7.0	3,169	22.1	3,868	(13.7)	3,336
January	1,176	2.6	1,206	28.3	1,547	(18.6)	1,259	1,622	7.6	1,746	7.7	1,881	9.1	2,051	2,797	5.5	2,952	16.1	3,427	(3.4)	3,310
February	1,134	4.7	1,187	15.4	1,370	(25.6)	1,019	1,533	8.0	1,657	7.9	1,787	5.5	1,885	2,667	6.6	2,844	11.0	3,157	(8.0)	2,904
March	1,576	3.1	1,626	(35.1)	1,054	37.0	1,445	1,721	7.4	1,848	3.7	1,915	24.1	2,377	3,297	5.4	3,473	(14.5)	2,970	28.7	3,822
April	1,565	5.2	1,646	(64.7)	581			1,715	8.4	1,859	(6.6)	1,737			3,280	6.9	3,505	(33.9)	2,318		
May	1,785	8.0	1,928	(50.5)	954			1,835	5.7	1,940	(6.3)	1,817			3,621	6.8	3,868	(28.4)	2,771		
Total Year	$19,692	5.3	$20,733	(6.9)	$19,295			$19,622	9.2	$21,422	3.6	$22,191			$39,314	7.2	$42,155	(1.6)	$41,486		
Jun-Mar	16,342	5.0	17,159	3.5	17,761	(14.8)	$15,134	16,072	9.6	17,622	5.8	18,636	10.6	$20,615	32,413	7.3	34,782	4.6	36,398	(1.8)	$35,749

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in October 2019.

Actual and Assumed Toll Rate Increases

Annual toll rate increases are assumed to occur on the entire Turnpike System. The toll rate increases are assumed to occur at 12:01 AM on the first Sunday after January 1 of each year unless otherwise noted. **Table 13** presents the annual percent increases in toll rates for E-ZPass, cash, and video from calendar year 2020 through 2050.

Table 13
Actual and Assumed Percent Changes in Turnpike System Toll Rates
Pennsylvania Turnpike System

Calendar Year (2)	Percent Change in Turnpike System Toll Rates (1)			
	E-ZPass	Cash	Video	Registered Video Account (RVA)
2020 (3)	6.00	6.00	6.00	N/A
2021 (3)	6.00	N/A	6.00/45.00 (4)	-15.00 (5)
2022	5.00	N/A	5.00	5.00
2023	5.00	N/A	5.00	5.00
2024	5.00	N/A	5.00	5.00
2025	5.00	N/A	5.00	5.00
2026	4.00	N/A	4.00	4.00
2027	3.50	N/A	3.50	3.50
2028	3.00	N/A	3.00	3.00
2029	3.00	N/A	3.00	3.00
2030	3.00	N/A	3.00	3.00
2031	3.00	N/A	3.00	3.00
2032	3.00	N/A	3.00	3.00
2033	3.00	N/A	3.00	3.00
2034	3.00	N/A	3.00	3.00
2035	3.00	N/A	3.00	3.00
2036	3.00	N/A	3.00	3.00
2037	3.00	N/A	3.00	3.00
2038	3.00	N/A	3.00	3.00
2039	3.00	N/A	3.00	3.00
2040	3.00	N/A	3.00	3.00
2041	3.00	N/A	3.00	3.00
2042	3.00	N/A	3.00	3.00
2043	3.00	N/A	3.00	3.00
2044	3.00	N/A	3.00	3.00
2045	3.00	N/A	3.00	3.00
2046	3.00	N/A	3.00	3.00
2047	3.00	N/A	3.00	3.00
2048	3.00	N/A	3.00	3.00
2049	3.00	N/A	3.00	3.00
2050	3.00	N/A	3.00	3.00

(1) Toll rate increases are the same for all facilities and vehicle classes, except where otherwise noted.
(2) Except where otherwise indicated, toll rate increases are applied on or near January 1.
(3) Toll rate increases are actual.
(4) All rates increased by 6%. Video rates increased by an additional 45% on the Ticket System and Mon Fayette Expressway (Turnpike 43) to bring the video rate premium in line with those on PTC's other AET facilities.
(5) Registered video accounts are a new billing option that provides a 15% discount to video customers who pre-register their vehicle and provide electronic payment information.

Rate increase assumptions are unchanged since the 6-Month Update. With the suspension of cash collection in March and June of 2020 on the Ticket System and MFE, respectively, the Turnpike System now operates entirely under AET. As such, there are no cash rates shown in Table 13 for 2021 and beyond. As discussed above, to make the toll differential between E-ZPass and video rates similar on all toll facilities, in addition to a six-percent toll increase in January 2021, video rates on the Ticket System and MFE also increased by an additional 45 percent. Toll adjustment assumptions for the years 2022 and beyond are proposed and have not yet been formally approved by the PTC Board.

An additional rate tier, registered video account (RVA), has also been added to the rate schedule beginning in 2021. RVA accounts allow for a 15-percent discount off of the video rate for video customers who pre-register their vehicle with PTC and provide electronic payment information. This will allow PTC to process payments automatically without having to send billing invoices.

Actual and Assumed E-ZPass Penetration Rates

Table 14 presents the actual and assumed annual E-ZPass penetration rates from calendar year 2018 through 2050. The first three columns show the E-ZPass market share assumptions for the current 2021 Bring Down Letter. These were adjusted slightly on a facility-by-facility basis, by the amount shown in the three rightmost columns, over assumptions used in the 2020 6-Month Update.

As shown, assumed E-ZPass market shares in the current analysis are very similar to those assumed in the 2020 6-Month Update. Thus far in 2021, actual PC and CV E-ZPass market share have been slightly higher than previously estimated. This has resulted in new 2021 estimates being about 0.3 (PC) and 0.2 (CV) percent higher than previous estimates. Over the rest of the forecast period E-ZPass market share for both PCs and CVs is unchanged from the previous forecast.

Accordingly, total E-ZPass market share forecast assumptions also remain largely unchanged from those in the 2020 6-Month Update. The only difference is in 2021, where total E-ZPass market share is 0.3 percent higher than the previous forecast.

Table 14
Actual and Assumed Percent E-ZPass Penetration
Pennsylvania Turnpike System

Calendar Year		E-ZPass Penetration Rates: 2021 Bring Down Letter Cars	Trucks	Total	Difference from 2020 6-Month Update Cars	Trucks	Total
2018	(1)	80.0	90.6	81.5	0.0	0.0	0.0
2019	(1)	81.4	91.7	82.9	0.0	0.0	0.0
2020	(2)	82.9	92.2	84.3	0.0	0.0	0.0
2021		85.1	93.2	86.3	0.3	0.2	0.3
2022		85.9	93.8	87.1	0.0	0.0	0.0
2023		86.6	94.2	87.8	0.0	0.0	0.0
2024		87.3	94.7	88.4	0.0	0.0	0.0
2025		87.8	95.1	88.9	0.0	0.0	0.0
2026		88.3	95.5	89.4	0.0	0.0	0.0
2027		88.8	95.8	89.8	0.0	0.0	0.0
2028		89.1	96.2	90.2	0.0	0.0	0.0
2029		89.5	96.3	90.6	0.0	0.0	0.0
2030		89.8	96.3	90.8	0.0	0.0	0.0
2031		89.9	96.4	90.9	0.0	0.0	0.0
2032		90.0	96.4	91.0	0.0	0.0	0.0
2033		90.1	96.5	91.1	0.0	0.0	0.0
2034		90.2	96.5	91.2	0.0	0.0	0.0
2035		90.2	96.5	91.2	0.0	0.0	0.0
2036		90.3	96.6	91.3	0.0	0.0	0.0
2037		90.4	96.6	91.3	0.0	0.0	0.0
2038		90.4	96.7	91.4	0.0	0.0	0.0
2039		90.5	96.7	91.4	0.0	0.0	0.0
2040		90.5	96.7	91.5	0.0	0.0	0.0
2041		90.6	96.8	91.5	0.0	0.0	0.0
2042		90.6	96.8	91.6	0.0	0.0	0.0
2043		90.7	96.8	91.6	0.0	0.0	0.0
2044		90.7	96.9	91.7	0.0	0.0	0.0
2045		90.8	96.9	91.7	0.0	0.0	0.0
2046		90.8	97.0	91.8	0.0	0.0	0.0
2047		90.8	97.0	91.8	0.0	0.0	0.0
2048		90.9	97.0	91.9	0.0	0.0	0.0
2049		90.9	97.1	91.9	0.0	0.0	0.0
2050		91.0	97.1	92.0	0.0	0.0	0.0

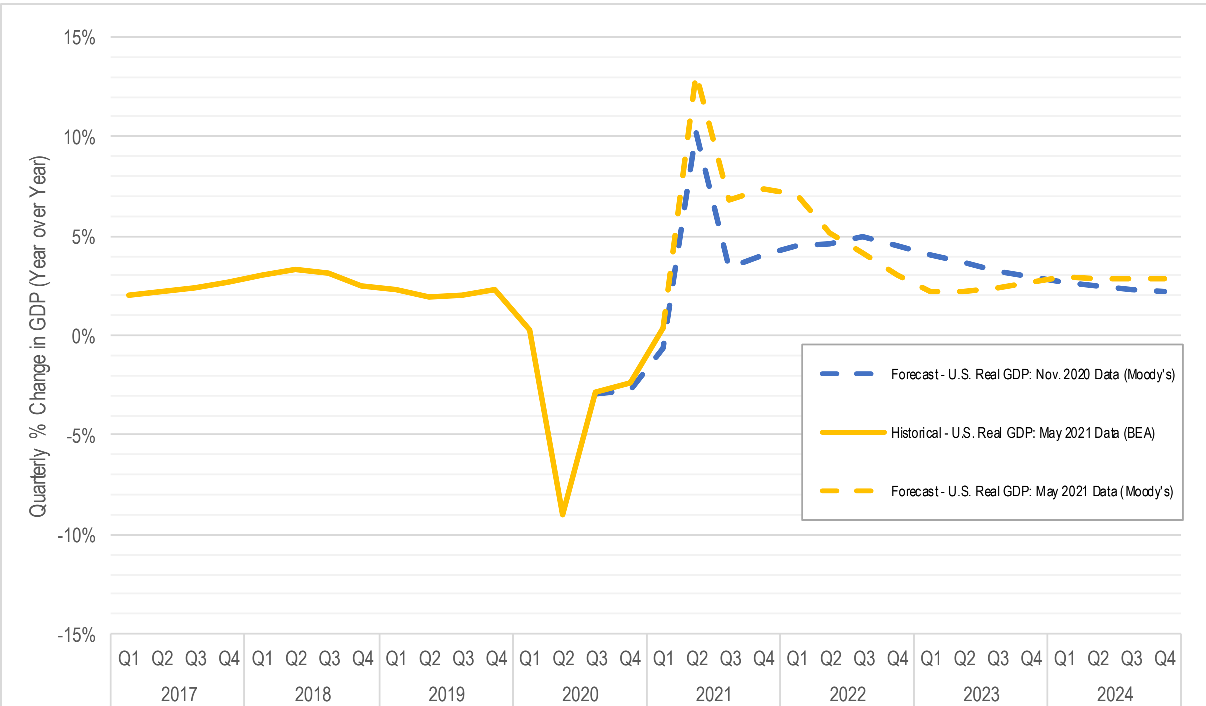
(1) The E-ZPass penetration rates for both 2021 Bring Down Letter and the 2020 6-Month Update are actual through 2019.
(2) 2020 E-ZPass penetration rates are actual for the 2021 Bring Down Letter only.

Summary of Changes in Future Year Estimates for U.S. Gross Domestic Product and Pennsylvania Gross State Product

This section presents a comparison of the Gross Domestic Product (GDP) and Pennsylvania Gross State Product (GSP) information available for the 2020 6-Month Update with updated forecasts for both measures from Moody's Analytics. This information was a key input in developing estimated growth forecasts for the Turnpike System. All GDP and GSP figures in this section refer to year over year comparisons. For example, the 2nd quarter 2020 percent change would reflect the 2nd quarter of 2020 versus the 2nd quarter of 2019.

Figure 3 shows actual and estimated GDP at the time of the 2020 6-Month Update as well as the revised figures based on updated Moody's Analytics' forecasts as of May 2021. Since the 2020 6-Month Update, actual GDP growth figures have been released for an additional two quarters: the fourth quarter of 2020 and the first quarter of 2021. Encouragingly, actual GDP growth in these quarters was better than forecasted in November 2020, indicating that the economic effects of the COVID-19 pandemic were not as severe as forecast. At the time of the 2020 6-Month Update, GDP was forecasted to fall 2.8 percent in the fourth quarter of 2020 and 0.7 percent in the first quarter of 2021. In actuality, GDP contracted by only 2.4 in the fourth quarter of 2020 and grew 0.4 percent during the first quarter of 2021. Accordingly, GDP growth is now expected to be higher than previously forecast through the second quarter of 2022. From that point through the end of 2023 GDP growth is expected to be slower than originally predicted, though still positive, largely because the GDP growth associated with economic recovery is now forecasted to happen earlier. In the latest May 2021 forecast, recovery from the pandemic is forecast to be strong through 2024. Growth is expected to accelerate to 13.1 percent in the second quarter of 2021, level off to still strong levels of between three and eight percent through 2022, and remain at a stable level of between two and three percent through 2023 and 2024. At this point, both forecasts (November 2020 and May 2021) are close to converging and are at, or near, growth levels experienced during the 2017 through 2019 period, before the pandemic.

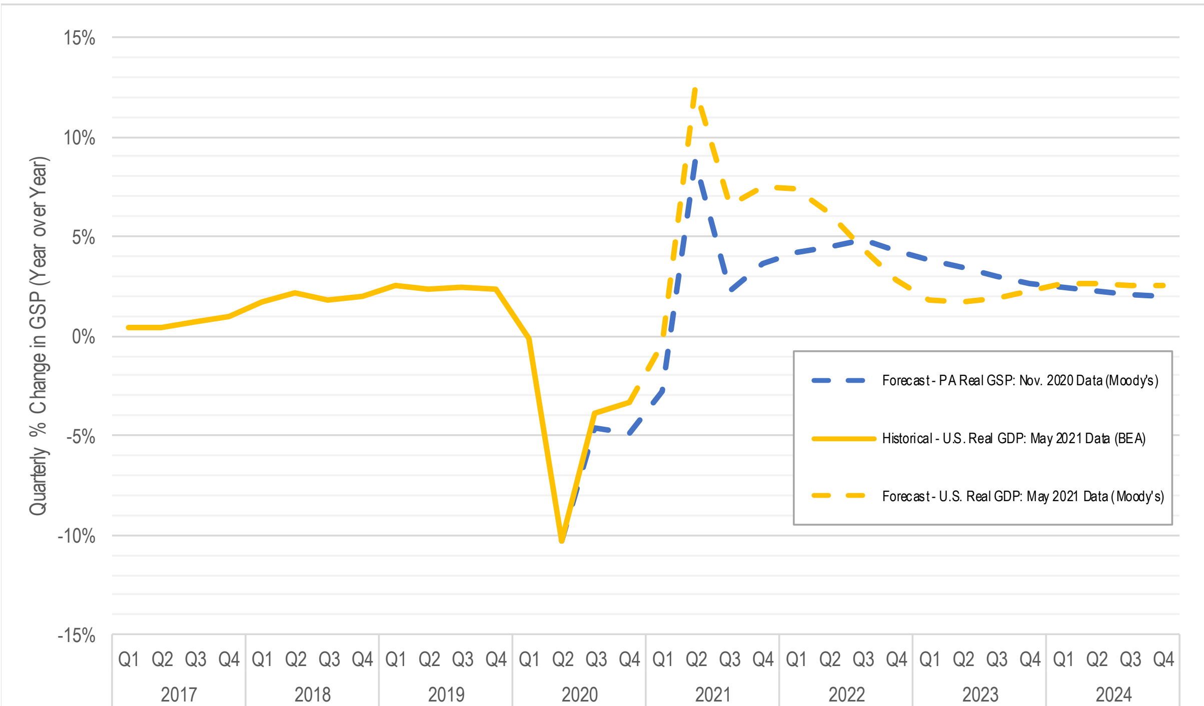
Figure 3
Comparison of November 2020 to May 2021 Quarterly Growth Estimates of U.S. Gross Domestic Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (November 2020 and May 2021 Releases)

Figure 4 shows GSP trend and forecast data for Pennsylvania. However, because GSP data lags GDP data, GSP is actual through only the fourth quarter of 2020. Like GDP, the GSP forecast through 2024 has been noticeably altered by actual economic conditions experienced over the last two quarters. Third quarter 2020 GSP contracted less than forecasted in November (falling 3.9 percent compared to the 4.6 percent forecast), and economic recovery is now forecasted to occur more strongly and more quickly than predicted in November, peaking at 12.5 percent growth in the second quarter of 2021 as compared to peak of 8.8 percent growth in the same quarter, as previously forecast. The latest forecast predicts a strong recovery period from the second quarter of 2021 through the second quarter of 2022, with GSP growth of at least six percent each quarter. After this point, economic growth is forecast to continue to remain positive, albeit it at a slowing rate, eventually reaching 2.5 percent growth at the end of 2024. Like with GDP, at this point of the forecast period both forecasts (November 2020 and May 2021) are close to converging and similar to the historical growth rates experienced in 2018 and 2019, before the pandemic.

Figure 4
Comparison of November 2020 and May 2021 Quarterly Growth Estimates of Pennsylvania Gross State Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (November 2020 and May 2021 Releases)

Summary of Trends in Fuel Prices

Figure 5 portrays actual gasoline and diesel prices for the Central Atlantic Region from January 2017 through May 2021. Actual gasoline prices for the East coast are also shown. They closely mirror those for the Central Atlantic gasoline prices and are shown here because the Energy Information Administration (EIA) also provides monthly forecasts for this region. Figure 5 shows the monthly gasoline price forecast through the end of 2022.

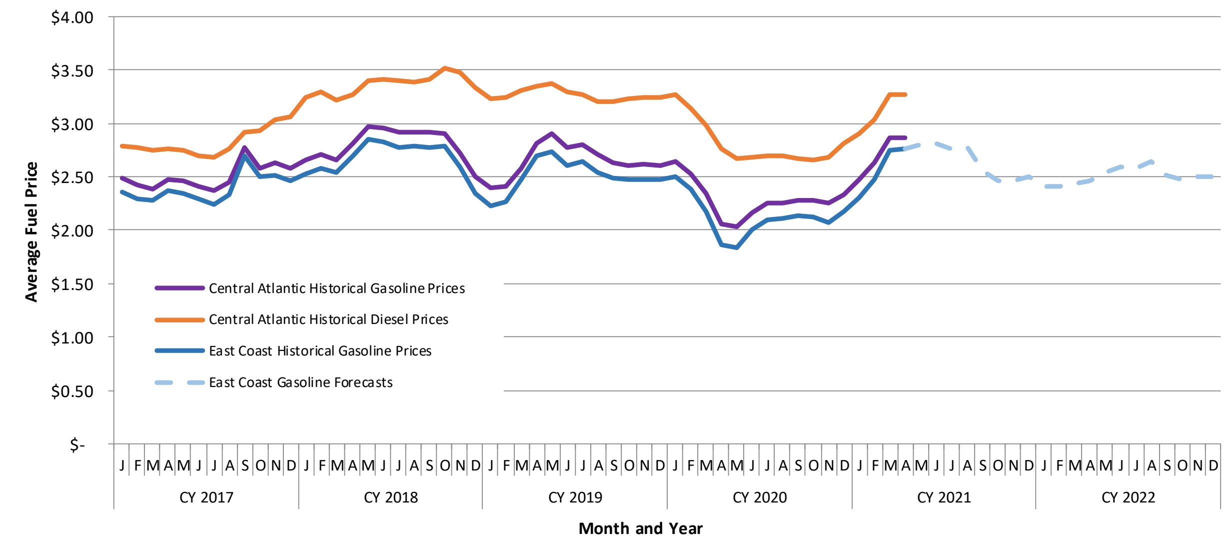
As shown, Central Atlantic gasoline and diesel prices have followed generally similar trends throughout this period, although over the past year gasoline prices have had slightly greater price fluctuations than diesel prices. Generally, both prices have moved in tandem. Prices for both increased slowly in the second half of 2017 and early 2018, reaching a high of $2.97 per gallon for gasoline in May 2018. Diesel prices reached a high of $3.52 per gallon in October 2018. Prices of both gasoline and diesel fell in late 2018 and early 2019. Between February and May 2019 prices rose, with gasoline prices increasing more rapidly than diesel prices. For the remainder of 2019, prices decreased slightly, with diesel prices remaining very stable and gasoline prices experiencing slightly more volatility.

However, in 2020 prices fell sharply, first in response to an early March announcement that Saudi Arabia and Russia would increase oil supply in the coming months, and second, by an extreme worldwide economic slowdown in response to the COVID-19 pandemic. As a result, May 2020 per gallon prices in the Central Atlantic region fell to $2.03 and $2.68 for gasoline and diesel, respectively. Prices then stayed relatively flat for the next several months before beginning to rise quickly through the winter of 2020-21 as the economic effects of the pandemic waned. In March 2021 gasoline prices reached $2.87 per gallon and diesel prices reached $3.27 per gallon. This trend of quickly rising prices came to an end in April, however, as both regular and diesel prices fell by one cent per gallon compared to the previous month.

As noted above, the EIA only forecasts future gasoline prices for the East coast, which is a region that is larger than, and wholly encompasses, the Central Atlantic region. Historically, East coast region prices move in tandem with Central Atlantic prices but are approximately 10 to 20 cents lower. East coast gasoline prices are forecast to remain stable through the summer before falling in the winter, bottoming out at $2.41 per gallon in January 2022. Prices are then forecast to rise slightly through the first half of 2022, peaking at $2.65 per gallon in August, before falling again in the fall and winter. Therefore, east coast gasoline prices through the end of 2022 should generally be lower than they are currently. Based on historical trends, Central Atlantic prices can be expected to follow the same pattern, but at slightly higher prices.

The most recent gasoline prices are about $0.60 higher than assumed they would be at this time in the 2020 6-Month Update. Over the remainder of 2021, the current forecast is between $0.30 and $0.50 cents higher each month. (A 2022 forecast was not available at the time of the 2020 6-Month Update.) The increase in both actual gasoline prices and forecast future prices over the past few months is a good indicator of a faster and stronger economic recovery than expected at the time of the 2020 6-Month Update, which largely aligns with the revised GDP and GSP forecasts discussed previously. The forecast of future prices are also similar to those experienced during 2018 and 2019.

Figure 5
Historic and Forecast Regional Fuel Prices ($ per Gallon)



Source: U.S. Energy Information Administration, release dates 5/3/2021 (historical) and 5/11/2021 (forecast).
Note: Retail Prices in USD for Regular All Formulations Retail Gasoline and Number 2 Diesel.
Central Atlantic states include Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania.
East Coast states include Central Atlantic and New England states, Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia.

Consumer Confidence

Consumer confidence is an important measure in that it highlights consumer's confidence in making purchases, their willingness to travel more, etc. Higher consumer confidence spurs demand for various goods and services, and it can be inferred that higher demand results in higher traffic on the roadways. Consumer confidence scores are indexed to the year 1985, for which consumer confidence equaled 100.

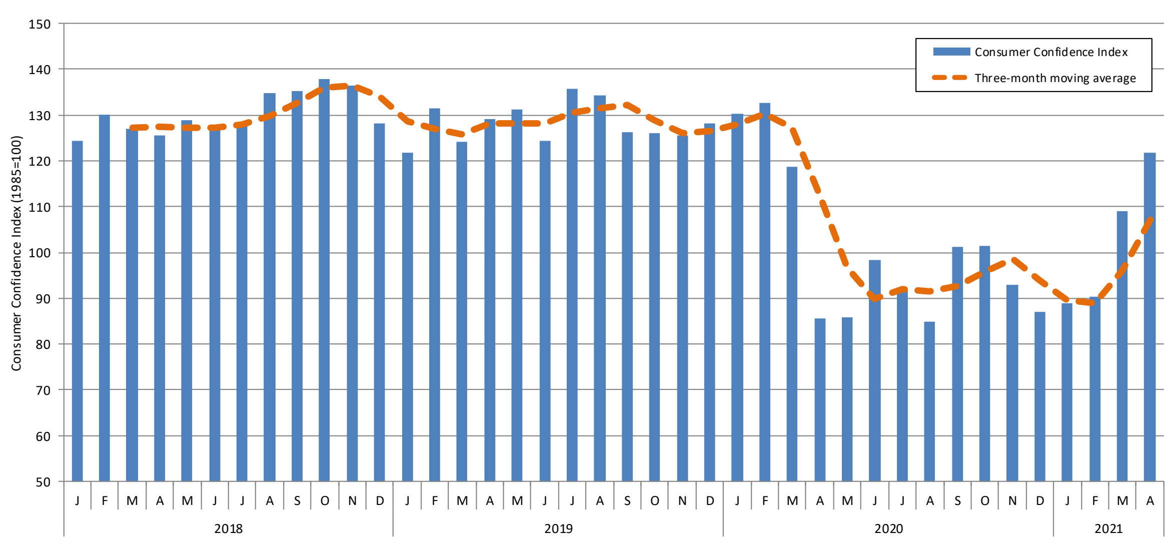
Figure 6 shows the Conference Board Consumer Confidence Index for the period between January 2018 and April 2021. Individual blue bars show index values for each month while the dotted line shows the three-month moving average. Consumer confidence exceeded 120 at the start of 2018 and rose throughout the year, peaking at a high of 137.9 in October 2018, which was the highest level of consumer confidence since September 2000. In 2019, consumer confidence fell slightly compared to 2018 but remained strong compared to historical levels.

Through the first two months of 2020, consumer confidence remained strong, increasing slightly since the end of 2019. However, since then, consumer confidence has fluctuated significantly, generally mirroring the national narrative regarding efforts to contain the COVID-19 pandemic. In 2020 consumer confidence declined sharply in March and even more significantly in April, when it fell to 85.7, reflecting the widespread economic shutdowns that were put in place as a result of the

COVID-19 pandemic. Consumer confidence rose as economic and travel restrictions were lifted in May and June, when it reached 98.3, indicating that consumers' expectations for the economy may have been stabilizing. However, it fell again in July and August, bottoming out at 84.8, reflecting increased COVID-19 infection rates that occurred in much of the southern and western U.S. as those states further loosened restrictions on commercial activities and people moved activities indoors to air-conditioned spaces. The Index once again rose in September and October, reaching 101.4, which was its highest level since March. However, consumer confidence fell to 92.9 in November and 87.1 in December as infection rates and deaths from COVID-19 reached their highest levels at any point during the pandemic.

In 2021, as the nationwide vaccination campaign started and infection rates began to stabilize, consumer confidence rose slightly in January and again in February, to 88.9 and 90.4, respectively. The Index jumped significantly to 109.0 in March and 121.7 in April, its highest levels in a year. Based on this history, it is reasonable to conclude that consumer confidence will continue to closely reflect the perceived success in containing the pandemic for the foreseeable future. According to the Senior Director of Economic Indicators at the Conference Board, "consumers' assessment of current conditions improved significantly in April, suggesting the economic recovery strengthened further in early Q2. Vacation intentions posted a healthy increase, likely boosted by the accelerating vaccine rollout and further loosening of pandemic restrictions."

Figure 6
Conference Board Consumer Confidence Index



Source: The Conference Board, release date April 27, 2021

Committed Roadway Improvements

Table 15 lists major capacity-enhancing roadway improvements with dedicated funding on the Pennsylvania Turnpike System. Most of these projects are part of PTC's statewide Total Reconstruction Initiative, which is a multi-year project to widen the mainline and the Northeast Extension to six lanes (three in each direction). On the Mainline I-76/I-276 this includes work throughout the Pittsburgh, Somerset, and Philadelphia metro areas. More than 130 miles had been completed as of May 2021, with an additional 17 miles under construction or funded. An additional 20 miles of the Northeast Extension have been widened, with 6 more miles scheduled to be completed by 2024. No projects have been added to the list since the 2020 6-Month Update, while the widening project on miles A31 to A38 on the Northeast Extension has been removed due to completion in late 2020. Furthermore, some dates and mileposts were updated to reflect the latest information available from PTC.

Table 15 also highlights three non-widening projects:

- A new cashless tolling interchange between I-276 and Lafayette Street in Montgomery County;
- An eight-mile extension of MFE to PA Route 837 in Allegheny County; and
- A 12.5-mile extension of Findlay Connector (Southern Beltway) in the Pittsburgh area.

These projects will serve to enhance capacity and create additional connections to other routes, all of which are expected to increase the number of travelers, and therefore revenue, on the Pennsylvania Turnpike System. Notably, the Southern Beltway project timeline has had a change since the 2020 6-Month Update that will impact traffic and revenue forecasts. A partial interchange with I-79 is expected to open in October 2021, a year earlier than previously stated: ramps from I-79 northbound to the Southern Beltway westbound and from the Southern Beltway eastbound to I-79 southbound. Ramps for all remaining movements will open in 2022. The forecast incorporates estimated traffic and revenue impacts of the complete Southern Beltway beginning in January 2022.

In addition to PTC-funded projects, the Pennsylvania Department of Transportation's (PennDOT's) Transportation Improvement Program (TIP) was reviewed. This review found no projects on competing or complementary routes that are expected to have an impact on Pennsylvania Turnpike System traffic and revenue.

Table 15
Major Committed Roadway Improvements on the Pennsylvania Turnpike System (1)

Milepost	Counties	Description	Actual or Assumed Start Date	Assumed Completion Date
Mainline I-76/I-276				
28-31	Allegheny and Butler	Reconstruct and widen to 3 lanes in each direction	May 2020	September 2022
102-109	Somerset County	Reconstruct and widen to 3 lanes in each direction	January 2021	August 2024
123-130	Somerset and Bedford	Reconstruct and widen to 3 lanes in each direction	June 2022	2025
331	Montogmery	Construct a new cashless tolling interchange at Lafayette Street	Fall 2024	Fall 2027
Northeast Extension I-476				
A38-A44	Montgomery and Bucks	Reconstruct and widen to 3 lanes in each direction	Fall 2021	Fall 2024
Mon/Fayette Expressway Turnpike 43				
PA-51 to PA Route 837	Allegheny	Construct a eight-mile extension of the existing Turnpike 43 including three new interchanges	Summer 2022	2028
Southern Beltway Toll 576				
US-22 to I-79	Washington and Allegheny	Construct a 12.5-mile cashless tolling extension of Toll 576 from the southern terminus of the Findlay Connector at US-22 to I-79 including four new interchanges	December 2016	January 2022

(1) The major committed roadway improvement projects listed here are a small subset of all projects listed in PTC's FY 2021Ten Year Capital Plan.

Actual Versus Estimated Traffic and Toll Revenue

Table 16 provides a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2020 6-Month Update. The analysis period in this table is from November 2020 through March 2021. This five-month period corresponds to the period for which actual data currently exists but was estimated at the time of the 2020 6-Month Update.

For the five-month period shown in Table 16, total system actual PC transactions and revenue fell short of estimates by 3.1 percent and 8.3 percent, respectively. CV transactions and revenue exceeded estimates by 6.6 percent and 6.5 percent, respectively. When all vehicles are considered, actual transactions were 1.4 percent below estimates, while toll revenue underperformed estimates by 0.9 percent.

Table 16 also includes a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2020 6-Month Update for each individual Turnpike toll facility. Total transactions for the Ticket System were 1.9 percent lower than the forecasted traffic, while actual total revenue was 1.1 percent lower than estimated. For the combined barrier toll facilities, total actual toll transactions exceeded CDM Smith estimates by 0.1 percent and actual toll revenue exceeded estimates by 0.3 percent.

Table 16
Comparison of Estimated and Actual Traffic Volumes and Gross Toll Revenue
From November 2020 Through March 2021 (1)
Pennsylvania Turnpike System

Facility	Total Traffic (in Thousands) Estimated	Total Traffic (in Thousands) Actual	Total Traffic Percent Difference between Actual and Estimated	Total Gross Toll Revenue (in Thousands) Estimated	Total Gross Toll Revenue (in Thousands) Actual	Total Gross Toll Revenue Percent Difference between Actual and Estimated
			Passenger Cars			
Ticket System	39,308	37,800	(3.8)	$199,593	$180,932	(9.3)
Gateway	1,016	886	(12.8)	7,264	6,271	(13.7)
Delaware River Bridge	2,726	2,633	(3.4)	16,083	15,756	(2.0)
Turnpike 43	3,775	4,216	11.7	7,782	7,962	2.3
Turnpike 66	2,231	2,258	1.2	4,396	4,662	6.0
Northeast Extension (Barrier)	1,246	1,055	(15.3)	1,628	1,449	(11.0)
Turnpike I-376	2,270	2,099	(7.5)	4,211	3,875	(8.0)
Turnpike I-576	528	480	(9.0)	756	693	(8.3)
Barrier Subtotal	13,792	13,629	(1.2)	$42,121	$40,668	(3.4)
Total System	53,101	51,429	(3.1)	$241,714	$221,601	(8.3)
			Commercial Vehicles			
Ticket System	8,850	9,447	6.7	$213,704	$227,939	6.7
Gateway	437	466	6.8	9,795	10,271	4.9
Delaware River Bridge	601	666	10.8	12,430	13,494	8.6
Turnpike 43	308	366	19.0	1,740	1,907	9.6
Turnpike 66	401	408	1.7	2,134	2,121	(0.6)
Northeast Extension (Barrier)	479	483	0.8	3,327	3,302	(0.7)
Turnpike I-376	496	488	(1.5)	1,791	1,685	(5.9)
Turnpike I-576	150	173	15.2	485	564	16.2
Barrier Subtotal	2,870	3,049	6.2	$31,703	$33,345	5.2
Total System	11,721	12,496	6.6	$245,407	$261,284	6.5
			Total Vehicles			
Ticket System	48,159	47,247	(1.9)	$413,298	$408,872	(1.1)
Gateway	1,452	1,352	(6.9)	17,059	16,542	(3.0)
Delaware River Bridge	3,327	3,299	(0.8)	28,514	29,251	2.6
Turnpike 43	4,083	4,582	12.2	9,521	9,869	3.6
Turnpike 66	2,632	2,666	1.3	6,531	6,783	3.9
Northeast Extension (Barrier)	1,725	1,538	(10.8)	4,955	4,752	(4.1)
Turnpike I-376	2,766	2,587	(6.4)	6,002	5,560	(7.4)
Turnpike I-576	677	653	(3.6)	1,241	1,257	1.3
Barrier Subtotal	16,663	16,678	0.1	$73,823	$74,013	0.3
Total System	64,821	63,925	(1.4)	$487,121	$482,885	(0.9)

(1) These five months correspond to the period for which actual data exists, but was estimated at the time of CDM Smith's 2020 6-Month Update.

Estimated COVID-19 Traffic and Toll Revenue Impacts

A key undertaking of this new forecast was to update the traffic and toll revenue impacts related to the COVID-19 pandemic over the forecast period. This section will provide a summary of the underlying assumptions CDM Smith has made in estimating the depth and longevity of the COVID-19 related impacts on Turnpike System traffic and toll revenue. Actual traffic and toll revenue experience through the end of March 2021 was collected as part of this analysis. Pandemic-related impacts began negatively effecting Turnpike System transactions and toll revenue in March 2020. A key assumption in this analysis is that COVID-19 related negative impacts would continue through FY 2025-26.

Due to the unpredictable nature of the pandemic and the changing infection rates, changes to operating procedures and capacity restrictions of businesses and schools is an unknown variable. While most restrictions have been lifted entirely, and are certainly looser than they were at the time of the 2020 6-Month Update in December, a future resurgence of the virus could potentially result in the re-establishment of restrictions. However, with 41 percent of all Pennsylvania residents fully vaccinated, 56 percent with at least one dose (as of May 20), an ongoing vaccination campaign, and recently expanded Pfizer vaccine eligibility for children ages 12-15 it seems likely that infection rates will continue to fall. Accordingly, traffic recovery is assumed to accelerate through the remainder of 2021.

Table 17 shows estimated historical and future COVID-19 related impacts on traffic and toll revenue between FY 2019-20 and FY 2026-27. Only the final three months of FY 2019-20 (March, April, May) were impacted, but over that time total traffic volumes were estimated to have been reduced by 21.9 million, or about 10.7 percent of total transactions. Gross toll revenue was reduced by about $142.2 million over the same time period (9.9 percent of total gross toll revenue). While the peak monthly negative impacts occurred in FY 2019-20, the largest annual declines are assumed to occur in FY 2020-21 since this will include 12 months of negative impacts. As shown in Table 17, total transaction losses of 30.2 million are assumed (15.1 percent of total transactions), along with gross toll revenue losses of $254.0 million (16.9 percent of total gross toll revenue). Negative traffic and toll revenue impacts are estimated to lessen over the following five years. By FY 2025-26 total traffic and gross toll revenue losses are assumed to be only about 0.1 percent and 0.9 percent, respectively. No COVID-19 impact is assumed beginning in FY 2026-27.

As shown, CV transactions are actually assumed to increase after FY 2019-20, while CV revenue is expected to be negatively impacted during the entire COVID-19 period. This is due to a combination of shorter, more frequent, CV trips, as well as a shift to smaller trucks during the pandemic. Both the shorter trip length and smaller vehicle class would result in lower CV toll revenue in spite of slightly more CV transactions.

Table 17
Estimated Annual Transactions and Gross Toll Revenue COVID Impact (1)
Total System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year (2)		Annual Traffic			Annual Gross Toll Revenue		
		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
		Annual Traffic and Gross Toll Revenue Impacts					
2018-19	(3,4,5)	$0	$0	$0	$0	$0	$0
2019-20	(3,6,7)	(21,072)	(780)	(21,852)	(114,658)	(27,543)	(142,201)
2020-21	(8,9,10,11,12,13)	(32,420)	2,236	(30,184)	(232,121)	(21,844)	(253,965)
2021-22	(13,14)	(12,497)	1,084	(11,413)	(125,867)	(16,262)	(142,129)
2022-23	(13)	(8,121)	489	(7,632)	(83,734)	(10,689)	(94,422)
2023-24	(13)	(6,484)	257	(6,227)	(62,272)	(8,581)	(70,853)
2024-25	(13)	(3,828)	183	(3,645)	(40,622)	(5,649)	(46,271)
2025-26	(13)	(486)	180	(306)	(16,282)	(2,222)	(18,504)
2026-27		0	0	0	0	0	0
		Percent Impacts on Annual Traffic and Gross Toll Revenue					
2018-19	(3,4,5)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019-20	(3,6,7)	(12.2)	(2.6)	(10.7)	(14.4)	(4.3)	(9.9)
2020-21	(8,9,10,11,12,13)	(19.0)	7.5	(15.1)	(27.7)	(3.3)	(16.9)
2021-22	(13,14)	(7.3)	3.6	(5.7)	(13.8)	(2.3)	(8.7)
2022-23	(13)	(4.7)	1.6	(3.7)	(8.7)	(1.4)	(5.5)
2023-24	(13)	(3.7)	0.8	(3.0)	(6.2)	(1.1)	(3.9)
2024-25	(13)	(2.1)	0.6	(1.7)	(3.8)	(0.7)	(2.4)
2025-26	(13)	(0.3)	0.6	(0.1)	(1.4)	(0.2)	(0.9)
2026-27		0	0	0	0	0	0

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) The Findlay Connector converted to AET in early June 2018.
(5) The partial I-95 Interchange (Stage 1) opened in September 2018.
(6) AKH and Gateway converted to AET at the end of October 2019.
(7) Cash collection on Ticket System suspended and converted to AET on March 16, 2020.
(8) Reflects actual traffic and revenue experience through March 31, 2021.
(9) Mon-Fayette Expressway converted to AET on June 11, 2020.
(10) Reflects actual experience through March 2021.
(11) Reflects Ticket System and PA 43 45% cash surcharge effective on January 3, 2021.
(12) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(13) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(14) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Estimated Traffic and Gross Toll Revenue

Updated traffic and gross toll revenue estimates were developed through FY 2049-50 incorporating the following changes into the forecast. All these changes were described in previous sections.

- Actual traffic and revenue experience through March 2021 (Tables 3-12);
- Revised estimates of E-ZPass penetration rates (Table 14); and
- Updated impacts related to COVID-19 (Table 17).

Other assumptions remain unchanged from the 2020 6-Month Update, including:

- Future toll increase assumptions (Table 13);
- Structure of the CV discount program; and
- Long-range economic indicators.

It should be noted that the underlying baseline traffic and gross toll revenue forecasts (i.e., excluding the estimated negative impacts of COVID-19) remain unchanged from those in the 2020 6-Month Update. All revisions to the current traffic and gross toll revenue estimates are based on the revised COVID-19 impacts show in Table 17.

Table 18 shows the total traffic and toll revenue for the Ticket System only. Data for FY 2018-19 and FY 2019-20 reflect a full year of actual experience and FY 2020-21 includes ten months of actual experience (through March 2021). Total toll transactions increase from 151.6 million to 186.6 million over the period shown in Table 18, an average annual increase of 0.7 percent. Gross toll revenue increases from $1.2 billion to $4.4 billion by FY 2049-50. This amounts to an average annual increase of 4.4 percent, reflecting the impact of normal growth plus the annual rate adjustments.

The same information is shown for the Barrier System in **Table 19**. Total annual toll transactions are estimated to grow from 51.5 million to 72.7 million over the period shown, an average rate of 1.1 percent. New toll transactions from the opening of the complete Southern Beltway in January 2022 contribute to total barrier growth rates. Barrier System total revenue is estimated to increase from $184.4 million to $738.0 million over the same period, an annual rate of 4.6 percent, reflecting normal growth plus annual rate adjustments.

Table 18
Estimated Annual Transactions and Gross Toll Revenue (1)
Ticket System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Annual Traffic: Passenger Cars	Annual Traffic: Commercial Vehicles	Annual Traffic: Total Vehicles	Annual Gross Toll Revenue: Passenger Cars	Annual Gross Toll Revenue: Commercial Vehicles	Annual Gross Toll Revenue: Total Vehicles
2018-19	(3,4)	129,559	22,020	151,579	$626,685	$524,309	$1,150,994
2019-20	(3,5)	112,482	21,670	134,151	571,829	529,718	1,101,547
2020-21	(6,7,8,9)	100,773	24,171	124,944	494,423	563,658	1,058,081
2021-22	(9)	114,850	23,161	138,010	652,449	613,129	1,265,577
2022-23	(9)	118,681	22,788	141,469	726,503	653,699	1,380,203
2023-24	(9)	120,471	22,798	143,269	788,203	693,620	1,481,823
2024-25	(9)	123,711	22,945	146,656	856,185	736,544	1,592,729
2025-26	(9)	127,794	23,180	150,973	927,362	779,639	1,707,001
2026-27		130,942	23,416	154,358	986,717	817,147	1,803,863
2027-28		132,408	23,610	156,019	1,028,247	849,195	1,877,442
2028-29		133,841	23,835	157,676	1,067,546	881,907	1,949,453
2029-30		135,245	24,109	159,354	1,108,812	918,773	2,027,584
2030-31		136,618	24,385	161,002	1,153,319	957,129	2,110,448
2031-32		137,978	24,659	162,637	1,200,362	996,949	2,197,310
2032-33		139,324	24,934	164,258	1,249,084	1,038,282	2,287,366
2033-34		140,624	25,208	165,832	1,299,236	1,081,191	2,380,427
2034-35		141,885	25,482	167,367	1,350,921	1,125,745	2,476,666
2035-36		143,111	25,757	168,868	1,404,199	1,172,012	2,576,211
2036-37		144,315	26,026	170,341	1,459,264	1,219,787	2,679,051
2037-38		145,439	26,288	171,727	1,515,549	1,268,999	2,784,547
2038-39		146,525	26,550	173,074	1,573,491	1,320,086	2,893,577
2039-40		147,594	26,812	174,406	1,633,389	1,373,123	3,006,511
2040-41		148,644	27,075	175,719	1,695,243	1,428,191	3,123,434
2041-42		149,668	27,339	177,007	1,759,069	1,485,375	3,244,444
2042-43		150,661	27,604	178,265	1,824,831	1,544,753	3,369,585
2043-44		151,629	27,870	179,499	1,892,656	1,606,420	3,499,076
2044-45		152,573	28,136	180,709	1,962,612	1,670,457	3,633,069
2045-46		153,490	28,404	181,894	2,034,725	1,736,950	3,771,675
2046-47		154,393	28,673	183,067	2,109,231	1,806,002	3,915,234
2047-48		155,285	28,944	184,229	2,186,235	1,877,723	4,063,959
2048-49		156,183	29,217	185,399	2,266,051	1,952,292	4,218,343
2049-50		157,085	29,492	186,577	2,348,780	2,029,822	4,378,603

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) The partial I-95 Interchange (Stage 1) opened in September 2018.
(5) Cash collection on Ticket System suspended and converted to AET on March 16, 2020.
(6) Reflects actual experience through March 2021.
(7) Reflects Ticket System 45% video surcharge effective on Jan 3, 2021.
(8) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(9) Reflects COVID-19 related recessionary impacts through FY 2025-26.

Table 19
Estimated Annual Transactions and Gross Toll Revenue (1)
Barrier Systems
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year	(2)	Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2018-19	(3,4,5)	43,870	7,605	51,475	$113,893	$70,498	$184,392
2019-20	(3,6)	39,819	7,599	47,418	112,089	75,925	188,014
2020-21	(7,8,9,10,11)	37,283	8,017	45,300	111,292	83,805	195,097
2021-22	(11,12)	43,346	8,323	51,669	134,118	88,300	222,418
2022-23	(11)	47,383	8,945	56,329	147,368	95,044	242,412
2023-24	(11)	49,007	9,099	58,106	158,770	99,968	258,739
2024-25	(11)	50,612	9,282	59,894	170,705	105,846	276,551
2025-26	(11)	52,121	9,423	61,544	182,961	111,585	294,546
2026-27		53,293	9,538	62,831	193,592	116,753	310,345
2027-28		53,788	9,605	63,393	201,911	121,537	323,449
2028-29		54,281	9,683	63,964	209,923	126,359	336,283
2029-30		54,749	9,778	64,527	218,149	131,684	349,834
2030-31		55,182	9,871	65,053	226,584	137,204	363,788
2031-32		55,581	9,964	65,545	235,268	142,930	378,197
2032-33		55,966	10,056	66,021	244,279	148,867	393,145
2033-34		56,331	10,147	66,478	253,607	155,027	408,634
2034-35		56,687	10,238	66,925	263,220	161,400	424,620
2035-36		57,033	10,329	67,362	273,127	167,984	441,111
2036-37		57,370	10,419	67,789	283,346	174,790	458,136
2037-38		57,691	10,508	68,199	293,807	181,813	475,621
2038-39		58,009	10,596	68,605	304,575	189,105	493,680
2039-40		58,326	10,685	69,011	315,709	196,676	512,385
2040-41		58,640	10,773	69,413	327,207	204,535	531,743
2041-42		58,945	10,862	69,807	339,059	212,692	551,750
2042-43		59,241	10,950	70,190	351,257	221,156	572,413
2043-44		59,528	11,037	70,565	363,823	229,940	593,763
2044-45		59,808	11,125	70,933	376,768	239,057	615,825
2045-46		60,078	11,212	71,290	390,096	248,517	638,613
2046-47		60,341	11,299	71,640	403,834	258,334	662,168
2047-48		60,599	11,386	71,985	418,006	268,524	686,530
2048-49		60,857	11,474	72,331	432,675	279,116	711,791
2049-50		61,117	11,562	72,679	447,860	290,125	737,985

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) The Findlay Connector converted to AET in early June 2018.
(5) The partial I-95 Interchange (Stage 1) opened in September 2018.
(6) AKH and Gateway converted to AET at the end of October 2019.
(7) Mon-Fayette Expressway converted to AET on June 11, 2020.
(8) Reflects actual experience through March 2021.
(9) Reflects PA 43 45% video surcharge effective on January 3, 2021.
(10) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(11) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(12) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 20 presents total combined Ticket and Barrier System transactions and gross toll revenue and also reflects estimated toll discounts and adjustments. The vast majority of the discounts and adjustments result from commercial account toll adjustments due to the Turnpike's volume discount program. The volume discount program allows for a 3.0-percent discount to be provided to accounts that accrue $20,000 or more in monthly tolls. Discounts and adjustments shown in Table 20 assume no further changes to the post-paid commercial volume discount program during the forecast period. Actual discounts and adjustments amounted to 1.65 percent of CV toll revenue in FY 2019-20. It has been increasing very slightly over time. CDM Smith's forecasts assume that the adjustment gradually increases until it equals approximately 2.17 percent of the CV gross toll revenue in FY 2029-30 and remains at that level throughout the remainder of the forecast.

As shown in Table 20, total toll transactions are expected to increase from 203.1 million to 259.3 million over the period shown. This amounts to an average annual growth rate of 0.8 percent. Total net toll revenue is estimated to grow from approximately $1.3 billion in FY 2018-19 to $5.1 billion by FY 2049-50. This reflects an average annual growth rate in gross toll revenue of 4.4 percent. Again, this includes the impact of normal growth plus annual toll rate adjustments.

Table 21 provides a comparison of the current traffic and net toll revenue forecast with the forecast developed as part of the 2020 6-Month Update. As shown, the revised total toll transactions are slightly more than those of the 2020 6-Month Update from FY 2020-21 through FY 2024-25. This is due to five more months of actual experience. For the period between FY 2025-26 and FY 2026-27, the current study assumes a slightly higher growth rate compared to the 2020 6-Month Update, resulting in 0.1 percent higher volumes. This 0.1 percent increase in estimated transactions is due to revisions to the forecast related to changes to PTC's AET system that will cause some non-revenue transactions to be captured that were not previously. Because these additional transactions are non-revenue, they have no impact on toll revenue estimates. After FY 2026-27 the growth rates between the two studies are identical, thus the 0.1 percent differential remains constant throughout the remainder of the forecast period.

Similarly, due to an additional five months of actual data and revised assumptions regarding COVID-19 impacts, annual net toll revenue is forecast to be somewhat lower in most years through FY 2025-26, with FY 2022-23 having very slightly higher estimated revenue. The largest difference occurs in FY 2021-22, in which revenue is estimated to be 0.6 percent lower than in the previous forecast. These negative impact differences generally decrease until FY 2026-27, at which point there is no difference from the previous forecast.

Table 20
Estimated Annual Transactions and Toll Revenue (1)
Total System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Annual Traffic: Passenger Cars	Annual Traffic: Commercial Vehicles	Annual Traffic: Total Vehicles	Annual Gross Toll Revenue: Passenger Cars	Annual Gross Toll Revenue: Commercial Vehicles	Annual Gross Toll Revenue: Total Vehicles	Discounts and Adjustments	Net Toll Revenue
2018-19	(3,4,5)	173,429	29,625	203,054	$740,578	$594,808	$1,335,385	($8,349)	$1,327,037
2019-20	(3,6)	152,301	29,269	181,570	683,918	605,642	1,289,561	(9,972)	1,279,588
2020-21	(7,8,9,10,11,12)	138,056	32,188	170,245	605,715	647,463	1,253,178	(11,654)	1,241,524
2021-22	(12,13)	158,196	31,484	189,679	786,567	701,429	1,487,996	(13,327)	1,474,668
2022-23	(12)	166,064	31,733	197,797	873,872	748,744	1,622,615	(14,601)	1,608,015
2023-24	(12)	169,477	31,898	201,375	946,973	793,589	1,740,562	(15,872)	1,724,690
2024-25	(12)	174,323	32,227	206,550	1,026,889	842,390	1,869,280	(17,269)	1,852,011
2025-26	(12)	179,915	32,602	212,517	1,110,323	891,224	2,001,547	(18,493)	1,983,054
2026-27		184,235	32,954	217,189	1,180,309	933,900	2,114,209	(19,612)	2,094,597
2027-28		186,196	33,215	219,411	1,230,158	970,733	2,200,891	(20,628)	2,180,262
2028-29		188,121	33,519	221,640	1,277,470	1,008,266	2,285,736	(21,678)	2,264,058
2029-30		189,994	33,887	223,881	1,326,961	1,050,457	2,377,418	(22,847)	2,354,571
2030-31		191,800	34,256	226,055	1,379,903	1,094,334	2,474,236	(23,802)	2,450,434
2031-32		193,559	34,623	228,182	1,435,629	1,139,878	2,575,508	(24,792)	2,550,715
2032-33		195,289	34,989	230,279	1,493,362	1,187,149	2,680,511	(25,820)	2,654,690
2033-34		196,955	35,355	232,310	1,552,843	1,236,218	2,789,061	(26,888)	2,762,173
2034-35		198,572	35,721	234,292	1,614,141	1,287,145	2,901,286	(27,995)	2,873,291
2035-36		200,144	36,086	236,230	1,677,326	1,339,996	3,017,322	(29,145)	2,988,177
2036-37		201,685	36,446	238,130	1,742,609	1,394,577	3,137,187	(30,332)	3,106,855
2037-38		203,131	36,795	239,926	1,809,356	1,450,812	3,260,168	(31,555)	3,228,613
2038-39		204,534	37,146	241,679	1,878,067	1,509,191	3,387,257	(32,825)	3,354,433
2039-40		205,920	37,497	243,417	1,949,098	1,569,798	3,518,896	(34,143)	3,484,753
2040-41		207,283	37,848	245,131	2,022,450	1,632,726	3,655,177	(35,512)	3,619,665
2041-42		208,613	38,200	246,814	2,098,128	1,698,067	3,796,195	(36,933)	3,759,262
2042-43		209,902	38,553	248,455	2,176,088	1,765,909	3,941,997	(38,409)	3,903,589
2043-44		211,157	38,907	250,064	2,256,479	1,836,360	4,092,839	(39,941)	4,052,898
2044-45		212,380	39,261	251,642	2,339,380	1,909,514	4,248,894	(41,532)	4,207,362
2045-46		213,568	39,616	253,184	2,424,821	1,985,467	4,410,288	(43,184)	4,367,104
2046-47		214,735	39,972	254,707	2,513,065	2,064,337	4,577,401	(44,899)	4,532,502
2047-48		215,884	40,330	256,214	2,604,241	2,146,247	4,750,488	(46,681)	4,703,807
2048-49		217,040	40,690	257,730	2,698,726	2,231,408	4,930,133	(48,533)	4,881,600
2049-50		218,202	41,054	259,256	2,796,638	2,319,947	5,116,586	(50,459)	5,066,127

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) The Findlay Connector converted to AET in early June 2018.
(5) The partial I-95 Interchange (Stage 1) opened in September 2018.
(6) AKH and Gateway converted to AET at the end of October 2019.
(7) Cash collection on Ticket System suspended and converted to AET on March 16, 2020.
(8) Mon-Fayette Expressway converted to AET on June 11, 2020.
(9) Reflects actual experience through March 2021.
(10) Reflects Ticket System and PA 43 45% video surcharge effective on January 3, 2021.
(11) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(12) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(13) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 21
Comparison of New Traffic and Revenue
Estimates with those from the 2020 Bring Down Letter
Total System
Pennsylvania Turnpike

Traffic and Toll Revenue in Thousands

Fiscal Year (1)	Total Annual Transactions			Annual Net Toll Revenue		
	Current Estimates (2)	2020 6-Month Update (3)	Percent Difference	Current Estimates (2)	2020 6-Month Update (3)	Percent Difference
2018-19	203,054	203,054	0.0	$1,327,037	$1,327,037	0.0
2019-20	181,570	181,570	0.0	1,279,588	1,279,588	0.0
2020-21	170,245	169,894	0.2	1,241,524	1,243,503	(0.2)
2021-22	189,679	187,424	1.2	1,474,668	1,483,734	(0.6)
2022-23	197,797	196,697	0.6	1,608,015	1,607,659	0.0
2023-24	201,375	200,826	0.3	1,724,690	1,727,470	(0.2)
2024-25	206,550	206,199	0.2	1,852,011	1,853,586	(0.1)
2025-26	212,517	212,291	0.1	1,983,054	1,983,685	(0.0)
2026-27	217,189	217,039	0.1	2,094,597	2,094,597	0.0
2027-28	219,411	219,273	0.1	2,180,262	2,180,262	0.0
2028-29	221,640	221,510	0.1	2,264,058	2,264,058	0.0
2029-30	223,881	223,753	0.1	2,354,571	2,354,571	0.0
2030-31	226,055	225,926	0.1	2,450,434	2,450,434	0.0
2031-32	228,182	228,052	0.1	2,550,715	2,550,715	0.0
2032-33	230,279	230,147	0.1	2,654,690	2,654,690	0.0
2033-34	232,310	232,177	0.1	2,762,173	2,762,173	0.0
2034-35	234,292	234,158	0.1	2,873,291	2,873,291	0.0
2035-36	236,230	236,094	0.1	2,988,177	2,988,177	0.0
2036-37	238,130	237,993	0.1	3,106,855	3,106,855	0.0
2037-38	239,926	239,788	0.1	3,228,613	3,228,613	0.0
2038-39	241,679	241,540	0.1	3,354,433	3,354,433	0.0
2039-40	243,417	243,276	0.1	3,484,753	3,484,753	0.0
2040-41	245,131	244,989	0.1	3,619,665	3,619,665	0.0
2041-42	246,814	246,671	0.1	3,759,262	3,759,262	0.0
2042-43	248,455	248,311	0.1	3,903,589	3,903,589	0.0
2043-44	250,064	249,919	0.1	4,052,898	4,052,898	0.0
2044-45	251,642	251,495	0.1	4,207,362	4,207,362	0.0
2045-46	253,184	253,036	0.1	4,367,104	4,367,104	0.0
2046-47	254,707	254,558	0.1	4,532,502	4,532,502	0.0
2047-48	256,214	256,064	0.1	4,703,807	4,703,807	0.0
2048-49	257,730	257,579	0.1	4,881,600	4,881,600	0.0
2049-50	259,256	259,103	0.1	5,066,127	5,066,127	0.0

(1) PTC fiscal year ends May 31.
(2) Reflects actual traffic and revenue experience through March 2021.
(3) Reflects actual traffic and revenue experience through October 2020.

Table 22 summarizes the full net revenue forecast, including written off bad debt expenses. Now that the PTC system is fully AET, there is some amount of video tolls that will be uncollectable and written off as bad debt expense, thereby subtracting from net toll revenue. As transactions are estimated to grow each year from, so too does bad debt expense. In FY 2021-22, the first full year of AET operation, bad debt expense is estimated to be $88.3 million, growing to $208.4 million in FY 2049-50. Total net toll revenue minus the video bad debt expense is estimated to grow from approximately $1.3 billion in FY 2018-19 to $4.9 billion by FY 2049-50.

Table 22
Total System: Estimated Annual Video Revenue Leakage (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year (2)		Net Toll Revenue	Estimated Video Revenue Bad Debt Expense	Net Toll Revenue Minus Video Bad Debt Expense
2018-19	(3,4,5)	$1,327,037	($4,455)	$1,322,581
2019-20	(3,6)	1,279,588	(6,474)	1,273,114
2020-21	(7,8,9,10,11,12)	1,241,524	(49,465)	1,192,059
2021-22	(12,13)	1,474,668	(88,300)	1,386,368
2022-23	(12)	1,608,015	(90,682)	1,517,333
2023-24	(12)	1,724,690	(92,613)	1,632,077
2024-25	(12)	1,852,011	(94,962)	1,757,049
2025-26	(12)	1,983,054	(97,272)	1,885,782
2026-27		2,094,597	(98,421)	1,996,176
2027-28		2,180,262	(98,343)	2,081,919
2028-29		2,264,058	(98,307)	2,165,751
2029-30		2,354,571	(99,692)	2,254,878
2030-31		2,450,434	(102,778)	2,347,656
2031-32		2,550,715	(106,712)	2,444,003
2032-33		2,654,690	(110,834)	2,543,857
2033-34		2,762,173	(115,140)	2,647,033
2034-35		2,873,291	(119,614)	2,753,677
2035-36		2,988,177	(124,258)	2,863,919
2036-37		3,106,855	(129,059)	2,977,795
2037-38		3,228,613	(133,992)	3,094,621
2038-39		3,354,433	(139,101)	3,215,332
2039-40		3,484,753	(144,388)	3,340,365
2040-41		3,619,665	(149,855)	3,469,811
2041-42		3,759,262	(155,502)	3,603,760
2042-43		3,903,589	(161,328)	3,742,260
2043-44		4,052,898	(167,345)	3,885,552
2044-45		4,207,362	(173,559)	4,033,803
2045-46		4,367,104	(179,973)	4,187,131
2046-47		4,532,502	(186,605)	4,345,897
2047-48		4,703,807	(193,465)	4,510,342
2048-49		4,881,600	(200,778)	4,680,822
2049-50		5,066,127	(208,367)	4,857,759

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) The Findlay Connector converted to AET in early June 2018.
(5) The partial I-95 Interchange (Stage 1) opened in September 2018.
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(10) Reflects Ticket System and PA 43 45% video surcharge and 15% discount to registered video customers effective on January 3, 2021.
(11) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(12) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(13) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Fiduciary Disclaimer

CDM Smith used currently-accepted professional practices and procedures in the development of the traffic and revenue estimates in this report. 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 estimates, CDM Smith reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the Pennsylvania Turnpike Commission (PTC). 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 estimates 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 estimates and projections reported herein are based on CDM Smith's experience and judgment and on a review of information obtained from multiple agencies, including PTC. These estimates and projections may not be indicative of actual or future values, and are therefore subject to substantial uncertainty. Certain variables such as future developments, economic cycles, pandemics, government actions, climate change related events, or impacts related to advances in automotive technology etc. cannot be predicted with certainty, and may affect the estimates 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 and other forward-looking statements contained within the report are based on reasonable assumptions as of the date of the report, 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 this report, 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.

The report and its contents are intended solely for use by PTC and designated parties approved by PTC and CDM Smith. Any use by third-parties, other than as noted above, is expressly prohibited. In addition, any publication of the report without the express written consent of CDM Smith is prohibited.

CDM Smith is not, and has not been, a municipal advisor as defined in Federal law (the Dodd Frank Bill) to PTC and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to PTC with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to PTC. PTC 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.

* * *

Sincerely,

Scott A. Allaire

Scott Allaire
Vice President
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December 18, 2020

Mr. Richard Dreher
Chief Financial Officer
Pennsylvania Turnpike Commission
700 South Eisenhower Boulevard
Middletown, PA 17057

Subject: Pennsylvania Turnpike Commission 6-Month Update to 2020 Traffic and Toll Revenue Bring Down Letter

Dear Mr. Dreher:

The Pennsylvania Turnpike Commission (PTC or Commission) asked CDM Smith to prepare this *6-Month Update to the 2020 Traffic and Toll Revenue Bring Down Letter* (6-Month Update) to be used in support of the Commission's ongoing capital improvement program and other funding requirements. This letter provides an update to the *2020 Traffic and Toll Revenue Bring Down Letter* (2020 Bring Down Letter), dated May 29, 2020, which in turn was an update to the 2019 Bring Down Letter, dated April 29, 2019, that updated the *2018 Traffic and Toll Revenue Forecast Study* (2018 Forecast Study), dated April 20, 2018.

The 2020 Bring Down Letter included actual data through April 2020 and presented traffic and gross toll revenue forecasts from fiscal year (FY) 2019-20 through FY 2049-50. A fiscal year runs from June 1 through May 31. Actual traffic and revenue data were available through October 2020 for this 6-Month Update, as such the forecast period for this analysis extends from FY 2020-21 through FY 2049-50. This report will provide a summary of differences between the current traffic and revenue forecast and that provided in the 2020 Bring Down Letter.

The updated forecasts reflect the following changes from the 2020 Bring Down Letter:

- E-ZPass market share estimates over the forecast period were reviewed and updated as needed.
- Actual traffic and toll revenue data were updated to include information through October 2020.
- All facilities now use all-electronic tolling (AET) following PTC's decision to make permanent the suspension of cash collection that was implemented in March and June of 2020 as a public health measure to combat the spread of the corona virus. The 2020 Bring Down Letter

assumed the last two facilities that still accepted cash payments, the Ticket System and the Mon/Fayette Expressway (MFE), would convert to AET in October 2021.

- Due to the conversion of the Ticket System and MFE to AET, additional non-revenue transactions that were previously not reported will now be included in transaction totals. Accordingly, transaction forecasts were adjusted slightly upwards to account for this. These additional non-revenue transactions will have no impact on revenue.

- Revenue forecasts were adjusted to account for the addition of a registered video account (RVA) toll rate tier beginning on January 3, 2021. RVA accounts will provide a 15-percent discount off of the video rate for non-ETC customers who pre-register their vehicle with PTC and provide electronic payment information, allowing PTC to process payments automatically without having to send billing invoices.

- In the current analysis both E-ZPass and video toll rates are assumed to increase by six percent in January 2021 at all locations; in addition, video toll rates for the Ticket System and MFE are assumed to increase by an additional 45 percent (this will then make the toll differential between E-ZPass and video rates at these two locations generally consistent with other toll locations). In the 2020 Bring Down Letter the toll increases just discussed were assumed to be implemented in October 2020 instead of January 2021. All toll rate increase assumptions for January 2022 and beyond are unchanged between the two reports.

- A detailed review of COVID-19 related impacts was conducted based on an additional six months of actual data. Revised COVID-19 impacts have now been applied to the forecasts through FY 2025-26. As with the previous forecast, no COVID-19 impacts are assumed after FY 2025-26.

- A review of scheduled major roadway improvements was conducted to determine if there have been any changes since completion of the 2020 Bring Down Letter. This review concluded that the list of committed roadway projects has not changed since the 2020 Bring Down Letter, although the timing of some have been adjusted. This will be discussed in the Committed Roadway Improvements section of this report.

These differences are described in more detail in the sections that follow below.

It is important to note that the intent of this 6-Month Update is to review and revise, if warranted, the short-term forecasts developed as part of the 2020 Bring Down Letter. Any adjustments would be made based on the six months of new actual traffic and toll revenue experience since the 2020 Bring Down Letter was completed, including COVID-19 impacts, as well as revised assumptions summarized in the bullet points above.

The underlying socioeconomic trends and forecasts for Pennsylvania, the surrounding states, and the United States that formed the basis for the long-term traffic and toll revenue forecasts are provided in the 2018 Forecast Study.

Historical Toll Rate Increases and Current Toll Rates

Table 1 provides a summary of historical toll rate increases on the Turnpike System from 1987 to the most recent increase implemented on January 5, 2020. Rate increases are presented as a percent increase over the prior toll rate for cash/video and E-ZPass. Note that toll rate increases are generally applied systemwide, although occasional exemptions occur, as indicated in Table 1.

Table 1
Historical Toll Rate Increases
Pennsylvania Turnpike

Date	Percent Increase Cash/Video	Percent Increase E-ZPass	Comment
1/2/1987	40.0	NA	E-ZPass was not yet implemented on the Turnpike
6/1/1991	32.0	NA	E-ZPass was not yet implemented on the Turnpike
8/1/2004	42.5	42.5	
1/4/2009	25.0	25.0	No increase on Findlay Connector or MFE between Uniontown and Brownsville
1/3/2010	3.0	3.0	No increase on Findlay Connector
1/2/2011	10.0	3.0	No increase on Findlay Connector
1/1/2012	10.0	0.0	No increase on Findlay Connector
1/6/2013	10.0	2.0	
1/5/2014	12.0	2.0	No increase on Findlay Connector
1/4/2015	5.0	5.0	No increase on Findlay Connector
1/3/2016	6.0	6.0	No increase on Findlay Connector; DRB converted from ticket system to barrier system and rate changes implemented
1/8/2017	6.0	6.0	No increase on Findlay Connector or DRB
1/7/2018	6.0	6.0	No increase on Findlay Connector, DRB, or the Northeast Extension barrier facilities
4/29/2018	6.0	6.0	Northeast Extension barrier facilities only (1)
6/3/2018	6.0	6.0	Findlay Connector only (1)
1/6/2019	6.0	6.0	
10/27/2019	6.0	6.0	BVE, AKH, and Gateway only; 45% surcharge over cash rate added to video rate
1/5/2020	6.0	6.0	No increase on BVE, AKH, or Gateway

Note: Beginning in 2016, all cash toll rate increases also reflect video toll rate increases.

(1) Toll rate increase coincided with vehicle classification changes from a weight-based to an axle-based system.

Periodic toll rate increases were implemented on the Turnpike System in 1987, 1991, 2004, and 2009. During the 2000s decade, E-ZPass was phased into the Turnpike System. Until 2011, cash and E-ZPass toll rates always increased by the same percent. The toll rate schedule implemented on January 2, 2011 created a differential between cash and E-ZPass, as E-ZPass rates were increased by 3.0 percent and cash toll were increased by 10.0 percent. Rate increases differed between cash and E-ZPass in the ensuing three years (2012, 2013, and 2014) further increasing the differential between cash and E-ZPass toll rates.

Toll rate increases have occurred annually since 2009, occurring on or close to January 1 of each year. Since 2015, the percent toll rate increases have been identical for cash and E-ZPass. In 2015 the toll rates increased by 5.0 percent over the prior year. From 2016 to 2020, toll rates increased by 6.0 percent annually for both cash/video and E-ZPass.

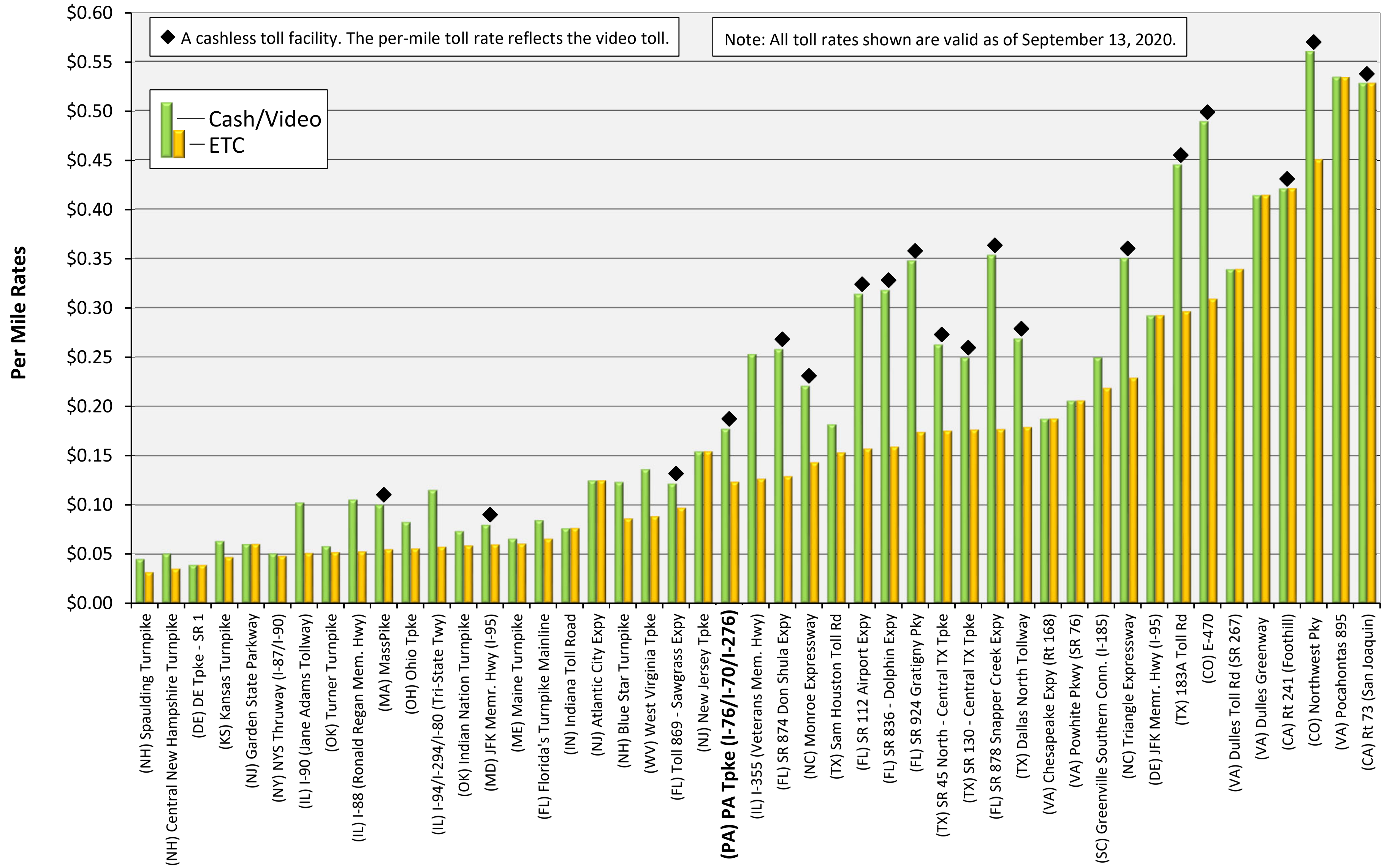
PTC policy has also been to implement a video toll surcharge upon conversion to AET; this has generally amounted to an additional 45 percent increase, making video rates about double E-ZPass rates. However, video toll rates on the Ticket System and MFE do not currently have a markup over the prior cash rate, as these AET conversions occurred ahead of schedule due to the COVID-19 pandemic. The scheduled January 3, 2021 toll increase will institute this 45-percent surcharge on the Ticket System and MFE.

It is assumed that annual toll rate increases will occur through the forecast period, as described in the section Actual and Assumed Toll Rate Increases and listed in Table 13.

Figures 1 and 2 show the 2020 per-mile toll rates for a through trip on 47 U.S. toll facilities, for passenger cars (PCs) and 5-axle commercial vehicles (CVs), respectively. Per-mile rates are shown for both cash/video and ETC transactions in each figure. If a facility is all electronic (does not accept cash payments), the video toll rate is shown as the equivalent of a cash toll rate. All ETC facilities are marked with a diamond in Figures 1 and 2.

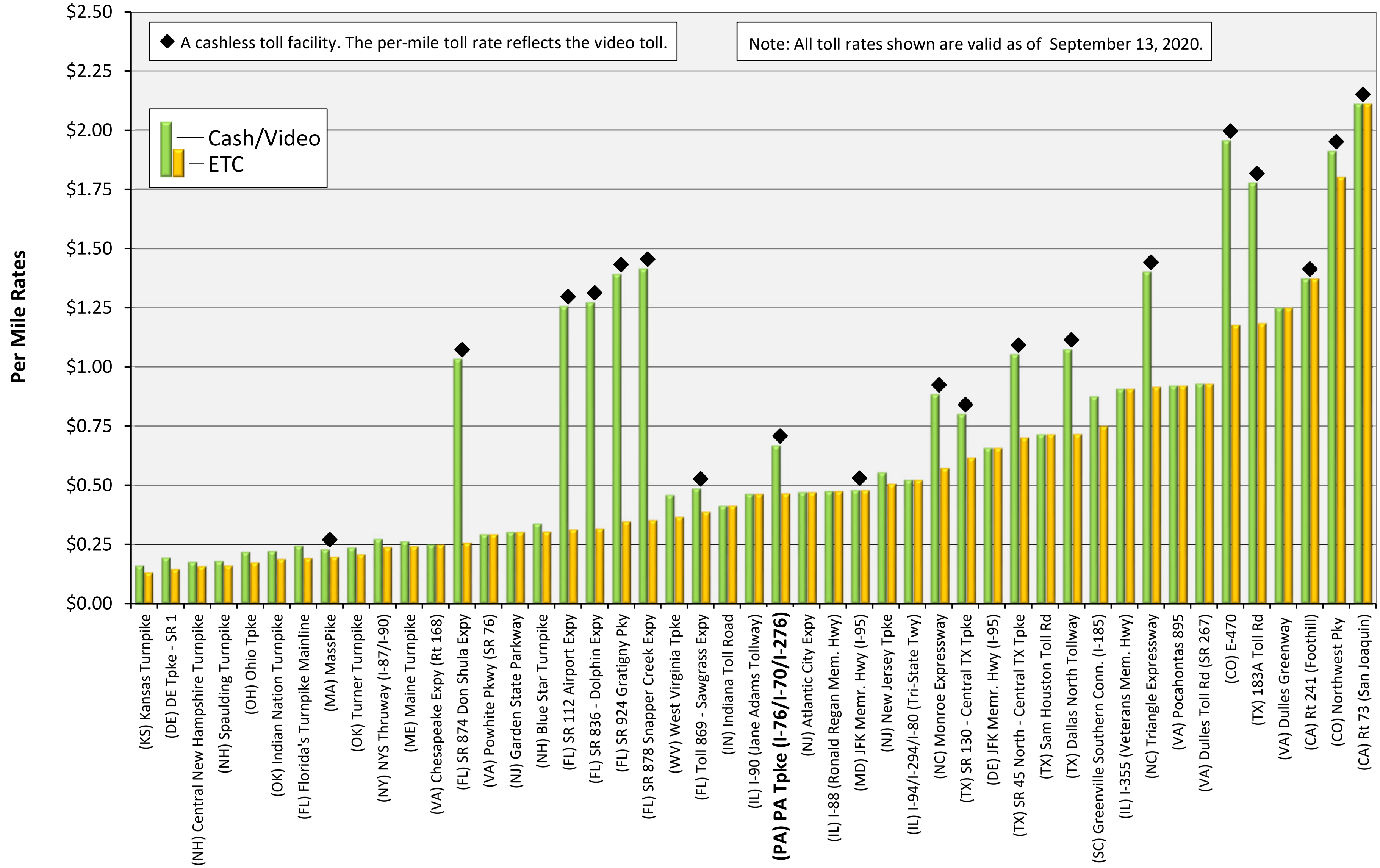
The per-mile through-trip toll rate is shown for the Pennsylvania Turnpike Mainline, which represents a trip on I-76/I-276 between New Jersey and Ohio. Figure 1 shows that even with the 12 consecutive annual toll increases since 2009, the PC per-mile toll rates on the Pennsylvania Turnpike System, at 12 cents per mile for E-ZPass customers and 18 cents per mile for video customers, are still very reasonably priced compared to other toll facilities in the U.S.

Toll rates for 5-axle CVs (represented by weight class 6 for the Pennsylvania Turnpike Mainline) are equivalent to 47 cents per mile for E-ZPass and 67 cents per mile for video transactions for a through trip on the Pennsylvania Turnpike Mainline. It should be remembered that the majority of both PC and CV trips are made using the more cost-effective E-ZPass payment method.



COMPARISON OF 2020 PASSENGER CAR PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 1



COMPARISON OF 2020 FIVE-AXLE VEHICLE PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2

Annual Transaction and Gross Toll Revenue Trends

Table 2 provides a summary of annual systemwide transactions and gross toll revenue trends from FY 1994-95 through FY 2019-20. Notably, this table excludes non-revenue transactions from PTC's non-AET facilities. The Pennsylvania Turnpike System is a large, mature system that has demonstrated long-term growth in transactions and toll revenue. Between FY 1999-2000 and FY 2009-10 there were only three toll rate increases (2004, 2009, 2010) and Turnpike transactions and gross toll revenue grew by an average annual rate of 1.5 percent and 6.9 percent, respectively. Conversely, in the 10 years from FY 2009-10 to FY 2019-20 there were toll rate increases every year. During this period Turnpike transactions fell by 0.3 percent annually, while turnpike revenue grew by 6.0 percent annually. In the most recently completed fiscal year (2019-20) transactions declined by 10.6 percent while revenue declined 3.4 percent. These declines are attributed to the COVID-19 pandemic, which began affecting traffic and revenue in March 2020.

Table 2
Annual Systemwide Traffic and Gross Toll Revenue Trends
Pennsylvania Turnpike System
(in thousands)

	Transactions						Gross Toll Revenue					
Fiscal Year (1)	Cars	Percent Change Over Prior Year	Trucks	Percent Change Over Prior Year	Total	Percent Change Over Prior Year	Cars	Percent Change Over Prior Year	Trucks	Percent Change Over Prior Year	Total	Percent Change Over Prior Year
1994-95	114,033	6.9	15,620	9.5	129,653	7.2	$165,850	4.9	$131,749	7.2	$297,599	5.9
1995-96	121,911	6.9	16,719	7.0	138,630	6.9	172,339	3.9	136,269	3.4	308,608	3.7
1996-97	126,654	3.9	17,479	4.5	144,133	4.0	179,303	4.0	140,837	3.4	320,140	3.7
1997-98	132,472	4.6	18,627	6.6	151,099	4.8	186,290	3.9	149,036	5.8	335,326	4.7
1998-99	136,399	3.0	19,833	6.5	156,232	3.4	191,804	3.0	158,761	6.5	350,565	4.5
1999-00	138,762	1.7	21,341	7.6	160,103	2.5	195,301	1.8	172,035	8.4	367,336	4.8
2000-01	141,033	1.6	21,278	(0.3)	162,311	1.4	193,563	(0.9)	172,337	0.2	365,900	(0.4)
2001-02	150,496	6.7	22,298	4.8	172,794	6.5	212,650	9.9	163,101	(5.4)	375,751	2.7
2002-03	156,220	3.8	23,179	4.0	179,399	3.8	219,201	3.1	168,021	3.0	387,222	3.1
2003-04	163,612	4.7	24,407	5.3	188,019	4.8	228,515	4.2	180,229	7.3	408,744	5.6
2004-05	163,316	(0.2)	25,109	2.9	188,425	0.2	309,032	35.2	236,126	31.0	545,158	33.4
2005-06	160,590	(1.7)	25,311	0.8	185,901	(1.3)	321,268	4.0	267,369	13.2	588,637	8.0
2006-07	160,107	(0.3)	25,316	0.0	185,423	(0.3)	322,781	0.5	269,861	0.9	592,642	0.7
2007-08	164,097	2.5	25,455	0.5	189,552	2.2	327,761	1.5	271,165	0.5	598,926	1.1
2008-09	162,638	(0.9)	23,583	(7.4)	186,220	(1.8)	356,345	8.7	259,259	(4.4)	615,605	2.8
2009-10	163,599	0.6	22,933	(2.8)	186,531	0.2	415,981	16.7	302,057	16.5	718,038	16.6
2010-11	165,231	1.0	23,812	3.8	189,043	1.3	435,752	4.8	328,105	8.6	763,856	6.4
2011-12	164,955	(0.2)	24,125	1.3	189,080	0.0	455,133	4.4	342,646	4.4	797,779	4.4
2012-13	163,690	(0.8)	24,207	0.3	187,897	(0.6)	471,514	3.6	350,226	2.2	821,740	3.0
2013-14	163,788	0.1	24,891	2.8	188,679	0.4	497,671	5.5	368,395	5.2	866,066	5.4
2014-15	166,192	1.5	26,144	5.0	192,336	1.9	533,054	7.1	401,197	8.9	934,251	7.9
2015-16 (2)	171,569	3.2	27,319	4.5	198,887	3.4	588,295	10.4	443,325	10.5	1,031,620	10.4
2016-17 (3,4)	172,799	0.7	27,703	1.4	200,501	0.8	638,787	8.6	476,188	7.4	1,114,975	8.1
2017-18 (5)	172,512	(0.2)	28,650	3.4	201,162	0.3	678,741	6.3	524,418	10.1	1,203,158	7.9
2018-19 (6,7)	173,429	0.5	29,625	3.4	203,054	0.9	740,578	9.1	594,808	13.4	1,335,385	11.0
2019-20 (8,9)	152,301	(12.2)	29,269	(1.2)	181,570	(10.6)	683,918	(7.7)	605,642	1.8	1,289,561	(3.4)

	Average Annual Percent Change					
	Transactions			Gross Toll Revenue		
Fiscal Year	Cars	Trucks	Total	Cars	Trucks	Total
FY 1999-2000 - FY 2009-10	1.7	0.7	1.5	7.9	5.8	6.9
FY 2009-10 - FY 2019-20	(0.7)	2.5	(0.3)	5.1	7.2	6.0
FY 1994-95 - FY 2019-20	1.2	2.5	1.4	5.8	6.3	6.0

(1) Fiscal year beginning June 1.
(2) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.
(5) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier Facilities in April 2018.
(6) Toll by Plate surcharge for I-376 Beaver Valley Expressway was increased in October 2019.
(7) AET conversion was implemented at Gateway Toll Plaza and Turnpike 66 in October 2019.
(8) AET conversion with no surcharge for Toll by Plate was implemented on the Ticket System on March 16, 2020.
(9) AET conversion with no surcharge for Toll by Plate was implemented on the Mon/Fayette Expressway on June 16, 2020.

Note: Refer to Table 1 for toll rate increase information.

Monthly Transactions and Gross Toll Revenue Trends

Tables 3 through 12 present recent monthly transaction and gross toll revenue trends from FY 2017-18 through October 2020 for all PTC facilities. The information is provided for PCs, CVs, and total vehicles. For comparative purposes, subtotals are provided for June through October for each fiscal year. The facilities are summarized in the following order:

- Table 3 – the total Turnpike System (comprised of all the facilities listed below);
- Table 4 – the Ticket System (comprised of I-76/I-276 and I-476);
- Table 5 – the combined Barrier System (comprised of all facilities listed below);
- Table 6 – Turnpike 43 (Mon/Fayette Expressway) (MFE);
- Table 7 – Turnpike 66 (Amos K. Hutchinson Bypass) (AKH);
- Table 8 – Northeast Extension (I-476) barrier plazas;
- Table 9 – Turnpike I-376 (Beaver Valley Expressway) (BVE);
- Table 10 – Turnpike I-576 (Southern Beltway – Findlay Connector);
- Table 11 – Delaware River Bridge (DRB); and
- Table 12 – Gateway Toll Plaza.

As shown in Table 3, total systemwide gross toll revenue increased by 11.0 percent in FY 2018-19 and decreased by 3.4 percent in FY 2019-20, the last three months of which were impacted by the COVID-19 pandemic. Year-to-date (June through October 2020) toll revenue has declined by 16.1 percent compared to the same period in the prior year. CV toll revenue decreased by 1.1 percent and PC toll revenue decreased by 27.3 percent from June through October 2020 compared to the same time period in the prior year. These significant declines are compared to the period in FY 2019-20 unaffected by COVID-19.

It is important to note, however, that the negative impacts of COVID-19 have diminished greatly over time. In April 2020 (which includes the first full month of COVID-19 impacts), total gross toll revenue was 49.2 percent lower than the same month in 2019. That negative impact has decreased each month since, such that October 2020 gross toll revenue was only 9.8 percent lower than the same month in the prior year. As shown in Table 3, PCs have been affected far more greatly by COVID-19 than have CVs. Thus far in FY 2020-21, PC gross toll revenue has declined 27.3 percent while CV gross toll revenue has declined only 1.1 percent. In fact, CV gross toll revenue has actually been slightly positive in September and October 2020 compared to the same months in 2019.

Table 3

Total Turnpike System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	15,438	(0.5)	15,361	(1.1)	15,187	(30.1)	10,616
July	15,522	0.3	15,566	0.1	15,583	(21.1)	12,292
August	15,957	1.1	16,134	(0.4)	16,071	(20.2)	12,824
September	14,724	(1.5)	14,503	0.5	14,582	(16.0)	12,248
October	15,221	1.2	15,396	(0.0)	15,389	(17.1)	12,758
November	14,317	(0.5)	14,242	(0.3)	14,193		
December	13,746	1.7	13,982	(0.5)	13,911		
January	12,542	(0.3)	12,504	2.6	12,826		
February	11,958	(0.2)	11,930	4.4	12,459		
March	13,591	3.1	14,018	(32.5)	9,463		
April	14,259	1.2	14,426	(66.4)	4,845		
May	15,237	0.9	15,367	(49.3)	7,791		
Total Year	172,512	0.5	173,429	(12.2)	152,301		
Jun - Oct	76,862	0.1	76,960	(0.2)	76,812	(20.9)	60,739

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	2,575	0.9	2,596	(1.5)	2,557	7.0	2,735
July	2,419	6.3	2,573	3.7	2,668	5.2	2,806
August	2,662	3.5	2,755	(1.2)	2,722	1.5	2,764
September	2,431	(0.5)	2,418	5.0	2,539	9.2	2,773
October	2,547	7.3	2,732	1.4	2,770	3.1	2,856
November	2,323	3.0	2,391	0.5	2,403		
December	2,146	2.5	2,198	3.3	2,271		
January	2,175	4.3	2,268	3.7	2,353		
February	2,034	1.9	2,073	5.2	2,182		
March	2,295	3.4	2,372	1.6	2,410		
April	2,387	6.8	2,549	(20.7)	2,021		
May	2,657	1.6	2,698	(12.1)	2,372		
Total Year	28,650	3.4	29,625	(1.2)	29,269		
Jun - Oct	12,635	3.5	13,075	1.4	13,256	5.1	13,934

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	18,013	(0.3)	17,958	(1.2)	17,744	(24.8)	13,351
July	17,942	1.1	18,138	0.6	18,251	(17.3)	15,098
August	18,619	1.5	18,889	(0.5)	18,793	(17.1)	15,587
September	17,156	(1.4)	16,921	1.2	17,121	(12.3)	15,021
October	17,768	2.0	18,128	0.2	18,159	(14.0)	15,615
November	16,640	(0.0)	16,633	(0.2)	16,597		
December	15,891	1.8	16,180	0.0	16,182		
January	14,718	0.4	14,772	2.8	15,179		
February	13,992	0.1	14,003	4.5	14,640		
March	15,886	3.2	16,389	(27.6)	11,873		
April	16,646	2.0	16,975	(59.5)	6,866		
May	17,893	1.0	18,065	(43.7)	10,164		
Total Year	201,162	0.9	203,054	(10.6)	181,570		
Jun - Oct	89,497	0.6	90,035	0.0	90,068	(17.1)	74,672

Toll Revenue (in $1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$61,877	6.5	$65,886	8.9	$71,743	(38.6)	$44,023
July	65,722	5.3	69,178	9.8	75,990	(31.2)	52,311
August	64,611	9.2	70,545	9.6	77,351	(25.6)	57,533
September	56,620	6.6	60,348	8.0	65,184	(21.8)	51,000
October	57,806	6.6	61,611	9.7	67,615	(18.3)	55,274
November	55,122	7.3	59,156	8.3	64,068		
December	52,345	9.6	57,377	10.8	63,565		
January	46,741	9.0	50,969	11.5	56,826		
February	44,576	11.8	49,844	11.1	55,386		
March	53,737	14.3	61,426	(38.8)	37,574		
April	57,201	11.8	63,940	(73.2)	17,157		
May	62,381	12.7	70,298	(55.2)	31,458		
Total Year	$678,741	9.1	$740,578	(7.7)	$683,918		
Jun - Oct	306,636	6.8	327,567	9.3	357,884	(27.3)	$260,141

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$44,643	11.5	$49,757	5.4	$52,463	(0.6)	$52,165
July	41,947	17.0	49,069	10.8	54,375	(3.1)	52,693
August	46,210	13.3	52,369	5.9	55,447	(3.5)	53,492
September	42,371	11.7	47,311	8.5	51,328	1.3	52,003
October	44,599	17.0	52,185	6.0	55,318	0.5	55,607
November	40,944	15.0	47,087	2.5	48,255		
December	39,000	11.9	43,630	8.3	47,235		
January	42,222	14.3	48,261	8.1	52,171		
February	40,130	12.4	45,096	8.9	49,120		
March	45,627	13.4	51,729	(5.4)	48,928		
April	46,057	14.6	52,793	(20.2)	42,127		
May	50,666	9.6	55,522	(12.0)	48,876		
Total Year	$524,418	13.4	$594,808	1.8	$605,642		
Jun - Oct	219,771	14.1	250,690	7.3	268,931	(1.1)	$265,959

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$106,521	8.6	$115,643	7.4	$124,206	(22.6)	$96,188
July	107,669	9.8	118,247	10.2	130,365	(19.5)	105,004
August	110,821	10.9	122,914	8.0	132,798	(16.4)	111,025
September	98,991	8.8	107,658	8.2	116,512	(11.6)	103,003
October	102,405	11.1	113,795	8.0	122,933	(9.8)	110,881
November	96,066	10.6	106,243	5.7	112,323		
December	91,344	10.6	101,007	9.7	110,800		
January	88,964	11.5	99,230	9.8	108,997		
February	84,707	12.1	94,940	10.1	104,507		
March	99,364	13.9	113,155	(23.6)	86,502		
April	103,259	13.0	116,733	(49.2)	59,283		
May	113,047	11.3	125,820	(36.2)	80,335		
Total Year	$1,203,158	11.0	$1,335,385	(3.4)	$1,289,561		
Jun - Oct	526,408	9.8	578,257	8.4	626,815	(16.1)	$526,101

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.
(5) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.
(6) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier facilities in April 2018.
(7) AET conversion and vehicle classification changes were implemented on the Turnpike I-576 Findlay Connector in June 2018.
(8) AET conversion was implemented on Turnpike 66 Amos K. Hutchinson Bypass and Gateway Toll Plaza in October 2019.
(9) AET conversion was implemented on the Ticket System and Mon/Fayette Expressway in June 2020.

Table 4

Ticket System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	11,695	(1.0)	11,580	(3.3)	11,195	(31.9)	7,621
July	11,654	(0.5)	11,596	(2.0)	11,365	(21.8)	8,884
August	12,015	0.0	12,019	(1.9)	11,786	(21.1)	9,305
September	11,110	(2.5)	10,836	(0.6)	10,768	(17.5)	8,879
October	11,547	(0.6)	11,483	(0.8)	11,387	(18.1)	9,326
November	10,905	(2.6)	10,625	(0.5)	10,574		
December	10,464	(0.0)	10,463	(1.1)	10,347		
January	9,655	(2.1)	9,453	1.8	9,623		
February	9,152	(2.4)	8,931	4.8	9,358		
March	10,288	1.8	10,475	(32.9)	7,032		
April	10,836	(1.0)	10,728	(67.7)	3,463		
May	11,485	(1.0)	11,371	(50.9)	5,583		
Total Year	130,805	(1.0)	129,559	(13.2)	112,482		
Jun - Oct	58,020	(0.9)	57,514	(1.8)	56,501	(22.1)	44,014

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	1,938	0.0	1,939	(2.7)	1,887	8.3	2,043
July	1,817	5.4	1,915	2.7	1,967	6.5	2,095
August	1,995	2.3	2,040	(1.7)	2,006	3.3	2,072
September	1,823	(1.8)	1,790	4.3	1,867	10.7	2,067
October	1,913	5.8	2,024	0.4	2,031	5.4	2,141
November	1,754	1.7	1,784	(0.8)	1,770		
December	1,638	0.8	1,650	2.2	1,686		
January	1,658	2.5	1,699	2.7	1,745		
February	1,539	0.5	1,547	4.5	1,616		
March	1,732	1.7	1,762	2.8	1,811		
April	1,795	4.7	1,880	(19.5)	1,513		
May	1,981	0.5	1,990	(11.0)	1,770		
Total Year	21,582	2.0	22,020	(1.6)	21,670		
Jun - Oct	9,486	2.4	9,709	0.5	9,757	6.8	10,419

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	13,633	(0.8)	13,519	(3.2)	13,082	(26.1)	9,664
July	13,471	0.3	13,512	(1.3)	13,332	(17.6)	10,979
August	14,009	0.4	14,059	(1.9)	13,792	(17.5)	11,377
September	12,933	(2.4)	12,626	0.1	12,635	(13.4)	10,947
October	13,459	0.4	13,506	(0.7)	13,418	(14.5)	11,467
November	12,659	(2.0)	12,409	(0.5)	12,343		
December	12,102	0.1	12,113	(0.7)	12,033		
January	11,313	(1.4)	11,152	1.9	11,368		
February	10,691	(2.0)	10,478	4.7	10,974		
March	12,020	1.8	12,237	(27.7)	8,843		
April	12,631	(0.2)	12,608	(60.5)	4,977		
May	13,465	(0.8)	13,361	(45.0)	7,354		
Total Year	152,387	(0.5)	151,579	(11.5)	134,151		
Jun - Oct	67,505	(0.4)	67,222	(1.4)	66,258	(17.8)	54,433

Toll Revenue (in $1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$52,913	6.5	$56,349	7.6	$60,635	(41.8)	$35,319
July	56,299	5.0	59,123	8.5	64,149	(33.4)	42,697
August	55,199	9.1	60,200	8.8	65,501	(28.3)	46,956
September	48,195	6.3	51,234	7.0	54,814	(24.3)	41,486
October	49,321	5.3	51,943	9.7	57,006	(21.3)	44,868
November	47,189	5.8	49,943	7.6	53,745		
December	44,599	8.3	48,312	10.0	53,142		
January	39,895	7.4	42,828	10.1	47,167		
February	38,015	10.1	41,868	10.5	46,274		
March	45,839	12.8	51,714	(40.2)	30,904		
April	48,924	10.1	53,860	(75.2)	13,360		
May	53,304	11.3	59,310	(57.6)	25,131		
Total Year	$579,692	8.1	$626,685	(8.8)	$571,829		
Jun - Oct	261,927	6.5	278,850	8.3	302,105	(30.0)	$211,326

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$39,308	11.7	$43,898	5.1	$46,135	(2.0)	$45,213
July	36,939	17.2	43,294	10.4	47,784	(4.3)	45,733
August	40,669	13.5	46,144	5.5	48,699	(4.5)	46,518
September	37,290	12.0	41,775	7.7	45,003	0.1	45,044
October	39,232	17.0	45,892	5.4	48,375	(0.3)	48,241
November	35,991	15.4	41,520	1.1	41,992		
December	34,402	11.8	38,457	7.1	41,206		
January	37,423	13.8	42,586	7.4	45,721		
February	35,551	12.0	39,811	8.3	43,112		
March	40,462	12.9	45,684	(6.7)	42,610		
April	40,759	13.9	46,431	(21.4)	36,517		
May	44,726	9.1	48,818	(12.8)	42,565		
Total Year	$462,754	13.3	$524,309	1.0	$529,718		
Jun - Oct	193,438	14.2	221,002	6.8	235,995	(2.2)	$230,749

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$92,221	8.7	$100,247	6.5	$106,770	(24.6)	$80,532
July	93,238	9.8	102,417	9.3	111,932	(21.0)	88,430
August	95,868	10.9	106,344	7.4	114,200	(18.1)	93,474
September	85,485	8.8	93,009	7.3	99,817	(13.3)	86,530
October	88,553	10.5	97,835	7.7	105,381	(11.6)	93,109
November	83,181	10.0	91,463	4.7	95,737		
December	79,001	9.8	86,769	8.7	94,348		
January	77,318	10.5	85,414	8.8	92,888		
February	73,566	11.0	81,679	9.4	89,386		
March	86,301	12.9	97,398	(24.5)	73,515		
April	89,683	11.8	100,291	(50.3)	49,878		
May	98,030	10.3	108,128	(37.4)	67,696		
Total Year	$1,042,446	10.4	$1,150,994	(4.3)	$1,101,547		
Jun - Oct	455,365	9.8	499,852	7.7	538,101	(17.8)	$442,075

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(5) AET conversion occurred in June 2020.

Table 5

Combined Barrier Facilities - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	3,743	1.0	3,782	5.5	3,992	(25.0)	2,996
July	3,869	2.6	3,970	6.3	4,218	(19.2)	3,409
August	3,942	4.4	4,115	4.1	4,286	(17.9)	3,519
September	3,614	1.5	3,667	4.0	3,814	(11.7)	3,368
October	3,674	6.5	3,913	2.3	4,001	(14.2)	3,433
November	3,412	6.0	3,618	0.1	3,620		
December	3,282	7.2	3,519	1.3	3,564		
January	2,887	5.7	3,051	5.0	3,203		
February	2,806	6.9	2,999	3.4	3,101		
March	3,303	7.3	3,543	(31.4)	2,431		
April	3,423	8.0	3,698	(62.6)	1,382		
May	3,752	6.5	3,996	(44.7)	2,208		
Total Year	41,707	5.2	43,870	(9.2)	39,819		
Jun - Oct	18,842	3.2	19,446	4.4	20,311	(17.7)	16,724

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	636	3.3	657	1.9	670	3.3	692
July	602	9.2	657	6.7	702	1.3	711
August	667	7.1	715	0.1	716	(3.4)	692
September	609	3.2	628	6.9	672	5.0	705
October	635	11.6	709	4.3	739	(3.3)	715
November	569	6.8	607	4.3	634		
December	508	7.9	548	6.7	585		
January	517	10.0	569	6.8	608		
February	495	6.4	526	7.5	566		
March	562	8.5	610	(1.9)	598		
April	592	13.1	669	(24.1)	508		
May	676	4.7	708	(14.9)	602		
Total Year	7,068	7.6	7,605	(0.1)	7,599		
Jun - Oct	3,149	6.9	3,366	3.9	3,499	0.5	3,515

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	4,379	1.4	4,439	5.0	4,661	(20.9)	3,688
July	4,471	3.5	4,627	6.3	4,920	(16.3)	4,120
August	4,610	4.8	4,830	3.5	5,002	(15.8)	4,211
September	4,223	1.7	4,295	4.4	4,486	(9.2)	4,074
October	4,309	7.3	4,621	2.6	4,740	(12.5)	4,147
November	3,981	6.1	4,225	0.7	4,253		
December	3,790	7.3	4,068	2.0	4,149		
January	3,404	6.3	3,620	5.3	3,811		
February	3,301	6.8	3,525	4.0	3,666		
March	3,865	7.4	4,153	(27.0)	3,030		
April	4,015	8.8	4,367	(56.7)	1,890		
May	4,428	6.2	4,704	(40.3)	2,810		
Total Year	48,775	5.5	51,475	(7.9)	47,418		
Jun - Oct	21,991	3.7	22,813	4.4	23,809	(15.0)	20,239

Toll Revenue (in $1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$8,964	6.4	$9,537	16.5	$11,108	(21.6)	$8,704
July	9,422	6.7	10,055	17.8	11,841	(18.8)	9,614
August	9,413	9.9	10,344	14.6	11,850	(10.7)	10,577
September	8,425	8.2	9,114	13.8	10,370	(8.3)	9,514
October	8,485	13.9	9,668	9.7	10,609	(1.9)	10,406
November	7,933	16.1	9,214	12.0	10,323		
December	7,746	17.0	9,065	15.0	10,423		
January	6,847	18.9	8,141	18.6	9,659		
February	6,561	21.6	7,976	14.3	9,112		
March	7,898	23.0	9,712	(31.3)	6,670		
April	8,277	21.8	10,080	(62.3)	3,796		
May	9,078	21.0	10,988	(42.4)	6,327		
Total Year	$99,048	15.0	$113,893	(1.6)	$112,089		
Jun - Oct	44,709	9.0	48,717	14.5	55,778	(12.5)	$48,815

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$5,335	9.8	$5,859	8.0	$6,328	9.9	$6,952
July	5,009	15.3	5,775	14.1	6,591	5.6	6,959
August	5,541	12.4	6,225	8.4	6,748	3.4	6,974
September	5,082	8.9	5,535	14.3	6,326	10.0	6,958
October	5,368	17.2	6,293	10.3	6,943	6.1	7,366
November	4,952	12.4	5,567	12.5	6,263		
December	4,597	12.5	5,173	16.6	6,029		
January	4,799	18.2	5,675	13.7	6,450		
February	4,580	15.4	5,285	13.7	6,009		
March	5,165	17.0	6,045	4.5	6,317		
April	5,298	20.1	6,362	(11.8)	5,610		
May	5,940	12.9	6,704	(5.9)	6,311		
Total Year	$61,664	14.3	$70,498	7.7	$75,925		
Jun - Oct	26,333	12.7	29,688	10.9	32,935	6.9	$35,210

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$14,299	7.7	$15,396	13.2	$17,436	(10.2)	$15,656
July	14,431	9.7	15,830	16.4	18,433	(10.1)	16,574
August	14,953	10.8	16,570	12.2	18,598	(5.6)	17,552
September	13,507	8.5	14,649	14.0	16,696	(1.3)	16,472
October	13,853	15.2	15,961	10.0	17,552	1.3	17,772
November	12,885	14.7	14,780	12.2	16,586		
December	12,343	15.4	14,238	15.6	16,452		
January	11,646	18.6	13,816	16.6	16,109		
February	11,141	19.0	13,261	14.0	15,121		
March	13,063	20.6	15,757	(17.6)	12,987		
April	13,575	21.1	16,443	(42.8)	9,406		
May	15,017	17.8	17,691	(28.6)	12,638		
Total Year	$160,712	14.7	$184,392	2.0	$188,014		
Jun - Oct	71,042	10.4	78,405	13.1	88,714	(5.3)	$84,025

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(5) AET Conversions at Beaver Valley Expressway, NE Extension Barrier Plazas, Findlay Connector, Amos K Hutchinson Bypass, Gateway Toll Plaza, and Mon/Fayette Expressway in May 2017, April 2018, June 2018, October 2019, October 2019, and June 2020 respectively.

Table 6

Turnpike 43 - Mon/Fayette Expressway - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	1,072	0.7	1,079	(1.6)	1,061	(11.0)	944	97	(0.1)	97	0.0	97	0.8	98	1,169	0.6	1,176	(1.5)	1,158	(10.0)	1,042
July	1,068	4.7	1,118	(1.6)	1,099	(4.9)	1,045	94	6.2	99	9.7	109	(8.9)	99	1,161	4.8	1,217	(0.7)	1,208	(5.3)	1,144
August	1,116	3.0	1,149	(2.9)	1,116	(6.6)	1,042	107	(5.6)	101	0.1	102	(12.5)	89	1,223	2.3	1,251	(2.7)	1,217	(7.1)	1,131
September	1,076	0.4	1,080	(1.2)	1,067	(2.7)	1,039	97	(2.5)	95	4.0	99	(8.1)	91	1,173	0.2	1,175	(0.8)	1,166	(3.1)	1,129
October	1,116	4.1	1,162	(3.5)	1,121	(5.4)	1,060	103	5.6	108	4.0	113	(17.8)	93	1,219	4.2	1,270	(2.9)	1,233	(6.5)	1,152
November	980	4.8	1,027	(5.6)	970			86	5.9	91	(4.3)	87			1,066	4.9	1,118	(5.5)	1,057		
December	952	1.6	967	(2.0)	948			71	4.6	75	(4.8)	71			1,023	1.8	1,042	(2.2)	1,019		
January	876	0.4	880	1.3	891			71	10.1	78	(3.8)	75			947	1.1	957	0.9	966		
February	870	1.5	884	(1.7)	868			71	0.9	72	(6.5)	67			942	1.5	956	(2.1)	936		
March	995	2.0	1,015	(30.4)	706			78	11.4	87	(18.7)	71			1,073	2.7	1,102	(29.5)	777		
April	1,026	2.7	1,053	(57.2)	451			88	13.1	99	(37.5)	62			1,113	3.5	1,152	(55.5)	513		
May	1,098	1.3	1,111	(39.6)	671			106	(2.0)	104	(22.6)	81			1,204	1.0	1,215	(38.2)	751		
Total Year	12,244	2.3	12,524	(12.4)	10,970			1,070	3.5	1,107	(6.7)	1,033			13,313	2.4	13,631	(11.9)	12,003		
Jun - Oct	5,447	2.6	5,588	(2.2)	5,464	(6.1)	5,130	498	0.6	501	3.6	519	(9.6)	469	5,945	2.4	6,089	(1.7)	5,983	(6.4)	5,599

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$1,659	6.8	$1,772	7.5	$1,904	(16.3)	$1,594	$426	8.5	$462	8.3	$500	(3.6)	$482	$2,085	7.1	$2,234	7.6	$2,404	(13.6)	$2,076
July	1,671	12.4	1,877	6.5	2,000	(12.1)	1,758	400	17.8	471	18.0	556	(16.0)	467	2,071	13.4	2,349	8.8	2,556	(13.0)	2,225
August	1,722	10.6	1,904	3.7	1,974	(8.1)	1,813	457	4.6	478	8.9	520	(16.1)	436	2,179	9.3	2,382	4.7	2,494	(9.8)	2,250
September	1,642	7.8	1,769	7.4	1,901	(9.6)	1,717	418	6.9	447	9.8	491	(11.2)	436	2,060	7.6	2,216	7.9	2,392	(10.0)	2,154
October	1,711	10.9	1,898	4.5	1,983	(2.3)	1,936	437	16.3	508	9.3	556	(15.3)	471	2,148	12.0	2,406	5.5	2,538	(5.2)	2,407
November	1,496	12.6	1,684	0.9	1,700			373	16.0	432	3.3	446			1,869	13.3	2,116	1.4	2,147		
December	1,446	12.4	1,625	3.4	1,680			316	18.3	374	0.8	377			1,762	13.5	1,999	2.9	2,056		
January	1,399	10.2	1,542	9.7	1,692			331	22.1	404	5.7	427			1,730	12.5	1,946	8.9	2,119		
February	1,403	10.4	1,548	5.9	1,639			343	10.4	378	2.8	389			1,746	10.4	1,926	5.3	2,028		
March	1,602	11.9	1,792	(26.1)	1,324			380	21.5	462	(14.3)	396			1,982	13.7	2,254	(23.7)	1,720		
April	1,672	11.4	1,862	(53.1)	873			421	22.1	513	(29.3)	363			2,093	13.5	2,376	(48.0)	1,236		
May	1,798	10.4	1,986	(31.9)	1,352			499	8.7	543	(16.5)	453			2,298	10.1	2,529	(28.6)	1,805		
Total Year	$19,222	10.6	$21,261	(5.8)	$20,022			$4,800	14.0	$5,472	0.0	$5,473			$24,021	11.3	$26,732	(4.6)	$25,496		
Jun - Oct	8,405	9.7	9,220	5.9	9,761	(9.7)	$8,819	2,138	10.7	2,367	10.9	2,624	(12.6)	$2,293	10,543	9.9	11,587	6.9	12,384	(10.3)	$11,111

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in June 2020.

Table 7

Turnpike 66 - Amos K. Hutchinson Bypass - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	567	(1.9)	556	(2.7)	541	(11.5)	479	100	1.0	101	(6.1)	95	3.1	97	667	(1.5)	657	(3.2)	636	(9.3)	577
July	553	1.1	559	(0.7)	555	(6.6)	518	94	7.2	101	(0.9)	100	1.3	101	647	2.0	660	(0.7)	655	(5.4)	620
August	578	0.8	583	(1.5)	574	(8.1)	528	104	3.6	108	(3.8)	104	(4.2)	100	682	1.2	691	(1.8)	678	(7.5)	627
September	558	(0.5)	555	(3.2)	538	(4.8)	512	95	(2.5)	92	3.0	95	3.0	98	653	(0.8)	648	(2.3)	633	(3.6)	610
October	575	1.0	580	0.1	581	(9.4)	527	98	8.1	105	(0.7)	105	(5.7)	99	672	2.0	686	(0.0)	686	(8.8)	625
November	537	(1.2)	531	(3.3)	513			84	2.4	86	(0.6)	85			621	(0.7)	617	(2.9)	599		
December	529	0.7	533	(3.1)	517			74	7.8	80	(3.0)	77			603	1.6	612	(3.1)	594		
January	482	(1.4)	475	2.3	486			77	5.7	81	2.0	83			558	(0.4)	556	2.2	569		
February	460	0.1	461	1.3	467			71	5.6	75	1.0	76			531	0.8	536	1.3	542		
March	533	(1.2)	527	(26.5)	387			84	(3.3)	81	(4.0)	78			617	(1.5)	608	(23.5)	465		
April	536	0.3	538	(49.6)	271			90	3.8	93	(26.4)	69			626	0.8	631	(46.1)	340		
May	579	(1.6)	570	(30.4)	396			101	(2.4)	99	(13.4)	86			680	(1.7)	669	(27.9)	482		
Total Year	6,486	(0.3)	6,466	(9.9)	5,827			1,071	2.9	1,102	(4.6)	1,051			7,556	0.2	7,568	(9.1)	6,878		
Jun - Oct	2,830	0.1	2,833	(1.6)	2,789	(8.1)	2,564	490	3.5	507	(1.8)	498	(0.7)	495	3,320	0.6	3,340	(1.6)	3,287	(7.0)	3,059

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$951	4.6	$995	4.8	$1,043	(4.8)	$992	$452	11.4	$504	(2.1)	$493	(0.7)	$490	$1,403	6.8	$1,499	2.5	$1,536	(3.5)	$1,482
July	938	7.1	1,004	7.6	1,080	(5.0)	1,027	426	15.9	494	2.9	508	(4.2)	487	1,364	9.8	1,498	6.1	1,588	(4.7)	1,514
August	964	7.4	1,036	6.6	1,104	(4.3)	1,057	473	9.6	518	2.5	531	(8.3)	487	1,437	8.2	1,554	5.2	1,636	(5.6)	1,544
September	931	6.4	991	3.8	1,029	(2.1)	1,007	434	3.1	447	7.4	480	(2.2)	470	1,364	5.4	1,438	4.9	1,509	(2.1)	1,476
October	960	6.5	1,023	1.3	1,036	8.0	1,119	445	16.4	518	(3.7)	499	0.7	503	1,405	9.7	1,541	(0.3)	1,536	5.6	1,622
November	892	4.8	934	12.1	1,047			389	6.4	414	6.9	443			1,281	5.3	1,349	10.5	1,490		
December	879	7.0	941	7.1	1,008			341	15.0	392	0.9	396			1,220	9.3	1,334	5.3	1,404		
January	829	7.1	888	8.5	963			373	12.6	420	1.1	425			1,202	8.8	1,308	6.1	1,388		
February	804	8.3	871	3.5	901			354	10.9	392	(2.9)	381			1,158	9.1	1,264	1.5	1,283		
March	935	7.4	1,004	(30.5)	698			414	3.5	429	(12.6)	375			1,350	6.2	1,433	(25.1)	1,073		
April	946	8.4	1,026	(49.8)	515			446	8.9	485	(28.9)	345			1,392	8.6	1,511	(43.1)	860		
May	1,024	6.5	1,090	(25.5)	812			493	3.9	513	(14.9)	437			1,518	5.6	1,603	(22.1)	1,249		
Total Year	$11,054	6.8	$11,804	(4.8)	$11,237			$5,041	9.7	$5,528	(3.9)	$5,314			$16,095	7.7	$17,331	(4.5)	$16,551		
Jun - Oct	4,743	6.4	5,048	4.8	5,292	(1.7)	$5,201	2,230	11.3	2,481	1.2	2,512	(3.0)	$2,437	6,973	8.0	7,530	3.6	7,804	(2.1)	$7,638

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.
(4) AET conversion occurred in October 2019.

Table 8

Northeast Extension Barrier Plazas - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	420	(0.7)	417	10.7	462	(45.0)	254
July	494	(1.2)	488	14.7	560	(40.4)	334
August	481	10.3	530	9.3	580	(39.5)	351
September	390	(0.1)	389	8.7	423	(27.1)	309
October	380	4.4	397	10.4	438	(29.4)	309
November	364	1.0	367	3.6	381		
December	323	2.3	331	2.9	340		
January	258	(0.2)	257	9.6	282		
February	256	2.3	262	5.9	277		
March	305	4.0	318	(34.5)	208		
April	338	8.3	366	(76.9)	85		
May	400	5.1	420	(57.7)	178		
Total Year	4,409	3.0	4,542	(7.3)	4,213		
Jun - Oct	2,164	2.6	2,221	10.9	2,462	(36.8)	1,556

	Commercial Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	104	3.5	108	5.4	113	(2.8)	110
July	101	8.6	109	12.2	123	(7.0)	114
August	107	13.0	121	3.8	126	(12.3)	110
September	96	4.8	100	15.2	116	(1.3)	114
October	97	14.8	111	7.0	119	(1.3)	117
November	91	6.0	96	3.8	100		
December	83	4.9	87	8.5	94		
January	88	3.5	91	8.5	99		
February	80	2.0	82	10.4	90		
March	89	6.9	95	3.0	98		
April	91	13.4	103	(18.9)	83		
May	107	6.8	114	(13.6)	99		
Total Year	1,132	7.5	1,216	3.4	1,258		
Jun - Oct	504	8.9	549	8.5	596	(5.1)	566

	Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	524	0.1	525	9.6	575	(36.7)	364
July	595	0.5	598	14.3	683	(34.4)	448
August	588	10.8	651	8.3	705	(34.6)	461
September	486	0.9	490	10.0	539	(21.6)	423
October	476	6.5	507	9.7	556	(23.4)	426
November	454	2.0	463	3.6	480		
December	406	2.8	417	4.0	434		
January	345	0.8	348	9.3	381		
February	337	2.2	344	6.9	368		
March	394	4.6	412	(25.9)	306		
April	429	9.4	469	(64.1)	168		
May	507	5.4	534	(48.3)	276		
Total Year	5,540	3.9	5,759	(5.0)	5,471		
Jun - Oct	2,668	3.8	2,770	10.4	3,058	(30.6)	2,122

Toll Revenue (in $1,000s)

	Passenger Cars						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$413	9.4	$452	17.9	$533	(35.8)	$342
July	500	4.7	524	27.8	669	(37.0)	422
August	479	21.7	583	18.8	693	(31.1)	477
September	384	13.4	435	15.0	500	(17.1)	415
October	371	14.1	424	22.4	519	(16.2)	435
November	353	11.1	392	12.2	440		
December	312	9.4	342	14.1	390		
January	249	21.1	302	21.2	366		
February	248	23.5	306	14.0	349		
March	297	25.3	373	(31.3)	256		
April	336	28.3	432	(72.6)	118		
May	422	16.1	490	(51.6)	237		
Total Year	$4,366	15.8	$5,054	0.3	$5,070		
Jun - Oct	2,148	12.6	2,418	20.5	2,915	(28.2)	$2,091

	Commercial Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$506	19.7	$607	11.1	$674	5.1	$708
July	484	22.9	595	20.5	717	0.3	719
August	516	29.2	666	12.4	749	(5.9)	705
September	462	22.3	566	22.9	695	4.4	726
October	476	33.7	636	14.9	731	3.4	756
November	454	26.3	574	10.5	634		
December	417	25.6	524	15.1	603		
January	450	28.3	578	15.5	667		
February	414	26.9	525	15.9	609		
March	457	34.0	612	6.6	652		
April	468	38.7	649	(9.4)	588		
May	620	12.3	696	(4.4)	665		
Total Year	$5,724	26.2	$7,227	10.5	$7,983		
Jun - Oct	2,445	25.6	3,070	16.1	3,565	1.4	$3,614

	Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$920	15.1	$1,058	14.0	$1,207	(13.0)	$1,050
July	984	13.7	1,119	23.9	1,386	(17.7)	1,141
August	995	25.6	1,250	15.4	1,442	(18.0)	1,183
September	846	18.3	1,001	19.5	1,195	(4.6)	1,141
October	847	25.1	1,060	17.9	1,250	(4.7)	1,191
November	807	19.7	965	11.2	1,073		
December	729	18.7	866	14.7	993		
January	699	25.7	879	17.5	1,033		
February	661	25.7	831	15.2	958		
March	754	30.6	984	(7.8)	908		
April	805	34.3	1,081	(34.7)	706		
May	1,042	13.8	1,186	(23.9)	902		
Total Year	$10,090	21.7	$12,281	6.3	$13,053		
Jun - Oct	4,592	19.5	5,488	18.1	6,480	(12.0)	$5,705

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.
(4) AET conversion and vehicle classification changes were implemented in April 2018.

Table 9

Turnpike I-376 - Beaver Valley Expressway - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	592	4.8	621	3.7	644	(27.2)	469	126	1.4	127	(3.9)	122	2.4	125	718	4.2	748	2.4	766	(22.5)	594
July	593	8.4	643	2.8	661	(23.1)	508	114	12.8	129	(0.7)	128	1.6	130	707	9.1	771	2.2	788	(19.1)	638
August	604	12.1	677	(0.2)	675	(23.3)	518	127	11.5	142	(5.2)	134	(6.0)	126	730	12.0	818	(1.1)	809	(20.5)	644
September	583	6.2	619	2.0	632	(16.5)	527	118	2.7	122	2.6	125	5.6	132	702	5.6	741	2.1	756	(12.9)	659
October	577	13.7	657	2.0	670	(19.3)	540	120	16.0	140	(5.8)	132	(1.5)	130	698	14.1	796	0.6	801	(16.4)	670
November	541	9.2	591	0.5	593			105	6.6	112	(3.1)	108			646	8.8	703	(0.1)	702		
December	534	9.1	582	0.4	585			91	8.2	99	(4.8)	94			625	9.0	681	(0.3)	678		
January	478	8.5	519	5.1	545			90	11.5	101	(3.5)	97			569	9.0	620	3.7	642		
February	465	9.3	508	2.0	518			91	4.2	95	(1.7)	93			556	8.4	603	1.4	611		
March	552	8.1	596	(32.5)	402			106	2.9	109	(12.2)	96			658	7.2	705	(29.4)	498		
April	568	7.9	613	(62.7)	229			115	8.8	125	(32.9)	84			683	8.0	738	(57.7)	312		
May	623	5.9	660	(45.4)	360			132	0.7	133	(19.7)	106			755	5.0	793	(41.1)	467		
Total Year	6,711	8.6	7,286	(10.6)	6,514			1,335	7.2	1,431	(7.8)	1,319			8,046	8.3	8,717	(10.1)	7,833		
Jun - Oct	2,950	9.0	3,216	2.0	3,281	(21.9)	2,562	605	8.8	659	(2.8)	640	0.3	642	3,555	9.0	3,875	1.2	3,922	(18.3)	3,204

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$771	9.8	$847	12.5	$953	(7.3)	$883	$369	1.6	$375	3.0	$386	13.9	$439	$1,140	7.2	$1,221	9.6	$1,339	(1.2)	$1,322
July	780	12.2	875	15.1	1,007	(10.8)	898	332	12.3	373	7.5	401	8.4	434	1,112	12.3	1,248	12.8	1,408	(5.4)	1,332
August	787	18.7	935	7.3	1,003	(5.7)	947	366	13.5	415	0.4	417	4.5	435	1,153	17.1	1,350	5.2	1,420	(2.7)	1,382
September	748	15.0	861	11.1	957	(5.3)	907	349	2.3	357	10.4	394	13.1	446	1,098	11.0	1,218	10.9	1,351	0.1	1,353
October	749	19.2	892	16.8	1,042	1.6	1,059	341	20.1	410	2.7	421	9.5	461	1,090	19.5	1,302	12.3	1,463	3.8	1,519
November	695	15.5	803	34.9	1,083			304	7.1	326	15.5	376			999	13.0	1,129	29.3	1,459		
December	683	14.8	784	34.7	1,057			268	6.8	286	14.4	327			951	12.6	1,070	29.3	1,384		
January	642	18.9	763	29.3	987			266	15.4	307	10.5	340			908	17.9	1,071	23.9	1,327		
February	623	21.2	755	21.3	916			278	8.6	302	7.8	326			901	17.3	1,057	17.4	1,242		
March	748	20.4	900	(29.2)	637			324	10.1	356	(8.3)	327			1,071	17.3	1,257	(23.3)	964		
April	781	17.8	920	(56.9)	397			345	16.9	403	(25.7)	299			1,126	17.5	1,323	(47.4)	696		
May	837	17.5	984	(33.2)	657			389	9.7	426	(11.9)	376			1,226	15.0	1,411	(26.7)	1,033		
Total Year	$8,845	16.7	$10,321	3.6	$10,697			$3,931	10.3	$4,337	1.2	$4,389			$12,776	14.7	$14,657	2.9	$15,086		
Jun - Oct	3,835	15.0	4,410	12.5	4,963	(5.4)	$4,693	1,758	9.8	1,930	4.6	2,018	9.8	$2,216	5,593	13.4	6,340	10.1	6,981	(1.0)	$6,909

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.
(4) AET conversion occurred in May 2017.

Table 10

Turnpike I-576 - Southern Beltway - Findlay Connector - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	157	(11.0)	140	0.5	140	(33.3)	94
July	158	(11.2)	140	5.8	148	(32.7)	100
August	172	(19.3)	139	7.4	149	(29.5)	105
September	154	(19.3)	124	10.8	137	(22.4)	107
October	164	(15.5)	139	8.6	151	(24.4)	114
November	148	(13.4)	128	4.0	133		
December	140	(11.5)	124	6.2	132		
January	131	(9.7)	118	5.9	125		
February	122	(5.8)	115	3.3	118		
March	143	(8.2)	131	(25.2)	98		
April	140	(8.0)	129	(56.1)	57		
May	151	(6.7)	141	(45.7)	77		
Total Year	1,779	(11.9)	1,567	(6.5)	1,465		
Jun - Oct	805	(15.3)	681	6.5	726	(28.5)	519

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	19	16.5	22	54.2	33	(0.7)	33
July	20	8.8	22	23.0	27	14.2	31
August	23	28.8	30	(2.3)	29	10.7	33
September	22	37.1	31	(3.2)	30	18.5	35
October	22	17.2	25	38.7	35	(10.2)	32
November	19	21.8	23	76.8	41		
December	17	31.7	22	70.5	37		
January	16	38.6	22	75.4	39		
February	16	37.2	22	67.1	37		
March	20	82.3	36	(3.8)	35		
April	20	87.3	38	(43.0)	22		
May	25	45.4	36	(30.8)	25		
Total Year	240	37.9	330	18.5	391		
Jun - Oct	106	22.2	130	19.2	155	5.6	164

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	175	(8.1)	161	7.7	174	(27.1)	127
July	178	(8.9)	162	8.1	175	(25.4)	131
August	196	(13.6)	169	5.7	179	(22.9)	138
September	176	(12.2)	155	8.0	167	(15.1)	142
October	186	(11.7)	164	13.2	186	(21.7)	146
November	167	(9.4)	151	15.3	174		
December	157	(6.9)	146	15.8	169		
January	147	(4.4)	141	17.0	165		
February	138	(0.7)	137	13.7	155		
March	163	2.8	167	(20.6)	133		
April	161	4.2	168	(53.1)	79		
May	176	0.7	177	(42.6)	102		
Total Year	2,019	(6.0)	1,898	(2.2)	1,857		
Jun - Oct	911	(10.9)	811	8.6	881	(22.5)	683

Toll Revenue (in $1,000s)

Passenger Cars

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$110	42.4	$157	11.8	$175	(21.7)	$137
July	114	41.3	162	16.3	188	(29.9)	132
August	123	36.9	168	9.5	184	(19.1)	149
September	108	36.4	147	23.0	181	(21.9)	141
October	116	40.6	164	18.1	193	(11.6)	171
November	103	43.8	148	11.9	166		
December	101	43.3	145	18.1	171		
January	91	62.4	147	20.1	177		
February	85	70.1	144	12.1	162		
March	101	68.5	170	(31.3)	116		
April	98	68.0	165	(49.9)	83		
May	106	69.6	179	(37.1)	113		
Total Year	$1,255	51.0	$1,895	0.7	$1,909		
Jun - Oct	572	39.5	797	15.6	922	(20.8)	$730

Commercial Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$42	35.5	$56	67.7	$94	14.3	$108
July	44	29.2	57	38.0	79	26.1	100
August	51	57.3	79	6.4	85	25.6	106
September	48	70.1	82	4.3	86	26.0	108
October	48	41.6	68	46.8	100	(2.1)	98
November	43	42.8	61	103.6	124		
December	38	52.3	57	86.9	107		
January	37	64.5	61	114.8	131		
February	36	72.9	63	97.4	125		
March	44	147.2	108	5.4	114		
April	46	146.9	112	(37.1)	71		
May	54	93.7	104	(23.3)	80		
Total Year	$530	71.8	$911	31.3	$1,195		
Jun - Oct	233	47.5	344	29.2	444	17.1	$521

Total Vehicles

Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$152	40.5	$213	26.6	$270	(9.1)	$245
July	159	38.0	219	22.0	267	(13.3)	232
August	173	42.8	247	8.5	268	(5.0)	255
September	156	46.8	230	16.3	267	(6.5)	250
October	165	40.9	232	26.5	293	(8.4)	269
November	146	43.5	209	38.6	290		
December	139	45.8	202	37.7	278		
January	128	63.0	208	47.8	307		
February	121	70.9	208	38.0	286		
March	144	92.3	278	(17.0)	231		
April	144	93.1	277	(44.7)	153		
May	159	77.7	283	(32.0)	192		
Total Year	$1,785	57.2	$2,806	10.6	$3,104		
Jun - Oct	805	41.8	1,141	19.7	1,366	(8.4)	$1,251

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion and vehicle classification changes were implemented in June 2018.

(5) The I-576 tolling configuration was changed from six ramp tolls to two mainline toll gantries at the time of AET conversion in June 2018.

Table 11

Delaware River Bridge - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	601	7.3	645	28.4	828	(35.4)	536	104	10.1	115	8.4	124	9.4	136	705	7.7	760	25.4	953	(29.5)	671
July	637	4.3	664	28.4	853	(25.2)	638	98	14.5	113	17.6	132	5.8	140	735	5.7	777	26.8	985	(21.1)	778
August	650	6.0	689	24.0	855	(17.3)	707	109	10.6	120	11.3	134	1.9	136	759	6.7	810	22.1	988	(14.7)	843
September	577	6.6	616	21.6	748	(14.6)	639	101	5.5	106	17.8	125	11.6	140	678	6.5	722	21.0	873	(10.8)	779
October	583	20.1	700	8.6	760	(14.8)	648	108	17.5	127	10.1	140	3.5	145	691	19.7	827	8.9	900	(11.9)	793
November	563	24.1	699	9.2	763			103	13.1	117	8.8	127			666	22.4	815	9.1	890		
December	543	32.6	720	6.0	763			96	14.1	110	16.3	128			639	29.8	830	7.4	891		
January	467	31.0	612	8.8	666			96	20.0	115	11.5	129			563	29.1	727	9.2	794		
February	446	31.4	586	11.6	653			90	16.1	104	13.8	119			535	28.8	690	11.9	772		
March	519	36.3	707	(34.1)	466			102	14.9	117	11.5	131			621	32.8	824	(27.6)	597		
April	561	33.0	746	(71.8)	211			104	19.7	125	(12.3)	109			665	30.9	870	(63.3)	320		
May	611	30.8	799	(53.0)	376			115	14.2	132	(7.1)	123			727	28.1	931	(46.5)	498		
Total Year	6,758	21.1	8,182	(2.9)	7,942			1,227	14.1	1,400	8.5	1,520			7,984	20.0	9,582	(1.3)	9,462		
Jun - Oct	3,048	8.7	3,314	22.0	4,045	(21.7)	3,168	520	11.7	581	12.8	655	6.3	697	3,568	9.1	3,895	20.7	4,700	(17.8)	3,864

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$3,098	6.2	$3,291	34.5	$4,425	(29.1)	$3,139	$1,879	8.7	$2,043	14.3	$2,335	16.2	$2,713	$4,978	7.2	$5,334	26.7	$6,760	(13.4)	$5,851
July	3,260	3.7	3,381	36.9	4,627	(21.7)	3,624	1,767	13.0	1,998	24.2	2,482	10.8	2,750	5,027	7.0	5,379	32.2	7,109	(10.4)	6,374
August	3,337	6.6	3,557	31.8	4,689	(12.8)	4,087	1,952	10.1	2,149	17.7	2,529	6.8	2,702	5,289	7.9	5,706	26.5	7,218	(6.0)	6,788
September	3,000	5.5	3,165	27.8	4,045	(9.0)	3,682	1,831	4.7	1,916	23.6	2,368	15.4	2,734	4,831	5.2	5,081	26.2	6,413	0.0	6,416
October	2,962	20.2	3,560	16.2	4,137	(6.1)	3,886	1,938	17.4	2,275	16.5	2,650	9.0	2,889	4,900	19.1	5,835	16.3	6,787	(0.2)	6,775
November	2,783	28.5	3,577	16.2	4,157			1,821	14.0	2,076	15.9	2,405			4,604	22.8	5,653	16.1	6,562		
December	2,827	28.4	3,631	11.9	4,061			1,754	12.2	1,968	22.4	2,409			4,581	22.2	5,599	15.6	6,470		
January	2,461	33.8	3,293	19.3	3,927			1,720	25.5	2,159	19.5	2,580			4,181	30.4	5,452	19.4	6,508		
February	2,265	39.7	3,164	19.3	3,776			1,621	21.4	1,967	21.6	2,392			3,886	32.1	5,131	20.2	6,168		
March	2,639	45.8	3,848	(32.9)	2,583			1,825	22.2	2,230	13.8	2,538			4,464	36.1	6,078	(15.7)	5,122		
April	2,879	40.0	4,030	(69.5)	1,230			1,858	25.9	2,340	(5.7)	2,206			4,737	34.5	6,369	(46.0)	3,437		
May	3,104	39.5	4,330	(49.2)	2,202			2,049	21.1	2,482	0.1	2,484			5,154	32.2	6,812	(31.2)	4,686		
Total Year	$34,615	23.7	$42,826	2.4	$43,859			$22,016	16.3	$25,603	14.7	$29,379			$56,631	20.8	$68,429	7.0	$73,239		
Jun - Oct	15,658	8.3	16,955	29.3	21,923	(16.0)	$18,417	9,367	10.8	10,380	19.1	12,364	11.5	$13,787	25,025	9.2	27,335	25.4	34,288	(6.1)	$32,204

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

Table 12

Gateway Toll Plaza - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	334	(2.8)	324	(2.9)	315	(29.9)	221	87	1.4	88	(3.7)	85	8.6	92	421	(2.0)	412	(3.1)	400	(21.7)	313
July	367	(2.5)	358	(4.3)	342	(22.3)	266	81	4.2	84	(2.0)	83	15.4	95	448	(1.3)	442	(3.9)	425	(15.0)	361
August	342	1.8	348	(3.2)	337	(20.1)	269	90	3.3	93	(5.5)	87	12.0	98	432	2.1	441	(3.7)	425	(13.5)	367
September	276	2.3	283	(5.3)	268	(12.1)	236	80	3.5	83	0.8	83	15.8	96	356	2.5	365	(3.9)	351	(5.5)	332
October	279	0.0	279	0.7	281	(16.6)	235	88	4.7	92	5.2	96	3.9	100	367	1.1	371	1.8	378	(11.4)	335
November	280	(1.7)	275	(2.9)	267			81	1.6	83	2.8	85			361	(0.9)	357	(1.5)	352		
December	261	0.8	263	6.7	280			76	1.2	77	8.5	83			337	0.9	340	7.1	364		
January	195	(2.5)	190	9.0	207			80	1.7	81	7.3	87			275	(1.3)	271	8.5	294		
February	187	(1.2)	185	7.2	198			75	1.5	76	9.3	83			262	(0.5)	261	7.8	281		
March	256	(2.8)	249	(34.5)	163			84	1.0	85	7.4	92			341	(1.9)	334	(23.8)	255		
April	254	(0.3)	253	(68.9)	79			84	2.2	86	(8.4)	79			338	0.3	339	(53.5)	158		
May	290	1.6	295	(49.0)	151			90	0.6	90	(7.7)	83			380	1.4	385	(39.3)	234		
Total Year	3,322	(0.6)	3,302	(12.5)	2,888			995	2.2	1,018	0.9	1,027			4,317	0.1	4,320	(9.4)	3,915		
Jun - Oct	1,598	(0.4)	1,592	(3.1)	1,543	(20.6)	1,226	425	3.4	439	(1.0)	435	10.9	482	2,023	0.4	2,032	(2.7)	1,978	(13.6)	1,708

Toll Revenue (in $1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21	2017-18	% Chg	2018-19	% Chg	2019-20	% Chg	2020-21
June	$1,962	3.1	$2,023	2.6	$2,075	(22.1)	$1,616	$1,661	9.2	$1,813	1.8	$1,845	9.0	$2,012	$3,623	5.9	$3,837	2.2	$3,920	(7.4)	$3,628
July	2,159	3.3	2,231	1.7	2,269	(22.7)	1,754	1,554	15.0	1,787	3.4	1,848	8.3	2,002	3,713	8.2	4,018	2.5	4,117	(8.8)	3,756
August	2,000	8.1	2,161	1.9	2,203	(7.0)	2,048	1,728	11.1	1,920	(0.1)	1,917	9.6	2,102	3,728	9.5	4,081	1.0	4,120	0.7	4,150
September	1,612	8.2	1,745	0.7	1,757	(6.4)	1,645	1,539	11.8	1,720	5.3	1,811	12.6	2,039	3,151	10.0	3,465	3.0	3,568	3.2	3,683
October	1,615	5.7	1,708	(0.5)	1,699	6.0	1,800	1,682	11.6	1,877	5.8	1,986	10.2	2,189	3,297	8.7	3,584	2.8	3,685	8.3	3,989
November	1,610	4.0	1,675	3.3	1,730			1,569	7.4	1,685	8.9	1,835			3,179	5.7	3,359	6.1	3,565		
December	1,497	6.7	1,597	28.8	2,057			1,464	7.4	1,571	15.2	1,811			2,961	7.0	3,169	22.1	3,868		
January	1,176	2.6	1,206	28.3	1,547			1,622	7.6	1,746	7.7	1,881			2,797	5.5	2,952	16.1	3,427		
February	1,134	4.7	1,187	15.4	1,370			1,533	8.0	1,657	7.9	1,787			2,667	6.6	2,844	11.0	3,157		
March	1,576	3.1	1,626	(35.1)	1,054			1,721	7.4	1,848	3.7	1,915			3,297	5.4	3,473	(14.5)	2,970		
April	1,565	5.2	1,646	(64.7)	581			1,715	8.4	1,859	(6.6)	1,737			3,280	6.9	3,505	(33.9)	2,318		
May	1,785	8.0	1,928	(50.5)	954			1,835	5.7	1,940	(6.3)	1,817			3,621	6.8	3,868	(28.4)	2,771		
Total Year	$19,692	5.3	$20,733	(6.9)	$19,295			$19,622	9.2	$21,422	3.6	$22,191			$39,314	7.2	$42,155	(1.6)	$41,486		
Jun - Oct	9,349	5.6	9,869	1.4	10,003	(11.4)	$8,864	8,163	11.7	9,116	3.2	9,407	10.0	$10,344	17,512	8.4	18,985	2.2	19,411	(1.0)	$19,207

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in October 2019.

As previously mentioned, the Ticket System is by far the largest component of both traffic and toll revenue on the Turnpike System. As such, its overall growth patterns generally resemble those for the total system. As shown in Table 4, for the FY 2020-21 year-to-date period, total transactions decreased 17.8 percent compared to the same period in the prior year (toll revenue decreased by 17.8 percent as well). PC transactions decreased by 22.1 percent (with toll revenue falling 30.0 percent) during this period, while CV activity has increased by 6.8 percent (with toll revenue falling 2.2 percent) compared to the same five-month period in FY 2019-20.

Prior to the impacts of COVID-19 beginning in March 2020, Ticket System toll transaction growth was generally slightly negative for PCs and slightly positive for CVs over the period shown in Table 4. The impact of the toll rate increases, however, resulted in significant revenue increases over this time for the Ticket System. In FY 2018-19, while total transactions decreased by 0.5 percent compared to the previous year, toll revenue increased by 10.4 percent (8.1 percent for PCs and 13.3 percent for CVs). This same general trend continued into FY 2019-20 until March 2020 when the impacts of COVID-19 become evident. As with the total systemwide trends shown in Table 3, the negative impacts of COVID-19 are greatest on the Ticket System in April 2020 with total transactions decreasing by 60.5 percent and toll revenue down by 50.3 percent. By October 2020, however, the negative impacts are just 14.5 percent for transactions and 11.6 percent for toll revenue. Negative impacts are much more pronounced for PCs than for CVs.

Table 5 provides the same information for all barrier toll facilities combined. Barrier facility toll revenue contributes less than 15 percent of total systemwide toll revenue. The negative impacts of COVID-19 on the barrier facilities are similar to those on the Ticket System. However, the recovery rate seems to be somewhat faster for the barrier facilities. For the latest five-month period shown for FY 2020-21, total barrier facility toll transactions are down by 15.0 percent compared to 17.8 percent for the Ticket System. Over the same period, total barrier facility toll revenue is down only 5.3 percent compared to 17.8 percent for the Ticket System. The same information is provided for each individual barrier facility in Tables 6 through 12.

Actual and Assumed Toll Rate Increases

Annual toll rate increases are assumed to occur on the entire Turnpike System. The toll rate increases are assumed to occur at 12:01 AM on the first Sunday after January 1 of each year unless otherwise noted. **Table 13** presents the annual percent increases in toll rates for E-ZPass, cash, and video from calendar year 2020 through 2050.

Table 13
Actual and Assumed Percent Changes in Turnpike System Toll Rates
Pennsylvania Turnpike System

Calendar Year (2)	Percent Change in Turnpike System Toll Rates (1)			
	E-ZPass	Cash	Video	Registered Video Account (RVA)
2020 (3)	6.00	6.00	6.00	N/A
2021	6.00	N/A	6.00/45.00 (4)	-15.00 (5)
2022	5.00	N/A	5.00	5.00
2023	5.00	N/A	5.00	5.00
2024	5.00	N/A	5.00	5.00
2025	5.00	N/A	5.00	5.00
2026	4.00	N/A	4.00	4.00
2027	3.50	N/A	3.50	3.50
2028	3.00	N/A	3.00	3.00
2029	3.00	N/A	3.00	3.00
2030	3.00	N/A	3.00	3.00
2031	3.00	N/A	3.00	3.00
2032	3.00	N/A	3.00	3.00
2033	3.00	N/A	3.00	3.00
2034	3.00	N/A	3.00	3.00
2035	3.00	N/A	3.00	3.00
2036	3.00	N/A	3.00	3.00
2037	3.00	N/A	3.00	3.00
2038	3.00	N/A	3.00	3.00
2039	3.00	N/A	3.00	3.00
2040	3.00	N/A	3.00	3.00
2041	3.00	N/A	3.00	3.00
2042	3.00	N/A	3.00	3.00
2043	3.00	N/A	3.00	3.00
2044	3.00	N/A	3.00	3.00
2045	3.00	N/A	3.00	3.00
2046	3.00	N/A	3.00	3.00
2047	3.00	N/A	3.00	3.00
2048	3.00	N/A	3.00	3.00
2049	3.00	N/A	3.00	3.00
2050	3.00	N/A	3.00	3.00

(1) Toll rate increases are the same for all facilities and vehicle classes, except where otherwise noted.
(2) Except where otherwise indicated, toll rate increases are applied on or near January 1.
(3) Toll rate increases are actual.
(4) All rates will increase by 6%. Video rates will increase by an additional 45% on the Ticket System and Mon Fayette Expressway (Turnpike 43) to bring the video rate premium in line with those on PTC's other AET facilities.
(5) Registered video accounts will be a new billing option that provides a 15% discount to video customers who pre-register their vehicle and provide electronic payment information.

Rate increase assumptions are unchanged since the 2020 Bring Down Letter, except for the calendar year 2021 increase, which is now scheduled to occur on January 3, 2021 rather than in October 2020. With the suspension of cash collection in March and June of 2020 on the Ticket System and MFE, respectively, the Turnpike System now operates entirely under AET. As such, there are no cash rates shown in Table 13 for 2021 and beyond. As discussed above, to make the toll differential between E-ZPass and video rates similar on all toll facilities, in addition to a six percent toll increase in January 2021, video rates on the Ticket System and MFE will also increase by an additional 45 percent. The 2021 toll rate increases were approved by the PTC on July 21, 2020. Toll adjustment assumptions for the years 2022 and beyond are proposed and have not been formally approved yet by the PTC Board.

An additional rate tier, registered video account (RVA), has also been added to the rate schedule beginning in 2021. RVA accounts will allow for a 15-percent discount off of the video rate for video customers who pre-register their vehicle with PTC and provide electronic payment information. This will allow PTC to process payments automatically without having to send billing invoices.

Actual and Assumed E-ZPass Penetration Rates

Table 14 presents the actual and assumed annual E-ZPass penetration rates from calendar year 2018 through 2050. The first three columns show the E-ZPass market share assumptions for the current 6-Month Update. These were adjusted slightly on a facility by facility basis, by the amount shown in the three rightmost columns, over assumptions used in the 2020 Bring Down Letter.

As shown, assumed E-ZPass market shares in the current analysis are very similar to those assumed in the 2020 Bring Down Letter. Thus far in 2020, actual PC E-ZPass market share has been slightly lower than previously estimated. This has resulted in new 2020 estimates being about 0.1 percent lower than previous estimates, although they are 0.1 percent higher in 2021. Over the rest of the forecast period PC E-ZPass market share is unchanged from previous forecasts. CV E-ZPass market share has not changed at all from previous estimates.

Accordingly, total E-ZPass market share forecast assumptions also remain largely unchanged from those in the 2020 Bring Down Letter. The only difference is in 2021, where total E-ZPass market share is 0.2 percent higher than the previous forecast. This is due to the fact that CV traffic is expected to recover more quickly from the pandemic, thus accounting for a larger percentage of traffic. Because CVs have higher E-ZPass usage rates than PCs, total E-ZPass penetration is expected to increase slightly.

Table 14
Actual and Assumed Percent E-ZPass Penetration
Pennsylvania Turnpike System

Calendar Year		6-month Update to 2020 Bring Down Letter: Cars	Trucks	Total	Difference from 2020 Bring Down Letter: Cars	Trucks	Total
		E-ZPass Penetration Rates					
2018	(1)	80.0	90.6	81.5	0.0	0.0	0.0
2019	(1)	81.4	91.7	82.9	0.0	0.0	0.0
2020		82.9	92.2	84.3	-0.1	0.0	0.0
2021		84.8	93.0	86.1	0.1	0.0	0.2
2022		85.9	93.8	87.1	0.0	0.0	0.0
2023		86.6	94.2	87.8	0.0	0.0	0.0
2024		87.3	94.7	88.4	0.0	0.0	0.0
2025		87.8	95.1	88.9	0.0	0.0	0.0
2026		88.3	95.5	89.4	0.0	0.0	0.0
2027		88.8	95.8	89.8	0.0	0.0	0.0
2028		89.1	96.2	90.2	0.0	0.0	0.0
2029		89.5	96.3	90.6	0.0	0.0	0.0
2030		89.8	96.3	90.8	0.0	0.0	0.0
2031		89.9	96.4	90.9	0.0	0.0	0.0
2032		90.0	96.4	91.0	0.0	0.0	0.0
2033		90.1	96.5	91.1	0.0	0.0	0.0
2034		90.2	96.5	91.2	0.0	0.0	0.0
2035		90.2	96.5	91.2	0.0	0.0	0.0
2036		90.3	96.6	91.3	0.0	0.0	0.0
2037		90.4	96.6	91.3	0.0	0.0	0.0
2038		90.4	96.7	91.4	0.0	0.0	0.0
2039		90.5	96.7	91.4	0.0	0.0	0.0
2040		90.5	96.7	91.5	0.0	0.0	0.0
2041		90.6	96.8	91.5	0.0	0.0	0.0
2042		90.6	96.8	91.6	0.0	0.0	0.0
2043		90.7	96.8	91.6	0.0	0.0	0.0
2044		90.7	96.9	91.7	0.0	0.0	0.0
2045		90.8	96.9	91.7	0.0	0.0	0.0
2046		90.8	97.0	91.8	0.0	0.0	0.0
2047		90.8	97.0	91.8	0.0	0.0	0.0
2048		90.9	97.0	91.9	0.0	0.0	0.0
2049		90.9	97.1	91.9	0.0	0.0	0.0
2050		91.0	97.1	92.0	0.0	0.0	0.0

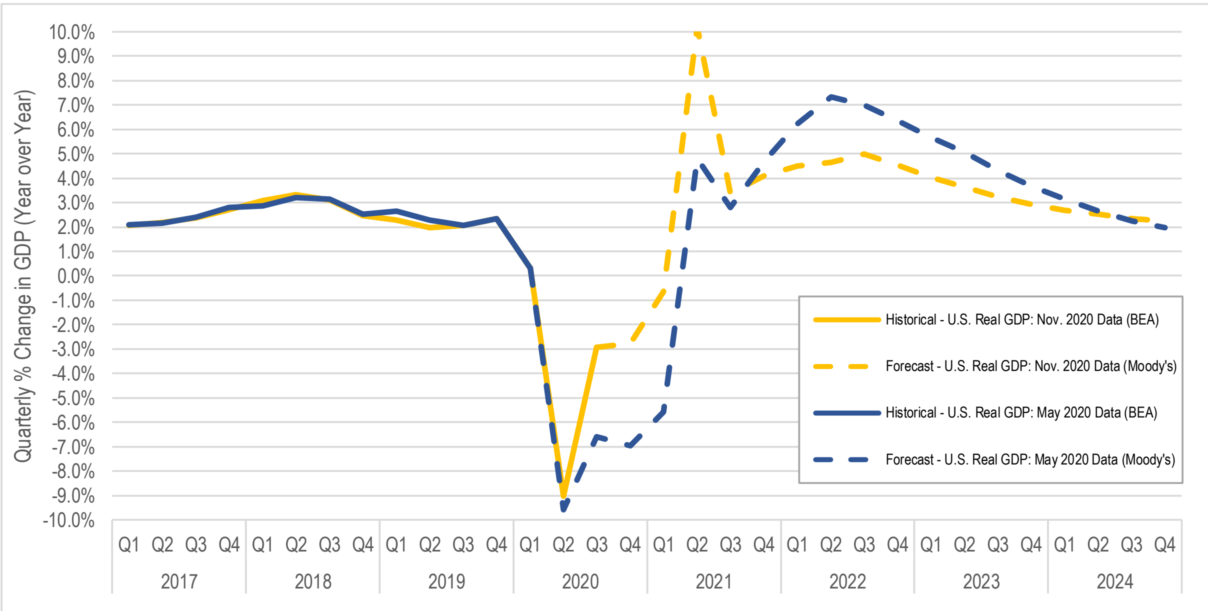
(1) The E-ZPass penetration rates for both this 6-month Update to the 2020 Bring Down Letter and the the 2020 Bring Down Letter are actual through 2019.

Summary of Changes in Future Year Estimates for U.S. Gross Domestic Product and Pennsylvania Gross State Product

This section presents a comparison of the Gross Domestic Product (GDP) and Pennsylvania Gross State Product (GSP) information available for the 2019 and 2020 Bring Down Letters with updated forecasts for both measures from Moody's Analytics. This information was a key input in developing estimated growth forecasts for the Turnpike System. All GDP and GSP figures in this section refer to year over year comparisons. For example, the 2nd quarter 2020 percent change would reflect the 2nd quarter of 2020 versus the 2nd quarter of 2019.

Figure 3 shows actual and estimated GDP at the time of the 2020 Bring Down Letter as well as the revised figures based on updated Moody's Analytics' forecasts as of November 2020. Since the 2020 Bring Down Letter, actual GDP growth figures have been released for an additional two quarters: the second and third quarters of 2020. Encouragingly, actual GDP growth in these quarters was better than forecasted in May, indicating that economic effects of the COVID-19 pandemic were not as severe as originally forecast. At the time of the 2020 Bring Down Letter, GDP was forecasted to fall 9.6 percent in the second quarter and 6.6 percent in the third quarter. In actuality, GDP contracted by only 9.0 percent and 2.8 percent during these quarters, respectively. Accordingly, although GDP growth is still expected to be negative for each quarter through the first quarter of 2021, it is now forecast to be less negative and then more positive for each period through the third quarter of 2021. After that point, GDP growth is expected to be slower than originally predicted, although still positive, largely because the GDP growth associated with economic recovery is now forecasted to happen earlier. In the latest November 2020 forecast, recovery from the pandemic is forecast to be strong throughout the remainder of the forecast period. After levelling off in 2021, GDP growth is expected to accelerate through most of 2022, reaching 5.0 percent in the third quarter of 2022. GDP is then forecast to continue growing, albeit it at a slowing rate, through the end of 2024, when 2.3 percent growth is forecast. At this point, both forecasts (May 2020 and November 2020) are close to converging, indicating that GDP growth will be close to returning to its long-range, pre-pandemic equilibrium.

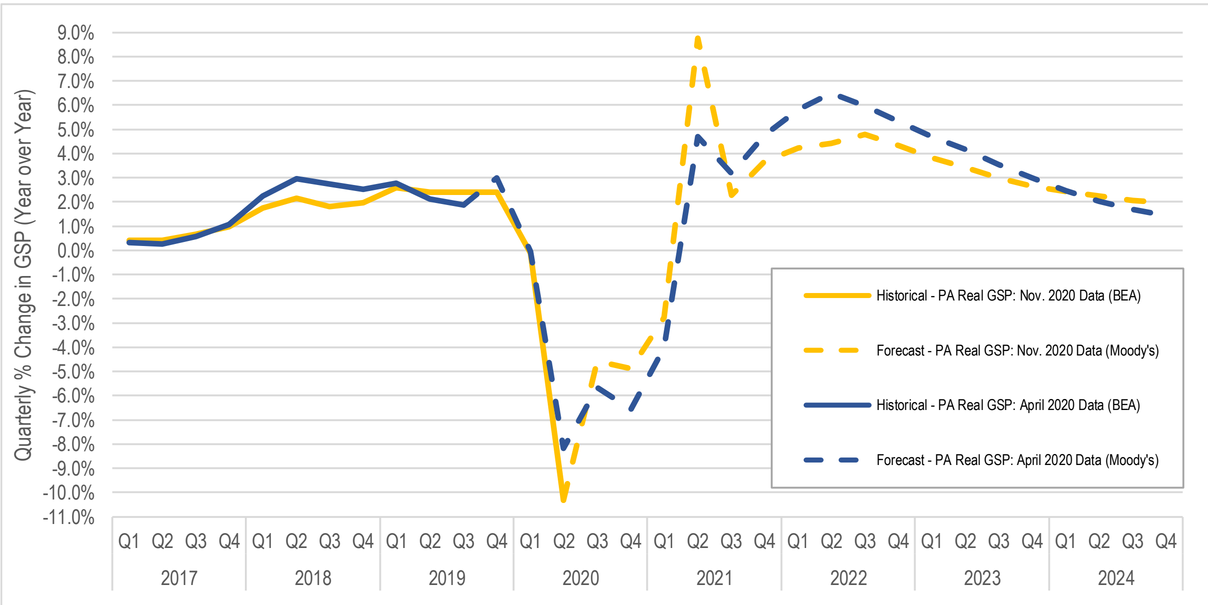
Figure 3
Comparison of May 2020 to November 2020 Quarterly Growth Estimates of U.S. Gross Domestic Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (May 2020 and November 2020 Releases)

Figure 4 shows GSP trend and forecast data for Pennsylvania. Like GDP, the GSP forecast for the remainder of the forecast period has been noticeably altered by actual economic conditions experienced over the last two quarters. While second quarter 2020 GSP contracted more than forecasted in April (falling 10.3 percent compared to the 8.2 percent forecast), economic recovery is now forecasted to occur more strongly and more quickly than predicted in April, peaking at 8.8 percent growth in the second quarter of 2021 as compared to peak of 6.5 percent growth in the second quarter of 2022, as previously forecast. The latest forecast predicts a strong recovery period from the second quarter of 2021 through the third quarter of 2023. After this point, economic growth is forecast to continue to remain positive, albeit it at a slowing rate, eventually reaching 2.0 percent growth at the end of 2024. Like with GDP, at this point end of the forecast period both forecasts (April 2020 and November 2020) are close to converging, indicating that GSP growth will be close to returning to its long-range, pre-pandemic equilibrium.

Figure 4
Comparison of April 2020 and November 2020 Quarterly Growth Estimates of Pennsylvania Gross State Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (May 2020 and November 2020 Releases)

Summary of Trends in Fuel Prices

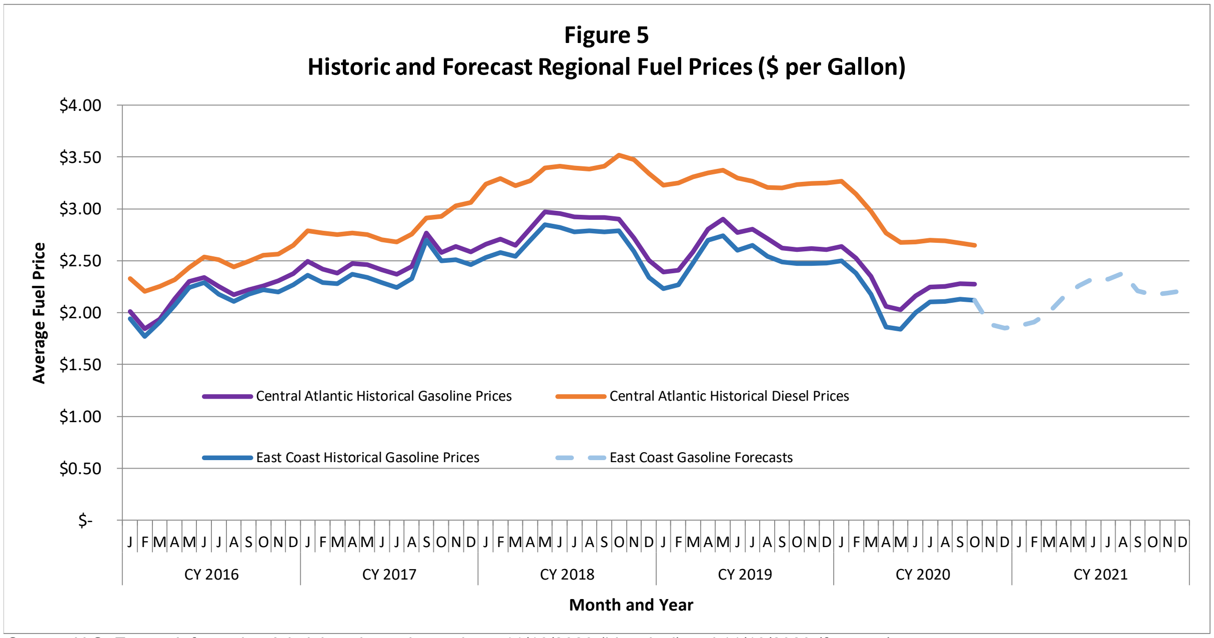
Figure 5 portrays gasoline and diesel prices for the Central Atlantic Region from January 2016 through October 2020. Gasoline prices for the East Coast are also shown. They closely mirror those for the Central Atlantic gasoline prices and are shown here because the Energy Information Administration (EIA) also provides monthly forecasts for this region. Figure 5 shows the monthly gasoline price forecast through the end of 2021.

As shown, Central Atlantic gasoline and diesel prices have followed generally similar trends throughout this period, although over the past year gasoline prices have had slightly greater price fluctuations than diesel prices. Generally, both prices have moved in tandem, decreasing over the first few months of 2016, reaching a low of $1.85 per gallon for gasoline and $2.20 per gallon for diesel in February 2016. Prices for both increased slowly but steadily throughout 2016, 2017, and early 2018, reaching a high of $2.97 per gallon for gasoline in May 2018. Prices fluctuated within a narrow range for the remainder of 2018, with diesel reaching a high of $3.52 per gallon in October 2018. Prices of both gasoline and diesel fell in late 2018 and early 2019. Between February and May 2019 prices rose, with gasoline prices increasing more rapidly than diesel prices. For the remainder of 2019, prices decreased slightly, with diesel prices remaining very stable and gasoline prices experiencing slightly more volatility.

However, in 2020 prices have fallen sharply first in response to an early March announcement that Saudi Arabia and Russia would increase oil supply in the coming months followed shortly thereafter by an extreme worldwide economic slowdown in response to the COVID-19 pandemic. As a result, May 2020 prices in the Central Atlantic region fell to $2.03 and $2.68 for gasoline and diesel, respectively. October 2020 prices for gasoline and diesel are $2.28 and $2.65, respectively; Over the last several months prior to October, prices increased slightly for gasoline but remained relatively stable for diesel.

As noted above, the EIA only forecasts future gasoline prices for the East Coast, which is a region that is larger than, and wholly encompasses, the Central Atlantic region. Historically, East Coast region prices move in tandem with Central Atlantic prices but are approximately 10 to 20 cents lower. East Coast gasoline prices are forecast to remain low, but stable, over the next few months, bottoming out in December at $1.85 per gallon. Prices are then forecast to rise in early 2021, peaking at $2.38 per gallon in the spring and summer of 2021 before falling slightly in the fall and winter.

Based on historical trends, Central Atlantic prices can be expected to follow the same pattern, but at slightly higher prices. The most recent gasoline prices are about $0.30 higher than assumed they would be at this time in the 2020 Bring Down Letter. However, the current gasoline price forecasts for 2021 are more similar to those from the 2020 Bring Down Letter. The increase in gasoline prices since May is a good indicator of a faster and stronger economic recovery than expected at the time of the 2020 Bring Down Letter, which largely aligns with the revised GDP and GSP forecasts discussed previously.



Source: U.S. Energy Information Administration, release dates 11/16/2020 (historical) and 11/10/2020 (forecast).
Note: Retail Prices in USD for Regular All Formulations Retail Gasoline and Number 2 Diesel.
Central Atlantic states include Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania.
East Coast states include Central Atlantic and New England states, Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia.

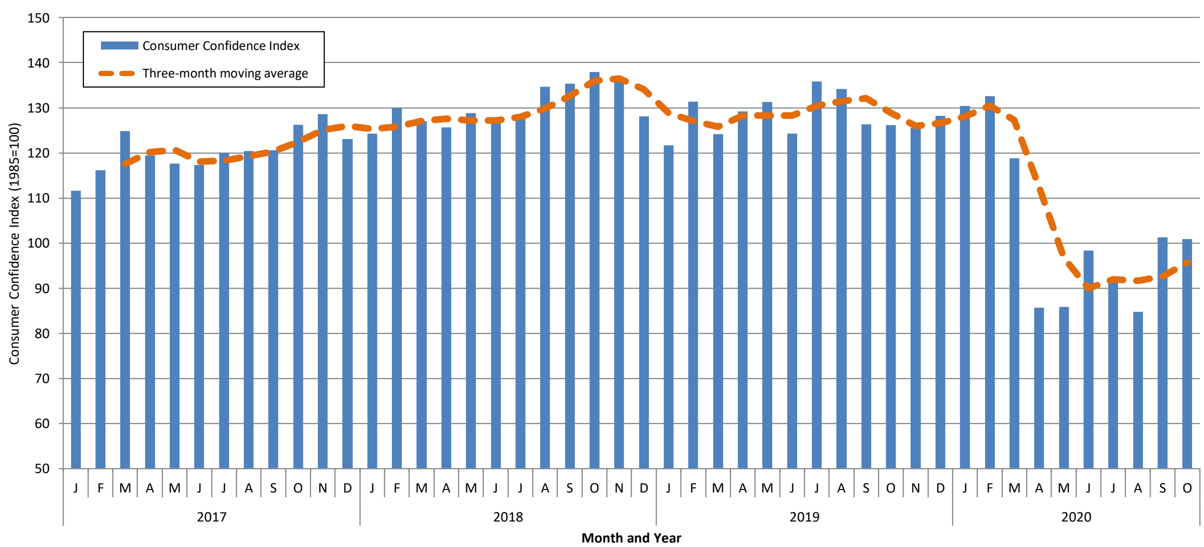
Consumer Confidence

Consumer confidence is an important measure in that it highlights consumer's confidence in making purchases, their willingness to travel more, etc. Higher consumer confidence spurs demand for various goods and services, and it can be inferred that higher demand results in higher traffic on the roadways.

Figure 6 shows the Conference Board Consumer Confidence Index for the period between January 2017 and October 2020. The individual blue bars show the index values for each month while the dotted line shows the three-month moving average. Consumer confidence scores are indexed to the year 1985, for which consumer confidence equaled 100.

As shown in Figure 6, consumer confidence trended up through November 2018. The average exceeded 110 at the beginning of 2017, rose to 126 by the end of the year, and surpassed 130 in 2018, peaking at a high of 137.9 in October, which was the highest level of consumer confidence since September 2000. In 2019, consumer confidence fell slightly compared to 2018 but remained strong compared to historical levels. Through the first two months of 2020, consumer confidence remained strong, increasing slightly since the end of 2019. However, consumer confidence declined sharply in March and even more significantly in April, when it fell to 85.7, reflecting the widespread economic shutdowns that were put in place as a result of the COVID-19 pandemic. In the following months, consumer confidence fluctuated but trended upwards, reflecting both easing of economic restrictions as well as various waves of increased infection rates through the summer and fall. October's consumer confidence index, while preliminary and subject to change with the next release, stood at 100.9, slightly below September's level but otherwise the highest consumer confidence has been since the start of the pandemic. According to the Senior Director of Economic Indicators at the Conference Board, "Consumers' assessment of current conditions improved [in October] while expectations declined, driven primarily by a softening in the short-term outlook for jobs. There is little to suggest that consumers foresee the economy gaining momentum in the final months of 2020, especially with COVID-19 cases on the rise and unemployment still high."

Figure 6
Conference Board Consumer Confidence Index



Source: The Conference Board, release date October 27, 2020

Committed Roadway Improvements

Table 15 lists major capacity-enhancing roadway improvements with dedicated funding on the Pennsylvania Turnpike System. Most of these projects are part of PTC's statewide Total Reconstruction Initiative, which is a multi-year project to widen the mainline and the Northeast Extension to six lanes (three in each direction). On the Mainline I-76/I-276 this includes work throughout the Pittsburgh, Somerset, and Philadelphia metro areas. Nearly 140 miles had been completed as of January 2020, with an additional 20 miles under construction or funded. An additional 15 miles of the Northeast Extension have been widened, with 15 more miles scheduled to be completed by 2026. No projects have been added to or removed from the list since the 2020 Bring Down Letter, although some dates and mileposts were updated to reflect the latest information available from PTC.

In addition to roadway widening, Table 15 highlights three additional projects:

- A new cashless tolling interchange between I-276 and Lafayette Street in Montgomery County;
- An eight-mile extension of MFE to PA Route 837 in Allegheny County; and
- A 12.5-mile extension of Findlay Connector (Southern Beltway) in the Pittsburgh area.

These projects will serve to enhance capacity and create additional connections to other routes, all of which are expected to increase the number of travelers, and therefore revenue, on the Pennsylvania Turnpike System.

In addition to PTC-funded projects, the Pennsylvania Department of Transportation's (PennDOT's) Transportation Improvement Program (TIP) was reviewed. This review found no projects on competing or complementary routes that are expected to have an impact on Pennsylvania Turnpike System traffic and revenue.

Table 15
Major Committed Roadway Improvements on the Pennsylvania Turnpike System (1)

Milepost	Counties	Description	Actual or Assumed Start Date	Assumed Completion Date
Mainline I-76/I-276				
28-31	Alleghany and Butler	Reconstruct and widen to 3 lanes in each direction	May 2020	September 2022
99-109	Somerset County	Reconstruct and widen to 3 lanes in each direction	March 2021	Fall 2023
123-130	Somerset and Bedford	Reconstruct and widen to 3 lanes in each direction	2022	2025
331	Montogmery	Construct a new cashless tolling interchange at Lafayette Street	Fall 2024	Fall 2027
Northeast Extension I-476				
A31-A38	Montgomery	Reconstruct and widen to 3 lanes in each direction	Early 2018	June 2021
A38-A44	Montgomery and Bucks	Reconstruct and widen to 3 lanes in each direction	Fall 2021	Fall 2026
Mon/Fayette Expressway Turnpike 43				
PA-51 to PA Route 837	Allegheny	Construct a eight-mile extension of the existing Turnpike 43 including three new interchanges	Summer 2022	2028
Southern Beltway Toll 576				
US-22 to I-79	Washington and Allegheny	Construct a 12.5-mile cashless tolling extension of Toll 576 from the southern terminus of the Findlay Connector at US-22 to I-79 including four new interchanges	December 2016	October 2022

(1) The major committed roadway improvement projects listed here are a small subset of all projects listed in PTC's FY 2020 Ten Year Capital Plan.

Actual Versus Estimated Traffic and Toll Revenue

Table 16 provides a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2020 Bring Down Letter. The analysis period in this table is from May 2020 through October 2020. This six-month period corresponds to the period for which actual data currently exists but was estimated at the time of the 2020 Bring Down Letter.

For the six-month period shown in Table 16, total system actual PC transactions surpassed estimates by 8.4 percent, and PC toll revenue fell short of estimates by 4.6 percent. CV transactions exceeded estimates by 20.2 percent, and actual CV toll revenue was 3.5 percent greater than estimates. When all vehicles are considered, actual transactions were higher than estimates by 10.5 percent and toll revenue underperformed estimates by 0.6 percent.

These discrepancies may be partially explained by two conditions that the 2020 Bring Down Letter assumed would happen but did not actually occur:

- a return to cash collection on the Ticket System in mid-June and continuation of cash collection on both the Ticket System and MFE until AET conversion in October 2021; and
- a system-wide six-percent toll increase and the implementation of a 45-percent cash surcharge on the Ticket System and MFE beginning in October 2020.

Instead, AET was made permanent on the Ticket System and MFE converted to AET in June 2020 and all toll increases were postponed until January 2021. These divergences from assumed conditions would have reduced revenue relative to the assumptions made in the forecast.

A comparison between forecast and actuals for the five-month period from June to September reveals that total actual revenue outperformed total forecast revenue by 2.1 percent. Therefore, it is likely that had PTC implemented toll increases in October, as assumed in the 2020 Bring Down Letter, actual revenue would have continued to outperform estimated revenue.

Table 16 also includes a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2020 Bring Down Letter for each individual Turnpike toll facility for the period from June to October 2020. Total transactions for the Ticket System were 10.9 percent higher than the forecasted traffic, while actual total revenue was 1.8 percent lower than estimated. For the combined barrier toll facilities, total actual toll transactions exceeded CDM Smith estimates by 9.3 percent and actual toll revenue exceeded estimates by 6.6 percent.

Table 16
Comparison of Estimated and Actual Traffic Volumes and Gross Toll Revenue
From May 2020 Through October 2020 (1)
Pennsylvania Turnpike System

	Total Traffic (in Thousands)			**Total Gross Toll Revenue (in Thousands)**		
Facility	Estimated	Actual	Percent Difference between Actual and Estimated	Estimated	Actual	Percent Difference between Actual and Estimated
			Passenger Cars			
Ticket System	45,691	49,598	8.6	$252,910	$236,457	(6.5)
Gateway	1,325	1,376	3.8	10,130	9,817	(3.1)
Delaware River Bridge	3,580	3,543	(1.0)	20,647	20,619	(0.1)
Turnpike 43	4,755	5,801	22.0	8,782	10,171	15.8
Turnpike 66	2,367	2,960	25.0	4,578	6,013	31.3
Northeast Extension (Barrier)	2,037	1,734	(14.9)	2,589	2,329	(10.0)
Turnpike I-376	2,846	2,923	2.7	5,223	5,350	2.4
Turnpike I-576	621	595	(4.1)	886	843	(4.9)
Barrier Subtotal	17,533	18,932	8.0	$52,837	$55,142	4.4
Total System	63,224	68,530	8.4	$305,747	$291,600	(4.6)
			Commercial Vehicles			
Ticket System	10,006	12,189	21.8	$266,466	$273,314	2.6
Gateway	462	565	22.4	10,536	12,161	15.4
Delaware River Bridge	679	819	20.6	14,605	16,271	11.4
Turnpike 43	486	550	13.1	2,769	2,746	(0.8)
Turnpike 66	504	580	15.3	2,760	2,873	4.1
Northeast Extension (Barrier)	604	664	9.9	4,098	4,279	4.4
Turnpike I-376	647	749	15.7	2,502	2,592	3.6
Turnpike I-576	175	189	7.9	588	600	2.1
Barrier Subtotal	3,557	4,117	15.7	$37,858	$41,521	9.7
Total System	13,562	16,306	20.2	$304,324	$314,836	3.5
			Total Vehicles			
Ticket System	55,697	61,787	10.9	$519,376	$509,772	(1.8)
Gateway	1,787	1,942	8.6	20,667	21,978	6.3
Delaware River Bridge	4,259	4,363	2.4	35,252	36,890	4.6
Turnpike 43	5,241	6,351	21.2	11,551	12,917	11.8
Turnpike 66	2,871	3,541	23.3	7,338	8,887	21.1
Northeast Extension (Barrier)	2,642	2,398	(9.2)	6,686	6,607	(1.2)
Turnpike I-376	3,493	3,671	5.1	7,726	7,942	2.8
Turnpike I-576	796	784	(1.5)	1,474	1,443	(2.1)
Barrier Subtotal	21,089	23,049	9.3	$90,695	$96,664	6.6
Total System	76,786	84,836	10.5	$610,071	$606,436	(0.6)

(1) These six months correspond to the period for which actual data exists, but was estimated at the time of CDM Smith's 2020 Bring Down Letter.

Estimated COVID-19 Traffic and Toll Revenue Impacts

A key undertaking of this new forecast was to update the traffic and toll revenue impacts related to the COVID-19 pandemic over the forecast period. This section will provide a summary of the underlying assumptions CDM Smith has made in estimating the depth and longevity of the COVID-19 related impacts on Turnpike System traffic and toll revenue. Actual traffic and toll revenue experience through the end of October 2020 was collected as part of this analysis. Total Turnpike System traffic and revenue losses for each month affected by the pandemic (March through October 2020) were shown above in Table 3 for the total System. A key assumption in this analysis is that COVID-19 related negative impacts would extend through FY 2025-26.

Due to the unpredictable nature of the pandemic and the changing infection rates, changes to operating procedures and capacity restrictions of businesses and schools is still an unknown. While restrictions are currently looser than they were at the time of 2020 Bring Down Letter in May, some states and cities have recently begun to tighten restrictions as COVID-19 cases have surged in the late autumn. Conversely, with vaccine distributions beginning in December, restrictions are likely to lessen in 2021 as a larger percentage of the population becomes vaccinated. For the purposes of this analysis, it is assumed that winter traffic will be significantly lower than in 2019, driven by a potential increase in restrictions and comparatively low levels of holiday traffic. (Preliminary daily traffic from the week of Thanksgiving showed traffic levels that were significantly lower than in prior years, and the December holiday season is anticipated to follow the same pattern). In the spring, as vaccinations are rolled out to a wider swath of the population, restrictions lessen, and warmer weather allows for additional outdoor activity, the traffic recovery is assumed to accelerate.

Table 17 shows estimated COVID-19 related impacts on traffic and toll revenue over the forecast period. Only the final three months of FY 2019-2020 (March, April, May) were impacted, but over that time total traffic volumes were estimated to have been reduced by 21.9 million, or about 10.7 percent of total transactions. Gross toll revenue was reduced by about $142.2 million over the same time period (9.9 percent of total gross toll revenue). While the peak monthly negative impacts occurred in FY 2019-20, the largest annual declines are assumed to occur in FY 2020-21 since this will include 12 months of negative impacts. As shown in Table 17, total transaction losses of 30.5 million are assumed (15.2 percent of total transactions), along with gross toll revenue losses of $252.1 million (16.7 percent of total gross toll revenue). Negative traffic and toll revenue impacts are estimated to lessen over the following five years. By FY 2025-26 total traffic and gross toll revenue losses are assumed to be only about 0.3 percent and 0.9 percent, respectively. No COVID-19 impact is assumed beginning in FY 2026-27.

As shown, CV transactions are actually assumed to increase slightly after FY 2019-20, while CV revenue is expected to be negatively impacted during the entire COVID-19 period. This is due to a combination of shorter, more frequent, CV trips, as well as a shift to smaller trucks during the pandemic. Both the shorter trip length and smaller vehicle class would result in lower CV toll revenue in spite of slightly more CV transactions. FY 2020-21 includes an analysis of actual traffic and revenue data through October 2020 and the resulting COVID-19 impacts.

Table 17
Estimated Annual Transactions and Gross Toll Revenue COVID Impact (1)
Total System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year		Annual Traffic: Passenger Cars	Annual Traffic: Commercial Vehicles	Annual Traffic: Total Vehicles	Annual Gross Toll Revenue: Passenger Cars	Annual Gross Toll Revenue: Commercial Vehicles	Annual Gross Toll Revenue: Total Vehicles
		Annual Traffic and Gross Toll Revenue Impacts					
2018-19	(2,3,4)	$0	$0	$0	$0	$0	$0
2019-20	(2,5,6)	(21,072)	(780)	(21,852)	(114,658)	(27,543)	(142,201)
2020-21	(7,8,9,10,11)	(31,543)	1,008	(30,534)	(208,001)	(44,073)	(252,074)
2021-22	(11,12)	(14,002)	333	(13,668)	(99,637)	(33,759)	(133,396)
2022-23	(11)	(8,883)	151	(8,732)	(70,817)	(24,225)	(95,042)
2023-24	(11)	(6,839)	63	(6,776)	(50,763)	(17,488)	(68,252)
2024-25	(11)	(4,050)	53	(3,997)	(33,426)	(11,388)	(44,814)
2025-26	(11)	(608)	75	(533)	(13,477)	(4,443)	(17,920)
2026-27		0	0	0	0	0	0
		Percent Impacts on Annual Traffic and Gross Toll Revenue					
2018-19	(2,3,4)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019-20	(2,5,6)	(12.2)	(2.6)	(10.7)	(14.4)	(4.3)	(9.9)
2020-21	(7,8,9,10,11)	(18.5)	3.4	(15.2)	(24.8)	(6.6)	(16.7)
2021-22	(11,12)	(8.2)	1.1	(6.8)	(10.9)	(4.7)	(8.2)
2022-23	(11)	(5.1)	0.5	(4.3)	(7.4)	(3.2)	(5.5)
2023-24	(11)	(3.9)	0.2	(3.3)	(5.0)	(2.2)	(3.8)
2024-25	(11)	(2.3)	0.2	(1.9)	(3.1)	(1.3)	(2.3)
2025-26	(11)	(0.3)	0.2	(0.3)	(1.2)	(0.5)	(0.9)
2026-27		0	0	0	0	0	0

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) Reflects actual traffic and revenue experience.
(3) The Findlay Connector converted to AET in early June 2018.
(4) The partial I-95 Interchange (Stage 1) opened in September 2018.
(5) AKH and Gateway converted to AET at the end of October 2019.
(6) Cash collection on Ticket System suspended and converted to AET on March 16, 2020.
(7) Mon-Fayette Expressway converted to AET on June 11, 2020.
(8) Reflects actual experience through October 2020.
(9) Reflects Ticket System and PA 43 45% cash surcharge effective on January 3, 2021.
(10) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(11) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(12) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Estimated Traffic and Gross Toll Revenue

Updated traffic and gross toll revenue estimates were developed through FY 2049-50 incorporating the following changes into the forecast. All these changes were described in previous sections.

- Actual traffic and revenue experience through October 2020 (Tables 3-12);
- Revised toll increase assumptions (Table 13);
- Revised estimates of E-ZPass penetration rates (Table 14); and
- Impacts related to COVID-19 (Table 17);

Other assumptions remain unchanged from the 2020 Bring Down Letter including:

- Structure of the CV discount program; and
- Long-range economic indicators.

Table 18 shows the total traffic and toll revenue for the Ticket System only. Data for FY 2018-19 and FY 2019-20 reflect a full year of actual experience and FY 2020-21 includes five months of actual experience (through October 2020). Total toll transactions increase from 151.6 million to 186.4 million over the forecast period, an average annual increase of 0.7 percent. Gross toll revenue increases from $1.2 billion to $4.4 billion by FY 2049-50. This amounts to an average annual increase of 4.4 percent, reflecting the impact of normal growth plus the annual rate adjustments.

The same information is shown for the Barrier System in **Table 19**. Total annual toll transactions are estimated to grow from 51.5 million to 72.7 million over the forecast period, an average rate of 1.1 percent. New toll transactions from the opening of the Southern Beltway in January 2022 contribute to total barrier growth rates. Barrier System total revenue is estimated to increase from $184.4 million to $738.0 million over the forecast period, an annual rate of 4.6 percent, reflecting normal growth plus annual rate adjustments.

Table 18
Estimated Annual Transactions and Gross Toll Revenue (1)
Ticket System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2018-19	(2,3)	129,559	22,020	151,579	$626,685	$524,309	$1,150,994
2019-20	(2,4)	112,482	21,670	134,151	571,829	529,718	1,101,547
2020-21	(5,6,7,8)	101,774	23,237	125,012	517,584	543,927	1,061,511
2021-22	(8)	114,281	22,575	136,855	678,173	596,629	1,274,801
2022-23	(8)	118,499	22,525	141,024	739,147	641,133	1,380,280
2023-24	(8)	120,379	22,638	143,018	799,550	685,193	1,484,742
2024-25	(8)	123,644	22,835	146,479	863,292	731,117	1,594,409
2025-26	(8)	127,728	23,082	150,810	930,135	777,541	1,707,676
2026-27		130,879	23,330	154,208	986,717	817,147	1,803,863
2027-28		132,346	23,534	155,880	1,028,247	849,195	1,877,442
2028-29		133,781	23,766	157,547	1,067,546	881,907	1,949,453
2029-30		135,186	24,040	159,226	1,108,812	918,773	2,027,584
2030-31		136,559	24,315	160,873	1,153,319	957,129	2,110,448
2031-32		137,918	24,589	162,507	1,200,362	996,949	2,197,310
2032-33		139,264	24,862	164,126	1,249,084	1,038,282	2,287,366
2033-34		140,563	25,136	165,699	1,299,236	1,081,191	2,380,427
2034-35		141,824	25,409	167,233	1,350,921	1,125,745	2,476,666
2035-36		143,049	25,683	168,732	1,404,199	1,172,012	2,576,211
2036-37		144,253	25,952	170,204	1,459,264	1,219,787	2,679,051
2037-38		145,376	26,212	171,589	1,515,549	1,268,999	2,784,547
2038-39		146,461	26,473	172,935	1,573,491	1,320,086	2,893,577
2039-40		147,531	26,735	174,266	1,633,389	1,373,123	3,006,511
2040-41		148,579	26,997	175,577	1,695,243	1,428,191	3,123,434
2041-42		149,604	27,260	176,864	1,759,069	1,485,375	3,244,444
2042-43		150,596	27,524	178,121	1,824,831	1,544,753	3,369,585
2043-44		151,564	27,790	179,353	1,892,656	1,606,420	3,499,076
2044-45		152,507	28,056	180,562	1,962,612	1,670,457	3,633,069
2045-46		153,423	28,323	181,746	2,034,725	1,736,950	3,771,675
2046-47		154,327	28,591	182,918	2,109,231	1,806,002	3,915,234
2047-48		155,218	28,861	184,079	2,186,235	1,877,723	4,063,959
2048-49		156,115	29,133	185,248	2,266,051	1,952,292	4,218,343
2049-50		157,017	29,408	186,424	2,348,780	2,029,822	4,378,603

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) Reflects actual traffic and revenue experience.
(3) The partial I-95 Interchange (Stage 1) opened in September 2018.
(4) Cash collection on Ticket System suspended and converted to AET on March 16, 2020.
(5) Reflects actual experience through October 2020.
(6) Reflects Ticket System 45% video surcharge effective on Jan 3, 2021.
(7) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(8) Reflects COVID-19 related recessionary impacts through FY 2025-26.

Table 19
Estimated Annual Transactions and Gross Toll Revenue (1)
Barrier Systems
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2018-19	(2,3,4)	43,870	7,605	51,475	$113,893	$70,498	$184,392
2019-20	(2,5)	39,819	7,599	47,418	112,089	75,925	188,014
2020-21	(6,7,8,9,10)	37,159	7,723	44,882	112,251	81,307	193,558
2021-22	(10,11)	42,410	8,158	50,568	134,624	87,304	221,928
2022-23	(10)	46,803	8,870	55,673	147,641	94,074	241,715
2023-24	(10)	48,743	9,065	57,808	158,932	99,489	258,421
2024-25	(10)	50,458	9,262	59,720	170,794	105,534	276,328
2025-26	(10)	52,065	9,415	61,480	182,994	111,462	294,456
2026-27		53,293	9,538	62,831	193,592	116,753	310,345
2027-28		53,788	9,605	63,393	201,911	121,537	323,449
2028-29		54,281	9,683	63,964	209,923	126,359	336,283
2029-30		54,749	9,778	64,527	218,149	131,684	349,834
2030-31		55,182	9,871	65,053	226,584	137,204	363,788
2031-32		55,581	9,964	65,545	235,268	142,930	378,197
2032-33		55,966	10,056	66,021	244,279	148,867	393,145
2033-34		56,331	10,147	66,478	253,607	155,027	408,634
2034-35		56,687	10,238	66,925	263,220	161,400	424,620
2035-36		57,033	10,329	67,362	273,127	167,984	441,111
2036-37		57,370	10,419	67,789	283,346	174,790	458,136
2037-38		57,691	10,508	68,199	293,807	181,813	475,621
2038-39		58,009	10,596	68,605	304,575	189,105	493,680
2039-40		58,326	10,685	69,011	315,709	196,676	512,385
2040-41		58,640	10,773	69,413	327,207	204,535	531,743
2041-42		58,945	10,862	69,807	339,059	212,692	551,750
2042-43		59,241	10,950	70,190	351,257	221,156	572,413
2043-44		59,528	11,037	70,565	363,823	229,940	593,763
2044-45		59,808	11,125	70,933	376,768	239,057	615,825
2045-46		60,078	11,212	71,290	390,096	248,517	638,613
2046-47		60,341	11,299	71,640	403,834	258,334	662,168
2047-48		60,599	11,386	71,985	418,006	268,524	686,530
2048-49		60,857	11,474	72,331	432,675	279,116	711,791
2049-50		61,117	11,562	72,679	447,860	290,125	737,985

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) Reflects actual traffic and revenue experience.
(3) The Findlay Connector converted to AET in early June 2018.
(4) The partial I-95 Interchange (Stage 1) opened in September 2018.
(5) AKH and Gateway converted to AET at the end of October 2019.
(6) Mon-Fayette Expressway converted to AET on June 11, 2020.
(7) Reflects actual experience through October 2020.
(8) Reflects PA 43 45% video surcharge effective on January 3, 2021.
(9) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(10) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(11) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 20 presents total combined Ticket and Barrier System transactions and gross toll revenue and also reflects estimated toll discounts and adjustments. The vast majority of the discounts and adjustments result from commercial account toll adjustments due to the Turnpike's volume discount program. The volume discount program allows for a 3.0-percent discount to be provided to accounts that accrue $20,000 or more in monthly tolls. Discounts and adjustments shown in Table 20 assume no further changes to the post-paid commercial volume discount program during the forecast period. Actual discounts and adjustments amounted to 1.65 percent of CV toll revenue in FY 2019-20. It has been increasing very slightly over time. CDM Smith's forecasts assume that the adjustment gradually increases until it equals approximately 2.17 percent of the CV gross toll revenue in FY 2029-30 and remains at that level throughout the remainder of the forecast.

As shown in Table 20, total toll transactions are expected to increase from 203.1 million to 259.1 million over the forecast period. This amounts to an average annual growth rate of 0.8 percent. Total net toll revenue is estimated to grow from approximately $1.3 billion in FY 2018-19 to $5.1 billion by FY 2049-50. This reflects an average annual growth rate in gross toll revenue of 4.4 percent. Again, this includes the impact of normal growth plus annual toll rate adjustments.

Table 20
Estimated Annual Transactions and Toll Revenue (1)
Total System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue			Discounts	
Fiscal Year		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles	**and Adjustments**	**Net Toll Revenue**
2018-19	(2,3,4)	173,429	29,625	203,054	$740,578	$594,808	$1,335,385	($8,349)	$1,327,037
2019-20	(2,5)	152,301	29,269	181,570	683,918	605,642	1,289,561	(9,972)	1,279,588
2020-21	(6,7,8,9,10,11)	138,933	30,961	169,894	629,835	625,234	1,255,070	(11,567)	1,243,503
2021-22	(11,12)	156,691	30,733	187,424	812,796	683,932	1,496,729	(12,995)	1,483,734
2022-23	(11)	165,302	31,395	196,697	886,788	735,207	1,621,995	(14,337)	1,607,659
2023-24	(11)	169,122	31,704	200,826	958,482	784,682	1,743,163	(15,694)	1,727,470
2024-25	(11)	174,102	32,097	206,199	1,034,085	836,652	1,870,737	(17,151)	1,853,586
2025-26	(11)	179,794	32,497	212,291	1,113,129	889,003	2,002,132	(18,447)	1,983,685
2026-27		184,172	32,867	217,039	1,180,309	933,900	2,114,209	(19,612)	2,094,597
2027-28		186,134	33,139	219,273	1,230,158	970,733	2,200,891	(20,628)	2,180,262
2028-29		188,061	33,449	221,510	1,277,470	1,008,266	2,285,736	(21,678)	2,264,058
2029-30		189,935	33,818	223,753	1,326,961	1,050,457	2,377,418	(22,847)	2,354,571
2030-31		191,741	34,186	225,926	1,379,903	1,094,334	2,474,236	(23,802)	2,450,434
2031-32		193,500	34,552	228,052	1,435,629	1,139,878	2,575,508	(24,792)	2,550,715
2032-33		195,229	34,918	230,147	1,493,362	1,187,149	2,680,511	(25,820)	2,654,690
2033-34		196,894	35,283	232,177	1,552,843	1,236,218	2,789,061	(26,888)	2,762,173
2034-35		198,511	35,647	234,158	1,614,141	1,287,145	2,901,286	(27,995)	2,873,291
2035-36		200,082	36,012	236,094	1,677,326	1,339,996	3,017,322	(29,145)	2,988,177
2036-37		201,622	36,371	237,993	1,742,609	1,394,577	3,137,187	(30,332)	3,106,855
2037-38		203,068	36,720	239,788	1,809,356	1,450,812	3,260,168	(31,555)	3,228,613
2038-39		204,470	37,069	241,540	1,878,067	1,509,191	3,387,257	(32,825)	3,354,433
2039-40		205,857	37,420	243,276	1,949,098	1,569,798	3,518,896	(34,143)	3,484,753
2040-41		207,219	37,771	244,989	2,022,450	1,632,726	3,655,177	(35,512)	3,619,665
2041-42		208,549	38,122	246,671	2,098,128	1,698,067	3,796,195	(36,933)	3,759,262
2042-43		209,837	38,474	248,311	2,176,088	1,765,909	3,941,997	(38,409)	3,903,589
2043-44		211,092	38,827	249,919	2,256,479	1,836,360	4,092,839	(39,941)	4,052,898
2044-45		212,314	39,181	251,495	2,339,380	1,909,514	4,248,894	(41,532)	4,207,362
2045-46		213,502	39,535	253,036	2,424,821	1,985,467	4,410,288	(43,184)	4,367,104
2046-47		214,668	39,890	254,558	2,513,065	2,064,337	4,577,401	(44,899)	4,532,502
2047-48		215,817	40,247	256,064	2,604,241	2,146,247	4,750,488	(46,681)	4,703,807
2048-49		216,972	40,606	257,579	2,698,726	2,231,408	4,930,133	(48,533)	4,881,600
2049-50		218,134	40,969	259,103	2,796,638	2,319,947	5,116,586	(50,459)	5,066,127

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) Reflects actual traffic and revenue experience.
(3) The Findlay Connector converted to AET in early June 2018.
(4) The partial I-95 Interchange (Stage 1) opened in September 2018.
(5) AKH and Gateway converted to AET at the end of October 2019.
(6) Cash collection on Ticket System suspended and converted to AET on March 16, 2020.
(7) Mon-Fayette Expressway converted to AET on June 11, 2020.
(8) Reflects actual experience through October 2020.
(9) Reflects Ticket System and PA 43 45% video surcharge effective on January 3, 2021.
(10) Reflects 6% Systemwide toll increase and 15% discount to registered video customers effective January 3, 2021.
(11) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(12) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 21 provides a comparison of the current traffic and net toll revenue forecast with the forecast developed as part of the 2020 Bring Down Letter. As shown, the revised total toll transactions are less than those of the 2020 Bring Down Letter from FY 2020-21 through FY 2024-25. This is due to slightly more negative assumptions regarding the impacts of COVID-19 in the current forecast. For the period between FY 2025-26 and FY 2026-27, the current study assumes a slightly higher growth rate compared to the 2020 Bring Down Letter, resulting in 0.7 percent higher volumes. This 0.7 percent increase in estimated transactions is due to changes to PTC's AET system that will cause some non-revenue transactions to be captured that were not previously. Because these additional transactions are non-revenue, they have no impact upon toll revenue estimates. After FY 2026-27 the growth rates between the two studies are identical, thus the 0.7 percent differential remains constant throughout the remainder of the forecast period.

Similarly, due to revised assumptions regarding COVID-19 impacts, annual net toll revenue is forecast to be somewhat lower each year through FY 2025-26 than previously estimated in the 2020 Bring Down Letter. The largest differences occur in FY 2020-21 and FY 2021-22, in which revenue is estimated to be 8.1 and 5.3 percent lower, respectively, than in the previous forecast. Delaying implementation of system-wide toll increases and the video surcharge on the Ticket System and MFE is estimated to have lowered revenue by 2.3 percent in FY 2020-21 compared to the previous forecast. The earlier conversion of AET on the Ticket System and MFE lowered revenue estimates by 1.9 percent in FY 2020-21 and 0.8 percent in FY 2021-22 due to AET-related leakage. In addition, as discussed above, the current forecast also has slightly more negative assumptions regarding the impacts of COVID-19 than did the previous forecast. These higher COVID-19 impact assumptions continue through FY 2025-26, when revenue is now estimated to be 0.6 percent lower than the previous forecast. Beginning in January 2021, annual net toll revenue is estimated to be 0.2 percent lower than the previous forecast due to the newly added RVA rate tier that provides a 15-percent discount to registered video customers and was not assumed in the 2020 Bring Down Letter.

Table 21
Comparison of New Traffic and Revenue
Estimates with those from the 2020 Bring Down Letter
Total System
Pennsylvania Turnpike

Traffic and Toll Revenue in Thousands

	Total Annual Transactions			Annual Net Toll Revenue		
Fiscal Year	Current Estimates (1)	2020 Bring Down Letter (2)	Percent Difference	Current Estimates (1)	2020 Bring Down Letter (2)	Percent Difference
2018-19	203,054	203,054	0.0	$1,327,037	$1,327,037	0.0
2019-20	181,570	177,199	2.5	1,279,588	1,270,011	0.8
2020-21	169,894	172,463	(1.5)	1,243,503	1,352,391	(8.1)
2021-22	187,424	195,203	(4.0)	1,483,734	1,566,210	(5.3)
2022-23	196,697	201,385	(2.3)	1,607,659	1,661,401	(3.2)
2023-24	200,826	204,906	(2.0)	1,727,470	1,769,339	(2.4)
2024-25	206,199	208,398	(1.1)	1,853,586	1,882,092	(1.5)
2025-26	212,291	211,925	0.2	1,983,685	1,995,624	(0.6)
2026-27	217,039	215,424	0.7	2,094,597	2,098,894	(0.2)
2027-28	219,273	217,707	0.7	2,180,262	2,184,810	(0.2)
2028-29	221,510	219,991	0.7	2,264,058	2,268,876	(0.2)
2029-30	223,753	222,261	0.7	2,354,571	2,359,740	(0.2)
2030-31	225,926	224,433	0.7	2,450,434	2,455,774	(0.2)
2031-32	228,052	226,544	0.7	2,550,715	2,556,261	(0.2)
2032-33	230,147	228,624	0.7	2,654,690	2,660,452	(0.2)
2033-34	232,177	230,640	0.7	2,762,173	2,768,160	(0.2)
2034-35	234,158	232,607	0.7	2,873,291	2,879,512	(0.2)
2035-36	236,094	234,529	0.7	2,988,177	2,994,642	(0.2)
2036-37	237,993	236,415	0.7	3,106,855	3,113,571	(0.2)
2037-38	239,788	238,197	0.7	3,228,613	3,235,587	(0.2)
2038-39	241,540	239,937	0.7	3,354,433	3,361,675	(0.2)
2039-40	243,276	241,661	0.7	3,484,753	3,492,272	(0.2)
2040-41	244,989	243,363	0.7	3,619,665	3,627,471	(0.2)
2041-42	246,671	245,033	0.7	3,759,262	3,767,365	(0.2)
2042-43	248,311	246,662	0.7	3,903,589	3,911,998	(0.2)
2043-44	249,919	248,259	0.7	4,052,898	4,061,624	(0.2)
2044-45	251,495	249,824	0.7	4,207,362	4,216,416	(0.2)
2045-46	253,036	251,356	0.7	4,367,104	4,376,496	(0.2)
2046-47	254,558	252,867	0.7	4,532,502	4,542,245	(0.2)
2047-48	256,064	254,362	0.7	4,703,807	4,713,913	(0.2)
2048-49	257,579	255,867	0.7	4,881,600	4,892,083	(0.2)
2049-50	259,103	257,382	0.7	5,066,127	5,077,001	(0.2)

(1) Reflects actual traffic and revenue experience through October 2020.
(2) Reflects actual traffic and revenue experience through April 2020.

*   *   *

Fiduciary Disclaimer

Current accepted professional practices and procedures were used in the development of these updated traffic and revenue forecasts. However, as with any forecast of the future, there may be differences between forecasted and actual results caused by events and circumstances beyond the control of CDM Smith. In formulating its forecasts, CDM Smith has reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the PTC and other local and state agencies. CDM Smith also has relied upon the reasonable assurances of some independent parties and is not aware of any facts that would make such information misleading.

CDM Smith has 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 to 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 state and local agencies, including the PTC. These estimates and projections may not be indicative of actual or future values and are therefore subject to substantial uncertainty. Future developments 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 forecasts or projections contained within this report.

While CDM Smith believes that some of the projections or other forward-looking statements contained within the report are based on reasonable assumptions as of the date in the report, 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 this report, 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 the PTC and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to PTC with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to PTC. PTC 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.

*   *   *

Sincerely,

Scott Allaire
Vice President
CDM Smith Inc.

Yogesh Patel, AICP
Project Manager
CDM Smith Inc.

77 Hartland Street, Suite 201
East Hartford, Connecticut 06108
tel: 860 529-7615

September 4, 2020

Mr. Richard Dreher
Acting Chief Financial Officer
Pennsylvania Turnpike Commission
700 South Eisenhower Boulevard
Middletown, PA 17057

Subject: Toll Revenue Impact of Turnpike Commission's Decision of Moving Pennsylvania Turnpike System Toll Rate Changes from October 1, 2020 to January 3, 2021

Dear Mr. Dreher:

The traffic and toll revenue forecasts from CDM Smith's most recent study ("Pennsylvania Turnpike Commission 2020 Traffic and Revenue Bring Down Letter", May 29, 2020) assumed the 45% Video surcharge for the Ticket System and Mon-Fayette Expressway and the next 6% annual toll increase on the Turnpike System would occur on October 1, 2020. It further assumed there would not be any toll increase in January 2021. The recent Turnpike Commission decision on July 21, 2020, however, approved a toll increase that will be effective beginning January 3, 2021. No changes will be made to the current 2020 toll rates until that time.

The impact of this decision is a reduction in the estimated Turnpike System toll revenue reported in CDM Smith's May 29, 2020 report since increased toll revenue will not be realized in October, November, and December 2020. The toll revenue reduction during these final three months of 2020 is estimated to be $34.6 million. All toll rate assumptions in the CDM Smith May 29, 2020 report remain valid for 2021, thus no further toll adjustments would be required in 2021 and beyond.

We hope this analysis meets your needs. Please feel free to contact us with any questions or comments.

Sincerely,

Yogesh K. Patel
Project Manager
CDM Smith Inc.

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CDM Smith
77 Hartland Street, Suite 201
East Hartford, Connecticut 06108
tel: 860 529-7615

May 29, 2020

Mr. Nikolaus Grieshaber
Chief Financial Officer
Pennsylvania Turnpike Commission
700 South Eisenhower Boulevard
Middletown, PA 17057

Subject: Pennsylvania Turnpike Commission 2020 Traffic and Toll Revenue Bring Down Letter

Dear Mr. Grieshaber:

The Pennsylvania Turnpike Commission (PTC or Commission) has asked CDM Smith to prepare this Bring Down Letter (2020 Bring Down Letter) to be used in support of the Commission's ongoing capital improvement program and other funding requirements. This letter provides an update to the 2019 Bring Down Letter, dated April 29, 2019, which in turn was an update to the 2018 Traffic and Toll Revenue Forecast Study (2018 Forecast Study), dated April 20, 2018. The 2019 Bring Down Letter presented traffic and gross toll revenue forecasts from fiscal year (FY) 2017-18 through FY 2048-49. A fiscal year runs from June 1 through May 31. Actual traffic and revenue data were available through February 2019 for the 2019 Bring Down Letter and through April 2020 for the current 2020 Bring Down Letter.

This 2020 Bring Down Letter presents actual traffic and toll revenue data through April 2020 (14 months of additional data since completion of the 2019 Bring Down Letter), provides updated traffic and revenue forecasts through FY 2049-50, and compares the new forecasts with those from the 2019 Bring Down Letter. The updated forecasts reflect the following changes from the 2019 Bring Down Letter:

- E-ZPass market share estimates over the forecast period were reviewed and updated.
- Actual traffic and toll revenue data were updated to include information through April 2020.
- Revised toll adjustment assumptions for calendar year 2021, which is now scheduled for a six-percent increase (as opposed to the five-percent increase that was previously planned). Additionally, this increase is scheduled to occur in October 2020 rather than January 2021 and will include an additional 45-percent increase for cash tolls. It should be noted that these two toll adjustment assumptions are proposed and haven't been formally approved yet by the PTC Board. Absent their approval, an across the board five-percent toll increase would occur on or about January 1, 2021.

- A review and adjustment of short-term traffic and revenue growth rates was conducted through 2023 based on the most recent actual trends. Longer term growth rates beyond 2023 are based on those established in the 2019 Bring Down Letter.
- A review of the major roadway improvements for any changes since completion of the 2019 Bring Down Letter.
- And, perhaps most importantly, this forecast takes into account the impacts of the COVID-19 pandemic on estimated traffic and toll revenue over the forecast period.

These differences are described in more detail in the sections that follow below.

It is important to note that the intent of this Bring Down Letter is to review and revise, if warranted, the short-term forecasts developed as part of the 2019 Bring Down Letter. Any adjustments would be made based on the 14 months of new actual traffic and toll revenue experience since the 2019 Bring Down Letter, including COVID-19 impacts. Adjustments were made through FY 2025-26 to account for the estimated longer term COVID-19 impacts. However, beyond that, this Bring Down Letter does not include a re-evaluation of the longer-term economic growth forecasts; those remain unchanged from the 2019 Bring Down Letter.

The underlying socioeconomic trends and forecasts for Pennsylvania, the surrounding states, and the United States that formed the basis for the long-term traffic and toll revenue forecasts are provided in the 2018 Forecast Study.

Historical Toll Rate Increases and Current Toll Rates

Table 1 provides a summary of historical toll rate increases on the Turnpike System from 1987 to the most recent increase implemented on January 5, 2020. Rate increases are presented as a percent increase over the prior toll rate for cash/video and E-ZPass. Note that toll rate increases are generally applied systemwide, although occasional exemptions occur, as indicated in Table 1.

Periodic toll rate increases were implemented on the Turnpike System in 1987, 1991, 2004, and 2009. During the 2000’s decade, E-ZPass was phased into the Turnpike System. Until 2011, cash and E-ZPass toll rates always increased by the same percent. The toll rate schedule implemented on January 2, 2011 created a differential between cash and E-ZPass, as E-ZPass rates were increased by 3.0 percent and cash toll were increased by 10.0 percent. Rate increases differed between cash and E-ZPass in the ensuing three years (2012, 2013, and 2014) further increasing the differential between cash and E-ZPass toll rates.

Table 1
Historical Toll Rate Increases
Pennsylvania Turnpike

Date	Percent Increase Cash/Video	Percent Increase E-ZPass	Comment
1/2/1987	40.0	NA	E-ZPass was not yet implemented on the Turnpike
6/1/1991	32.0	NA	E-ZPass was not yet implemented on the Turnpike
8/1/2004	42.5	42.5	
1/4/2009	25.0	25.0	No increase on Findlay Connector or MFE between Uniontown and Brownsville
1/3/2010	3.0	3.0	No increase on Findlay Connector
1/2/2011	10.0	3.0	No increase on Findlay Connector
1/1/2012	10.0	0.0	No increase on Findlay Connector
1/6/2013	10.0	2.0	
1/5/2014	12.0	2.0	No increase on Findlay Connector
1/4/2015	5.0	5.0	No increase on Findlay Connector
1/3/2016	6.0	6.0	No increase on Findlay Connector; DRB converted from ticket system to barrier system and rate changes implemented
1/8/2017	6.0	6.0	No increase on Findlay Connector or DRB
1/7/2018	6.0	6.0	No increase on Findlay Connector, DRB, or the Northeast Extension barrier facilities
4/29/2018	6.0	6.0	Northeast Extension barrier facilities only (1)
6/3/2018	6.0	6.0	Findlay Connector only (1)
1/6/2019	6.0	6.0	
10/27/2019	6.0	6.0	BVE, AKH, and Gateway only; 45% surcharge over cash rate added to video rate
1/5/2020	6.0	6.0	No increase on BVE, AKH, or Gateway

Note: Beginning in 2016, all cash toll rate increases also reflect video toll rate increases.

(1) Toll rate increase coincided with vehicle classification changes from a weight-based to an axle-based system.

Toll rate increases have occurred annually since 2009, occurring on or close to January 1 of each year. Since 2015, the percent toll rate increases have been identical for cash and E-ZPass. In 2015 the toll rates increased by 5.0 percent over the prior year. From 2016 to 2020, toll rates increased by 6.0 percent annually for both cash/video and E-ZPass. PTC policy has also been to implement a video toll surcharge upon conversion to all electronic tolling (AET); this has generally amounted to an additional 45 percent increase, making video rates about double E-ZPass rates. It is assumed that annual toll rate increases will occur through the forecast period, as described in the section Actual and Assumed Toll Rate Increases and listed in Table 13.

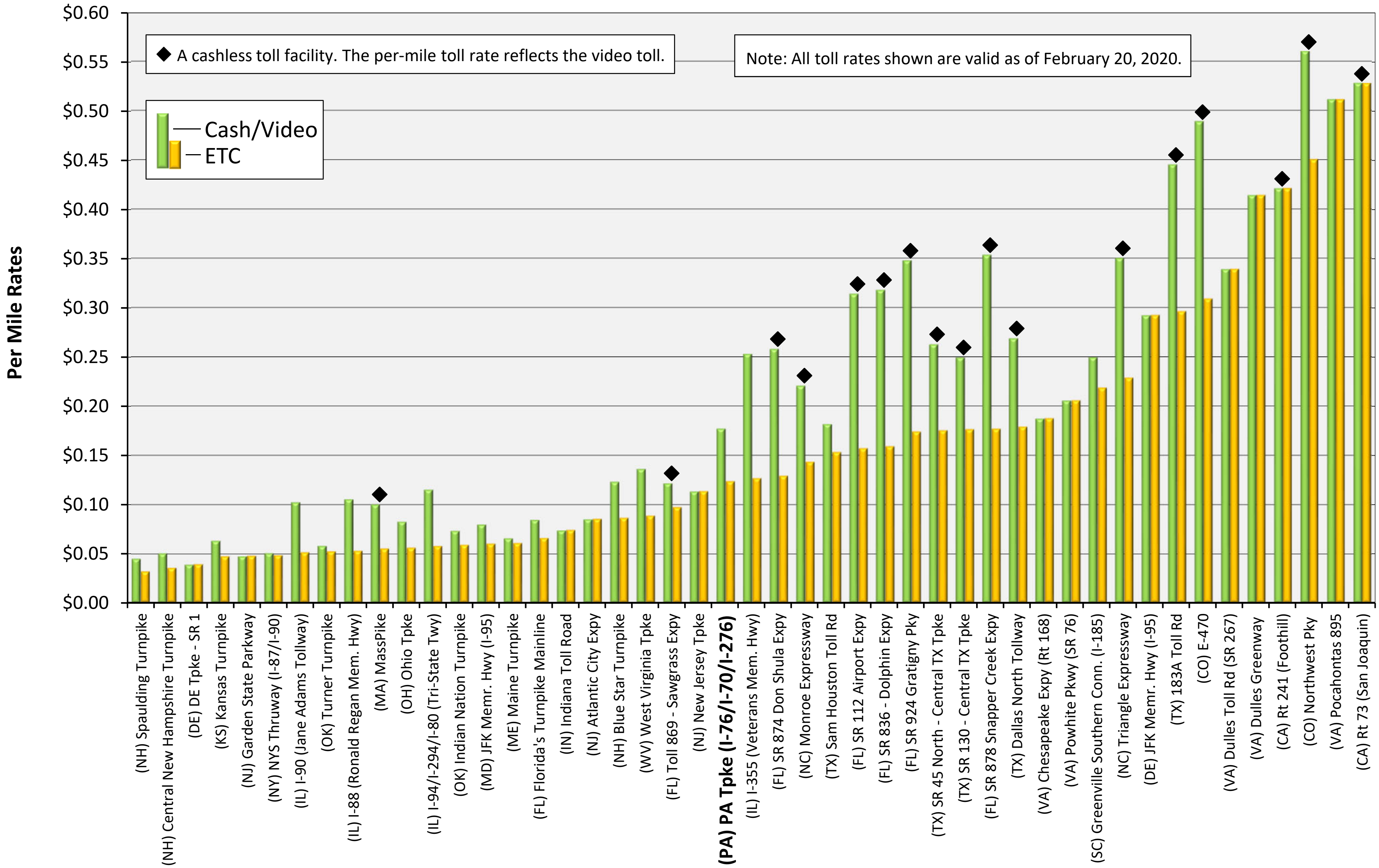
Figures 1 and 2 show the 2020 per-mile toll rates for a through trip on 47 U.S. toll facilities, for passenger cars and 5-axle commercial vehicles, respectively. Per-mile rates are shown for both cash/video and ETC transactions in each figure. If a facility is all electronic (does not accept cash payments), the video toll rate is shown as the equivalent of a cash toll rate. These facilities are marked with a diamond in Figures 1 and 2.

The per-mile through-trip toll rate is shown for the Pennsylvania Turnpike Mainline, which represents a trip on I-76/I-276 between New Jersey and Ohio. Figure 1 shows that even with the 12 consecutive annual toll increases since 2009, the passenger car per-mile toll rates on the Pennsylvania Turnpike System, at 12 cents per mile for E-ZPass customers and 18 cents per mile for cash customers, are still very reasonably priced compared to other toll facilities in the U.S.

Toll rates for 5-axle commercial vehicles (represented by weight class 6) are equivalent to 47 cents per mile for E-ZPass and 67 cents per mile for cash transactions for a through trip on the Pennsylvania Turnpike Mainline. It should be remembered that the majority of both passenger car and commercial vehicle trips are made using the more cost-effective E-ZPass payment method.

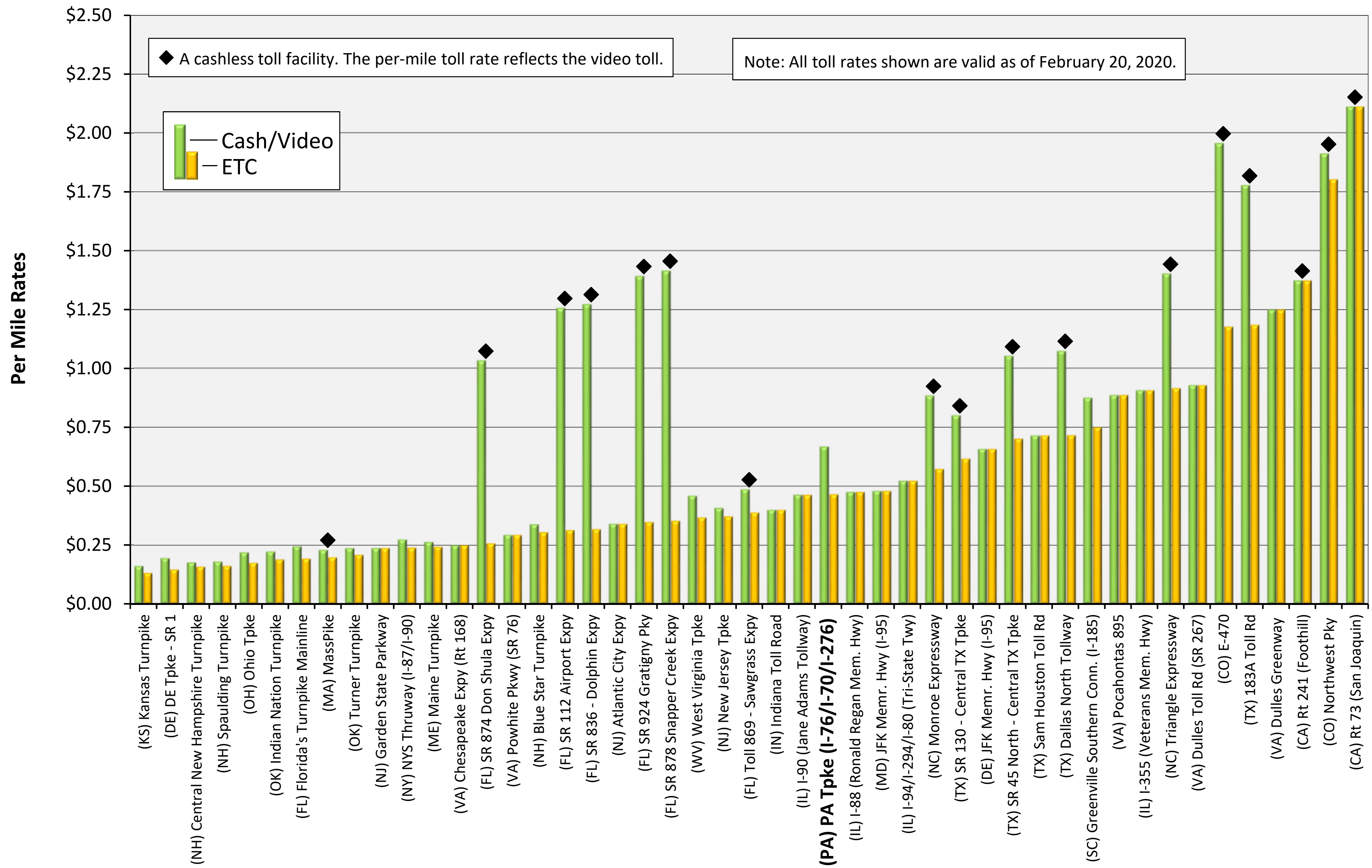
Annual Transaction and Gross Toll Revenue Trends

Table 2 provides a summary of annual systemwide transactions and gross toll revenue trends from FY 1994-95 through FY 2018-19. Notably, this table excludes non-revenue transactions from PTC's non-AET facilities. The Pennsylvania Turnpike System is a large, mature system that has demonstrated long-term growth in transactions and toll revenue. Between FY 1998-99 and FY 2008-09 there was only one toll rate increase (in 2004) and Turnpike transactions and gross toll revenue grew by an average annual rate of 1.8 percent and 5.8 percent, respectively. Conversely, in the 10 years from FY 2008-09 to FY 2018-19 there were toll rate increases every year. During this period Turnpike transactions grew by a comparatively lower average annual rate of 0.9 percent, while turnpike revenue grew by a higher average annual rate of 8.1 percent. In the most recently completed fiscal year (2018-19), traffic growth was 0.9 percent, while revenue growth was 11.0 percent, both equal to or larger than the average growth over the past 10 years.



COMPARISON OF 2020 PASSENGER CAR PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 1



COMPARISON OF 2020 FIVE-AXLE VEHICLE PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

CDM Smith

FIGURE 2

Table 2
Annual Systemwide Traffic and Gross Toll Revenue Trends
Pennsylvania Turnpike System
(in thousands)

	Transactions						Gross Toll Revenue					
Fiscal Year (1)	Cars	Percent Change Over Prior Year	Trucks	Percent Change Over Prior Year	Total	Percent Change Over Prior Year	Cars	Percent Change Over Prior Year	Trucks	Percent Change Over Prior Year	Total	Percent Change Over Prior Year
1994-95	114,033	6.9	15,620	9.5	129,653	7.2	$165,850	4.9	$131,749	7.2	$297,599	5.9
1995-96	121,911	6.9	16,719	7.0	138,630	6.9	172,339	3.9	136,269	3.4	308,608	3.7
1996-97	126,654	3.9	17,479	4.5	144,133	4.0	179,303	4.0	140,837	3.4	320,140	3.7
1997-98	132,472	4.6	18,627	6.6	151,099	4.8	186,290	3.9	149,036	5.8	335,326	4.7
1998-99	136,399	3.0	19,833	6.5	156,232	3.4	191,804	3.0	158,761	6.5	350,565	4.5
1999-00	138,762	1.7	21,341	7.6	160,103	2.5	195,301	1.8	172,035	8.4	367,336	4.8
2000-01	141,033	1.6	21,278	(0.3)	162,311	1.4	193,563	(0.9)	172,337	0.2	365,900	(0.4)
2001-02	150,496	6.7	22,298	4.8	172,794	6.5	212,650	9.9	163,101	(5.4)	375,751	2.7
2002-03	156,220	3.8	23,179	4.0	179,399	3.8	219,201	3.1	168,021	3.0	387,222	3.1
2003-04	163,612	4.7	24,407	5.3	188,019	4.8	228,515	4.2	180,229	7.3	408,744	5.6
2004-05	163,316	(0.2)	25,109	2.9	188,425	0.2	309,032	35.2	236,126	31.0	545,158	33.4
2005-06	160,590	(1.7)	25,311	0.8	185,901	(1.3)	321,268	4.0	267,369	13.2	588,637	8.0
2006-07	160,107	(0.3)	25,316	0.0	185,423	(0.3)	322,781	0.5	269,861	0.9	592,642	0.7
2007-08	164,097	2.5	25,455	0.5	189,552	2.2	327,761	1.5	271,165	0.5	598,926	1.1
2008-09	162,638	(0.9)	23,583	(7.4)	186,220	(1.8)	356,345	8.7	259,259	(4.4)	615,605	2.8
2009-10	163,599	0.6	22,933	(2.8)	186,531	0.2	415,981	16.7	302,057	16.5	718,038	16.6
2010-11	165,231	1.0	23,812	3.8	189,043	1.3	435,752	4.8	328,105	8.6	763,856	6.4
2011-12	164,955	(0.2)	24,125	1.3	189,080	0.0	455,133	4.4	342,646	4.4	797,779	4.4
2012-13	163,690	(0.8)	24,207	0.3	187,897	(0.6)	471,514	3.6	350,226	2.2	821,740	3.0
2013-14	163,788	0.1	24,891	2.8	188,679	0.4	497,671	5.5	368,395	5.2	866,066	5.4
2014-15	166,192	1.5	26,144	5.0	192,336	1.9	533,054	7.1	401,197	8.9	934,251	7.9
2015-16 (2)	171,569	3.2	27,319	4.5	198,887	3.4	588,295	10.4	443,325	10.5	1,031,620	10.4
2016-17 (3,4)	172,799	0.7	27,703	1.4	200,501	0.8	638,787	8.6	476,188	7.4	1,114,975	8.1
2017-18 (5)	172,512	(0.2)	28,650	3.4	201,162	0.3	678,741	6.3	524,418	10.1	1,203,158	7.9
2018-19 (6,7)	173,429	0.5	29,625	3.4	203,054	0.9	740,578	9.1	594,808	13.4	1,335,385	11.0

Average Annual Percent Change

	Transactions			Gross Toll Revenue		
Fiscal Year	Cars	Trucks	Total	Cars	Trucks	Total
FY 1998-99 - FY 2008-09	1.8	1.7	1.8	6.4	5.0	5.8
FY 2008-09 - FY 2018-19	0.6	2.3	0.9	7.6	8.7	8.1
FY 1994-95 - FY 2018-19	1.8	2.7	1.9	6.4	6.5	6.5

(1) Fiscal year beginning June 1.
(2) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.
(5) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier Facilities in April 2018.
(6) Toll by Plate surcharge for I-376 Beaver Valley Expressway was increased in October 2019.
(7) AET conversion was implemented at Gateway Toll Plaza and Turnpike 66 in October 2019.

Note: Refer to Table 1 for toll rate increase information.

Monthly Transactions and Gross Toll revenue Trends

Tables 3 through 12 present recent monthly transaction and gross toll revenue trends from FY 2016-17 through April 2020 for all PTC facilities. The information is provided for passenger cars, commercial vehicles, and total vehicles. For comparative purposes, subtotals are provided for June through April for each fiscal year. The facilities are summarized in the following order:

- Table 3 – the total Turnpike System (comprised of all the facilities listed below);
- Table 4 – the Ticket System (comprised of I-76/I-276 and I-476);
- Table 5 – the combined Barrier System (comprised of all facilities listed below);
- Table 6 – Turnpike 43 (Mon/Fayette Expressway) (MFE);
- Table 7 – Turnpike 66 (Amos K. Hutchinson Bypass) (AKH);
- Table 8 – Northeast Extension (I-476) barrier plazas;
- Table 9 – Turnpike I-376 (Beaver Valley Expressway) (BVE);
- Table 10 – Turnpike I-576 (Southern Beltway – Findlay Connector);
- Table 11 – Delaware River Bridge (DRB); and
- Table 12 – Gateway Toll Plaza.

The 2018 Investment Grade Study and 2019 Bring Down Letter both included the Gateway Toll Plaza with the Ticket System. With the conversion of the Gateway Toll Plaza to AET in October 2019, it is now reported as a stand-alone facility separate from the Ticket System. Gateway traffic and revenue data for previous years have been extracted from Ticket System data and included in Table 12, so year-to-year comparisons for both Table 4 and Table 12 are consistent.

As shown in Table 3, systemwide gross toll revenue increased by 7.9 percent in FY 2017-18 and 11.0 percent in FY 2018-19. Year-to-date (June 2019 through April 2020) toll revenue growth had declined by less than 0.1 percent compared to the same period in the prior year. Commercial vehicle toll revenue increased by 3.2 percent and passenger car toll revenue decreased by 2.7 percent from June 2019 through April 2020 compared to the same time period in the prior year. Annual toll revenue growth has exceeded annual transaction growth due to the annual toll increase adjustments. Year-to-date transactions decreased by 9.5 percent for passenger cars and 1.4 for commercial vehicles, resulting in an 8.3-percent decrease for total vehicles.

Table 3

Total Turnpike System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	15,395	0.3	15,438	(0.5)	15,361	(1.1)	15,187	2,550	1.0	2,575	0.9	2,596	(1.5)	2,557	17,945	0.4	18,013	(0.3)	17,958	(1.2)	17,744
July	15,783	(1.7)	15,522	0.3	15,566	0.1	15,583	2,419	(0.0)	2,419	6.3	2,573	3.7	2,668	18,202	(1.4)	17,942	1.1	18,138	0.6	18,251
August	15,967	(0.1)	15,957	1.1	16,134	(0.4)	16,071	2,616	1.7	2,662	3.5	2,755	(1.2)	2,722	18,583	0.2	18,619	1.5	18,889	(0.5)	18,793
September	14,817	(0.6)	14,724	(1.5)	14,503	0.5	14,582	2,442	(0.4)	2,431	(0.5)	2,418	5.0	2,539	17,260	(0.6)	17,156	(1.4)	16,921	1.2	17,121
October	15,236	(0.1)	15,221	1.2	15,396	(0.0)	15,389	2,429	4.9	2,547	7.3	2,732	1.4	2,770	17,665	0.6	17,768	2.0	18,128	0.2	18,159
November	14,458	(1.0)	14,317	(0.5)	14,242	(0.3)	14,193	2,236	3.9	2,323	3.0	2,391	0.5	2,403	16,695	(0.3)	16,640	(0.0)	16,633	(0.2)	16,597
December	14,051	(2.2)	13,746	1.7	13,982	(0.5)	13,911	2,153	(0.4)	2,146	2.5	2,198	3.3	2,271	16,204	(1.9)	15,891	1.8	16,180	0.0	16,182
January	12,609	(0.5)	12,542	(0.3)	12,504	2.6	12,826	2,014	8.0	2,175	4.3	2,268	3.7	2,353	14,622	0.7	14,718	0.4	14,772	2.8	15,179
February	11,407	4.8	11,958	(0.2)	11,930	4.4	12,459	1,815	12.0	2,034	1.9	2,073	5.2	2,182	13,223	5.8	13,992	0.1	14,003	4.5	14,640
March	13,416	1.3	13,591	3.1	14,018	(37.5)	8,765	2,216	3.5	2,295	3.4	2,372	(5.3)	2,245	15,632	1.6	15,886	3.2	16,389	(32.8)	11,010
April	14,400	(1.0)	14,259	1.2	14,426	(71.8)	4,074	2,268	5.2	2,387	6.8	2,549	(28.0)	1,836	16,668	(0.1)	16,646	2.0	16,975	(65.2)	5,911
May	15,260	(0.2)	15,237	0.9	15,367			2,542	4.5	2,657	1.6	2,698			17,802	0.5	17,893	1.0	18,065		
Total Year	172,799	(0.2)	172,512	0.5	173,429			27,703	3.4	28,650	3.4	29,625			200,501	0.3	201,162	0.9	203,054		
Jun - Apr	157,539	(0.2)	157,276	0.5	158,062	(9.5)	143,040	25,160	3.3	25,993	3.6	26,927	(1.4)	26,547	182,699	0.3	183,269	0.9	184,989	(8.3)	169,587

Toll Revenue (in $1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$57,273	8.0	$61,877	6.5	$65,886	8.9	$71,743	$42,661	4.6	$44,643	11.5	$49,757	5.4	$52,463	$99,935	6.6	$106,521	8.6	$115,643	7.4	$124,206
July	62,975	4.4	65,722	5.3	69,178	9.8	75,990	40,876	2.6	41,947	17.0	49,069	10.8	54,375	103,851	3.7	107,669	9.8	118,247	10.2	130,365
August	60,179	7.4	64,611	9.2	70,545	9.6	77,351	43,337	6.6	46,210	13.3	52,369	5.9	55,447	103,516	7.1	110,821	10.9	122,914	8.0	132,798
September	54,770	3.4	56,620	6.6	60,348	8.0	65,184	40,984	3.4	42,371	11.7	47,311	8.5	51,328	95,754	3.4	98,991	8.8	107,658	8.2	116,512
October	55,018	5.1	57,806	6.6	61,611	9.7	67,615	39,895	11.8	44,599	17.0	52,185	6.0	55,318	94,912	7.9	102,405	11.1	113,795	8.0	122,933
November	52,436	5.1	55,122	7.3	59,156	8.3	64,068	37,100	10.4	40,944	15.0	47,087	2.5	48,255	89,536	7.3	96,066	10.6	106,243	5.7	112,323
December	50,563	3.5	52,345	9.6	57,377	10.8	63,565	36,880	5.7	39,000	11.9	43,630	8.3	47,235	87,443	4.5	91,344	10.6	101,007	9.7	110,800
January	44,374	5.3	46,741	9.0	50,969	11.5	56,826	36,597	15.4	42,222	14.3	48,261	8.1	52,171	80,971	9.9	88,964	11.5	99,230	9.8	108,997
February	38,957	14.4	44,576	11.8	49,844	11.1	55,386	32,933	21.9	40,130	12.4	45,096	8.9	49,120	71,890	17.8	84,707	12.1	94,940	10.1	104,507
March	48,033	11.9	53,737	14.3	61,426	(38.8)	37,574	40,619	12.3	45,627	13.4	51,729	(5.4)	48,928	88,653	12.1	99,364	13.9	113,155	(23.6)	86,502
April	55,683	2.7	57,201	11.8	63,940	(73.2)	17,157	40,540	13.6	46,057	14.6	52,793	(20.2)	42,127	96,223	7.3	103,259	13.0	116,733	(49.2)	59,283
May	58,526	6.6	62,381	12.7	70,298			43,767	15.8	50,666	9.6	55,522			102,293	10.5	113,047	11.3	125,820		
Total Year	$638,787	6.3	$678,741	9.1	$740,578			$476,188	10.1	$524,418	13.4	$594,808			$1,114,975	7.9	$1,203,158	11.0	$1,335,385		
Jun - Apr	$580,261	6.2	$616,359	8.7	$670,280	(2.7)	$652,460	$432,422	9.6	$473,752	13.8	$539,286	3.2	$556,766	$1,012,683	7.6	$1,090,111	11.0	$1,209,566	(0.0)	$1,209,226

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.

(5) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.

(6) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier facilities in April 2018.

(7) AET conversion and vehicle classification changes were implemented on the Turnpike I-576 Findlay Connector in June 2018.

(8) AET conversion was implemented on Turnpike 66 Amos K. Hutchinson Bypass and Gateway Toll Plaza in October 2019.

Table 4

Ticket System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	11,681	0.1	11,695	(1.0)	11,580	(3.3)	11,195
July	11,813	(1.3)	11,654	(0.5)	11,596	(2.0)	11,365
August	12,006	0.1	12,015	0.0	12,019	(1.9)	11,786
September	11,186	(0.7)	11,110	(2.5)	10,836	(0.6)	10,768
October	11,551	(0.0)	11,547	(0.6)	11,483	(0.8)	11,387
November	11,016	(1.0)	10,905	(2.6)	10,625	(0.5)	10,574
December	10,749	(2.6)	10,464	(0.0)	10,463	(1.1)	10,347
January	9,816	(1.6)	9,655	(2.1)	9,453	1.8	9,623
February	9,030	1.3	9,152	(2.4)	8,931	4.8	9,358
March	10,344	(0.5)	10,288	1.8	10,475	(39.5)	6,334
April	10,971	(1.2)	10,836	(1.0)	10,728	(74.9)	2,692
May	11,557	(0.6)	11,485	(1.0)	11,371		
Total Year	131,721	(0.7)	130,805	(1.0)	129,559		
Jun - Apr	120,163	(0.7)	119,321	(0.9)	118,188	(10.8)	105,429

Commercial Vehicles

Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	1,942	(0.2)	1,938	0.0	1,939	(2.7)	1,887
July	1,845	(1.5)	1,817	5.4	1,915	2.7	1,967
August	1,993	0.1	1,995	2.3	2,040	(1.7)	2,006
September	1,857	(1.9)	1,823	(1.8)	1,790	4.3	1,867
October	1,846	3.6	1,913	5.8	2,024	0.4	2,031
November	1,697	3.3	1,754	1.7	1,784	(0.8)	1,770
December	1,655	(1.0)	1,638	0.8	1,650	2.2	1,686
January	1,564	6.0	1,658	2.5	1,699	2.7	1,745
February	1,441	6.8	1,539	0.5	1,547	4.5	1,616
March	1,711	1.2	1,732	1.7	1,762	(6.5)	1,647
April	1,727	3.9	1,795	4.7	1,880	(29.3)	1,329
May	1,916	3.4	1,981	0.5	1,990		
Total Year	21,195	1.8	21,582	2.0	22,020		
Jun - Apr	19,278	1.7	19,601	2.2	20,030	(2.4)	19,550

Total Vehicles

Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	13,623	0.1	13,633	(0.8)	13,519	(3.2)	13,082
July	13,658	(1.4)	13,471	0.3	13,512	(1.3)	13,332
August	13,999	0.1	14,009	0.4	14,059	(1.9)	13,792
September	13,044	(0.9)	12,933	(2.4)	12,626	0.1	12,635
October	13,397	0.5	13,459	0.4	13,506	(0.7)	13,418
November	12,713	(0.4)	12,659	(2.0)	12,409	(0.5)	12,343
December	12,404	(2.4)	12,102	0.1	12,113	(0.7)	12,033
January	11,381	(0.6)	11,313	(1.4)	11,152	1.9	11,368
February	10,472	2.1	10,691	(2.0)	10,478	4.7	10,974
March	12,054	(0.3)	12,020	1.8	12,237	(34.8)	7,981
April	12,698	(0.5)	12,631	(0.2)	12,608	(68.1)	4,021
May	13,474	(0.1)	13,465	(0.8)	13,361		
Total Year	152,915	(0.3)	152,387	(0.5)	151,579		
Jun - Apr	139,442	(0.4)	138,922	(0.5)	138,218	(9.6)	124,979

Toll Revenue (in $1,000s)

Passenger Cars

Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$48,540	9.0	$52,913	6.5	$56,349	7.6	$60,635
July	53,525	5.2	56,299	5.0	59,123	8.5	64,149
August	51,004	8.2	55,199	9.1	60,200	8.8	65,501
September	46,395	3.9	48,195	6.3	51,234	7.0	54,814
October	46,690	5.6	49,321	5.3	51,943	9.7	57,006
November	44,524	6.0	47,189	5.8	49,943	7.6	53,745
December	42,977	3.8	44,599	8.3	48,312	10.0	53,142
January	38,258	4.3	39,895	7.4	42,828	10.1	47,167
February	34,772	9.3	38,015	10.1	41,868	10.5	46,274
March	41,479	10.5	45,839	12.8	51,714	(40.2)	30,904
April	47,629	2.7	48,924	10.1	53,860	(75.2)	13,360
May	49,996	6.6	53,304	11.3	59,310		
Total Year	$545,788	6.2	$579,692	8.1	$626,685		
Jun - Apr	$495,793	6.2	$526,389	7.8	$567,374	(3.6)	$546,698

Commercial Vehicles

Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$37,574	4.6	$39,308	11.7	$43,898	5.1	$46,135
July	36,068	2.4	36,939	17.2	43,294	10.4	47,784
August	38,164	6.6	40,669	13.5	46,144	5.5	48,699
September	36,039	3.5	37,290	12.0	41,775	7.7	45,003
October	35,017	12.0	39,232	17.0	45,892	5.4	48,375
November	32,451	10.9	35,991	15.4	41,520	1.1	41,992
December	32,414	6.1	34,402	11.8	38,457	7.1	41,206
January	32,708	14.4	37,423	13.8	42,586	7.4	45,721
February	30,228	17.6	35,551	12.0	39,811	8.3	43,112
March	36,315	11.4	40,462	12.9	45,684	(6.7)	42,610
April	35,780	13.9	40,759	13.9	46,431	(21.4)	36,517
May	38,497	16.2	44,726	9.1	48,818		
Total Year	$421,255	9.9	$462,754	13.3	$524,309		
Jun - Apr	$382,758	9.2	$418,027	13.7	$475,491	2.5	$487,153

Total Vehicles

Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$86,113	7.1	$92,221	8.7	$100,247	6.5	$106,770
July	89,593	4.1	93,238	9.8	102,417	9.3	111,932
August	89,168	7.5	95,868	10.9	106,344	7.4	114,200
September	82,434	3.7	85,485	8.8	93,009	7.3	99,817
October	81,707	8.4	88,553	10.5	97,835	7.7	105,381
November	76,975	8.1	83,181	10.0	91,463	4.7	95,737
December	75,390	4.8	79,001	9.8	86,769	8.7	94,348
January	70,967	8.9	77,318	10.5	85,414	8.8	92,888
February	65,001	13.2	73,566	11.0	81,679	9.4	89,386
March	77,793	10.9	86,301	12.9	97,398	(24.5)	73,515
April	83,409	7.5	89,683	11.8	100,291	(50.3)	49,878
May	88,493	10.8	98,030	10.3	108,128		
Total Year	$967,044	7.8	$1,042,446	10.4	$1,150,994		
Jun - Apr	$878,551	7.5	$944,416	10.4	$1,042,866	(0.9)	$1,033,851

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.

Table 5

Combined Barrier Facilities - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	3,714	0.8	3,743	1.0	3,782	5.5	3,992
July	3,970	(2.5)	3,869	2.6	3,970	6.3	4,218
August	3,961	(0.5)	3,942	4.4	4,115	4.1	4,286
September	3,631	(0.5)	3,614	1.5	3,667	4.0	3,814
October	3,685	(0.3)	3,674	6.5	3,913	2.3	4,001
November	3,443	(0.9)	3,412	6.0	3,618	0.1	3,620
December	3,302	(0.6)	3,282	7.2	3,519	1.3	3,564
January	2,792	3.4	2,887	5.7	3,051	5.0	3,203
February	2,377	18.0	2,806	6.9	2,999	3.4	3,101
March	3,072	7.5	3,303	7.3	3,543	(31.4)	2,431
April	3,428	(0.2)	3,423	8.0	3,698	(62.6)	1,382
May	3,703	1.3	3,752	6.5	3,996		
Total Year	41,078	1.5	41,707	5.2	43,870		
Jun - Apr	37,375	1.6	37,955	5.1	39,874	(5.7)	37,611

Month	Commercial Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	609	4.5	636	3.3	657	1.9	670
July	574	4.9	602	9.2	657	6.7	702
August	624	7.0	667	7.1	715	0.1	716
September	585	4.1	609	3.2	628	6.9	672
October	583	8.8	635	11.6	709	4.3	739
November	539	5.5	569	6.8	607	4.3	634
December	498	1.9	508	7.9	548	6.7	585
January	450	15.1	517	10.0	569	6.8	608
February	374	32.3	495	6.4	526	7.5	566
March	505	11.3	562	8.5	610	(1.9)	598
April	541	9.3	592	13.1	669	(24.1)	508
May	626	8.0	676	4.7	708		
Total Year	6,508	8.6	7,068	7.6	7,605		
Jun - Apr	5,882	8.7	6,392	7.9	6,897	1.5	6,997

Month	Total Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	4,322	1.3	4,379	1.4	4,439	5.0	4,661
July	4,544	(1.6)	4,471	3.5	4,627	6.3	4,920
August	4,585	0.5	4,610	4.8	4,830	3.5	5,002
September	4,216	0.2	4,223	1.7	4,295	4.4	4,486
October	4,268	0.9	4,309	7.3	4,621	2.6	4,740
November	3,982	(0.0)	3,981	6.1	4,225	0.7	4,253
December	3,800	(0.3)	3,790	7.3	4,068	2.0	4,149
January	3,242	5.0	3,404	6.3	3,620	5.3	3,811
February	2,751	20.0	3,301	6.8	3,525	4.0	3,666
March	3,577	8.1	3,865	7.4	4,153	(27.0)	3,030
April	3,970	1.1	4,015	8.8	4,367	(56.7)	1,890
May	4,329	2.3	4,428	6.2	4,704		
Total Year	47,586	2.5	48,775	5.5	51,475		
Jun - Apr	43,257	2.5	44,347	5.5	46,771	(4.6)	44,608

Toll Revenue (in $1,000s)

Month	Passenger Cars 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$8,734	2.6	$8,964	6.4	$9,537	16.5	$11,108
July	9,451	(0.3)	9,422	6.7	10,055	17.8	11,841
August	9,175	2.6	9,413	9.9	10,344	14.6	11,850
September	8,375	0.6	8,425	8.2	9,114	13.8	10,370
October	8,327	1.9	8,485	13.9	9,668	9.7	10,609
November	7,912	0.3	7,933	16.1	9,214	12.0	10,323
December	7,586	2.1	7,746	17.0	9,065	15.0	10,423
January	6,116	12.0	6,847	18.9	8,141	18.6	9,659
February	4,184	56.8	6,561	21.6	7,976	14.3	9,112
March	6,554	20.5	7,898	23.0	9,712	(31.3)	6,670
April	8,054	2.8	8,277	21.8	10,080	(62.3)	3,796
May	8,531	6.4	9,078	21.0	10,988		
Total Year	$92,999	6.5	$99,048	15.0	$113,893		
Jun - Apr	$84,468	6.5	$89,971	14.4	$102,906	2.8	$105,762

Month	Commercial Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$5,087	4.9	$5,335	9.8	$5,859	8.0	$6,328
July	4,807	4.2	5,009	15.3	5,775	14.1	6,591
August	5,172	7.1	5,541	12.4	6,225	8.4	6,748
September	4,945	2.8	5,082	8.9	5,535	14.3	6,326
October	4,878	10.0	5,368	17.2	6,293	10.3	6,943
November	4,649	6.5	4,952	12.4	5,567	12.5	6,263
December	4,467	2.9	4,597	12.5	5,173	16.6	6,029
January	3,888	23.4	4,799	18.2	5,675	13.7	6,450
February	2,704	69.3	4,580	15.4	5,285	13.7	6,009
March	4,305	20.0	5,165	17.0	6,045	4.5	6,317
April	4,760	11.3	5,298	20.1	6,362	(11.8)	5,610
May	5,270	12.7	5,940	12.9	6,704		
Total Year	$54,933	12.3	$61,664	14.3	$70,498		
Jun - Apr	$49,664	12.2	$55,724	14.5	$63,795	9.1	$69,613

Month	Total Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$13,821	3.5	$14,299	7.7	$15,396	13.2	$17,436
July	14,258	1.2	14,431	9.7	15,830	16.4	18,433
August	14,348	4.2	14,953	10.8	16,570	12.2	18,598
September	13,320	1.4	13,507	8.5	14,649	14.0	16,696
October	13,205	4.9	13,853	15.2	15,961	10.0	17,552
November	12,562	2.6	12,885	14.7	14,780	12.2	16,586
December	12,052	2.4	12,343	15.4	14,238	15.6	16,452
January	10,004	16.4	11,646	18.6	13,816	16.6	16,109
February	6,889	61.7	11,141	19.0	13,261	14.0	15,121
March	10,859	20.3	13,063	20.6	15,757	(17.6)	12,987
April	12,814	5.9	13,575	21.1	16,443	(42.8)	9,406
May	13,800	8.8	15,017	17.8	17,691		
Total Year	$147,932	8.6	$160,712	14.7	$184,392		
Jun - Apr	$134,132	8.6	$145,695	14.4	$166,700	5.2	$175,375

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.

(5) AET Conversions at Beaver Valley Expressway, NE Extension Barrier Plazas, Findlay Connector, Amos K Hutchinson Bypass, and Gateway Toll Plaza in May 2017, April 2018, June 2018, October 2019, and October 2019 respectively.

Table 6

Turnpike 43 - Mon/Fayette Expressway - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	1,083	(1.0)	1,072	0.7	1,079	(1.6)	1,061	95	2.4	97	(0.1)	97	0.0	97	1,178	(0.8)	1,169	0.6	1,176	(1.5)	1,158
July	1,112	(3.9)	1,068	4.7	1,118	(1.6)	1,099	86	8.9	94	6.2	99	9.7	109	1,198	(3.0)	1,161	4.8	1,217	(0.7)	1,208
August	1,141	(2.2)	1,116	3.0	1,149	(2.9)	1,116	95	12.8	107	(5.6)	101	0.1	102	1,236	(1.0)	1,223	2.3	1,251	(2.7)	1,217
September	1,107	(2.8)	1,076	0.4	1,080	(1.2)	1,067	89	9.1	97	(2.5)	95	4.0	99	1,196	(1.9)	1,173	0.2	1,175	(0.8)	1,166
October	1,134	(1.6)	1,116	4.1	1,162	(3.5)	1,121	89	15.6	103	5.6	108	4.0	113	1,223	(0.3)	1,219	4.2	1,270	(2.9)	1,233
November	1,013	(3.2)	980	4.8	1,027	(5.6)	970	78	9.5	86	5.9	91	(4.3)	87	1,091	(2.3)	1,066	4.9	1,118	(5.5)	1,057
December	984	(3.3)	952	1.6	967	(2.0)	948	73	(1.8)	71	4.6	75	(4.8)	71	1,057	(3.2)	1,023	1.8	1,042	(2.2)	1,019
January	902	(2.8)	876	0.4	880	1.3	891	63	12.2	71	10.1	78	(3.8)	75	965	(1.9)	947	1.1	957	0.9	966
February	892	(2.4)	870	1.5	884	(1.7)	868	65	9.6	71	0.9	72	(6.5)	67	957	(1.6)	942	1.5	956	(2.1)	936
March	1,028	(3.2)	995	2.0	1,015	(30.4)	706	78	(0.4)	78	11.4	87	(18.7)	71	1,106	(3.0)	1,073	2.7	1,102	(29.5)	777
April	1,029	(0.3)	1,026	2.7	1,053	(57.2)	451	82	6.9	88	13.1	99	(37.5)	62	1,111	0.2	1,113	3.5	1,152	(55.5)	513
May	1,085	1.2	1,098	1.3	1,111			98	8.1	106	(2.0)	104			1,183	1.7	1,204	1.0	1,215		
Total Year	12,508	(2.1)	12,244	2.3	12,524			992	7.8	1,070	3.5	1,107			13,500	(1.4)	13,313	2.4	13,631		
Jun - Apr	11,423	(2.4)	11,146	2.4	11,413	(9.8)	10,299	894	7.8	963	4.1	1,003	(5.0)	952	12,317	(1.7)	12,109	2.5	12,416	(9.4)	11,251

Toll Revenue (in $1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$1,597	3.9	$1,659	6.8	$1,772	7.5	$1,904	$380	12.2	$426	8.5	$462	8.3	$500	$1,976	5.5	$2,085	7.1	$2,234	7.6	$2,404
July	1,621	3.1	1,671	12.4	1,877	6.5	2,000	346	15.9	400	17.8	471	18.0	556	1,966	5.3	2,071	13.4	2,349	8.8	2,556
August	1,678	2.6	1,722	10.6	1,904	3.7	1,974	380	20.0	457	4.6	478	8.9	520	2,058	5.9	2,179	9.3	2,382	4.7	2,494
September	1,606	2.2	1,642	7.8	1,769	7.4	1,901	364	14.9	418	6.9	447	9.8	491	1,970	4.5	2,060	7.6	2,216	7.9	2,392
October	1,654	3.5	1,711	10.9	1,898	4.5	1,983	363	20.5	437	16.3	508	9.3	556	2,017	6.5	2,148	12.0	2,406	5.5	2,538
November	1,443	3.7	1,496	12.6	1,684	0.9	1,700	321	16.1	373	16.0	432	3.3	446	1,764	5.9	1,869	13.3	2,116	1.4	2,147
December	1,419	1.9	1,446	12.4	1,625	3.4	1,680	301	5.0	316	18.3	374	0.8	377	1,719	2.5	1,762	13.5	1,999	2.9	2,056
January	1,348	3.8	1,399	10.2	1,542	9.7	1,692	277	19.6	331	22.1	404	5.7	427	1,624	6.5	1,730	12.5	1,946	8.9	2,119
February	1,348	4.1	1,403	10.4	1,548	5.9	1,639	289	18.5	343	10.4	378	2.8	389	1,637	6.6	1,746	10.4	1,926	5.3	2,028
March	1,568	2.2	1,602	11.9	1,792	(26.1)	1,324	351	8.2	380	21.5	462	(14.3)	396	1,919	3.3	1,982	13.7	2,254	(23.7)	1,720
April	1,568	6.6	1,672	11.4	1,862	(53.1)	873	362	16.3	421	22.1	513	(29.3)	363	1,930	8.4	2,093	13.5	2,376	(48.0)	1,236
May	1,666	7.9	1,798	10.4	1,986			428	16.6	499	8.7	543			2,094	9.7	2,298	10.1	2,529		
Total Year	$18,516	3.8	$19,222	10.6	$21,261			$4,161	15.4	$4,800	14.0	$5,472			$22,677	5.9	$24,021	11.3	$26,732		
Jun - Apr	$16,850	3.4	$17,423	10.6	$19,274	(3.1)	$18,670	$3,732	15.2	$4,300	14.6	$4,929	1.8	$5,020	$20,582	5.5	$21,724	11.4	$24,204	(2.1)	$23,690

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.

Table 7

Turnpike 66 - Amos K. Hutchinson Bypass - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	563	0.7	567	(1.9)	556	(2.7)	541	93	7.4	100	1.0	101	(6.1)	95	656	1.6	667	(1.5)	657	(3.2)	636
July	560	(1.3)	553	1.1	559	(0.7)	555	88	7.1	94	7.2	101	(0.9)	100	648	(0.2)	647	2.0	660	(0.7)	655
August	572	1.0	578	0.8	583	(1.5)	574	96	8.1	104	3.6	108	(3.8)	104	669	2.0	682	1.2	691	(1.8)	678
September	560	(0.4)	558	(0.5)	555	(3.2)	538	94	0.9	95	(2.5)	92	3.0	95	654	(0.2)	653	(0.8)	648	(2.3)	633
October	577	(0.4)	575	1.0	580	0.1	581	92	5.9	98	8.1	105	(0.7)	105	669	0.5	672	2.0	686	(0.0)	686
November	542	(0.9)	537	(1.2)	531	(3.3)	513	80	5.4	84	2.4	86	(0.6)	85	621	(0.1)	621	(0.7)	617	(2.9)	599
December	540	(2.1)	529	0.7	533	(3.1)	517	70	5.6	74	7.8	80	(3.0)	77	610	(1.2)	603	1.6	612	(3.1)	594
January	487	(1.0)	482	(1.4)	475	2.3	486	69	12.1	77	5.7	81	2.0	83	555	0.6	558	(0.4)	556	2.2	569
February	467	(1.4)	460	0.1	461	1.3	467	67	6.7	71	5.6	75	1.0	76	533	(0.4)	531	0.8	536	1.3	542
March	537	(0.8)	533	(1.2)	527	(26.5)	387	82	1.9	84	(3.3)	81	(4.0)	78	620	(0.5)	617	(1.5)	608	(23.5)	465
April	548	(2.1)	536	0.3	538	(49.6)	271	88	2.1	90	3.8	93	(26.4)	69	636	(1.5)	626	0.8	631	(46.1)	340
May	577	0.3	579	(1.6)	570			99	2.8	101	(2.4)	99			676	0.7	680	(1.7)	669		
Total Year	6,530	(0.7)	6,486	(0.3)	6,466			1,016	5.3	1,071	2.9	1,102			7,546	0.1	7,556	0.2	7,568		
Jun - Apr	5,953	(0.8)	5,907	(0.2)	5,897	(7.9)	5,430	918	5.6	969	3.5	1,003	(3.7)	965	6,870	0.1	6,876	0.3	6,900	(7.3)	6,396

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$889	7.0	$951	4.6	$995	4.8	$1,043	$400	13.1	$452	11.4	$504	(2.1)	$493	$1,289	8.9	$1,403	6.8	$1,499	2.5	$1,536
July	894	4.8	938	7.1	1,004	7.6	1,080	384	11.0	426	15.9	494	2.9	508	1,278	6.7	1,364	9.8	1,498	6.1	1,588
August	902	6.9	964	7.4	1,036	6.6	1,104	429	10.1	473	9.6	518	2.5	531	1,331	7.9	1,437	8.2	1,554	5.2	1,636
September	883	5.4	931	6.4	991	3.8	1,029	419	3.5	434	3.1	447	7.4	480	1,302	4.8	1,364	5.4	1,438	4.9	1,509
October	912	5.2	960	6.5	1,023	1.3	1,036	405	9.8	445	16.4	518	(3.7)	499	1,318	6.7	1,405	9.7	1,541	(0.3)	1,536
November	847	5.3	892	4.8	934	12.1	1,047	341	14.1	389	6.4	414	6.9	443	1,188	7.9	1,281	5.3	1,349	10.5	1,490
December	845	4.1	879	7.0	941	7.1	1,008	304	12.3	341	15.0	392	0.9	396	1,149	6.2	1,220	9.3	1,334	5.3	1,404
January	787	5.3	829	7.1	888	8.5	963	317	17.6	373	12.6	420	1.1	425	1,104	8.9	1,202	8.8	1,308	6.1	1,388
February	767	4.9	804	8.3	871	3.5	901	314	12.7	354	10.9	392	(2.9)	381	1,081	7.2	1,158	9.1	1,264	1.5	1,283
March	884	5.8	935	7.4	1,004	(30.5)	698	389	6.5	414	3.5	429	(12.6)	375	1,273	6.1	1,350	6.2	1,433	(25.1)	1,073
April	913	3.6	946	8.4	1,026	(49.8)	515	407	9.5	446	8.9	485	(28.9)	345	1,320	5.4	1,392	8.6	1,511	(43.1)	860
May	962	6.4	1,024	6.5	1,090			447	10.4	493	3.9	513			1,409	7.7	1,518	5.6	1,603		
Total Year	$10,486	5.4	$11,054	6.8	$11,804			$4,556	10.6	$5,041	9.7	$5,528			$15,042	7.0	$16,095	7.7	$17,331		
Jun - Apr	$9,523	5.3	$10,029	6.8	$10,713	(2.7)	$10,425	$4,109	10.7	$4,547	10.3	$5,015	(2.7)	$4,877	$13,633	6.9	$14,577	7.9	$15,728	(2.7)	$15,302

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.
(4) AET conversion occurred in October 2019.

Table 8

Northeast Extension Barrier Plazas - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	417	0.7	420	(0.7)	417	10.7	462	101	3.3	104	3.5	108	5.4	113	518	1.2	524	0.1	525	9.6	575
July	519	(4.8)	494	(1.2)	488	14.7	560	100	0.9	101	8.6	109	12.2	123	619	(3.8)	595	0.5	598	14.3	683
August	502	(4.2)	481	10.3	530	9.3	580	106	0.8	107	13.0	121	3.8	126	608	(3.4)	588	10.8	651	8.3	705
September	396	(1.6)	390	(0.1)	389	8.7	423	97	(1.4)	96	4.8	100	15.2	116	493	(1.6)	486	0.9	490	10.0	539
October	398	(4.6)	380	4.4	397	10.4	438	93	3.8	97	14.8	111	7.0	119	491	(3.0)	476	6.5	507	9.7	556
November	376	(3.3)	364	1.0	367	3.6	381	89	1.3	91	6.0	96	3.8	100	466	(2.4)	454	2.0	463	3.6	480
December	329	(1.6)	323	2.3	331	2.9	340	83	(0.0)	83	4.9	87	8.5	94	411	(1.3)	406	2.8	417	4.0	434
January	277	(6.9)	258	(0.2)	257	9.6	282	81	7.9	88	3.5	91	8.5	99	358	(3.5)	345	0.8	348	9.3	381
February	267	(4.0)	256	2.3	262	5.9	277	77	4.8	80	2.0	82	10.4	90	344	(2.0)	337	2.2	344	6.9	368
March	297	2.9	305	4.0	318	(34.5)	208	87	1.5	89	6.9	95	3.0	98	384	2.6	394	4.6	412	(25.9)	306
April	376	(10.2)	338	8.3	366	(76.9)	85	90	1.3	91	13.4	103	(18.9)	83	466	(8.0)	429	9.4	469	(64.1)	168
May	454	(11.9)	400	5.1	420			113	(5.3)	107	6.8	114			567	(10.6)	507	5.4	534		
Total Year	4,608	(4.3)	4,409	3.0	4,542			1,117	1.4	1,132	7.5	1,216			5,724	(3.2)	5,540	3.9	5,759		
Jun - Apr	4,154	(3.5)	4,009	2.8	4,122	(2.1)	4,035	1,004	2.1	1,025	7.6	1,102	5.2	1,160	5,158	(2.4)	5,034	3.8	5,225	(0.6)	5,195

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$392	5.5	$413	9.4	$452	17.9	$533	$477	6.3	$506	19.7	$607	11.1	$674	$868	5.9	$920	15.1	$1,058	14.0	$1,207
July	494	1.2	500	4.7	524	27.8	669	462	4.8	484	22.9	595	20.5	717	956	3.0	984	13.7	1,119	23.9	1,386
August	477	0.5	479	21.7	583	18.8	693	495	4.1	516	29.2	666	12.4	749	972	2.4	995	25.6	1,250	15.4	1,442
September	370	3.8	384	13.4	435	15.0	500	457	1.1	462	22.3	566	22.9	695	827	2.3	846	18.3	1,001	19.5	1,195
October	351	6.0	371	14.1	424	22.4	519	430	10.6	476	33.7	636	14.9	731	781	8.5	847	25.1	1,060	17.9	1,250
November	366	(3.7)	353	11.1	392	12.2	440	422	7.5	454	26.3	574	10.5	634	789	2.3	807	19.7	965	11.2	1,073
December	287	8.8	312	9.4	342	14.1	390	390	6.9	417	25.6	524	15.1	603	677	7.7	729	18.7	866	14.7	993
January	276	(9.8)	249	21.1	302	21.2	366	410	9.8	450	28.3	578	15.5	667	686	1.9	699	25.7	879	17.5	1,033
February	260	(4.7)	248	23.5	306	14.0	349	387	7.0	414	26.9	525	15.9	609	647	2.3	661	25.7	831	15.2	958
March	290	2.7	297	25.3	373	(31.3)	256	447	2.2	457	34.0	612	6.6	652	736	2.4	754	30.6	984	(7.8)	908
April	374	(10.0)	336	28.3	432	(72.6)	118	449	4.3	468	38.7	649	(9.4)	588	823	(2.2)	805	34.3	1,081	(34.7)	706
May	452	(6.6)	422	16.1	490			554	11.9	620	12.3	696			1,006	3.6	1,042	13.8	1,186		
Total Year	$4,388	(0.5)	$4,366	15.8	$5,054			$5,381	6.4	$5,724	26.2	$7,227			$9,769	3.3	$10,090	21.7	$12,281		
Jun - Apr	$3,936	0.2	$3,943	15.7	$4,563	5.9	$4,832	$4,827	5.8	$5,105	27.9	$6,531	12.1	$7,318	$8,762	3.3	$9,048	22.6	$11,094	9.5	$12,151

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.
(4) AET conversion and vehicle classification changes were implemented in April 2018.

Table 9

Turnpike I-376 - Beaver Valley Expressway - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	562	5.4	592	4.8	621	3.7	644	111	12.9	126	1.4	127	(3.9)	122	673	6.6	718	4.2	748	2.4	766
July	588	1.0	593	8.4	643	2.8	661	104	10.1	114	12.8	129	(0.7)	128	691	2.3	707	9.1	771	2.2	788
August	579	4.2	604	12.1	677	(0.2)	675	113	12.1	127	11.5	142	(5.2)	134	693	5.5	730	12.0	818	(1.1)	809
September	550	6.0	583	6.2	619	2.0	632	104	13.5	118	2.7	122	2.6	125	654	7.2	702	5.6	741	2.1	756
October	553	4.3	577	13.7	657	2.0	670	105	15.1	120	16.0	140	(5.8)	132	658	6.0	698	14.1	796	0.6	801
November	509	6.2	541	9.2	591	0.5	593	95	10.4	105	6.6	112	(3.1)	108	605	6.9	646	8.8	703	(0.1)	702
December	497	7.4	534	9.1	582	0.4	585	80	13.5	91	8.2	99	(4.8)	94	577	8.3	625	9.0	681	(0.3)	678
January	450	6.3	478	8.5	519	5.1	545	80	12.9	90	11.5	101	(3.5)	97	530	7.3	569	9.0	620	3.7	642
February	432	7.7	465	9.3	508	2.0	518	78	16.4	91	4.2	95	(1.7)	93	510	9.0	556	8.4	603	1.4	611
March	499	10.6	552	8.1	596	(32.5)	402	92	15.3	106	2.9	109	(12.2)	96	591	11.4	658	7.2	705	(29.4)	498
April	511	11.2	568	7.9	613	(62.7)	229	93	23.0	115	8.8	125	(32.9)	84	604	13.0	683	8.0	738	(57.7)	312
May	556	12.2	623	5.9	660			108	21.4	132	0.7	133			664	13.7	755	5.0	793		
Total Year	6,286	6.8	6,711	8.6	7,286			1,164	14.7	1,335	7.2	1,431			7,450	8.0	8,046	8.3	8,717		
Jun - Apr	5,730	6.2	6,088	8.8	6,625	(7.1)	6,154	1,055	14.0	1,203	7.9	1,298	(6.6)	1,212	6,786	7.4	7,291	8.7	7,924	(7.0)	7,366

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$764	0.9	$771	9.8	$847	12.5	$953	$381	(3.1)	$369	1.6	$375	3.0	$386	$1,144	(0.4)	$1,140	7.2	$1,221	9.6	$1,339
July	810	(3.7)	780	12.2	875	15.1	1,007	347	(4.4)	332	12.3	373	7.5	401	1,157	(3.9)	1,112	12.3	1,248	12.8	1,408
August	780	0.9	787	18.7	935	7.3	1,003	381	(4.1)	366	13.5	415	0.4	417	1,162	(0.7)	1,153	17.1	1,350	5.2	1,420
September	738	1.4	748	15.0	861	11.1	957	352	(0.7)	349	2.3	357	10.4	394	1,090	0.7	1,098	11.0	1,218	10.9	1,351
October	744	0.6	749	19.2	892	16.8	1,042	348	(1.9)	341	20.1	410	2.7	421	1,092	(0.2)	1,090	19.5	1,302	12.3	1,463
November	677	2.7	695	15.5	803	34.9	1,083	317	(4.0)	304	7.1	326	15.5	376	994	0.5	999	13.0	1,129	29.3	1,459
December	663	3.0	683	14.8	784	34.7	1,057	270	(0.7)	268	6.8	286	14.4	327	933	1.9	951	12.6	1,070	29.3	1,384
January	619	3.7	642	18.9	763	29.3	987	286	(6.7)	266	15.4	307	10.5	340	905	0.4	908	17.9	1,071	23.9	1,327
February	604	3.1	623	21.2	755	21.3	916	279	(0.2)	278	8.6	302	7.8	326	883	2.1	901	17.3	1,057	17.4	1,242
March	700	6.8	748	20.4	900	(29.2)	637	331	(2.1)	324	10.1	356	(8.3)	327	1,031	3.9	1,071	17.3	1,257	(23.3)	964
April	717	9.0	781	17.8	920	(56.9)	397	332	4.0	345	16.9	403	(25.7)	299	1,048	7.4	1,126	17.5	1,323	(47.4)	696
May	687	21.9	837	17.5	984			321	21.1	389	9.7	426			1,008	21.7	1,226	15.0	1,411		
Total Year	$8,504	4.0	$8,845	16.7	$10,321			$3,943	(0.3)	$3,931	10.3	$4,337			$12,447	2.6	$12,776	14.7	$14,657		
Jun - Apr	$7,817	2.4	$8,007	16.6	$9,336	7.5	$10,039	$3,622	(2.2)	$3,542	10.4	$3,910	2.6	$4,013	$11,439	1.0	$11,550	14.7	$13,247	6.1	$14,053

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.
(4) AET conversion occurred in May 2017.

Table 10

Turnpike I-576 - Southern Beltway - Findlay Connector - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	151	4.1	157	(11.0)	140	0.5	140	19	(2.3)	19	16.5	22	54.2	33	170	3.4	175	(8.1)	161	7.7	174
July	162	(2.7)	158	(11.2)	140	5.8	148	18	11.0	20	8.8	22	23.0	27	180	(1.3)	178	(8.9)	162	8.1	175
August	168	2.6	172	(19.3)	139	7.4	149	20	15.2	23	28.8	30	(2.3)	29	188	4.0	196	(13.6)	169	5.7	179
September	151	2.1	154	(19.3)	124	10.8	137	18	23.0	22	37.1	31	(3.2)	30	169	4.3	176	(12.2)	155	8.0	167
October	154	6.5	164	(15.5)	139	8.6	151	24	(8.0)	22	17.2	25	38.7	35	178	4.6	186	(11.7)	164	13.2	186
November	147	0.2	148	(13.4)	128	4.0	133	19	0.7	19	21.8	23	76.8	41	166	0.2	167	(9.4)	151	15.3	174
December	142	(1.3)	140	(11.5)	124	6.2	132	19	(13.6)	17	31.7	22	70.5	37	161	(2.7)	157	(6.9)	146	15.8	169
January	131	(0.2)	131	(9.7)	118	5.9	125	20	(18.6)	16	38.6	22	75.4	39	151	(2.6)	147	(4.4)	141	17.0	165
February	124	(2.3)	122	(5.8)	115	3.3	118	15	8.1	16	37.2	22	67.1	37	139	(1.2)	138	(0.7)	137	13.7	155
March	146	(2.3)	143	(8.2)	131	(25.2)	98	18	11.2	20	82.3	36	(3.8)	35	164	(0.8)	163	2.8	167	(20.6)	133
April	143	(2.1)	140	(8.0)	129	(56.1)	57	18	15.1	20	87.3	38	(43.0)	22	161	(0.2)	161	4.2	168	(53.1)	79
May	157	(4.0)	151	(6.7)	141			19	33.8	25	45.4	36			176	(0.0)	176	0.7	177		
Total Year	1,777	0.1	1,779	(11.9)	1,567			227	5.7	240	37.9	330			2,004	0.8	2,019	(6.0)	1,898		
Jun - Apr	1,620	0.5	1,628	(12.4)	1,426	(2.6)	1,389	208	3.2	215	37.0	294	24.5	366	1,828	0.8	1,843	(6.6)	1,721	2.0	1,755

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$108	1.9	$110	42.4	$157	11.8	$175	$42	(1.7)	$42	35.5	$56	67.7	$94	$150	0.9	$152	40.5	$213	26.6	$270
July	118	(2.8)	114	41.3	162	16.3	188	41	8.0	44	29.2	57	38.0	79	159	0.0	159	38.0	219	22.0	267
August	117	4.6	123	36.9	168	9.5	184	45	13.4	51	57.3	79	6.4	85	162	7.0	173	42.8	247	8.5	268
September	106	1.9	108	36.4	147	23.0	181	41	19.3	48	70.1	82	4.3	86	147	6.7	156	46.8	230	16.3	267
October	108	8.1	116	40.6	164	18.1	193	49	(2.3)	48	41.6	68	46.8	100	157	4.8	165	40.9	232	26.5	293
November	103	0.5	103	43.8	148	11.9	166	42	1.6	43	42.8	61	103.6	124	145	0.8	146	43.5	209	38.6	290
December	102	(0.8)	101	43.3	145	18.1	171	45	(16.1)	38	52.3	57	86.9	107	147	(5.5)	139	45.8	202	37.7	278
January	92	(1.8)	91	62.4	147	20.1	177	47	(21.1)	37	64.5	61	114.8	131	139	(8.3)	128	63.0	208	47.8	307
February	87	(2.3)	85	70.1	144	12.1	162	35	5.5	36	72.9	63	97.4	125	122	(0.1)	121	70.9	208	38.0	286
March	101	(0.7)	101	68.5	170	(31.3)	116	41	6.8	44	147.2	108	5.4	114	142	1.4	144	92.3	278	(17.0)	231
April	101	(3.2)	98	68.0	165	(49.9)	83	41	11.9	46	146.9	112	(37.1)	71	142	1.1	144	93.1	277	(44.7)	153
May	110	(3.7)	106	69.6	179			42	27.3	54	93.7	104			152	4.9	159	77.7	283		
Total Year	$1,253	0.2	$1,255	51.0	$1,895			$510	3.9	$530	71.8	$911			$1,763	1.3	$1,785	57.2	$2,806		
Jun - Apr	$1,143	0.6	$1,150	49.3	$1,716	4.7	$1,796	$468	1.8	$476	69.4	$807	38.3	$1,116	$1,611	0.9	$1,626	55.1	$2,523	15.4	$2,912

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.

(4) AET conversion and vehicle classification changes were implemented in June 2018.

(5) The I-576 tolling configuration was changed from six ramp tolls to two mainline toll gantries at the time of AET conversion in June 2018.

Table 11

Delaware River Bridge - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	606	(0.8)	601	7.3	645	28.4	828
July	647	(1.6)	637	4.3	664	28.4	853
August	657	(1.1)	650	6.0	689	24.0	855
September	573	0.6	577	6.6	616	21.6	748
October	583	0.0	583	20.1	700	8.6	760
November	570	(1.3)	563	24.1	699	9.2	763
December	555	(2.1)	543	32.6	720	6.0	763
January	330	41.7	467	31.0	612	8.8	666
February	0	N/A	446	31.4	586	11.6	653
March	320	62.3	519	36.3	707	(34.1)	466
April	545	2.8	561	33.0	746	(71.8)	211
May	577	6.0	611	30.8	799		
Total Year	5,963	13.3	6,758	21.1	8,182		
Jun - Apr	5,387	14.1	6,146	20.1	7,383	2.5	7,566

Month	Commercial Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	103	0.8	104	10.1	115	8.4	124
July	97	1.6	98	14.5	113	17.6	132
August	103	5.8	109	10.6	120	11.3	134
September	99	1.8	101	5.5	106	17.8	125
October	97	11.2	108	17.5	127	10.1	140
November	98	5.5	103	13.1	117	8.8	127
December	96	0.5	96	14.1	110	16.3	128
January	59	62.1	96	20.0	115	11.5	129
February	0	N/A	90	16.1	104	13.8	119
March	63	62.5	102	14.9	117	11.5	131
April	91	14.4	104	19.7	125	(12.3)	109
May	103	12.3	115	14.2	132		
Total Year	1,008	21.7	1,227	14.1	1,400		
Jun - Apr	905	22.7	1,111	14.1	1,268	10.1	1,397

Month	Total Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	709	(0.6)	705	7.7	760	25.4	953
July	744	(1.2)	735	5.7	777	26.8	985
August	760	(0.2)	759	6.7	810	22.1	988
September	672	0.8	678	6.5	722	21.0	873
October	680	1.6	691	19.7	827	8.9	900
November	668	(0.3)	666	22.4	815	9.1	890
December	651	(1.7)	639	29.8	830	7.4	891
January	389	44.8	563	29.1	727	9.2	794
February	0	N/A	535	28.8	690	11.9	772
March	383	62.3	621	32.8	824	(27.6)	597
April	636	4.5	665	30.9	870		
May	679	6.9	727	28.1	931		
Total Year	6,971	14.5	7,984	20.0	9,582		
Jun - Apr	6,292	15.3	7,258	19.2	8,651	(0.1)	8,644

Toll Revenue (in $1,000s)

Month	Passenger Cars 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	3,150	(1.6)	$3,098	6.2	$3,291	34.5	$4,425
July	3,380	(3.5)	3,260	3.7	3,381	36.9	4,627
August	3,337	0.0	3,337	6.6	3,557	31.8	4,689
September	3,038	(1.3)	3,000	5.5	3,165	27.8	4,045
October	2,985	(0.8)	2,962	20.2	3,560	16.2	4,137
November	2,915	(4.5)	2,783	28.5	3,577	16.2	4,157
December	2,872	(1.6)	2,827	28.4	3,631	11.9	4,061
January	1,762	39.6	2,461	33.8	3,293	19.3	3,927
February	-7	N/A	2,265	39.7	3,164	19.3	3,776
March	1,591	65.9	2,639	45.8	3,848	(32.9)	2,583
April	2,775	3.7	2,879	40.0	4,030	(69.5)	1,230
May	2,929	6.0	3,104	39.5	4,330		
Total Year	$30,727	12.7	$34,615	23.7	$42,826		
Jun - Apr	$27,798	13.4	$31,511	22.2	$38,496	8.2	$41,658

Month	Commercial Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	1,845	1.9	$1,879	8.7	$2,043	14.3	$2,335
July	1,753	0.8	1,767	13.0	1,998	24.2	2,482
August	1,830	6.7	1,952	10.1	2,149	17.7	2,529
September	1,797	1.9	1,831	4.7	1,916	23.6	2,368
October	1,758	10.3	1,938	17.4	2,275	16.5	2,650
November	1,761	3.4	1,821	14.0	2,076	15.9	2,405
December	1,743	0.6	1,754	12.2	1,968	22.4	2,409
January	1,071	60.5	1,720	25.5	2,159	19.5	2,580
February	1	N/A	1,621	21.4	1,967	21.6	2,392
March	1,112	64.1	1,825	22.2	2,230	13.8	2,538
April	1,642	13.2	1,858	25.9	2,340	(5.7)	2,206
May	1,829	12.0	2,049	21.1	2,482		
Total Year	$18,142	21.4	$22,016	16.3	$25,603		
Jun - Apr	$16,313	22.4	$19,966	15.8	$23,121	16.3	$26,895

Month	Total Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	4,995	(0.3)	$4,978	7.2	$5,334	26.7	$6,760
July	5,133	(2.0)	5,027	7.0	5,379	32.2	7,109
August	5,166	2.4	5,289	7.9	5,706	26.5	7,218
September	4,835	(0.1)	4,831	5.2	5,081	26.2	6,413
October	4,742	3.3	4,900	19.1	5,835	16.3	6,787
November	4,677	(1.5)	4,604	22.8	5,653	16.1	6,562
December	4,615	(0.7)	4,581	22.2	5,599	15.6	6,470
January	2,834	47.5	4,181	30.4	5,452	19.4	6,508
February	-6	N/A	3,886	32.1	5,131	20.2	6,168
March	2,703	65.2	4,464	36.1	6,078	(15.7)	5,122
April	4,418	7.2	4,737	34.5	6,369		
May	4,758	8.3	5,154	32.2	6,812		
Total Year	$48,869	15.9	$56,631	20.8	$68,429		
Jun - Apr	$44,111	16.7	$51,478	19.7	$61,617	5.7	$65,117

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(3) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(4) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.

Mr. Nikolaus Grieshaber
May 29, 2020
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Table 12

Gateway Toll Plaza - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	Commercial Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	Total Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	332	0.7	334	(2.8)	324	(2.9)	315	87	0.3	87	1.4	88	(3.7)	85	418	0.6	421	(2.0)	412	(3.1)	400
July	383	(4.2)	367	(2.5)	358	(4.3)	342	82	(1.1)	81	4.2	84	(2.0)	83	464	(3.6)	448	(1.3)	442	(3.9)	425
August	342	0.1	342	1.8	348	(3.2)	337	89	0.4	90	3.3	93	(5.5)	87	431	0.2	432	2.1	441	(3.7)	425
September	294	(5.9)	276	2.3	283	(5.3)	268	83	(4.4)	80	3.5	83	0.8	83	377	(5.6)	356	2.5	365	(3.9)	351
October	286	(2.3)	279	0.0	279	0.7	281	84	4.5	88	4.7	92	5.2	96	369	(0.7)	367	1.1	371	1.8	378
November	285	(1.9)	280	(1.7)	275	(2.9)	267	80	1.6	81	1.6	83	2.8	85	365	(1.1)	361	(0.9)	357	(1.5)	352
December	256	1.8	261	0.8	263	6.7	280	78	(2.2)	76	1.2	77	8.5	83	334	0.9	337	0.9	340	7.1	364
January	216	(9.8)	195	(2.5)	190	9.0	207	78	2.6	80	1.7	81	7.3	87	294	(6.5)	275	(1.3)	271	8.5	294
February	196	(4.5)	187	(1.2)	185	7.2	198	73	3.6	75	1.5	76	9.3	83	268	(2.3)	262	(0.5)	261	7.8	281
March	245	4.5	256	(2.8)	249	(34.5)	163	85	(0.5)	84	1.0	85	7.4	92	330	3.2	341	(1.9)	334	(23.8)	255
April	276	(8.0)	254	(0.3)	253	(68.9)	79	80	5.7	84	2.2	86	(8.4)	79	356	(4.9)	338	0.3	339	(53.5)	158
May	298	(2.4)	290	1.6	295			87	3.6	90	0.6	90			384	(1.0)	380	1.4	385		
Total Year	3,407	(2.5)	3,322	(0.6)	3,302			984	1.1	995	2.2	1,018			4,391	(1.7)	4,317	0.1	4,320		
Jun - Apr	3,110	(2.5)	3,031	(0.8)	3,007	(9.0)	2,738	897	0.9	906	2.4	927	1.8	944	4,007	(1.8)	3,937	(0.1)	3,935	(6.4)	3,681

Toll Revenue (in $1,000s)

Month	Passenger Cars 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	Commercial Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20	Total Vehicles 2016-17	% Chg	2017-18	% Chg	2018-19	% Chg	2019-20
June	$1,834	6.9	$1,962	3.1	$2,023	2.6	$2,075	$1,563	6.2	$1,661	9.2	$1,813	1.8	$1,845	$3,398	6.6	$3,623	5.9	$3,837	2.2	$3,920
July	2,134	1.2	2,159	3.3	2,231	1.7	2,269	1,474	5.4	1,554	15.0	1,787	3.4	1,848	3,608	2.9	3,713	8.2	4,018	2.5	4,117
August	1,885	6.1	2,000	8.1	2,161	1.9	2,203	1,612	7.2	1,728	11.1	1,920	(0.1)	1,917	3,496	6.6	3,728	9.5	4,081	1.0	4,120
September	1,634	(1.3)	1,612	8.2	1,745	0.7	1,757	1,516	1.5	1,539	11.8	1,720	5.3	1,811	3,149	0.1	3,151	10.0	3,465	3.0	3,568
October	1,574	2.6	1,615	5.7	1,708	(0.5)	1,699	1,525	10.3	1,682	11.6	1,877	5.8	1,986	3,098	6.4	3,297	8.7	3,584	2.8	3,685
November	1,560	3.2	1,610	4.0	1,675	3.3	1,730	1,445	8.6	1,569	7.4	1,685	8.9	1,835	3,005	5.8	3,179	5.7	3,359	6.1	3,565
December	1,399	7.1	1,497	6.7	1,597	28.8	2,057	1,414	3.5	1,464	7.4	1,571	15.2	1,811	2,813	5.3	2,961	7.0	3,169	22.1	3,868
January	1,231	(4.5)	1,176	2.6	1,206	28.3	1,547	1,481	9.5	1,622	7.6	1,746	7.7	1,881	2,712	3.2	2,797	5.5	2,952	16.1	3,427
February	1,125	0.8	1,134	4.7	1,187	15.4	1,370	1,400	9.5	1,533	8.0	1,657	7.9	1,787	2,525	5.6	2,667	6.6	2,844	11.0	3,157
March	1,421	10.9	1,576	3.1	1,626	(35.1)	1,054	1,634	5.3	1,721	7.4	1,848	3.7	1,915	3,055	7.9	3,297	5.4	3,473	(14.5)	2,970
April	1,605	(2.5)	1,565	5.2	1,646	(64.7)	581	1,528	12.2	1,715	8.4	1,859	(6.6)	1,737	3,134	4.7	3,280	6.9	3,505	(33.9)	2,318
May	1,725	3.5	1,785	8.0	1,928			1,648	11.4	1,835	5.7	1,940			3,373	7.3	3,621	6.8	3,868		
Total Year	$19,127	3.0	$19,692	5.3	$20,733			$18,239	7.6	$19,622	9.2	$21,422			$37,366	5.2	$39,314	7.2	$42,155		
Jun - Apr	$17,402	2.9	$17,906	5.0	$18,805	(2.5)	$18,342	$16,592	7.2	$17,787	9.5	$19,482	4.6	$20,374	$33,993	5.0	$35,693	7.3	$38,287	1.1	$38,715

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020.

(4) AET conversion occurred in October 2019.

It should be noted that the DRB was closed on January 20, 2017 due to a fracture in one of the structural support beams. The structure was closed to all traffic through March 9, 2017. This event negatively impacted the traffic and revenue values for FY 2016-17. CDM Smith analyzed the impact on Turnpike traffic and revenue during the closure and estimated that losses over this period amounted to 1.8 million transactions and $12.1 million in toll revenue.

The FY 2019-20 numbers, especially for passenger cars, were severely impacted by the COVID-19 pandemic that began affecting travel patterns in Pennsylvania in March 2020. Prior to that point, passenger car transaction growth had been slightly positive for the fiscal year through February but fell 37.5 percent in March 2020 and 71.8 percent in April 2020, compared to the same months in 2019. Commercial vehicle traffic fell less sharply, decreasing 5.3 percent in March 2020 and 28.0 percent in April, while total transactions decreased 32.8 percent in March and 65.2 percent in April. Revenue also decreased markedly in these two months, decreasing 38.8 percent in March and 73.2 percent in April for passenger cars, 5.4 percent in March and 20.2 percent in April for commercial vehicles, and 23.6 percent in March and 49.2 percent in April for total vehicles.

As previously mentioned, the Ticket System is by far the largest component of both traffic and toll revenue on the Turnpike System. As shown in Table 4, total year-to-date transactions decreased 9.6 percent compared to the same period in the prior year. Year-to-date passenger car transactions decreased by 10.8 percent during this period. Year-to-date commercial vehicle activity has decreased by 2.4 percent compared to the previous 11-month period. Total revenue for the Ticket System grew by 7.8 percent in FY 2017-18 and by 10.4 percent in FY 2018-19. Year-to-date FY 2019-20 revenue has fallen by 0.9 percent compared to the same period in the previous year. The previously mentioned ongoing COVID-19 pandemic began significantly impacting travel patterns in March 2020. Total vehicle transactions in March 2020 were down 34.8 percent compared to March 2019, while total transactions in April 2020 fell 68.1 percent compared to April 2019. Total vehicle revenue was down 24.5 percent and 50.3 percent in March and April, respectively.

The combined barrier facilities monthly transaction and revenue data is shown in Table 5. Year-to-date transactions decreased 4.6 percent in FY 2019-20 compared to the same period in the previous year. Commercial vehicle transactions increased 1.5 percent for this time period, while passenger cars fell 5.7 percent. Total revenue for the combined barrier facilities grew 5.2 percent overall year-to-date. Growth in toll revenue at the barrier facilities has outpaced transaction growth due to system-wide annual toll increases and AET conversions on AKH and the Gateway Toll Plaza in October 2019. These AET conversions resulted in a significant increase in video transactions, which also had the effect of increasing the average toll rates. As with the Ticket System, the ongoing COVID-19 pandemic began significantly impacting travel patterns in March 2020. Total vehicle transactions were down 27.0 percent in March 2020 and 56.7 percent in April 2020 compared to the same months in 2019, while total vehicle revenue was down 17.6 percent and 42.8 percent in March and April, respectively.

Traffic and gross toll revenue trends for the seven barrier toll facilities are provided in Tables 6 through 12. These seven barrier facilities (MFE, AKH, the Northeast Extension barrier plazas, BVE, Findlay Connector, DRB, and the Gateway Toll Plaza) contribute about 14 percent of the total systemwide gross toll revenue.

The effects of ramp-up, inclement weather, alternative routes, and new developments have a more significant impact on these relatively low volume roads. However, each barrier system has experienced a smaller year-to-date percent decrease in total transactions due to the COVID-19 pandemic than has the ticket system. The Findlay Connector (Table 10) has actually experienced slight overall traffic growth through the first 11 months of FY 2019-20 despite the significant decreases in March and April. Due to increasing toll rates, five of the seven facilities have managed to have positive revenue growth over the same time period, with the exceptions being MFE (Table 6) and AKH (Table 7).

Actual and Assumed Toll Rate Increases

Annual toll rate increases are assumed to occur on the entire Turnpike System. The toll rate increases are assumed to occur at 12:01 AM on the first Sunday after January 1 of each year unless otherwise noted. **Table 13** presents the annual percent increases in toll rates for E-ZPass, cash, and video from calendar year 2020 through 2050.

Rate increase assumptions are unchanged since the 2019 Bring Down Letter, except for the calendar year 2021 increase, which is now scheduled for a six-percent increase (as opposed to the five-percent increase that was previously planned). Additionally, this increase is scheduled to occur in October 2020 rather than January 2021 and will include an additional 45-percent increase for cash tolls. This will occur at the only two remaining locations where cash toll collection is permitted, including the Ticket System and MFE. By including this 45-percent cash-only increase, in addition to the six-percent across-the-board increase, the percent cash toll differential (compared to E-ZPass rates) will be equal to video tolls, essentially condensing the three toll schedules that now exist (E-ZPass, cash, video) to two (E-ZPass, non-E-ZPass). As mentioned earlier, these toll adjustment assumptions are proposed and haven't been formally approved yet by the PTC Board. Absent their approval, an across the board five-percent toll increase would occur on or about January 1, 2021.

The impact of COVID-19 has resulted in dramatically reduced travel on the Turnpike System, as well as throughout the state and country. Increasing the next toll adjustment from five-percent to six-percent helps, in a small way, to make up for some lost toll revenue. Moving the toll increase date from January 2021 to October 2020 also results in a small amount of increased revenue.

The proposed 45-percent cash surcharge for the Ticket System and MFE in October 2020 would have occurred in October 2021 as both of these facilities convert to AET. As on the other PTC toll

Table 13
Actual and Assumed Percent Changes in Turnpike System Toll Rates
Pennsylvania Turnpike System

Calendar Year (2)	Percent Changes in Turnpike System's Toll Rates (1)		
	E-ZPass	Cash	Video
2020 (3)	6.00	6.00	6.00
2020 (4)	6.00	6.00 + 45.00	6.00
2022 (5)	5.00	N/A	5.00
2023	5.00	N/A	5.00
2024	5.00	N/A	5.00
2025	5.00	N/A	5.00
2026	4.00	N/A	4.00
2027	3.50	N/A	3.50
2028	3.00	N/A	3.00
2029	3.00	N/A	3.00
2030	3.00	N/A	3.00
2031	3.00	N/A	3.00
2032	3.00	N/A	3.00
2033	3.00	N/A	3.00
2034	3.00	N/A	3.00
2035	3.00	N/A	3.00
2036	3.00	N/A	3.00
2037	3.00	N/A	3.00
2038	3.00	N/A	3.00
2039	3.00	N/A	3.00
2040	3.00	N/A	3.00
2041	3.00	N/A	3.00
2042	3.00	N/A	3.00
2043	3.00	N/A	3.00
2044	3.00	N/A	3.00
2045	3.00	N/A	3.00
2046	3.00	N/A	3.00
2047	3.00	N/A	3.00
2048	3.00	N/A	3.00
2049	3.00	N/A	3.00
2050	3.00	N/A	3.00

(1) Toll rate increases are the same for all facilities and vehicle classes.
(2) Except where otherwise indicated, toll rate increases are applied on or near January 1.
(3) Toll rate increases are actual.
(4) Rate increase will occur in October 2020 instead of January 2021. All rates will increase by 6%, except for the two remaining facilities where cash is accepted: the Ticket System and Mon Fayette Expressway (Turnpike 43). Cash rates at these two location will increase by an additional 45% to bring cash rates in line with video rates.
(5) Beginning in 2022, all facilities will be AET and cash collection will no longer be an option.

facilities that have converted to AET, a 45-percent video surcharge has been imposed to recoup expected revenue leakage. PTC is advancing the surcharge implementation date by one year on the Ticket System and MFE for three reasons:

1. It generates slightly more toll revenue for one year;
2. The greater toll differential between cash and E-ZPass toll rates encourages greater use of E-ZPass (whose rates will be about half those of cash); and
3. It simplifies the rate schedule into two categories for the entire Turnpike Sytem: E-ZPass and non-E-ZPass.

The toll revenue impacts of the rate changes discussed above are estimated to generate an additional $62 million in FY 2020-21 (about a 4.8 percent increase). For FY 2021-22 CDM Smith estimates that an additional $59 million will be generated (about a 3.9 percent increase). For FY 2022-23 and beyond, the positive revenue impact amounts to about one-percent. This is due to the change in the rate adjustment from five-percent to six-percent in October 2020.

Actual and Assumed E-ZPass Penetration Rates

Table 14 presents the actual and assumed annual E-ZPass penetration rates from calendar year 2018 through 2050. The first three columns show the E-ZPass market share assumptions for the current 2020 Bring Down Letter. These were adjusted slightly on a facility by facility basis, by the amount shown in the three rightmost columns, over assumptions used in the 2019 Bring Down Letter.

Table 14
Actual and Assumed Percent E-ZPass Penetration
Pennsylvania Turnpike System

Calendar Year	E-ZPass Penetration Rates: 2020 Bring Down Letter Cars	Trucks	Total	Difference from 2019 Bring Down Letter Cars	Trucks	Total
2018	80.0	90.6	81.5	0.0	0.0	0.0
2019	81.4	91.7	82.9	-0.1	0.7	0.0
2020	83.0	92.2	84.3	0.1	0.7	0.2
2021	84.7	93.0	85.9	0.8	1.0	0.8
2022	85.9	93.8	87.1	0.7	1.2	0.8
2023	86.6	94.2	87.8	0.6	1.1	0.7
2024	87.3	94.7	88.4	0.5	1.1	0.6
2025	87.8	95.1	88.9	0.5	1.4	0.6
2026	88.3	95.5	89.4	0.4	1.7	0.6
2027	88.8	95.8	89.8	0.5	2.0	0.6
2028	89.1	96.2	90.2	0.3	2.3	0.7
2029	89.5	96.3	90.6	0.3	2.4	0.7
2030	89.8	96.3	90.8	0.2	2.3	0.5
2031	89.9	96.4	90.9	-0.1	2.4	0.3
2032	90.0	96.4	91.0	-0.1	2.4	0.3
2033	90.1	96.5	91.1	0.0	2.4	0.4
2034	90.2	96.5	91.2	0.0	2.4	0.4
2035	90.2	96.5	91.2	-0.1	2.3	0.3
2036	90.3	96.6	91.3	0.0	2.4	0.4
2037	90.4	96.6	91.3	0.1	2.4	0.4
2038	90.4	96.7	91.4	0.0	2.4	0.4
2039	90.5	96.7	91.4	0.1	2.4	0.4
2040	90.5	96.7	91.5	0.1	2.4	0.5
2041	90.6	96.8	91.5	0.2	2.4	0.5
2042	90.6	96.8	91.6	0.2	2.4	0.6
2043	90.7	96.8	91.6	0.3	2.4	0.5
2044	90.7	96.9	91.7	0.3	2.5	0.6
2045	90.8	96.9	91.7	0.3	2.4	0.6
2046	90.8	97.0	91.8	0.3	2.5	0.7
2047	90.8	97.0	91.8	0.3	2.5	0.7
2048	90.9	97.0	91.9	0.4	2.5	0.8
2049	90.9	97.1	91.9	0.4	2.6	0.8
2050	91.0	97.1	92.0	N/A	N/A	N/A

Note: The E-ZPass penetration rates for this 2020 Bring Down Letter are actual through 2019 and were actual only through 2018 for the 2019 Bring Down Letter.

As shown, differences between assumed E-ZPass market share in the current analysis are very similar to those assumed in the 2019 Bring Down Letter. Actual commercial vehicle (truck) E-ZPass market share has slightly exceeded our previous estimates. This results in new 2020 estimates being about 0.7 percent higher than previous estimates. By the end of the forecast period, commercial vehicle E-ZPass market share is about 2.6 percent higher than previous forecasts. It should be noted, too, that the maximum allowable commercial vehicle E-ZPass market share has been increased for the current analysis. In the 2019 Bring Down Letter, commercial vehicle E-ZPass market share was capped when it reached 95 percent. Given the continued robust growth observed since the last forecast, however, the cap was increased to 97.5 percent for the current study.

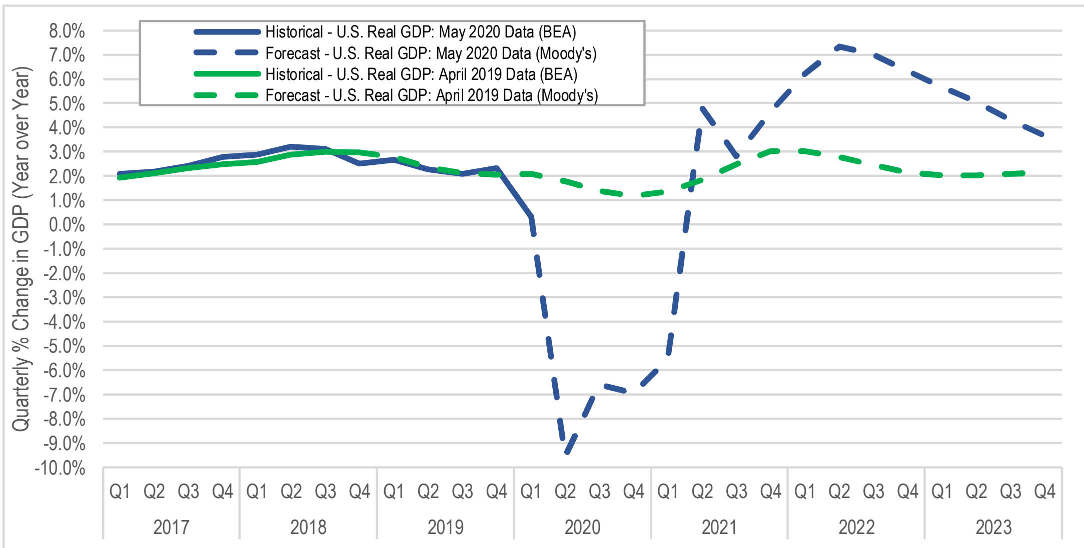
Passenger car E-ZPass market share forecast assumptions remain largely unchanged from those in the 2019 Bring Down Letter. The only difference is that beginning in 2021 there is a 0.8-percent increase in passenger car E-ZPass market share compared to the previous forecast. This is due to the fact that we are now assuming a 45-percent video surcharge on the Ticket System and MFE beginning in October 2020. This was not assumed in the 2019 Bring Down Letter and has the effect of shifting more motorists to the lower cost E-ZPass option. This difference slowly diminishes through about 2030 as the facilities reach the assumed E-ZPass market share cap of just over 90 percent.

Summary of Changes in Future Year Estimates for U.S. Gross Domestic Product and Pennsylvania Gross State Product

This section presents a comparison of the Gross Domestic Product (GDP) and Pennsylvania Gross State Product (GSP) information available for the 2020 Bring Down Letter with updated forecasts for both measures from Moody's Analytics. This information was a key input in developing estimated growth forecasts for the Turnpike System. All GDP and GSP figures in this section refer to year over year comparisons. For example, the 2nd quarter 2020 percent change would reflect the 2nd quarter of 2020 versus the 2nd quarter of 2019.

Figure 3 shows actual and estimated GDP at the time of the 2019 Bring Down Letter as well as the revised figures based on updated Moody's Analytics' forecasts as of May 2020. As shown, actual experience in 2019 closely matched the 2019 forecast, underperforming the forecast by 0.1 percent in the first and second quarters and overperforming it by 0.2 percent in the fouth quarter. However, due to the COVID-19 pandemic and the steep decline in GDP growth experienced in the first quarter of 2020, the revised GDP growth estimates in 2020 predict much lower growth in 2020. GDP is forecast to fall 9.6 percent in the second quarter of 2020, with negative growth continuing through the first quarter of 2021. Recovery from the pandemic is forecast to be strong throughout the remainder of the forecast period. GDP growth is expected to accelerate through 2021 and the first half of 2022, reaching 7.3 percent in the second quarter of 2022. GDP is then forecast to continue growing, albeit it at a slowing rate, through the end of 2023, when 3.7 percent growth is forecast.

Figure 3
Comparison of April 2019 to May 2020 Quarterly Growth Estimates of U.S. Gross Domestic Product

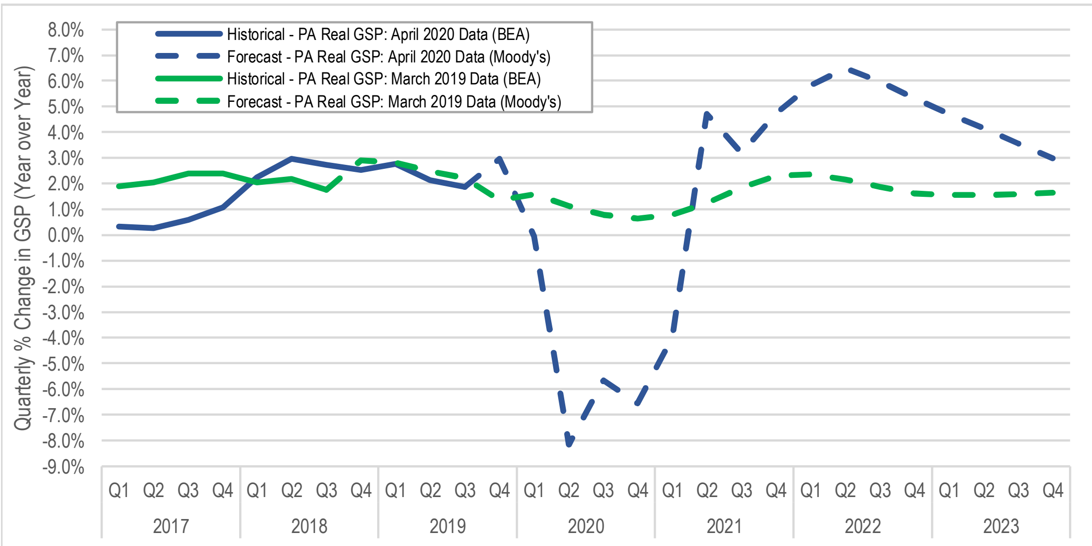


Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (April 2019 and May 2020 Releases)

Figure 4 shows GSP trend and forecast data for Pennsylvania. Revised GSP numbers for 2017 show that historical growth in 2017 was lower than previously estimated, while growth through the first three quarters of 2018 was higher. The most recent four quarters for which historical estimates exist (fourth quarter of 2018 through the third quarter of 2019) had lower growth than the prior forecast by a range of 0.0 to 0.4 percent. Like GDP, the GSP forecast for the remainder of the forecast period has been significantly altered by the COVID-19 pandemic. GSP is forecast to fall sharply in the second quarter of 2020 (-8.2 percent), with continued, although lessening, negative growth through the first quarter of 2021. A strong recovery period is forecast from the second quarter of 2021 through the end of the forecast period. GSP growth during this time is expected to peak at 6.5 percent in the second quarter of 2022. Like GDP, GSP is forecast to continue to grow at a decreasing rate through the remainder of the forecast period, slowing to 3.0-percent growth by the end of 2023.

Overall, actual GDP and GSP growth closely matched forecasted growth rates in 2019, although the COVID-19 pandemic resulted in significant negative growth in the first quarter of 2020 when continued moderate positive growth had been expected. Based on this information it might be expected that actual traffic growth in 2019 would have also closely matched CDM Smith's 2019 Bring Down Letter estimates. As will be discussed in more detail below, actual traffic and toll revenue on the total System slightly outperformed CDM Smith's estimates through February 2020. This is likely due to other factors, namely motor fuel prices and consumer confidence, that are discussed in the next section.

Figure 4
Comparison of March 2019 to April 2020 Quarterly Growth Estimates of Pennsylvania Gross State Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (March 2019 and April 2020 Releases)

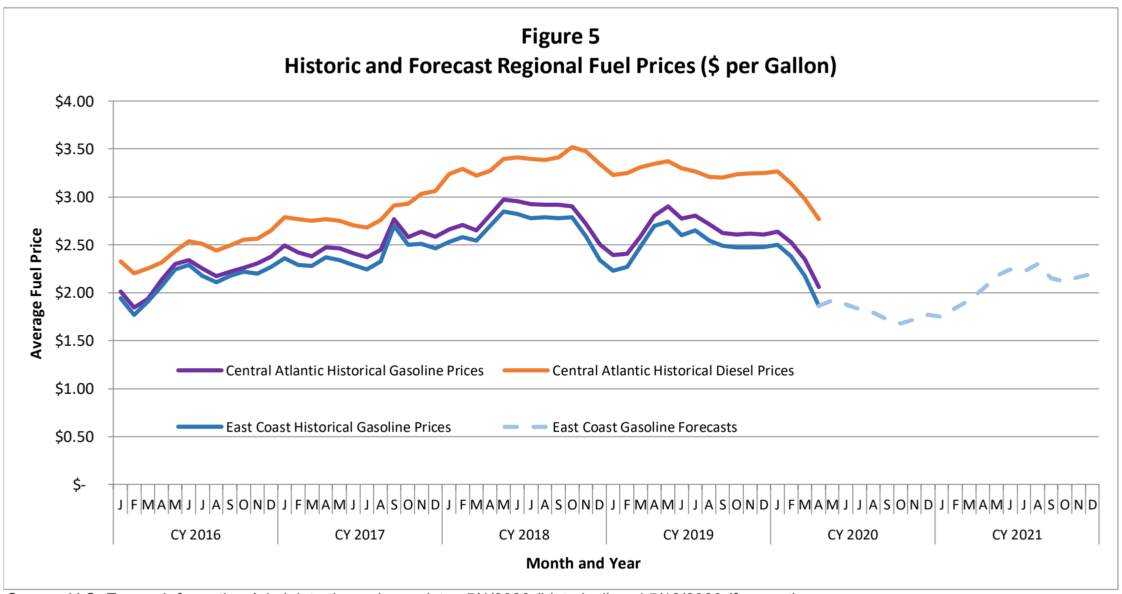
Summary of Trends in Fuel Prices

Figure 5 portrays gasoline and diesel prices for the Central Atlantic Region from January 2016 through April 2020. Gasoline prices for the East Coast are also shown. They closely mirror those for the Central Atlantic gasoline prices and are shown here because the Energy Information Administration (EIA) also provides monthly forecasts for this region. Figure 5 shows the monthly forecasts through the end of 2021.

As shown, Central Atlantic gasoline and diesel prices have followed generally similar trends throughout this period, although over the past year gasoline prices have had slightly greater price fluctuations than diesel prices. Generally, both prices have moved in tandem, decreasing over the first few months of 2016, reaching a low of $1.85 per gallon for gasoline and $2.20 per gallon for diesel in February 2016. Prices for both increased slowly but steadily throughout 2016, 2017, and early 2018, reaching a high of $2.97 per gallon for gasoline in May 2018. Prices fluctuated within a narrow range for the remainder of 2018, with diesel reaching a high of $3.52 per gallon in October 2018. Prices of both gasoline and diesel fell in late 2018 and early 2019. Between February and May 2019 prices rose, with gasoline prices increasing more rapidly than diesel prices. For the remainder of 2019, prices decreased slightly, with diesel prices remaining very stable and gasoline prices experiencing slightly more volatility.

For most of the year following the development of the 2019 Bring Down Letter motor fuel prices remained relatively stable, and even slightly declined. However, over the past two months prices have fallen sharply in response to an early March announcement that Saudi Arabia and Russia would increase oil supply in the coming months followed shortly thereafter by an extreme worldwide economic slowdown in response to the COVID-19 pandemic. As a result, prices in the Central Atlantic region fell to $2.06 and $2.77 for gasoline and diesel, respectively, in April 2020.

As noted above, the EIA only forecasts future gasoline prices for the East Coast, which is a region that is larger than and wholly encomposses the Central Atlantic region. Historically, East Coast region prices move in tandem with Central Atlantic prices but are approximately 10 to 20 cents lower. These East Coast gasoline prices are forecast to remain low, but stable, over the next few months, bottoming out in October at $1.68 per gallon. Prices are then forecast to rise slowly over the last few months of 2020 and early 2021, stabilizing between $2.12 and $2.30 per gallon in the summer and fall of 2021. Based on historical trends, Central Atlantic prices can be expected to follow the same pattern, but at slightly higher prices.



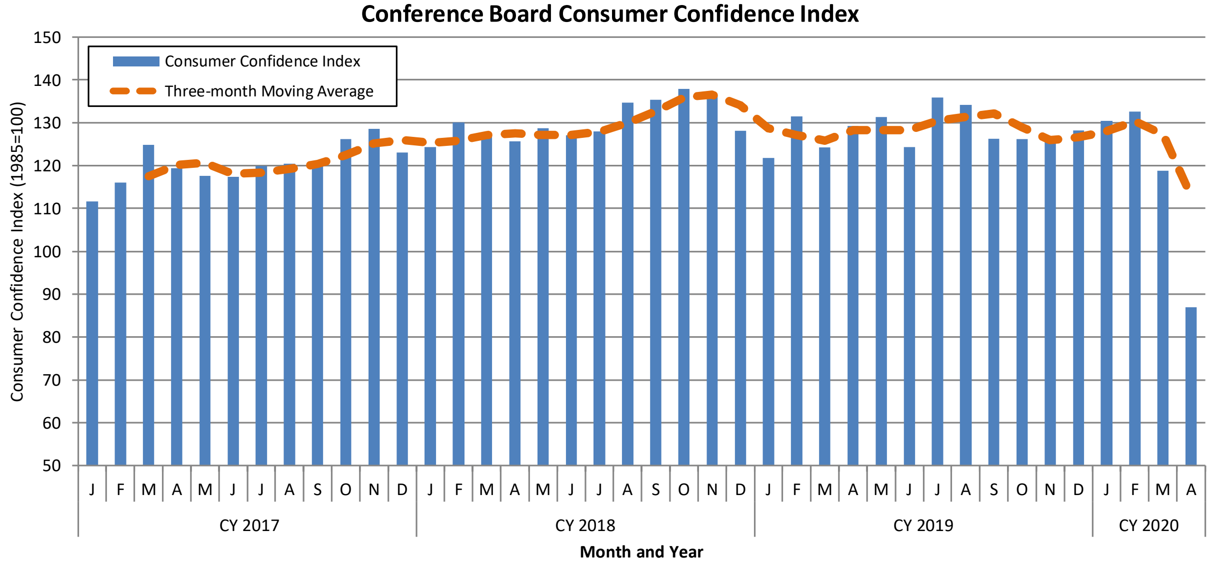
Source: U.S. Energy Information Administration, release dates 5/4/2020 (historical) and 5/12/2020 (forecast).
Note: Retail Prices in USD for Regular All Formulations Retail Gasoline and Number 2 Diesel.
Central Atlantic states include Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania.
East Coast states include Central Atlantic and New England states, Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia.

Consumer Confidence

Consumer confidence is an important measure in that it highlights consumer's confidence in making purchases, their willingness to travel more, etc. Higher consumer confidence spurs demand for various goods and services, and it can be inferred that higher demand results in higher traffic on the roadways. Consumer confidence scores are indexed to the year 1985, for which consumer confidence equaled 100.

Figure 6 shows the Conference Board Consumer Confidence Index for the period between January 2017 and April 2020. The individual blue bars show the index values for each month while the dotted line shows the three-month moving average. As shown, consumer confidence trended up through November 2018. The average exceeded 110 at the beginning of 2017, rose to 126 by the end of the year, and surpassed 130 in 2018, peaking at a high of 137.9 in October, which was the highest level of consumer confidence since September 2000. In 2019, consumer confidence fell slightly compared to 2018 but remained strong compared to historical levels. Through the first two months of 2020, consumer confidence remained strong, increasing slightly since the end of 2019. However, consumer confidence declined sharply in March and even more significantly in April, when it fell to 86.9, reflecting the widespread economic shutdowns that have been put in place as a result of the COVID-19 pandemic. April consumer confidence data is currently preliminary, based on data gathered through April 17 and therefore exclusive of influences from the end of the month. It is subject to change with the next release, and therefore may be higher or lower than currently reported.

Figure 6
Conference Board Consumer Confidence Index



Source: The Conference Board, release date 4/28/2020.

Committed Roadway Improvements

Table 15 lists major capacity-enhancing roadway improvements with dedicated funding on the Pennsylvania Turnpike System. Most of these projects are part of PTC's statewide Total Reconstruction Initiative, which is a multi-year project to widen the mainline and the Northeast Extension to six lanes (three in each direction). On the Mainline I-76/I-276 this includes work throughout the Pittsburgh, Somerset, and Philadelphia metro areas. More than 150 miles have been completed as of January 2020, with more than 15 additional miles under construction or funded. An additional 15 miles of the Northeast Extension have been widened, with 15 more miles scheduled to be completed by 2024.

In addition to roadway widening, Table 15 highlights three additional projects:

- A new cashless tolling interchange between I-276 and Lafayette Street in Montgomery County;
- An eight-mile extension of MFE to PA Route 837 in Allegheny County; and
- A 12.5-mile extension of Findlay Connector (Southern Beltway) in the Pittsburgh area.

Table 15
Major Committed Roadway Improvements on the Pennsylvania Turnpike System (1)

Milepost	Counties	Description	Actual or Assumed Start Date	Assumed Completion Date
Mainline I-76/I-276				
28-31	Alleghany and Butler	Reconstruct and widen to 3 lanes in each direction	May 2020	September 2022
102-109	Somerset County	Reconstruct and widen to 3 lanes in each direction	March 2021	Fall 2023
126-130	Somerset and Bedford	Reconstruct and widen to 3 lanes in each direction	March 2022	Fall 2024
331	Montogmery	Construct a new cashless tolling interchange at Lafayette Street	Fall 2024	Fall 2027
Northeast Extension I-476				
A31-A38	Montgomery	Reconstruct and widen to 3 lanes in each direction	Early 2018	June 2021
A38-A44	Montgomery and Bucks	Reconstruct and widen to 3 lanes in each direction	Fall 2021	Fall 2024
Mon/Fayette Expressway Turnpike 43				
PA-51 to PA Route 837	Allegheny	Construct a eight-mile extension of the existing Turnpike 43 including three new interchanges	Summer 2022	2028
Southern Beltway Toll 576				
US-22 to I-79	Washington and Allegheny	Construct a 12.5-mile cashless tolling extension of Toll 576 from the southern terminus of the Findlay Connector at US-22 to I-79 including four new interchanges	December 2016	October 2022

(1) The major committed roadway improvement projects listed here are a small subset of all projects listed in PTC's FY 2020 Ten Year Capital Plan.

These projects will serve to enhance capacity and create additional connections to other routes, all of which are expected to increase the number of travelers, and therefore revenue, on the Pennsylvania Turnpike System.

In addition to PTC-funded projects, the Pennsylvania Department of Transportation's (PennDOT's) Transportation Improvement Program (TIP) was reviewed. This review found no projects on competing or complementary routes that are expected to have an impact on Pennsylvania Turnpike System traffic and revenue.

Actual Versus Estimated Traffic and Toll Revenue

Table 16 provides a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2019 Bring Down Letter. The analysis period in this table is from March 2019 through February 2020. This twelve-month period corresponds to the period for which actual data currently exists but was estimated at the time of the 2019 Bring Down Letter. Crucially, this period is also prior to the significant reductions in toll transactions and revenue that PTC facilities began to experience in March due to the COVID-19 pandemic. Therefore, the difference between actual and estimated traffic and revenue in Table 16 reflects only normal, pre-COVID-19, conditions. **Table 17** was prepared in the same format but reflects actual versus estimated traffic and revenue only for March and April 2020; differences in this table reflect the impact COVID-19 has had on Turnpike System traffic and toll revenue.

For the non-COVID-19 impacted period shown in Table 16, Systemwide actual passenger car transactions surpassed estimates by 1.2 percent, and passenger-car toll revenue exceeded estimates by 4.2 percent. Commercial vehicle transactions exceeded estimates by 1.7 percent, and actual commercial vehicle toll revenue was 1.7 percent greater than estimates. When all vehicles are considered, actual transactions were higher than estimates by 1.2 percent and toll revenue exceeded estimates by 3.1 percent.

The same information is provided in Table 16 for each individual Turnpike toll facility. Because a separate forecast was not provided for the Gateway Toll Plaza in the 2019 Bring Down Letter, the Ticket System and Gateway are grouped together for the purposes of this analysis. Total transactions for the Ticket System and Gateway barrier were 0.7 percent higher than the forecasted traffic, while actual total revenue was 2.8 percent higher than estimated.

All barrier facilities overperformed when compared to the 2019 Bring Down Letter transaction forecasts. However, toll revenue for AKH was 2.0 percent lower than forecast. Toll revenue for the other five barrier facilities was higher than CDM Smith estimates by between 3.2 percent (MFE) and 31.2 percent (Findlay Connector) for both passenger car and commercial revenue combined.

Table 16
Comparison of Estimated and Actual Traffic Volumes and Gross Toll Revenue
From March 2019 Through February 2020 (1)
Pennsylvania Turnpike System

	Total Traffic (in Thousands)			Total Gross Toll Revenue (in Thousands)		
Facility	Estimated	Actual	Percent Difference between Actual and Estimated	Estimated	Actual	Percent Difference between Actual and Estimated
			Passenger Cars			
Ticket and Gateway Barrier	131,314	132,270	0.7	$661,274	$689,223	4.2
Delaware River Bridge	8,978	9,142	1.8	48,878	50,052	2.4
Turnpike 43	12,283	12,321	0.3	21,487	22,112	2.9
Turnpike 66	6,339	6,406	1.1	12,319	12,332	0.1
Northeast Extension (Barrier)	4,339	4,846	11.7	4,884	5,753	17.8
Turnpike I-376	7,211	7,392	2.5	11,090	11,810	6.5
Turnpike I-576	1,558	1,635	4.9	1,823	2,110	15.8
Barrier Subtotal	40,707	41,742	2.5	$100,480	$104,170	3.7
Total System	172,022	174,012	1.2	$761,754	$793,393	4.2
			Commercial Vehicles			
Ticket and Gateway Barrier	23,049	23,241	0.8	$564,359	$571,327	1.2
Delaware River Bridge	1,393	1,531	9.9	26,634	29,202	9.6
Turnpike 43	1,084	1,110	2.3	5,530	5,780	4.5
Turnpike 66	1,111	1,092	(1.7)	5,958	5,584	(6.3)
Northeast Extension (Barrier)	1,209	1,290	6.8	7,169	8,035	12.1
Turnpike I-376	1,452	1,399	(3.6)	4,649	4,573	(1.6)
Turnpike I-576	287	420	46.4	744	1,255	68.8
Barrier Subtotal	6,537	6,843	4.7	$50,683	$54,429	7.4
Total System	29,586	30,084	1.7	$615,042	$625,756	1.7
			Total Vehicles			
Ticket and Gateway Barrier	154,363	155,470	0.7	$1,225,634	$1,260,550	2.8
Delaware River Bridge	10,371	10,673	2.9	75,511	79,254	5.0
Turnpike 43	13,367	13,430	0.5	27,017	27,892	3.2
Turnpike 66	7,450	7,498	0.6	18,276	17,916	(2.0)
Northeast Extension (Barrier)	5,547	6,136	10.6	12,053	13,788	14.4
Turnpike I-376	8,663	8,792	1.5	15,739	16,383	4.1
Turnpike I-576	1,846	2,056	11.4	2,566	3,366	31.2
Barrier Subtotal	47,244	48,585	2.8	$151,163	$158,599	4.9
Total System	201,608	204,096	1.2	$1,376,796	$1,419,149	3.1

(1) These 12 months correspond to the period for which actual data exists, but was estimated at the time of CDM Smith's 2019 Bring Down Letter, and before traffic and figures were impacted by the COVID-19 pandemic.

Table 17
Comparison of Estimated and Actual Traffic Volumes and Gross Toll Revenue
March and April 2020 (1)
Pennsylvania Turnpike System

	Total Traffic (in Thousands)			Total Gross Toll Revenue (in Thousands)		
Facility	Estimated	Actual	Percent Difference between Actual and Estimated	Estimated	Actual	Percent Difference between Actual and Estimated
			Passenger Cars			
Ticket and Gateway Barrier	21,269	9,268	(56.4)	$108,438	$45,900	(57.7)
Delaware River Bridge	1,412	677	(52.1)	8,077	3,813	(52.8)
Turnpike 43	2,000	1,157	(42.1)	3,600	2,198	(39.0)
Turnpike 66	1,018	658	(35.3)	2,131	1,213	(43.1)
Northeast Extension (Barrier)	627	293	(53.3)	640	374	(41.6)
Turnpike I-376	1,156	631	(45.4)	1,990	1,034	(48.0)
Turnpike I-576	258	155	(39.9)	243	199	(18.1)
Barrier Subtotal	6,472	3,571	(44.8)	$16,681	$8,831	(47.1)
Total System	27,741	12,839	(53.7)	$125,120	$54,731	(56.3)
			Commercial Vehicles			
Ticket and Gateway Barrier	3,783	3,146	(16.8)	$96,964	$82,780	(14.6)
Delaware River Bridge	225	240	6.7	4,534	4,745	4.7
Turnpike 43	175	133	(24.1)	945	759	(19.7)
Turnpike 66	179	146	(18.2)	1,054	720	(31.7)
Northeast Extension (Barrier)	190	181	(4.5)	1,012	1,240	22.5
Turnpike I-376	236	179	(23.9)	834	626	(24.9)
Turnpike I-576	46	56	23.4	101	185	83.9
Barrier Subtotal	1,050	936	(10.8)	$8,480	$8,274	(2.4)
Total System	4,833	4,082	(15.5)	$105,443	$91,054	(13.6)
			Total Vehicles			
Ticket and Gateway Barrier	25,052	12,414	(50.4)	$205,402	$128,680	(37.4)
Delaware River Bridge	1,637	917	(44.0)	12,611	8,558	(32.1)
Turnpike 43	2,175	1,290	(40.7)	4,545	2,956	(35.0)
Turnpike 66	1,197	805	(32.8)	3,185	1,933	(39.3)
Northeast Extension (Barrier)	816	474	(41.9)	1,652	1,614	(2.3)
Turnpike I-376	1,392	810	(41.8)	2,823	1,660	(41.2)
Turnpike I-576	303	211	(30.4)	344	384	11.7
Barrier Subtotal	7,521	4,507	(40.1)	$25,161	$17,105	(32.0)
Total System	32,573	16,921	(48.1)	$230,563	$145,785	(36.8)

(1) These two months correspond to the period for which actual data was estimated at the time of CDM Smith's 2019 Bring Down Letter and now exist but were significantly impacted by the COVID-19 pandemic.

Given the positive economic performance, low motor fuel prices, and strong consumer confidence that continued through February 2020, it is not surprising that Turnpike System traffic and revenue actual experience slightly outperformed CDM Smith's estimates. As noted above, the information in Table 16 does not include actual versus estimates for March and April 2020, when the impacts of COVID-19 began to be felt in the state, region, and country. Those impacts are provided in Table 17.

Table 17 highlights the strong negative impacts COVID-19 had on Turnpike travel demand, especially given the System's traffic and toll revenue overperformance through February 2020. The following items are a partial listing of official actions taken by the Commonwealth of Pennsylvania in response to the pandemic and are provided to give context as to the extent that travel on PTC facilities was negatively impacted throughout the course of the past two months:

- March 6: Emergency disaster declaration signed;
- March 11: State employees are banned from travelling and large meetings, conferences, trainings, and community events postponed without prior approval from the governor's office;
- March 13: Montgomery County schools closed;
- March 14: Delaware County schools closed;
- March 15: Bucks and Chester Counties schools closed;
- March 16: All K-12 schools state-wide closed for 10 business days;
- March 17: State-wide closure of dine-in restaurants, childcare facilities, adult day care centers, and senior community centers and all state employees instructed to work from home if feasible;
- March 23: Stay-at-home order issued for 7 of 67 counties and all non-life sustaining businesses ordered to close physical locations;
- March 24-31: Stay-at-home order gradually extended to 33 of 67 counties;
- April 1: State-wide stay-at-home order issued;
- April 9: Announcement that schools will remain closed through end of school year; and
- April 20: State-wide stay-at-home order extended until May 8.

Actions taken to start reopening the Commonwealth's economy did not begin to take effect until May and therefore their effects on traffic and revenue are not reflected in the data presented in this Bring Down Letter.

Systemwide, total transactions fell short of estimates by 48.1 percent, and total toll revenue was 36.8 percent lower than estimates for March and April. Passenger-car traffic was significantly more affected than commercial vehicle traffic, with actual passenger-car traffic and revenue falling short of estimates by 53.7 percent and 56.3 percent, respectively. Commercial vehicle traffic and revenue was still lower than estimates, but by only 15.5 percent and 13.6 percent, respectively.

The same information is provided in Table 17 for each of the Turnpike toll facilities. Total transactions for the Ticket System and Gateway barrier were 50.4 percent lower than the forecasted traffic, while actual total revenue was 37.4 percent lower than estimated. Impacts to barrier facilities were slightly less, with total transactions being 40.1 percent lower and total revenue being 32.0 percent lower than estimated in the 2019 Bring Down Letter. As with the Ticket System, commercial vehicles were much less impacted than passenger cars, with passenger-car transactions falling 44.8 percent short of estimates and commercial-vehicle traffic only being 10.8 percent lower. Passenger-car revenue was 47.1 percent lower than estimated, while commercial-vehicle revenue was only 2.4 percent lower.

Estimated COVID-19 Traffic and Toll Revenue Impacts

A key undertaking of this new forecast was to estimate the traffic and toll revenue impacts related to the COVID-19 pandemic over the forecast period. CDM Staff worked closely with PTC staff in collecting and reviewing daily traffic and toll revenue data for each of the Turnpike systems, by vehicle class (passenger cars versus commercial vehicles). Actual traffic and toll revenue experience through the end of April 2020 was collected as part of this analysis. Total Turnpike System traffic and revenue losses for March and April 2020 were shown above in Table 3 for the total System. A timeline of key Pennsylvania closure events was presented above in the section **Actual Versus Estimated Traffic and Toll Revenue** that contributed (along with similar closures in states throughout the region) to these unprecedented declines in travel demand. PTC also made the decision to suspend all cash toll collection on the Turnpike System beginning on March 16.

This section will provide a summary of the underlying assumptions CDM Smith has made in estimating the depth and longevity of the COVID-19 related impacts on Turnpike System traffic and toll revenue. Of course, actual relaxing of stay-at-home orders, the opening of businesses, schools, and general social activity is still an unknown. Some relaxing (or partial reopening) is being proposed throughout the month of May, so the process of returning to some level of pre-COVID-19 activity has begun. The speed at which it continues will likely be contingent on the success of these early partial openings.

There were three weeks of steeply declining traffic and revenue on the Turnpike System, beginning with the week of March 8. Steep declines continued through the week of March 22. Volumes losses stabilized at that point and have not declined further through the end of April. Peak daily traffic reductions reached about 70 percent for passenger cars, but only about 30 percent for commercial vehicles. CDM Smith's forecasts assume the peak declines continue at these levels through the first week of May and then begin to slowly moderate such that by the end of September 2020 both passenger and commercial traffic reach levels that are about 10 to 12 percent below normal levels. This assumes a gradual relaxation in the stay at home orders and social distances guidelines over this period, as well as a return to cash toll collection on the Turnpike System by mid-June.

From October 2020 through FY 2025-26, CDM Smith assumes there will be continued residual impacts of COVID-19 on the economy and social behavior. Over this period, the negative impacts of COVID-19 gradually decline from the 10- to 12-percent levels at the end of September 2020 to zero by the end of FY 2025-26.

Table 18 shows the assumed COVID-19 related impacts on estimated traffic and toll revenue over the forecast period. FY 2019-2020 total traffic volumes are reduced by 26.3 million, or about 12.9 percent of total transactions. Toll revenue is reduced by about $157.2 million over the same time period (10.9 percent of total toll revenue). Only three months (March, April, and May) are impacted in FY 2019-20. While the peak daily negative impacts occur in FY 2019-20, the biggest total declines are assumed in FY 2020-21 since this will include 12 months of negative impacts. As shown in Table 18, total transaction losses of 28.0 million are assumed (13.9 percent of total transactions), along with toll revenue losses of $211.0 million (13.4 percent of total toll revenue). After that, negative traffic and toll revenue impacts are estimated to decline over the next five years. By FY 2025-26 total traffic and toll revenue losses are assumed to be only about 0.4 percent and 0.5 percent, respectively. No COVID-19 impact is assumed by FY 2026-27.

Estimated Traffic and Gross Toll Revenue

Updated traffic and gross toll revenue estimates were developed through FY 2049-50 incorporating the following changes into the forecast. All these changes were described in previous sections.

- Actual traffic and revenue experience through April 2020;
- Impacts related to COVID-19 (Table 18);
- Revised estimates of E-ZPass penetration rates (Table 14); and
- Revised toll increase assumptions (Table 13).

Table 18
Estimated Systemwide COVID-19 Impacts on Annual Transactions and Gross Toll Revenue (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year		Annual Traffic: Passenger Cars	Annual Traffic: Commercial Vehicles	Annual Traffic: Total Vehicles	Annual Gross Toll Revenue: Passenger Cars	Annual Gross Toll Revenue: Commercial Vehicles	Annual Gross Toll Revenue: Total Vehicles
		Annual Traffic and Gross Toll Revenue Impacts					
2018-19	(2,3,4)	0	0	0	$0	$0	$0
2019-20	(5,6,7)	(24,801)	(1,515)	(26,316)	(127,363)	(29,866)	(157,229)
2020-21	(8,9,10,11)	(24,627)	(3,330)	(27,956)	(140,070)	(70,976)	(211,046)
2021-22	(11,12,13)	(4,108)	(1,958)	(6,066)	(22,350)	(45,749)	(68,099)
2022-23	(11)	(2,738)	(1,306)	(4,044)	(14,900)	(30,500)	(45,400)
2023-24	(11)	(1,826)	(870)	(2,696)	(9,933)	(20,333)	(30,266)
2024-25	(11)	(1,217)	(580)	(1,797)	(6,622)	(13,555)	(20,178)
2025-26	(11)	(609)	(290)	(899)	(3,311)	(6,778)	(10,089)
2026-27		0	0	0	0	0	0
		Percent Impacts on Annual Traffic and Gross Toll Revenue					
2018-19	(2,3,4)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019-20	(5,6,7)	(14.3)	(5.0)	(12.9)	(15.9)	(4.7)	(10.9)
2020-21	(8,9,10,11)	(14.4)	(11.1)	(13.9)	(15.8)	(10.3)	(13.4)
2021-22	(11,12,13)	(2.4)	(6.4)	(3.0)	(2.4)	(6.3)	(4.1)
2022-23	(11)	(1.6)	(4.2)	(2.0)	(1.6)	(4.0)	(2.6)
2023-24	(11)	(1.0)	(2.8)	(1.3)	(1.0)	(2.5)	(1.7)
2024-25	(11)	(0.7)	(1.8)	(0.9)	(0.6)	(1.6)	(1.1)
2025-26	(11)	(0.3)	(0.9)	(0.4)	(0.3)	(0.8)	(0.5)
2026-27		0.0	0.0	0.0	0.0	0.0	0.0

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) Reflects actual traffic and revenue experience.
(3) The Findlay Connector converted to AET in early June 2018.
(4) The partial I-95 Interchange (Stage 1) opened in September 2018.
(5) AKH and Gateway converted to AET at the end of October 2019.
(6) Reflects actual experience through April 2020.
(7) March 16, 2020 cash collection on Ticket System and PA 43 temporarily suspended.
(8) June 14, 2020 cash collection on Ticket System and PA 43 is assumed to resume.
(9) Reflects Ticket System and PA 43 45% cash surcharge effective on October 1, 2020.
(10) Reflects 6% Systemwide toll increase effective October 1, 2020. No January 2021 toll increase will occur.
(11) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(12) Reflects Ticket System and PA 43 AET conversion effective October 1, 2021.
(13) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Other assumptions remain unchanged from the 2019 Bring Down Letter including:

- Structure of the commercial vehicle discount program; and
- Long-range economic indicators.

Table 19 shows the total traffic and toll revenue for the Ticket System only. Data for FY 2017-18 and FY 2018-19 reflect a full year of actual experience and FY 2019-20 includes 11 months of actual experience (through April 2020). Total toll transactions increase from 152.4 million to 184.7 million over the forecast period, an average annual increase of 0.6 percent. Gross toll revenue increases from $1.0 billion to $4.4 billion by FY 2049-50. This amounts to an average annual increase of 4.6 percent, reflecting the impact of normal growth plus the annual rate adjustments.

The same information is shown for the Barrier System in **Table 20**. Total annual toll transactions are estimated to grow from 48.8 million to 72.7 million over the forecast period, an average rate of 1.3 percent. New toll transactions from the opening of the Southern Beltway in January 2022 contribute to total barrier growth rates. Barrier System total revenue is estimated to increase from $160.7 million to $739.0 million over the forecast period, an annual rate of 4.9 percent, reflecting normal growth plus annual rate adjustments.

Table 21 identifies total combined transactions and gross toll revenue and also factors in estimated toll discounts and adjustments. The vast majority of the discounts and adjustments result from commercial account toll adjustments due to the Turnpike's volume discount program. The volume discount program allows for a 3.0-percent discount to be provided to accounts that accrue $20,000 or more in monthly tolls. Discounts and adjustments shown in Table 21 assume no further changes to the post-paid commercial volume discount program during the forecast period. The result is that the current forecasts have a negative adjustment applied for FY 2017-18; beyond that the adjustment gradually increases until it equals approximately 2.1 percent of the commercial vehicle gross toll revenue in FY 2024-25 and beyond.

As shown in Table 21, total toll transactions are expected to increase from 201.2 million to 257.4 million over the forecast period. This amounts to an average annual growth rate of 0.8 percent. Total net toll revenue is estimated to grow from approximately $1.2 billion in FY 2017-18 to $5.1 billion by FY 2049-50. This reflects an average annual growth rate in gross toll revenue of 4.6 percent. Again, this includes the impact of normal growth plus annual toll rate adjustments.

Table 22 provides a comparison of the current traffic and net toll revenue forecast with the forecast developed as part of the 2019 Bring Down Letter. As shown, the revised total toll transactions are significantly less than those of the 2019 Bring Down Letter through FY 2020-21 due to the effects of the COVID-19 pandemic. As the economic effects of the pandemic begin to fade, the difference between the 2019 Bring Down Letter and current estimates lessen, reaching negative

Table 19
Ticket System: Estimated Annual Transactions and Gross Toll Revenue (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

	Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year	Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2017-18 (2)	130,805	21,582	152,387	$579,692	$462,754	$1,042,446
2018-19 (2,3)	129,559	22,020	151,579	626,685	524,309	1,150,994
2019-20 (4,5)	109,378	21,032	130,410	564,122	528,490	1,092,612
2020-21 (6,7,8,9)	107,044	19,691	126,735	627,153	541,900	1,169,053
2021-22 (9,10)	121,171	20,756	141,927	761,034	593,587	1,354,622
2022-23 (9)	122,277	21,390	143,668	792,319	639,663	1,431,983
2023-24 (9)	123,742	21,902	145,645	839,010	685,511	1,524,521
2024-25 (9)	125,445	22,334	147,780	890,199	731,218	1,621,418
2025-26 (9)	127,363	22,785	150,148	942,193	776,577	1,718,770
2026-27	129,361	23,232	152,593	989,636	817,628	1,807,265
2027-28	130,866	23,448	154,314	1,031,196	849,635	1,880,831
2028-29	132,340	23,687	156,027	1,070,512	882,321	1,952,833
2029-30	133,773	23,962	157,735	1,111,817	919,196	2,031,013
2030-31	135,145	24,235	159,380	1,156,424	957,571	2,113,995
2031-32	136,490	24,508	160,999	1,203,602	997,408	2,201,010
2032-33	137,821	24,781	162,603	1,252,463	1,038,761	2,291,224
2033-34	139,108	25,054	164,161	1,302,760	1,081,690	2,384,449
2034-35	140,355	25,326	165,681	1,354,593	1,126,264	2,480,858
2035-36	141,568	25,599	167,167	1,408,026	1,172,552	2,580,578
2036-37	142,759	25,867	168,626	1,463,250	1,220,350	2,683,599
2037-38	143,871	26,127	169,998	1,519,699	1,269,584	2,789,283
2038-39	144,945	26,387	171,332	1,577,810	1,320,695	2,898,505
2039-40	146,003	26,648	172,651	1,637,883	1,373,756	3,011,638
2040-41	147,041	26,909	173,950	1,699,918	1,428,850	3,128,768
2041-42	148,054	27,172	175,226	1,763,932	1,486,060	3,249,992
2042-43	149,037	27,435	176,472	1,829,888	1,545,466	3,375,354
2043-44	149,994	27,699	177,693	1,897,913	1,607,160	3,505,074
2044-45	150,928	27,964	178,892	1,968,076	1,671,228	3,639,304
2045-46	151,834	28,231	180,065	2,040,404	1,737,751	3,778,155
2046-47	152,728	28,498	181,227	2,115,132	1,806,835	3,921,967
2047-48	153,611	28,767	182,378	2,192,366	1,878,589	4,070,955
2048-49	154,498	29,038	183,536	2,272,420	1,953,192	4,225,613
2049-50	155,391	29,312	184,703	2,355,398	2,030,758	4,386,156

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) Reflects actual traffic and revenue experience.
(3) The partial I-95 Interchange (Stage 1) opened in September 2018.
(4) Reflects actual experience through April 2020.
(5) March 16, 2020 cash collection on Ticket System temporarily suspended.
(6) June 14, 2020 cash collection on Ticket System is assumed to resume.
(7) Reflects Ticket System 45% cash surcharge effective on October 1, 2020.
(8) Reflects 6% Systemwide toll increase effective October 1, 2020. No January 2021 toll increase will occur.
(9) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(10) Reflects Ticket System AET conversion effective October 1, 2021.

Table 20
Barrier Systems: Estimated Annual Transactions and Gross Toll Revenue (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2017-18	(2,3)	41,707	7,068	48,775	$99,048	$61,664	$160,712
2018-19	(2,4,5)	43,870	7,605	51,475	113,893	70,498	184,392
2019-20	(6,7,8)	39,281	7,508	46,789	111,040	75,841	186,882
2020-21	(9,10,11,12)	38,796	6,932	45,728	119,860	74,165	194,025
2021-22	(12,13,14)	45,581	7,696	53,277	142,812	81,322	224,134
2022-23	(12)	49,170	8,548	57,718	153,687	89,975	243,662
2023-24	(12)	50,394	8,868	59,261	163,633	97,006	260,640
2024-25	(12)	51,489	9,129	60,619	174,081	103,916	277,997
2025-26	(12)	52,430	9,346	61,776	184,555	110,704	295,259
2026-27		53,293	9,538	62,831	194,171	116,842	311,013
2027-28		53,788	9,605	63,393	202,499	121,627	324,126
2028-29		54,281	9,683	63,964	210,518	126,450	336,969
2029-30		54,749	9,778	64,527	218,751	131,777	350,527
2030-31		55,182	9,871	65,053	227,192	137,298	364,490
2031-32		55,581	9,964	65,545	235,883	143,025	378,907
2032-33		55,966	10,056	66,021	244,902	148,963	393,865
2033-34		56,331	10,147	66,478	254,242	155,125	409,366
2034-35		56,687	10,238	66,925	263,867	161,500	425,367
2035-36		57,033	10,329	67,362	273,786	168,086	441,872
2036-37		57,370	10,419	67,789	284,019	174,894	458,913
2037-38		57,691	10,508	68,199	294,494	181,919	476,413
2038-39		58,009	10,596	68,605	305,277	189,213	494,490
2039-40		58,326	10,685	69,011	316,426	196,786	513,212
2040-41		58,640	10,773	69,413	327,940	204,647	532,587
2041-42		58,945	10,862	69,807	339,806	212,806	552,612
2042-43		59,241	10,950	70,190	352,020	221,272	573,292
2043-44		59,528	11,037	70,565	364,602	230,058	594,660
2044-45		59,808	11,125	70,933	377,563	239,177	616,740
2045-46		60,078	11,212	71,290	390,907	248,639	639,545
2046-47		60,341	11,299	71,640	404,660	258,458	663,118
2047-48		60,599	11,386	71,985	418,848	268,650	687,498
2048-49		60,857	11,474	72,331	433,534	279,243	712,777
2049-50		61,117	11,562	72,679	448,735	290,255	738,989

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) Reflects actual traffic and revenue experience.
(3) The two Northeast Extension Barrier Plazas were converted to AET at the end of April 2018.
(4) The Findlay Connector converted to AET in early June 2018.
(5) The partial I-95 Interchange (Stage 1) opened in September 2018.
(6) AKH and Gateway converted to AET at the end of October 2019.
(7) Reflects actual experience through April 2020.
(8) March 16, 2020 cash collection on PA 43 (Mon-Fayette Expressway) temporarily suspended.
(9) June 14, 2020 cash collection on PA 43 is assumed to resume.
(10) Reflects PA 43 45% cash surcharge effective on October 1, 2020.
(11) Reflects 6% Systemwide toll increase effective October 1, 2020. No January 2021 toll increase will occur.
(12) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(13) Reflects PA 43 (Mon-Fayette Expressway) AET conversion effective October 1, 2021.
(14) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 21
Total System: Estimated Annual Transactions and Gross Toll Revenue (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue			Discounts	
		Passenger	Commercial	Total	Passenger	Commercial	Total	and	Net
Fiscal Year		Cars	Vehicles	Vehicles	Cars	Vehicles	Vehicles	**Adjustments**	**Toll Revenue**
2017-18	(2,3)	172,512	28,650	201,162	$678,741	$524,418	$1,203,158	$(6,552)	$1,196,606
2018-19	(2,4,5)	173,429	29,625	203,054	740,578	594,808	1,335,385	(8,349)	1,327,037
2019-20	(6,7,8)	148,659	28,540	177,199	675,163	604,331	1,279,494	(9,483)	1,270,011
2020-21	(9,10,11,12)	145,840	26,623	172,463	747,013	616,066	1,363,078	(10,687)	1,352,391
2021-22	(12,13,14)	166,752	28,452	195,203	903,846	674,909	1,578,756	(12,546)	1,566,210
2022-23	(12)	171,447	29,938	201,385	946,006	729,638	1,675,644	(14,243)	1,661,401
2023-24	(12)	174,136	30,770	204,906	1,002,643	782,517	1,785,160	(15,822)	1,769,339
2024-25	(12)	176,935	31,464	208,398	1,064,281	835,134	1,899,415	(17,323)	1,882,092
2025-26	(12)	179,793	32,132	211,925	1,126,749	887,280	2,014,029	(18,405)	1,995,624
2026-27		182,654	32,770	215,424	1,183,807	934,470	2,118,277	(19,384)	2,098,894
2027-28		184,654	33,053	217,707	1,233,695	971,262	2,204,957	(20,147)	2,184,810
2028-29		186,621	33,371	219,991	1,281,030	1,008,771	2,289,801	(20,925)	2,268,876
2029-30		188,521	33,740	222,261	1,330,568	1,050,973	2,381,540	(21,800)	2,359,740
2030-31		190,327	34,106	224,433	1,383,616	1,094,869	2,478,485	(22,711)	2,455,774
2031-32		192,072	34,472	226,544	1,439,484	1,140,433	2,579,917	(23,656)	2,556,261
2032-33		193,787	34,837	228,624	1,497,365	1,187,724	2,685,089	(24,637)	2,660,452
2033-34		195,439	35,201	230,640	1,557,001	1,236,814	2,793,816	(25,655)	2,768,160
2034-35		197,042	35,565	232,607	1,618,460	1,287,764	2,906,224	(26,712)	2,879,512
2035-36		198,600	35,929	234,529	1,681,812	1,340,638	3,022,450	(27,809)	2,994,642
2036-37		200,128	36,287	236,415	1,747,269	1,395,244	3,142,512	(28,941)	3,113,571
2037-38		201,562	36,635	238,197	1,814,192	1,451,503	3,265,696	(30,108)	3,235,587
2038-39		202,954	36,983	239,937	1,883,087	1,509,908	3,392,995	(31,320)	3,361,675
2039-40		204,329	37,333	241,661	1,954,308	1,570,542	3,524,850	(32,578)	3,492,272
2040-41		205,680	37,683	243,363	2,027,858	1,633,497	3,661,355	(33,884)	3,627,471
2041-42		207,000	38,033	245,033	2,103,739	1,698,866	3,802,604	(35,239)	3,767,365
2042-43		208,278	38,384	246,662	2,181,908	1,766,737	3,948,646	(36,647)	3,911,998
2043-44		209,522	38,736	248,259	2,262,515	1,837,218	4,099,734	(38,109)	4,061,624
2044-45		210,735	39,089	249,824	2,345,639	1,910,404	4,256,044	(39,627)	4,216,416
2045-46		211,913	39,443	251,356	2,431,310	1,986,390	4,417,700	(41,204)	4,376,496
2046-47		213,070	39,797	252,867	2,519,792	2,065,293	4,585,085	(42,840)	4,542,245
2047-48		214,210	40,153	254,362	2,611,214	2,147,239	4,758,453	(44,540)	4,713,913
2048-49		215,356	40,512	255,867	2,705,955	2,232,436	4,938,390	(46,307)	4,892,083
2049-50		216,508	40,874	257,382	2,804,133	2,321,013	5,125,146	(48,145)	5,077,001

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) Reflects actual traffic and revenue experience.
(3) The two Northeast Extension Barrier Plazas were converted to AET at the end of April 2018.
(4) The Findlay Connector converted to AET in early June 2018.
(5) The partial I-95 Interchange (Stage 1) opened in September 2018.
(6) AKH and Gateway converted to AET at the end of October 2019.
(7) Reflects actual experience through April 2020.
(8) March 16, 2020 cash collection on Ticket System and PA 43 temporarily suspended.
(9) June 14, 2020 cash collection on Ticket System and PA 43 is assumed to resume.
(10) Reflects Ticket System and PA 43 45% cash surcharge effective on October 1, 2020.
(11) Reflects 6% Systemwide toll increase effective October 1, 2020. No January 2021 toll increase will occur.
(12) Reflects COVID-19 related recessionary impacts through FY 2025-26.
(13) Reflects Ticket System and PA 43 AET conversion effective October 1, 2021.
(14) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 22
Comparison of New Traffic and Revenue
Estimates with those from the 2019 Bring Down Letter
Pennsylvania Turnpike

Traffic and Toll Revenue in Thousands

	Total Annual Transactions			Annual Net Toll Revenue		
Fiscal Year	Current Estimates (1)	2019 Bring Down Letter (2)	Percent Difference	Current Estimates (1)	2019 Bring Down Letter (2)	Percent Difference
2017-18	201,162	201,162	0.0	$1,196,606	$1,196,606	0.0
2018-19	203,054	202,051	0.5	1,327,037	1,306,722	1.6
2019-20	177,199	201,542	(12.1)	1,270,011	1,390,057	(8.6)
2020-21	172,463	201,100	(14.2)	1,352,391	1,473,739	(8.2)
2021-22	195,203	203,711	(4.2)	1,566,210	1,555,172	0.7
2022-23	201,385	208,716	(3.5)	1,661,401	1,647,361	0.9
2023-24	204,906	211,394	(3.1)	1,769,339	1,742,814	1.5
2024-25	208,398	214,001	(2.6)	1,882,092	1,844,500	2.0
2025-26	211,925	216,655	(2.2)	1,995,624	1,946,821	2.5
2026-27	215,424	219,283	(1.8)	2,098,894	2,039,137	2.9
2027-28	217,707	221,593	(1.8)	2,184,810	2,124,036	2.9
2028-29	219,991	223,895	(1.7)	2,268,876	2,206,883	2.8
2029-30	222,261	226,188	(1.7)	2,359,740	2,295,186	2.8
2030-31	224,433	228,424	(1.7)	2,455,774	2,386,729	2.9
2031-32	226,544	230,630	(1.8)	2,556,261	2,482,933	3.0
2032-33	228,624	232,806	(1.8)	2,660,452	2,584,008	3.0
2033-34	230,640	234,916	(1.8)	2,768,160	2,688,432	3.0
2034-35	232,607	236,976	(1.8)	2,879,512	2,796,466	3.0
2035-36	234,529	238,984	(1.9)	2,994,642	2,908,287	3.0
2036-37	236,415	240,948	(1.9)	3,113,571	3,023,823	3.0
2037-38	238,197	242,805	(1.9)	3,235,587	3,142,370	3.0
2038-39	239,937	244,619	(1.9)	3,361,675	3,264,899	3.0
2039-40	241,661	246,403	(1.9)	3,492,272	3,391,799	3.0
2040-41	243,363	248,142	(1.9)	3,627,471	3,523,128	3.0
2041-42	245,033	249,849	(1.9)	3,767,365	3,659,011	3.0
2042-43	246,662	251,513	(1.9)	3,911,998	3,799,505	3.0
2043-44	248,259	253,145	(1.9)	4,061,624	3,944,855	3.0
2044-45	249,824	254,745	(1.9)	4,216,416	4,095,230	3.0
2045-46	251,356	256,309	(1.9)	4,376,496	4,250,751	3.0
2046-47	252,867	257,853	(1.9)	4,542,245	4,411,783	3.0
2047-48	254,362	259,381	(1.9)	4,713,913	4,578,572	3.0
2048-49	255,867	260,919	(1.9)	4,892,083	4,751,678	3.0
2049-50	257,382	N/A	N/A	5,077,001	N/A	N/A

(1) Reflects actual traffic and revenue experience through April 2020.
(2) Reflects actual traffic and revenue experience through February 2019.

1.7 percent by FY 2028-29. Over the remainder of the forecast period, the updated estimates are forecast to grow slightly slower than previously forecast such that by FY 2048-49 we now estimate that total toll transactions will be about 1.9 percent lower than the previous estimates. This longer-term difference is partly a result of slightly higher toll increase assumptions in the current forecast, including the 45-percent cash surcharge on Ticket System and MFE traffic as well as the six-percent Systemwide toll increase in October 2020. The 45-percent increase is new and the six-percent October 2020 increase was previously assumed to be a five-percent increase in January 2020.

Due to the COVID-19 pandemic FY 2019-20 (which includes 11 months of actual data) and FY 2020-21 are each forecast to have approximately eight percent less revenue than previously estimated. Yet, revenue is now forecast to grow faster and despite reduced transactions FY 2021-22 revenue is now estimated to be 0.7 percent higher than previously estimated. Revenue is expected to continue growing faster than previously forecast such that by the end of the prior forecast period in FY 2048-49 revenue is now estimated to be 3.0 percent higher. Unlike with traffic forecasts, new revenue forecasts remain higher than previous forecasts over the entire forecast period. This is because average toll rates for commercial vehicles are now higher than previously assumed. This occurs due to lower E-ZPass market share assumptions for commercial vehicles at recently converted AET facilities over the forecast period. Revenue is also positively impacted as a result of a 45-percent cash surcharge on the Ticket System and MFE and a six-percent toll increase in October 2020.

* * *

Fiduciary Disclaimer

Current accepted professional practices and procedures were used in the development of these updated traffic and revenue forecasts. However, as with any forecast of the future, there may be differences between forecasted and actual results caused by events and circumstances beyond the control of CDM Smith. In formulating its forecasts, CDM Smith has reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the PTC and other local and state agencies. CDM Smith also has relied upon the reasonable assurances of some independent parties and is not aware of any facts that would make such information misleading.

CDM Smith has 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 to 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 state and local agencies, including the PTC.

These estimates and projections may not be indicative of actual or future values and are therefore subject to substantial uncertainty. Future developments 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 forecasts or projections contained within this report.

While CDM Smith believes that some of the projections or other forward-looking statements contained within the report are based on reasonable assumptions as of the date in the report, 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 this report, 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 the PTC and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to PTC with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to PTC. PTC 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.

* * *

Sincerely,

Scott A. Allaire

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April 29, 2019

Mr. Nikolaus Grieshaber
Chief Financial Officer
Pennsylvania Turnpike Commission
700 South Eisenhower Boulevard
Middletown, PA 17057

Subject: Pennsylvania Turnpike Commission 2019 Traffic and Toll Revenue Bring Down Letter

Dear Mr. Grieshaber:

The Pennsylvania Turnpike Commission (PTC or Commission) has asked CDM Smith to prepare this Bring Down Letter (2019 Bring Down Letter) to be used in support of the Commission's ongoing capital improvement program and other funding requirements. This letter provides an update to the *2018 Traffic and Toll Revenue Forecast Study* (2018 Forecast Study), dated April 20, 2018. The 2018 Forecast Study presented traffic and gross toll revenue forecasts from fiscal year (FY) 2016-17 through FY 2047-48. A fiscal year runs from June 1 through May 31. Actual traffic and revenue data were available through February 2018 for the 2018 Forecast Study and through February 2019 for the current 2019 Bring Down Letter.

This 2019 Bring Down Letter presents actual traffic and toll revenue data through February 2019 (12 months of additional data since completion of the 2018 Forecast Study), provides updated traffic and revenue forecasts through FY 2048-49, and compares the new forecasts with those from the 2018 Forecast Study. The updated forecasts reflect the following changes from the 2018 Forecast Study.

- E-ZPass market share estimates over the forecast period were reviewed and updated.
- Actual traffic and toll revenue data were updated to include information through February 2019.
- A review and adjustment of short-term traffic and revenue growth rates was conducted through 2022 based on the most recent actual trends.
- A review and adjustment of longer-term growth rate assumptions (beyond 2022) was conducted. Normally, longer term growth rates from the 2018 Forecast Study would not be adjusted in a Bring Down Letter. But in this case, commercial vehicle growth has been

higher than estimated in the 12 months since the 2018 Forecast Study was conducted. As such, we slightly dampened longer-term growth estimates for commercial vehicles.

- All Electronic Toll (AET) Conversion at AKH and Gateway is now scheduled to occur in October 2019 and those impacts are included in this 2019 Bring Down Letter. There was no scheduled conversion for these two facilities at the time of the 2018 Forecast Study, and were, therefore, not included at that time.
- A review of the major roadway improvements for any changes since completion of the 2018 Forecast Study.

These differences are described in more detail in the following sections.

It is important to note that the intent of this Bring Down Letter is to review and revise, if warranted, the short term forecasts originally developed as part of the 2018 Forecast Study. Any adjustments would be made based on the 12 months of new actual traffic and toll revenue experience since the 2018 Forecast Study. Since this Bring Down Letter does not include a reevaluation of the longer term economic growth forecasts, critical attention was placed on a review of near term growth through calendar year (CY) 2022 only. Growth rates beyond 2022 have been adjusted slightly down from those in the 2018 Forecast Study to compensate for higher than expected recent commercial vehicle growth.

The socioeconomic trends and forecasts for Pennsylvania, the surrounding states, and the United States, which formed the basis for the long-term traffic and toll revenue forecasts are provided in the 2018 Forecast Study. Additional information regarding the Pennsylvania Turnpike (Turnpike), such as historical toll rate increases, sample toll rates, E-ZPass market share, and more, are also provided in the 2018 Forecast Study.

Historical Toll Rate Increases and Current Toll Rates

Table 1 provides a summary of historical toll rate increases on the Turnpike System from 1987 to the most recent increase implemented on January 6, 2019. Rate increases are presented as a percent increase over the prior toll rate for cash and E-ZPass. Note that toll rate increases are generally applied systemwide, although occasional exemptions occur, as indicated in Table 1.

Periodic toll rate increases were implemented on the Turnpike System in 1987, 1991, 2004, and 2009. During the 2000s decade, E-ZPass was phased into the Turnpike System. Until CY 2011, cash and E-ZPass toll rates always increased by the same percent. The toll rate schedule implemented on January 2, 2011 created a differential between cash and E-ZPass, as E-ZPass rates were increased by 3.0 percent and cash toll were increased by 10.0 percent. Rate increases differed between cash and E-ZPass in the ensuing three years (2012, 2013 and 2014) further increasing the differential between cash and E-ZPass toll rates.

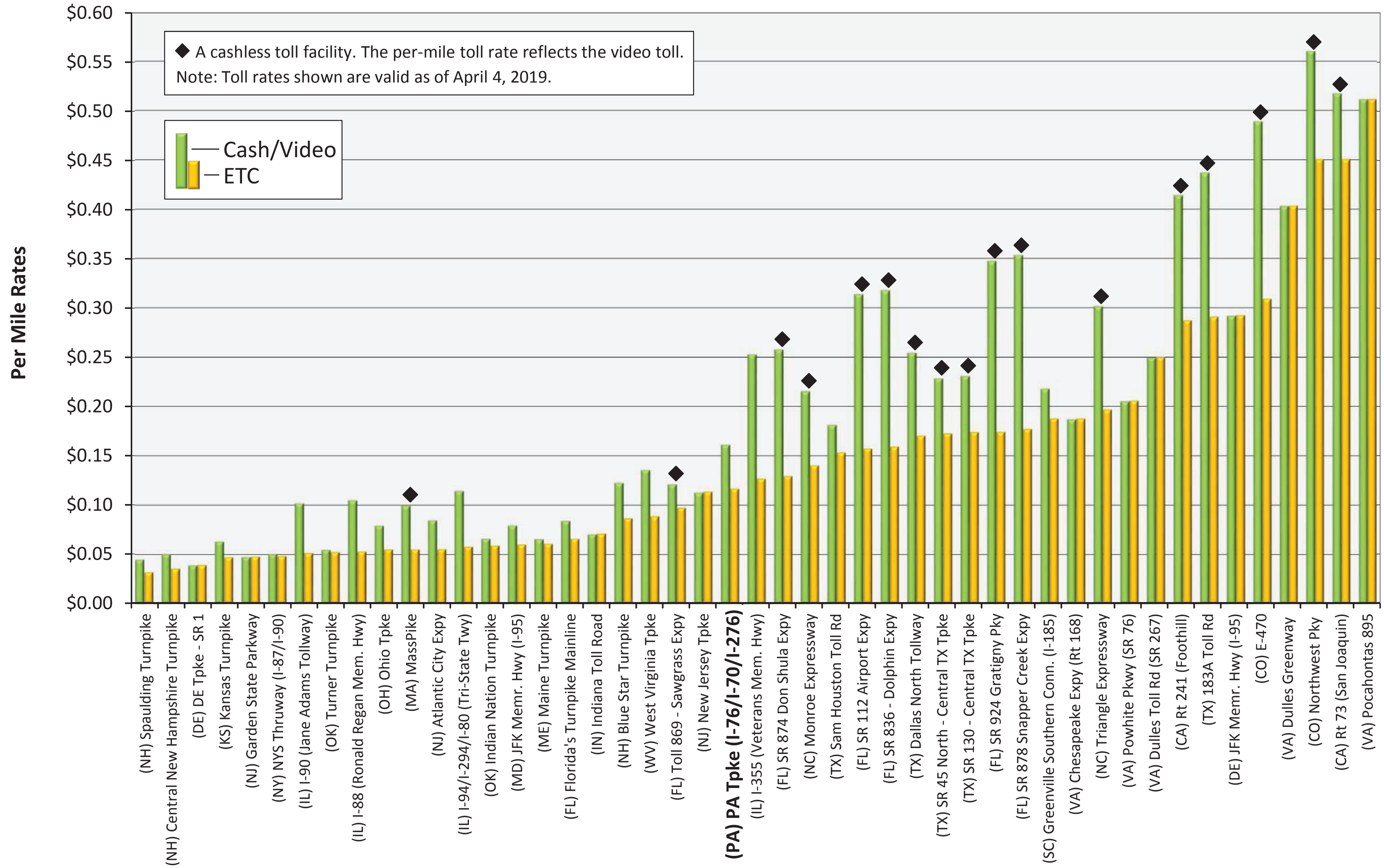
Toll rate increases have occurred annually since 2009, occurring on or close to January 1 of each year. Since CY 2015, the percent toll rate increases have been identical for cash and E-ZPass. In 2015 the toll rates increased by 5.0 percent over the prior year. From 2016 to 2019, toll rates increased by 6.0 percent annually for both cash and E-ZPass. It is assumed that annual toll rate increases will occur through the forecast period, as described in the section **Actual and Assumed Toll Rate Increases** and listed in Table 12.

Table 1
Historical Toll Rate Increases
Pennsylvania Turnpike

	Percent Increase		
Date	Cash	E-ZPass	**Comment**
1/2/1987	40.0	NA	E-ZPass was not yet implemented on the Turnpike
6/1/1991	32.0	NA	E-ZPass was not yet implemented on the Turnpike
8/1/2004	42.5	42.5	
1/4/2009	25.0	25.0	No increase on Turnpike I-576 or Turnpike 43 between Uniontown and Brownsville
1/3/2010	3.0	3.0	No increase on Turnpike I-576
1/2/2011	10.0	3.0	No increase on Turnpike I-576
1/1/2012	10.0	0.0	No increase on Turnpike I-576
1/6/2013	10.0	2.0	
1/5/2014	12.0	2.0	No increase on Turnpike I-576
1/4/2015	5.0	5.0	No increase on Turnpike I-576
1/3/2016	6.0	6.0	No increase on Turnpike I-576
1/8/2017	6.0	6.0	No increase on Turnpike I-576 or Delaware River Bridge
1/7/2018	6.0	6.0	No increase on Turnpike I-576, Delaware River Bridge, or the Northeast Extension barrier facilities
1/6/2019	6.0	6.0	

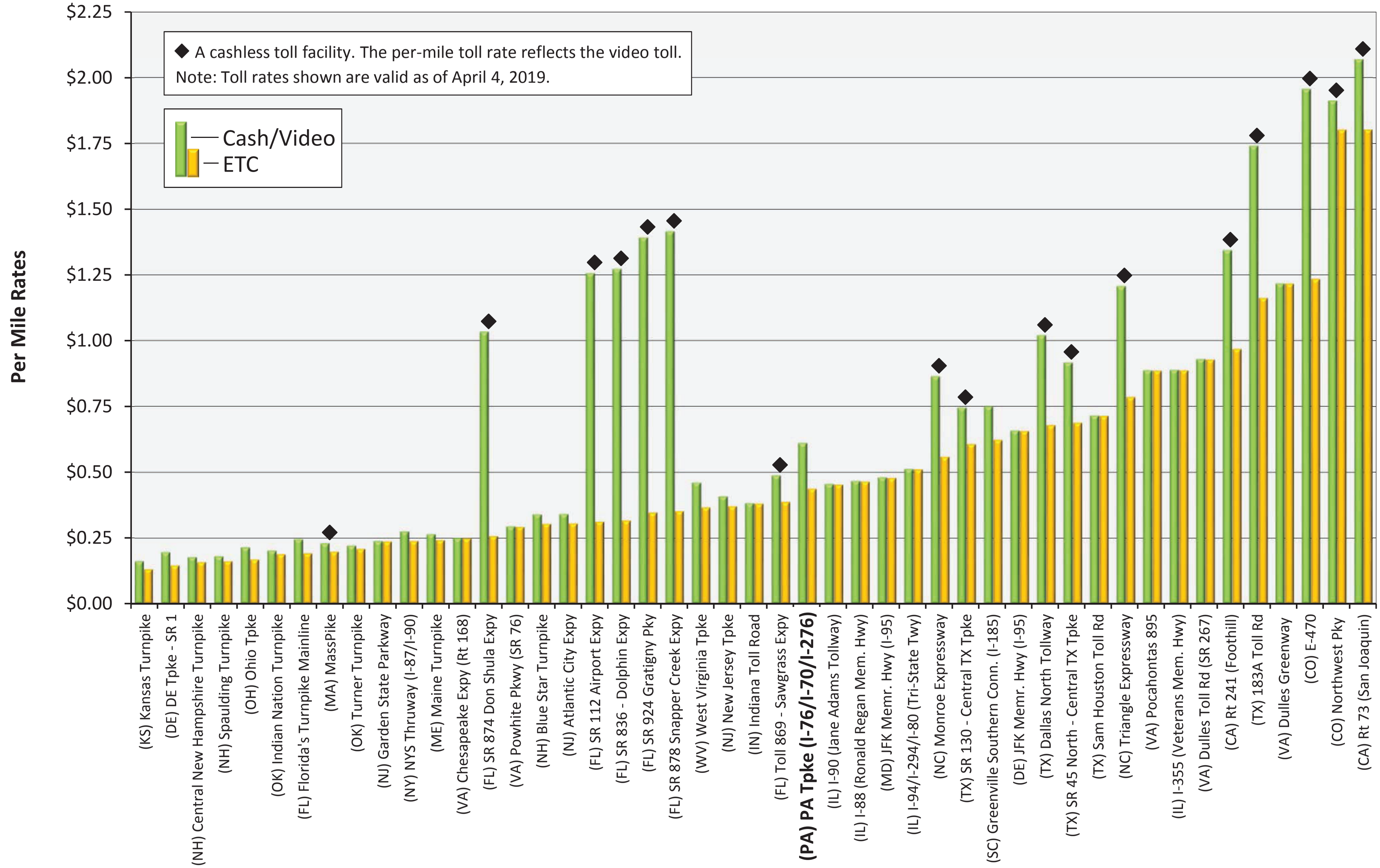
Note: Beginning in 2016, all cash toll rate increases also reflect video toll rate increases.

Figures 1 and 2 show the 2019 per-mile toll rates for a through trip on 43 U.S. toll facilities, for passenger cars and 5-axle commercial vehicles, respectively. Per-mile rates are shown for both cash/video and ETC transactions in each figure. If a facility is all electronic (does not accept cash payments), the video toll rate is shown as the equivalent of a cash toll rate. These facilities are marked with a diamond in the Figures 1 and 2.



COMPARISON OF 2019 PASSENGER CAR PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 1



COMPARISON OF 2019 FIVE-AXLE VEHICLE PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2

The per-mile through-trip toll rate is shown for the Pennsylvania Turnpike Mainline, which represents a trip on I-76/I-276 between New Jersey and Ohio. Figure 1 shows that even with the 11 consecutive annual toll increases since 2009, the passenger car per-mile toll rates on the Pennsylvania Turnpike System, at 12 cents per mile for E-ZPass customers and 16 cents per mile for cash customers, are still very reasonably priced compared to other toll facilities in the U.S.

Toll rates for 5-axle commercial vehicles (represented by weight class 6) are equivalent to 44 cents per mile for E-ZPass and 61 cents per mile for cash transactions for a through trip on the Pennsylvania Turnpike Mainline. It should be remembered that the majority of both passenger car and commercial vehicle trips are made using the more cost-effective E-ZPass payment method.

Annual Transaction and Gross Toll Revenue Trends

Table 2 provides a summary of annual Systemwide transactions and gross toll revenue trends from FY 1994-95 through FY 2017-18. The Pennsylvania Turnpike System is a large, mature system that has demonstrated long-term growth in transactions and toll revenue. Between FY 1997-98 and FY 2007-08, Turnpike transactions and gross toll revenue grew by an average annual rate of 2.3 percent and 6.0 percent, respectively. Similarly, in the 10 years from FY 2007-08 to FY 2017-18, Turnpike transactions and gross toll revenue grew by average annual rates of 0.6 percent and 7.2 percent, respectively. Traffic growth in the most recently completed fiscal year (2017-18) was 0.3 percent. Revenue growth in the most recent fiscal year was 7.9 percent, largely due to the 6.0 percent toll increase.

Monthly Transactions and Gross Toll revenue Trends

Tables 3 through 11 present recent monthly transaction and gross toll revenue trends from FY 2015-16 through February 2019 for all PTC facilities. The facilities are summarized in the following order:

- Table 3 - The Total Turnpike System (comprised of all the facilities listed below);
- Table 4 - The Ticket System: comprised of I-76/I-276 (including Gateway Barrier Plaza) and I-476;
- Table 5 - The combined Barrier System: comprised of all facilities listed below;
- Table 6 - Turnpike 43 (Mon/Fayette Expressway);
- Table 7 - Turnpike 66 (Amos K. Hutchinson Bypass);
- Table 8 - Northeast Extension (I-476) Barrier Plazas;

Table 2
Annual Systemwide Traffic and Gross Toll Revenue Trends
Pennsylvania Turnpike System
(in thousands)

	Transactions						Gross Toll Revenue					
Fiscal Year (1)	Cars	Percent Change Over Prior Year	Trucks	Percent Change Over Prior Year	Total	Percent Change Over Prior Year	Cars	Percent Change Over Prior Year	Trucks	Percent Change Over Prior Year	Total	Percent Change Over Prior Year
1994-95	114,033	6.9	15,620	9.5	129,653	7.2	$165,850	4.9	$131,749	7.2	$297,599	5.9
1995-96	121,911	6.9	16,719	7.0	138,630	6.9	172,339	3.9	136,269	3.4	308,608	3.7
1996-97	126,654	3.9	17,479	4.5	144,133	4.0	179,303	4.0	140,837	3.4	320,140	3.7
1997-98	132,472	4.6	18,627	6.6	151,099	4.8	186,290	3.9	149,036	5.8	335,326	4.7
1998-99	136,399	3.0	19,833	6.5	156,232	3.4	191,804	3.0	158,761	6.5	350,565	4.5
1999-00	138,762	1.7	21,341	7.6	160,103	2.5	195,301	1.8	172,035	8.4	367,336	4.8
2000-01	141,033	1.6	21,278	(0.3)	162,311	1.4	193,563	(0.9)	172,337	0.2	365,900	(0.4)
2001-02	150,496	6.7	22,298	4.8	172,794	6.5	212,650	9.9	163,101	(5.4)	375,751	2.7
2002-03	156,220	3.8	23,179	4.0	179,399	3.8	219,201	3.1	168,021	3.0	387,222	3.1
2003-04	163,612	4.7	24,407	5.3	188,019	4.8	228,515	4.2	180,229	7.3	408,744	5.6
2004-05	163,316	(0.2)	25,109	2.9	188,425	0.2	309,032	35.2	236,126	31.0	545,158	33.4
2005-06	160,590	(1.7)	25,311	0.8	185,901	(1.3)	321,268	4.0	267,369	13.2	588,637	8.0
2006-07	160,107	(0.3)	25,316	0.0	185,423	(0.3)	322,781	0.5	269,861	0.9	592,642	0.7
2007-08	164,097	2.5	25,455	0.5	189,552	2.2	327,761	1.5	271,165	0.5	598,926	1.1
2008-09	162,638	(0.9)	23,583	(7.4)	186,220	(1.8)	356,345	8.7	259,259	(4.4)	615,605	2.8
2009-10	163,599	0.6	22,933	(2.8)	186,531	0.2	415,981	16.7	302,057	16.5	718,038	16.6
2010-11	165,231	1.0	23,812	3.8	189,043	1.3	435,752	4.8	328,105	8.6	763,856	6.4
2011-12	164,955	(0.2)	24,125	1.3	189,080	0.0	455,133	4.4	342,646	4.4	797,779	4.4
2012-13	163,690	(0.8)	24,207	0.3	187,897	(0.6)	471,514	3.6	350,226	2.2	821,740	3.0
2013-14	163,788	0.1	24,891	2.8	188,679	0.4	497,671	5.5	368,395	5.2	866,066	5.4
2014-15	166,192	1.5	26,144	5.0	192,336	1.9	533,054	7.1	401,197	8.9	934,251	7.9
2015-16 (2)	171,569	3.2	27,319	4.5	198,887	3.4	588,295	10.4	443,325	10.5	1,031,620	10.4
2016-17 (3,4)	172,799	0.7	27,703	1.4	200,501	0.8	638,787	8.6	476,188	7.4	1,114,975	8.1
2017-18 (5)	172,512	(0.2)	28,650	3.4	201,162	0.3	678,741	6.3	524,418	10.1	1,203,158	7.9

Average Annual Percent Change

	Transactions			Gross Toll Revenue		
Fiscal Year	Cars	Trucks	Total	Cars	Trucks	Total
FY 1997-98 - FY 2007-08	2.2	3.2	2.3	5.8	6.2	6.0
FY 2007-08 - FY 2017-18	0.5	1.2	0.6	7.6	6.8	7.2
FY 1994-95 - FY 2017-18	1.8	2.7	1.9	6.3	6.2	6.3

(1) Refer to Table 1 for toll rate increase information.
(2) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.
(5) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier Facilities in April 2018.

Table 3

Total Turnpike System - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	14,849	3.7	15,395	0.3	15,438	(0.5)	15,361	2,398	6.4	2,550	1.0	2,575	0.9	2,596	17,246	4.1	17,945	0.4	18,013	(0.3)	17,958
July	15,643	0.9	15,783	(1.7)	15,522	0.3	15,566	2,429	(0.4)	2,419	(0.0)	2,419	6.3	2,573	18,072	0.7	18,202	(1.4)	17,942	1.1	18,138
August	15,584	2.5	15,967	(0.1)	15,957	1.1	16,134	2,390	9.5	2,616	1.7	2,662	3.5	2,755	17,974	3.4	18,583	0.2	18,619	1.5	18,889
September	14,220	4.2	14,817	(0.6)	14,724	(1.5)	14,503	2,364	3.3	2,442	(0.4)	2,431	(0.5)	2,418	16,584	4.1	17,260	(0.6)	17,156	(1.4)	16,921
October	15,067	1.1	15,236	(0.1)	15,221	1.2	15,396	2,450	(0.8)	2,429	4.9	2,547	7.3	2,732	17,517	0.8	17,665	0.6	17,768	2.0	18,128
November	13,965	3.5	14,458	(1.0)	14,317	(0.5)	14,242	2,125	5.2	2,236	3.9	2,323	3.0	2,391	16,090	3.8	16,695	(0.3)	16,640	(0.0)	16,633
December	13,960	0.7	14,051	(2.2)	13,746	1.7	13,982	2,116	1.7	2,153	(0.4)	2,146	2.5	2,198	16,076	0.8	16,204	(1.9)	15,891	1.8	16,180
January	12,276	2.7	12,609	(0.5)	12,542	(0.3)	12,504	1,947	3.4	2,014	8.0	2,175	4.3	2,268	14,222	2.8	14,622	0.7	14,718	0.4	14,772
February	12,477	(8.6)	11,407	4.8	11,958	(0.2)	11,930	1,996	(9.0)	1,815	12.0	2,034	1.9	2,073	14,472	(8.6)	13,223	5.8	13,992	0.1	14,003
March	14,328	(6.4)	13,416	1.3	13,591			2,338	(5.2)	2,216	3.5	2,295			16,666	(6.2)	15,632	1.6	15,886		
April	14,105	2.1	14,400	(1.0)	14,259			2,333	(2.8)	2,268	5.2	2,387			16,438	1.4	16,668	(0.1)	16,646		
May	15,095	1.1	15,260	(0.2)	15,237			2,434	4.5	2,542	4.5	2,657			17,529	1.6	17,802	0.5	17,893		
Total Year	171,569	0.7	172,799	(0.2)	172,512			27,319	1.4	27,703	3.4	28,650			198,887	0.8	200,501	0.3	201,162		
June - Feb	128,040	1.3	129,723	(0.2)	129,425	0.1	129,619	20,214	2.3	20,676	3.1	21,312	3.3	22,006	148,254	1.4	150,399	0.2	150,737	0.6	151,624

Gross Toll Revenue (in $1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$50,991	12.3	$57,273	8.0	$61,877	6.5	$65,886	$37,614	13.4	$42,661	4.6	$44,643	11.5	$49,757	$88,606	12.8	$99,935	6.6	$106,521	8.6	$115,643
July	56,625	11.2	62,975	4.4	65,722	5.3	69,178	37,680	8.5	40,876	2.6	41,947	17.0	49,069	94,305	10.1	103,851	3.7	107,669	9.8	118,247
August	56,072	7.3	60,179	7.4	64,611	9.2	70,545	36,983	17.2	43,337	6.6	46,210	13.3	52,369	93,054	11.2	103,516	7.1	110,821	10.9	122,914
September	47,419	15.5	54,770	3.4	56,620	6.6	60,348	36,472	12.4	40,984	3.4	42,371	11.7	47,311	83,891	14.1	95,754	3.4	98,991	8.8	107,658
October	49,331	11.5	55,018	5.1	57,806	6.6	61,611	37,786	5.6	39,895	11.8	44,599	17.0	52,185	87,117	8.9	94,912	7.9	102,405	11.1	113,795
November	47,013	11.5	52,436	5.1	55,122	7.3	59,156	33,096	12.1	37,100	10.4	40,944	15.0	47,087	80,109	11.8	89,536	7.3	96,066	10.6	106,243
December	45,446	11.3	50,563	3.5	52,345	9.6	57,377	33,264	10.9	36,880	5.7	39,000	11.9	43,630	78,709	11.1	87,443	4.5	91,344	10.6	101,007
January	41,103	8.0	44,374	5.3	46,741	9.0	50,969	34,106	7.3	36,597	15.4	42,222	14.3	48,261	75,209	7.7	80,971	9.9	88,964	11.5	99,230
February	40,633	(4.1)	38,957	14.4	44,576	11.8	49,844	35,122	(6.2)	32,933	21.9	40,130	12.4	45,096	75,755	(5.1)	71,890	17.8	84,707	12.1	94,940
March	49,488	(2.9)	48,033	11.9	53,737			40,322	0.7	40,619	12.3	45,627			89,811	(1.3)	88,653	12.1	99,364		
April	49,275	13.0	55,683	2.7	57,201			39,950	1.5	40,540	13.6	46,057			89,224	7.8	96,223	7.3	103,259		
May	54,899	6.6	58,526	6.6	62,381			40,930	6.9	43,767	15.8	50,666			95,829	6.7	102,293	10.5	113,047		
Total Year	$588,295	8.6	$638,787	6.3	$678,741			$443,325	7.4	$476,188	10.1	$524,418			$1,031,620	8.1	$1,114,975	7.9	$1,203,158		
June - Feb	$434,633	9.6	$476,545	6.1	$505,421	7.8	$544,914	$322,123	9.0	$351,263	8.8	$382,067	13.8	$434,764	$756,756	9.4	$827,807	7.2	$887,488	10.4	$979,678

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.

(3) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.

(4) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(5) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.

(6) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier Facilities in April 2018.

(7) AET conversion and vehicle classification changes were implemented on the Turnpike I-576 Findlay Connector in June 2018.

Table 4

Ticket System (Including Gateway Barrier Plaza) - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	11,995	0.1	12,013	0.1	12,029	(1.0)	11,904
July	12,583	(3.1)	12,196	(1.4)	12,020	(0.6)	11,954
August	12,525	(1.4)	12,348	0.1	12,357	0.1	12,367
September	11,362	1.0	11,480	(0.8)	11,386	(2.3)	11,119
October	12,064	(1.9)	11,836	(0.1)	11,826	(0.5)	11,762
November	11,281	0.2	11,301	(1.0)	11,185	(2.5)	10,900
December	11,302	(2.6)	11,005	(2.5)	10,725	0.0	10,726
January	9,605	4.4	10,033	(1.8)	9,851	(2.1)	9,643
February	9,738	(5.3)	9,226	1.2	9,339	(2.4)	9,116
March	11,168	(5.2)	10,589	(0.4)	10,544		
April	10,953	2.7	11,247	(1.4)	11,090		
May	11,717	1.2	11,855	(0.7)	11,775		
Total Year	136,294	(0.9)	135,128	(0.7)	134,127		
June - Feb	102,456	(1.0)	101,437	(0.7)	100,717	(1.2)	99,490

	Commercial Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	1,976	2.6	2,028	(0.1)	2,025	0.1	2,027
July	1,998	(3.5)	1,927	(1.5)	1,898	5.3	2,000
August	1,951	6.7	2,082	0.1	2,084	2.3	2,133
September	1,925	0.8	1,941	(2.0)	1,903	(1.6)	1,872
October	1,997	(3.4)	1,930	3.6	2,000	5.8	2,115
November	1,748	1.6	1,777	3.3	1,835	1.7	1,866
December	1,763	(1.7)	1,732	(1.1)	1,713	0.8	1,727
January	1,552	5.8	1,642	5.8	1,738	2.5	1,780
February	1,606	(5.8)	1,514	6.6	1,614	0.6	1,623
March	1,869	(3.9)	1,796	1.2	1,817		
April	1,858	(2.8)	1,807	4.0	1,879		
May	1,927	3.9	2,003	3.4	2,070		
Total Year	22,172	0.0	22,179	1.8	22,577		
June - Feb	16,517	0.3	16,573	1.4	16,811	2.0	17,144

	Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	13,971	0.5	14,041	0.1	14,054	(0.9)	13,931
July	14,581	(3.1)	14,123	(1.4)	13,919	0.3	13,954
August	14,476	(0.3)	14,430	0.1	14,441	0.4	14,500
September	13,287	1.0	13,421	(1.0)	13,289	(2.2)	12,992
October	14,061	(2.1)	13,766	0.4	13,826	0.4	13,877
November	13,029	0.4	13,078	(0.4)	13,019	(1.9)	12,766
December	13,065	(2.5)	12,738	(2.3)	12,439	0.1	12,452
January	11,158	4.6	11,675	(0.7)	11,588	(1.4)	11,423
February	11,345	(5.3)	10,740	2.0	10,953	(2.0)	10,739
March	13,037	(5.0)	12,384	(0.2)	12,361		
April	12,812	1.9	13,054	(0.6)	12,970		
May	13,644	1.6	13,858	(0.1)	13,845		
Total Year	158,466	(0.7)	157,307	(0.4)	156,704		
June - Feb	118,973	(0.8)	118,010	(0.4)	117,528	(0.8)	116,634

Gross Toll Revenue (in $1,000s)

	Passenger Cars						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$47,358	6.4	$50,374	8.9	$54,875	6.4	$58,373
July	52,753	5.5	55,659	5.0	58,459	5.0	61,355
August	52,191	1.3	52,888	8.1	57,199	9.0	62,362
September	43,823	9.6	48,028	3.7	49,807	6.4	52,979
October	45,567	5.9	48,264	5.5	50,936	5.3	53,651
November	43,632	5.6	46,084	5.9	48,799	5.8	51,617
December	42,110	5.4	44,375	3.9	46,096	8.3	49,909
January	35,973	9.8	39,489	4.0	41,070	7.2	44,033
February	35,190	2.0	35,898	9.1	39,149	10.0	43,056
March	43,273	(0.9)	42,900	10.5	47,415		
April	42,999	14.5	49,234	2.5	50,489		
May	48,163	7.4	51,721	6.5	55,089		
Total Year	$533,031	6.0	$564,915	6.1	$599,384		
June - Feb	$398,596	5.6	$421,060	6.0	$446,391	6.9	$477,334

	Commercial Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$36,014	8.7	$39,137	4.7	$40,969	11.6	$45,711
July	36,048	4.1	37,543	2.5	38,493	17.1	45,081
August	35,345	12.5	39,776	6.6	42,397	13.4	48,064
September	34,839	7.8	37,555	3.4	38,829	12.0	43,495
October	36,072	1.3	36,541	12.0	40,913	16.8	47,768
November	31,665	7.0	33,896	10.8	37,560	15.0	43,205
December	31,906	6.0	33,828	6.0	35,866	11.6	40,028
January	31,378	9.0	34,189	14.2	39,045	13.5	44,332
February	32,343	(2.2)	31,628	17.3	37,084	11.8	41,467
March	37,096	2.3	37,948	11.2	42,183		
April	36,662	1.8	37,308	13.8	42,474		
May	37,552	6.9	40,145	16.0	46,562		
Total Year	$416,919	5.4	$439,495	9.8	$482,376		
June - Feb	$305,610	6.0	$324,093	8.4	$351,157	13.7	$399,151

	Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$83,371	7.4	$89,511	7.1	$95,844	8.6	$104,084
July	88,801	5.0	93,201	4.0	96,952	9.8	106,435
August	87,536	5.9	92,665	7.5	99,596	10.9	110,425
September	78,662	8.8	85,583	3.6	88,636	8.8	96,474
October	81,639	3.9	84,805	8.3	91,850	10.4	101,419
November	75,297	6.2	79,980	8.0	86,360	9.8	94,822
December	74,016	5.7	78,203	4.8	81,962	9.7	89,938
January	67,351	9.4	73,678	8.7	80,116	10.3	88,365
February	67,533	(0.0)	67,526	12.9	76,233	10.9	84,523
March	80,369	0.6	80,848	10.8	89,598		
April	79,661	8.6	86,542	7.4	92,963		
May	85,715	7.2	91,866	10.7	101,651		
Total Year	$949,950	5.7	$1,004,410	7.7	$1,081,760		
June - Feb	$704,206	5.8	$745,154	7.0	$797,547	9.9	$876,485

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.

(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

Table 5

Combined Barrier Facilities - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	2,854	18.5	3,382	0.8	3,409	1.4	3,457	421	23.9	522	5.2	549	3.6	569	3,275	19.2	3,904	1.4	3,958	1.7	4,026
July	3,060	17.2	3,587	(2.4)	3,502	3.1	3,612	431	14.1	492	5.9	521	10.0	573	3,491	16.9	4,079	(1.4)	4,023	4.0	4,185
August	3,059	18.3	3,619	(0.5)	3,600	4.6	3,767	439	21.7	534	8.1	578	7.7	622	3,498	18.7	4,154	0.6	4,178	5.1	4,389
September	2,858	16.8	3,337	0.0	3,338	1.4	3,384	439	14.1	501	5.5	529	3.2	546	3,297	16.4	3,839	0.7	3,867	1.6	3,930
October	3,004	13.2	3,399	(0.1)	3,395	7.0	3,634	452	10.4	500	9.5	547	12.7	617	3,456	12.8	3,899	1.1	3,942	7.8	4,251
November	2,684	17.7	3,158	(0.8)	3,133	6.7	3,343	377	21.9	459	6.2	488	7.6	525	3,060	18.2	3,617	0.1	3,620	6.8	3,867
December	2,658	14.6	3,046	(0.8)	3,021	7.8	3,257	353	19.1	421	2.7	432	9.1	471	3,011	15.1	3,467	(0.4)	3,453	8.0	3,728
January	2,670	(3.5)	2,576	4.5	2,692	6.3	2,861	394	(5.7)	372	17.7	438	11.5	488	3,065	(3.8)	2,948	6.2	3,129	7.0	3,349
February	2,738	(20.3)	2,181	20.1	2,619	7.5	2,814	389	(22.5)	302	39.2	420	7.3	450	3,127	(20.6)	2,483	22.4	3,039	7.4	3,264
March	3,160	(10.5)	2,827	7.8	3,047			468	(10.3)	420	13.7	478			3,629	(10.5)	3,247	8.5	3,525		
April	3,152	0.0	3,152	0.5	3,169			475	(2.8)	462	10.0	508			3,627	(0.4)	3,614	1.7	3,677		
May	3,378	0.8	3,405	1.7	3,462			507	6.5	539	8.7	586			3,885	1.5	3,945	2.6	4,048		
Total Year	35,274	6.8	37,671	1.9	38,385			5,147	7.3	5,524	9.9	6,073			40,422	6.9	43,195	2.9	44,459		
June - Feb	25,584	10.6	28,286	1.5	28,708	4.9	30,129	3,697	11.0	4,103	9.7	4,501	8.0	4,861	29,281	10.6	32,389	2.5	33,209	5.4	34,990

Gross Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$3,633	89.9	$6,899	1.5	$7,002	7.3	$7,514	$1,601	120.1	$3,524	4.3	$3,674	10.1	$4,046	$5,234	99.1	$10,423	2.4	$10,677	8.3	$11,559
July	3,873	88.9	7,316	(0.7)	7,263	7.7	7,823	1,631	104.3	3,333	3.6	3,454	15.5	3,988	5,504	93.5	10,649	0.6	10,717	10.2	11,812
August	3,881	87.9	7,291	1.7	7,413	10.4	8,183	1,638	117.4	3,561	7.1	3,813	12.9	4,305	5,518	96.6	10,851	3.4	11,226	11.3	12,488
September	3,596	87.5	6,741	1.1	6,813	8.2	7,369	1,634	109.9	3,429	3.3	3,543	7.7	3,816	5,229	94.5	10,171	1.8	10,355	8.0	11,184
October	3,764	79.4	6,754	1.7	6,870	15.9	7,960	1,714	95.6	3,353	9.9	3,686	19.8	4,416	5,478	84.5	10,107	4.4	10,556	17.2	12,377
November	3,381	87.9	6,352	(0.5)	6,323	19.2	7,539	1,432	123.8	3,204	5.6	3,384	14.7	3,882	4,812	98.6	9,556	1.6	9,706	17.7	11,421
December	3,336	85.5	6,187	1.0	6,249	19.5	7,468	1,357	124.9	3,053	2.7	3,133	14.9	3,602	4,693	96.9	9,240	1.5	9,382	18.0	11,070
January	5,130	(4.8)	4,885	16.1	5,671	22.3	6,935	2,728	(11.7)	2,408	32.0	3,177	23.7	3,929	7,858	(7.2)	7,293	21.3	8,848	22.8	10,864
February	5,443	(43.8)	3,059	77.4	5,428	25.1	6,789	2,779	(53.1)	1,305	133.5	3,046	19.1	3,629	8,222	(46.9)	4,364	94.2	8,474	22.9	10,417
March	6,215	(17.4)	5,133	23.2	6,322			3,227	(17.2)	2,671	28.9	3,444			9,442	(17.3)	7,804	25.1	9,766		
April	6,276	2.8	6,449	4.1	6,712			3,288	(1.7)	3,232	10.9	3,583			9,563	1.2	9,680	6.4	10,295		
May	6,736	1.0	6,806	7.1	7,292			3,378	7.2	3,622	13.3	4,104			10,114	3.1	10,427	9.3	11,397		
Total Year	$55,263	33.7	$73,872	7.4	$79,357			$26,406	39.0	$36,694	14.6	$42,042			$81,670	35.4	$110,566	9.8	$121,399		
June - Feb	$36,037	54.0	$55,484	6.4	$59,030	14.5	$67,580	$16,514	64.5	$27,169	13.8	$30,911	15.2	$35,613	$52,550	57.3	$82,654	8.8	$89,941	14.7	$103,193

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.

(3) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.

(4) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(5) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.

(6) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier Facilities in April 2018.

(7) AET conversion and vehicle classification changes were implemented on the Turnpike I-576 Findlay Connector in June 2018.

Table 6

Turnpike 43 - Mon/Fayette Expressway - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	Commercial Vehicles 2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	Total Vehicles 2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	1,098	(1.4)	1,083	(1.0)	1,072	0.7	1,079	98	(2.9)	95	2.4	97	(0.1)	97	1,196	(1.5)	1,178	(0.8)	1,169	0.6	1,176
July	1,141	(2.6)	1,112	(3.9)	1,068	4.7	1,118	99	(12.9)	86	8.9	94	6.2	99	1,240	(3.4)	1,198	(3.0)	1,161	4.8	1,217
August	1,151	(0.9)	1,141	(2.2)	1,116	3.0	1,149	110	(13.2)	95	12.8	107	(5.6)	101	1,261	(2.0)	1,236	(1.0)	1,223	2.3	1,251
September	1,147	(3.5)	1,107	(2.8)	1,076	0.4	1,080	119	(25.0)	89	9.1	97	(2.5)	95	1,266	(5.5)	1,196	(1.9)	1,173	0.2	1,175
October	1,221	(7.1)	1,134	(1.6)	1,116	4.1	1,162	107	(16.9)	89	15.6	103	5.6	108	1,327	(7.9)	1,223	(0.3)	1,219	4.2	1,270
November	1,058	(4.3)	1,013	(3.2)	980	4.8	1,027	86	(9.0)	78	9.5	86	5.9	91	1,145	(4.7)	1,091	(2.3)	1,066	4.9	1,118
December	1,043	(5.6)	984	(3.3)	952	1.6	967	75	(3.5)	73	(1.8)	71	4.6	75	1,118	(5.5)	1,057	(3.2)	1,023	1.8	1,042
January	887	1.7	902	(2.8)	876	0.4	880	67	(5.4)	63	12.2	71	10.1	78	953	1.2	965	(1.9)	947	1.1	957
February	932	(4.3)	892	(2.4)	870	1.5	884	63	3.7	65	9.6	71	0.9	72	995	(3.8)	957	(1.6)	942	1.5	956
March	1,061	(3.1)	1,028	(3.2)	995			86	(8.8)	78	(0.4)	78			1,147	(3.5)	1,106	(3.0)	1,073		
April	1,050	(2.0)	1,029	(0.3)	1,026			83	(1.0)	82	6.9	88			1,133	(1.9)	1,111	0.2	1,113		
May	1,088	(0.3)	1,085	1.2	1,098			90	9.3	98	8.1	106			1,178	0.4	1,183	1.7	1,204		
Total Year	12,876	(2.9)	12,508	(2.1)	12,244			1,082	(8.3)	992	7.8	1,070			13,958	(3.3)	13,500	(1.4)	13,313		
June - Feb	9,677	(3.2)	9,366	(2.6)	9,126	2.4	9,345	823	(10.9)	734	8.7	798	2.4	817	10,500	(3.8)	10,099	(1.7)	9,923	2.4	10,162

Gross Toll Revenue (in $1,000s)

Month	Passenger Cars 2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	Commercial Vehicles 2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	Total Vehicles 2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$1,524	4.7	$1,597	3.9	$1,659	6.8	$1,772	$374	1.6	$380	12.2	$426	8.5	$462	$1,898	4.1	$1,976	5.5	$2,085	7.1	$2,234
July	1,577	2.8	1,621	3.1	1,671	12.4	1,877	375	(7.8)	346	15.9	400	17.8	471	1,952	0.8	1,966	5.3	2,071	13.4	2,349
August	1,596	5.2	1,678	2.6	1,722	10.6	1,904	405	(6.0)	380	20.0	457	4.6	478	2,000	2.9	2,058	5.9	2,179	9.3	2,382
September	1,541	4.3	1,606	2.2	1,642	7.8	1,769	425	(14.4)	364	14.9	418	6.9	447	1,966	0.2	1,970	4.5	2,060	7.6	2,216
October	1,632	1.4	1,654	3.5	1,711	10.9	1,898	397	(8.8)	363	20.5	437	16.3	508	2,029	(0.6)	2,017	6.5	2,148	12.0	2,406
November	1,445	(0.1)	1,443	3.7	1,496	12.6	1,684	326	(1.7)	321	16.1	373	16.0	432	1,772	(0.4)	1,764	5.9	1,869	13.3	2,116
December	1,375	3.2	1,419	1.9	1,446	12.4	1,625	293	2.5	301	5.0	316	18.3	374	1,668	3.1	1,719	2.5	1,762	13.5	1,999
January	1,264	6.6	1,348	3.8	1,399	10.2	1,542	279	(1.0)	277	19.6	331	22.1	404	1,543	5.3	1,624	6.5	1,730	12.5	1,946
February	1,371	(1.7)	1,348	4.1	1,403	10.4	1,548	272	6.2	289	18.5	343	10.4	378	1,643	(0.4)	1,637	6.6	1,746	10.4	1,926
March	1,523	2.9	1,568	2.2	1,602			348	1.0	351	8.2	380			1,871	2.6	1,919	3.3	1,982		
April	1,500	4.5	1,568	6.6	1,672			334	8.1	362	16.3	421			1,834	5.2	1,930	8.4	2,093		
May	1,586	5.0	1,666	7.9	1,798			362	18.2	428	16.6	499			1,948	7.5	2,094	9.7	2,298		
Total Year	$17,934	3.2	$18,516	3.8	$19,222			$4,192	(0.7)	$4,161	15.4	$4,800			$22,126	2.5	$22,677	5.9	$24,021		
June - Feb	$13,325	2.9	$13,714	3.2	$14,149	10.4	$15,621	$3,147	(4.1)	$3,020	15.9	$3,500	13.0	$3,954	$16,472	1.6	$16,734	5.5	$17,649	10.9	$19,575

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.

Table 7

Turnpike 66 - Amos K. Hutchinson Bypass - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	579	(2.7)	563	0.7	567	(1.9)	556
July	591	(5.3)	560	(1.3)	553	1.1	559
August	587	(2.5)	572	1.0	578	0.8	583
September	571	(2.0)	560	(0.4)	558	(0.5)	555
October	600	(3.9)	577	(0.4)	575	1.0	580
November	550	(1.4)	542	(0.9)	537	(1.2)	531
December	564	(4.3)	540	(2.1)	529	0.7	533
January	480	1.3	487	(1.0)	482	(1.4)	475
February	489	(4.5)	467	(1.4)	460	0.1	461
March	554	(3.0)	537	(0.8)	533		
April	549	(0.2)	548	(2.1)	536		
May	575	0.3	577	0.3	579		
Total Year	6,690	(2.4)	6,530	(0.7)	6,486		
June - Feb	5,012	(2.9)	4,868	(0.6)	4,838	(0.1)	4,833

Commercial Vehicles

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	95	(2.4)	93	7.4	100	1.0	101
July	98	(10.4)	88	7.1	94	7.2	101
August	97	(0.0)	96	8.1	104	3.6	108
September	93	0.8	94	0.9	95	(2.5)	92
October	104	(11.5)	92	5.9	98	8.1	105
November	86	(7.0)	80	5.4	84	2.4	86
December	82	(14.6)	70	5.6	74	7.8	80
January	72	(5.1)	69	12.1	77	5.7	81
February	70	(5.1)	67	6.7	71	5.6	75
March	84	(2.4)	82	1.9	84		
April	89	(0.9)	88	2.1	90		
May	94	5.3	99	2.8	101		
Total Year	1,063	(4.4)	1,016	5.3	1,071		
June - Feb	796	(6.1)	747	6.4	796	4.2	829

Total Vehicles

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	674	(2.7)	656	1.6	667	(1.5)	657
July	689	(6.0)	648	(0.2)	647	2.0	660
August	684	(2.2)	669	2.0	682	1.2	691
September	665	(1.6)	654	(0.2)	653	(0.8)	648
October	705	(5.1)	669	0.5	672	2.0	686
November	635	(2.2)	621	(0.1)	621	(0.7)	617
December	646	(5.6)	610	(1.2)	603	1.6	612
January	552	0.5	555	0.6	558	(0.4)	556
February	559	(4.6)	533	(0.4)	531	0.8	536
March	639	(2.9)	620	(0.5)	617		
April	637	(0.3)	636	(1.5)	626		
May	669	1.0	676	0.7	680		
Total Year	7,753	(2.7)	7,546	0.1	7,556		
June - Feb	5,809	(3.3)	5,615	0.3	5,633	0.5	5,661

Gross Toll Revenue (in $1,000s)

Passenger Cars

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$868	2.4	$889	7.0	$951	4.6	$995
July	893	0.1	894	4.8	938	7.1	1,004
August	889	1.5	902	6.9	964	7.4	1,036
September	855	3.4	883	5.4	931	6.4	991
October	895	1.9	912	5.2	960	6.5	1,023
November	811	4.4	847	5.3	892	4.8	934
December	832	1.6	845	4.1	879	7.0	941
January	747	5.4	787	5.3	829	7.1	888
February	766	0.1	767	4.9	804	8.3	871
March	866	2.1	884	5.8	935		
April	848	7.6	913	3.6	946		
May	912	5.6	962	6.4	1,024		
Total Year	$10,182	3.0	$10,486	5.4	$11,054		
June - Feb	$7,556	2.3	$7,726	5.5	$8,148	6.6	$8,683

Commercial Vehicles

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$401	(0.3)	$400	13.1	$452	11.4	$504
July	409	(6.1)	384	11.0	426	15.9	494
August	400	7.2	429	10.1	473	9.6	518
September	387	8.3	419	3.5	434	3.1	447
October	442	(8.2)	405	9.8	445	16.4	518
November	358	(4.8)	341	14.1	389	6.4	414
December	342	(11.2)	304	12.3	341	15.0	392
January	329	(3.5)	317	17.6	373	12.6	420
February	314	(0.1)	314	12.7	354	10.9	392
March	378	3.0	389	6.5	414		
April	396	2.8	407	9.5	446		
May	413	8.2	447	10.4	493		
Total Year	$4,569	(0.3)	$4,556	10.6	$5,041		
June - Feb	$3,382	(2.0)	$3,313	11.3	$3,687	11.2	$4,101

Total Vehicles

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$1,269	1.5	$1,289	8.9	$1,403	6.8	$1,499
July	1,302	(1.8)	1,278	6.7	1,364	9.8	1,498
August	1,289	3.3	1,331	7.9	1,437	8.2	1,554
September	1,241	4.9	1,302	4.8	1,364	5.4	1,438
October	1,336	(1.4)	1,318	6.7	1,405	9.7	1,541
November	1,170	1.6	1,188	7.9	1,281	5.3	1,349
December	1,174	(2.2)	1,149	6.2	1,220	9.3	1,334
January	1,075	2.7	1,104	8.9	1,202	8.8	1,308
February	1,081	0.0	1,081	7.2	1,158	9.1	1,264
March	1,243	2.4	1,273	6.1	1,350		
April	1,244	6.1	1,320	5.4	1,392		
May	1,325	6.4	1,409	7.7	1,518		
Total Year	$14,750	2.0	$15,042	7.0	$16,095		
June - Feb	$10,938	0.9	$11,040	7.2	$11,835	8.0	$12,784

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.

Table 8

Northeast Extension Barrier Plazas - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	448	(6.9)	417	0.7	420	(0.7)	417	100	0.4	101	3.3	104	3.5	108	548	(5.5)	518	1.2	524	0.1	525
July	554	(6.4)	519	(4.8)	494	(1.2)	488	102	(2.3)	100	0.9	101	8.6	109	657	(5.8)	619	(3.8)	595	0.5	598
August	562	(10.6)	502	(4.2)	481	10.3	530	102	3.8	106	0.8	107	13.0	121	664	(8.4)	608	(3.4)	588	10.8	651
September	427	(7.3)	396	(1.6)	390	(0.1)	389	97	0.4	97	(1.4)	96	4.8	100	524	(5.9)	493	(1.6)	486	0.9	490
October	452	(11.9)	398	(4.6)	380	4.4	397	101	(8.2)	93	3.8	97	14.8	111	553	(11.2)	491	(3.0)	476	6.5	507
November	406	(7.4)	376	(3.3)	364	1.0	367	86	3.7	89	1.3	91	6.0	96	492	(5.5)	466	(2.4)	454	2.0	463
December	369	(10.9)	329	(1.6)	323	2.3	331	83	(0.5)	83	(0.0)	83	4.9	87	452	(9.0)	411	(1.3)	406	2.8	417
January	288	(3.9)	277	(6.9)	258	(0.2)	257	77	5.6	81	7.9	88	3.5	91	365	(1.9)	358	(3.5)	345	0.8	348
February	286	(6.8)	267	(4.0)	256	2.3	262	76	1.2	77	4.8	80	2.0	82	362	(5.1)	344	(2.0)	337	2.2	344
March	351	(15.4)	297	2.9	305			86	1.0	87	1.5	89			438	(12.2)	384	2.6	394		
April	361	4.2	376	(10.2)	338			89	0.3	90	1.3	91			451	3.4	466	(8.0)	429		
May	433	5.0	454	(11.9)	400			99	14.1	113	(5.3)	107			531	6.7	567	(10.6)	507		
Total Year	4,937	(6.7)	4,608	(4.3)	4,409			1,100	1.5	1,117	1.4	1,132			6,037	(5.2)	5,724	(3.2)	5,540		
June - Feb	3,792	(8.2)	3,480	(3.3)	3,365	2.2	3,439	825	0.2	827	2.2	846	7.0	905	4,617	(6.7)	4,307	(2.2)	4,211	3.1	4,343

Gross Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$403	(2.8)	$392	5.5	$413	9.4	$452	$439	8.6	$477	6.3	$506	19.7	$607	$842	3.1	$868	5.9	$920	15.1	$1,058
July	500	(1.1)	494	1.2	500	4.7	524	436	5.9	462	4.8	484	22.9	595	936	2.1	956	3.0	984	13.7	1,119
August	509	(6.4)	477	0.5	479	21.7	583	438	13.2	495	4.1	516	29.2	666	947	2.7	972	2.4	995	25.6	1,250
September	380	(2.9)	370	3.8	384	13.4	435	422	8.3	457	1.1	462	22.3	566	803	3.0	827	2.3	846	18.3	1,001
October	400	(12.4)	351	6.0	371	14.1	424	445	(3.3)	430	10.6	476	33.7	636	845	(7.6)	781	8.5	847	25.1	1,060
November	357	2.7	366	(3.7)	353	11.1	392	383	10.3	422	7.5	454	26.3	574	740	6.7	789	2.3	807	19.7	965
December	358	(19.8)	287	8.8	312	9.4	342	377	3.4	390	6.9	417	25.6	524	735	(7.9)	677	7.7	729	18.7	866
January	262	5.6	276	(9.8)	249	21.1	302	369	11.1	410	9.8	450	28.3	578	631	8.8	686	1.9	699	25.7	879
February	280	(7.1)	260	(4.7)	248	23.5	306	370	4.5	387	7.0	414	26.9	525	650	(0.5)	647	2.3	661	25.7	831
March	326	(11.3)	290	2.7	297			417	7.2	447	2.2	457			743	(0.9)	736	2.4	754		
April	337	10.9	374	(10.0)	336			435	3.3	449	4.3	468			772	6.6	823	(2.2)	805		
May	408	11.0	452	(6.6)	422			471	17.7	554	11.9	620			878	14.6	1,006	3.6	1,042		
Total Year	$4,520	(2.9)	$4,388	(0.5)	$4,366			$5,003	7.6	$5,381	6.4	$5,724			$9,522	2.6	$9,769	3.3	$10,090		
June - Feb	$3,448	(5.1)	$3,272	1.1	$3,310	13.6	$3,759	$3,680	6.8	$3,931	6.3	$4,180	26.1	$5,270	$7,129	1.0	$7,203	4.0	$7,489	20.6	$9,029

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.
(3) AET conversion occurred in April 2018.
(4) Vehicle classification changes were implemented at the time of AET conversion in April 2018.

Table 9

Turnpike I-376 - Beaver Valley Expressway - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	574	(2.1)	562	5.4	592	4.8	621
July	610	(3.7)	588	1.0	593	8.4	643
August	601	(3.6)	579	4.2	604	12.1	677
September	565	(2.7)	550	6.0	583	6.2	619
October	577	(4.1)	553	4.3	577	13.7	657
November	529	(3.6)	509	6.2	541	9.2	591
December	539	(7.8)	497	7.4	534	9.1	582
January	455	(1.2)	450	6.3	478	8.5	519
February	446	(3.2)	432	7.7	465	9.3	508
March	519	(4.0)	499	10.6	552		
April	513	(0.5)	511	11.2	568		
May	547	1.6	556	12.2	623		
Total Year	6,476	(2.9)	6,286	6.8	6,711		
June - Feb	4,896	(3.6)	4,721	5.2	4,968	9.0	5,416

	Commercial Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	108	3.3	111	12.9	126	1.4	127
July	113	(8.4)	104	10.1	114	12.8	129
August	110	2.7	113	12.1	127	11.5	142
September	109	(4.6)	104	13.5	118	2.7	122
October	117	(10.5)	105	15.1	120	16.0	140
November	98	(3.2)	95	10.4	105	6.6	112
December	93	(13.8)	80	13.5	91	8.2	99
January	82	(2.0)	80	12.9	90	11.5	101
February	81	(3.7)	78	16.4	91	4.2	95
March	99	(7.4)	92	15.3	106		
April	102	(8.6)	93	23.0	115		
May	107	1.3	108	21.4	132		
Total Year	1,220	(4.6)	1,164	14.7	1,335		
June - Feb	911	(4.5)	870	12.9	982	8.4	1,065

	Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	682	(1.2)	673	6.6	718	4.2	748
July	723	(4.5)	691	2.3	707	9.1	771
August	711	(2.6)	693	5.5	730	12.0	818
September	675	(3.0)	654	7.2	702	5.6	741
October	694	(5.2)	658	6.0	698	14.1	796
November	627	(3.6)	605	6.9	646	8.8	703
December	632	(8.7)	577	8.3	625	9.0	681
January	537	(1.3)	530	7.3	569	9.0	620
February	527	(3.3)	510	9.0	556	8.4	603
March	619	(4.5)	591	11.4	658		
April	616	(1.9)	604	13.0	683		
May	654	1.5	664	13.7	755		
Total Year	7,696	(3.2)	7,450	8.0	8,046		
June - Feb	5,808	(3.7)	5,591	6.4	5,950	8.9	6,481

Gross Toll Revenue (in $1,000s)

	Passenger Cars						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$732	4.3	$764	0.9	$771	9.8	$847
July	783	3.4	810	(3.7)	780	12.2	875
August	773	0.9	780	0.9	787	18.7	935
September	716	3.0	738	1.4	748	15.0	861
October	729	2.1	744	0.6	749	19.2	892
November	668	1.3	677	2.7	695	15.5	803
December	675	(1.8)	663	3.0	683	14.8	784
January	606	2.2	619	3.7	642	18.9	763
February	591	2.2	604	3.1	623	21.2	755
March	688	1.8	700	6.8	748		
April	680	5.3	717	9.0	781		
May	739	(7.1)	687	21.9	837		
Total Year	$8,382	1.5	$8,504	4.0	$8,845		
June - Feb	$6,275	2.0	$6,400	1.2	$6,479	16.0	$7,516

	Commercial Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$342	11.3	$381	(3.1)	$369	1.6	$375
July	364	(4.7)	347	(4.4)	332	12.3	373
August	348	9.7	381	(4.1)	366	13.5	415
September	351	0.3	352	(0.7)	349	2.3	357
October	380	(8.4)	348	(1.9)	341	20.1	410
November	319	(0.7)	317	(4.0)	304	7.1	326
December	302	(10.7)	270	(0.7)	268	6.8	286
January	283	0.8	286	(6.7)	266	15.4	307
February	282	(1.0)	279	(0.2)	278	8.6	302
March	343	(3.7)	331	(2.1)	324		
April	346	(4.3)	332	4.0	345		
May	365	(12.0)	321	21.1	389		
Total Year	$4,026	(2.0)	$3,943	(0.3)	$3,931		
June - Feb	$2,971	(0.4)	$2,960	(2.9)	$2,874	9.6	$3,151

	Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$1,074	6.6	$1,144	(0.4)	$1,140	7.2	$1,221
July	1,148	0.9	1,157	(3.9)	1,112	12.3	1,248
August	1,121	3.6	1,162	(0.7)	1,153	17.1	1,350
September	1,067	2.1	1,090	0.7	1,098	11.0	1,218
October	1,109	(1.5)	1,092	(0.2)	1,090	19.5	1,302
November	987	0.6	994	0.5	999	13.0	1,129
December	977	(4.6)	933	1.9	951	12.6	1,070
January	889	1.7	905	0.4	908	17.9	1,071
February	873	1.1	883	2.1	901	17.3	1,057
March	1,031	(0.0)	1,031	3.9	1,071		
April	1,027	2.1	1,048	7.4	1,126		
May	1,104	(8.7)	1,008	21.7	1,226		
Total Year	$12,408	0.3	$12,447	2.6	$12,776		
June - Feb	$9,246	1.2	$9,360	(0.1)	$9,352	14.1	$10,667

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.
(3) AET conversion occurred in May 2017.

Table 10

Turnpike I-576 - Southern Beltway - Findlay Connector - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	155	(2.9)	151	4.1	157	(11.0)	140
July	163	(0.5)	162	(2.7)	158	(11.2)	140
August	158	5.9	168	2.6	172	(19.3)	139
September	147	2.6	151	2.1	154	(19.3)	124
October	154	0.4	154	6.5	164	(15.5)	139
November	141	4.7	147	0.2	148	(13.4)	128
December	143	(0.8)	142	(1.3)	140	(11.5)	124
January	124	5.8	131	(0.2)	131	(9.7)	118
February	122	1.8	124	(2.3)	122	(5.8)	115
March	143	2.3	146	(2.3)	143		
April	138	3.9	143	(2.1)	140		
May	147	6.8	157	(4.0)	151		
Total Year	1,735	2.4	1,777	0.1	1,779		
June - Feb	1,307	1.8	1,330	1.1	1,345	(13.3)	1,166

	Commercial Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	20	(6.2)	19	(2.3)	19	16.5	22
July	19	(5.6)	18	11.0	20	8.8	22
August	20	(0.3)	20	15.2	23	28.8	30
September	21	(15.0)	18	23.0	22	37.1	31
October	23	2.2	24	(8.0)	22	17.2	25
November	21	(7.2)	19	0.7	19	21.8	23
December	20	(4.1)	19	(13.6)	17	31.7	22
January	16	21.8	20	(18.6)	16	38.6	22
February	15	(1.0)	15	8.1	16	37.2	22
March	17	2.4	18	11.2	20		
April	17	5.5	18	15.1	20		
May	21	(9.9)	19	33.8	25		
Total Year	231	(2.0)	227	5.7	240		
June - Feb	177	(2.3)	172	1.2	175	26.0	220

	Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	175	(3.3)	170	3.4	175	(8.1)	161
July	182	(1.1)	180	(1.3)	178	(8.9)	162
August	179	5.2	188	4.0	196	(13.6)	169
September	168	0.4	169	4.3	176	(12.2)	155
October	177	0.6	178	4.6	186	(11.7)	164
November	161	3.2	166	0.2	167	(9.4)	151
December	163	(1.2)	161	(2.7)	157	(6.9)	146
January	140	7.7	151	(2.6)	147	(4.4)	141
February	137	1.5	139	(1.2)	138	(0.7)	137
March	160	2.3	164	(0.8)	163		
April	155	4.1	161	(0.2)	161		
May	168	4.8	176	(0.0)	176		
Total Year	1,966	1.9	2,004	0.8	2,019		
June - Feb	1,483	1.3	1,502	1.1	1,519	(8.8)	1,386

Gross Toll Revenue (in $1,000s)

	Passenger Cars						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$106	2.2	$108	1.9	$110	42.4	$157
July	120	(1.6)	118	(2.8)	114	41.3	162
August	114	2.7	117	4.6	123	36.9	168
September	103	2.6	106	1.9	108	36.4	147
October	108	(0.7)	108	8.1	116	40.6	164
November	99	3.5	103	0.5	103	43.8	148
December	96	6.3	102	(0.8)	101	43.3	145
January	85	8.0	92	(1.8)	91	62.4	147
February	95	(8.7)	87	(2.3)	85	70.1	144
March	99	2.9	101	(0.7)	101		
April	97	4.4	101	(3.2)	98		
May	103	6.6	110	(3.7)	106		
Total Year	$1,225	2.2	$1,253	0.2	$1,255		
June - Feb	$927	1.5	$940	1.2	$951	45.3	$1,382

	Commercial Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$45	(7.0)	$42	(1.7)	$42	35.5	$56
July	47	(12.8)	41	8.0	44	29.2	57
August	47	(5.4)	45	13.4	51	57.3	79
September	48	(15.4)	41	19.3	48	70.1	82
October	50	(1.6)	49	(2.3)	48	41.6	68
November	45	(6.2)	42	1.6	43	42.8	61
December	43	5.4	45	(16.1)	38	52.3	57
January	38	24.6	47	(21.1)	37	64.5	61
February	37	(7.1)	35	5.5	36	72.9	63
March	39	5.1	41	6.8	44		
April	39	5.5	41	11.9	46		
May	45	(7.4)	42	27.3	54		
Total Year	$523	(2.5)	$510	3.9	$530		
June - Feb	$400	(3.5)	$386	0.2	$387	51.4	$586

	Total Vehicles						
Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June	$151	(0.6)	$150	0.9	$152	40.5	$213
July	167	(4.8)	159	0.0	159	38.0	219
August	161	0.3	162	7.0	173	42.8	247
September	151	(3.1)	147	6.7	156	46.8	230
October	159	(1.0)	157	4.8	165	40.9	232
November	144	0.5	145	0.8	146	43.5	209
December	138	6.0	147	(5.5)	139	45.8	202
January	123	13.1	139	(8.3)	128	63.0	208
February	132	(8.2)	122	(0.1)	121	70.9	208
March	138	3.5	142	1.4	144		
April	136	4.7	142	1.1	144		
May	148	2.3	152	4.9	159		
Total Year	$1,748	0.8	$1,763	1.3	$1,785		
June - Feb	$1,327	(0.0)	$1,327	0.9	$1,338	47.1	$1,968

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.
(3) AET conversion occurred in June 2018.
(4) Vehicle classification changes were implemented at the time of AET conversion in June 2018.
(5) The I-576 tolling configuration was changed from six ramp tolls to two mainline toll gantries at the time of AET conversion in June 2018.

Table 11

Delaware River Bridge - Monthly Transaction and Gross Toll Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Passenger Cars

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June			606	(0.8)	601	7.3	645
July			647	(1.6)	637	4.3	664
August			657	(1.1)	650	6.0	689
September			573	0.6	577	6.6	616
October			583	0.0	583	20.1	700
November			570	(1.3)	563	24.1	699
December			555	(2.1)	543	32.6	720
January	436	(24.4)	330	41.7	467	31.0	612
February	463	(100.0)	0	N/A	446	31.4	586
March	532	(39.8)	320	62.3	519		
April	541	0.8	545	2.8	561		
May	589	(2.0)	577	6.0	611		
Total Year	2,561		5,963		6,758		
June - Feb			4,522	12.1	5,067	17.0	5,930

Commercial Vehicles

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June			103	0.8	104	10.1	115
July			97	1.6	98	14.5	113
August			103	5.8	109	10.6	120
September			99	1.8	101	5.5	106
October			97	11.2	108	17.5	127
November			98	5.5	103	13.1	117
December			96	0.5	96	14.1	110
January	81	(26.6)	59	62.1	96	20.0	115
February	84	(100.0)	0	N/A	90	16.1	104
March	95	(34.1)	63	62.5	102		
April	95	(4.5)	91	14.4	104		
May	97	6.5	103	12.3	115		
Total Year	452		1,008		1,227		
June - Feb			752	20.4	905	13.4	1,027

Total Vehicles

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June			709	(0.6)	705	7.7	760
July			744	(1.2)	735	5.7	777
August			760	(0.2)	759	6.7	810
September			672	0.8	678	6.5	722
October			680	1.6	691	19.7	827
November			668	(0.3)	666	22.4	815
December			651	(1.7)	639	29.8	830
January	517	(24.8)	389	44.8	563	29.1	727
February	548	(100.0)	0	N/A	535	28.8	690
March	627	(39.0)	383	62.3	621		
April	636	(0.0)	636	4.5	665		
May	685	(0.8)	679	6.9	727		
Total Year	3,012		6,971		7,984		
June - Feb			5,273	13.2	5,972	16.5	6,957

Gross Toll Revenue (in $1,000s)

Passenger Cars

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June			$3,150	(1.6)	$3,098	6.2	$3,291
July			3,380	(3.5)	3,260	3.7	3,381
August			3,337	0.0	3,337	6.6	3,557
September			3,038	(1.3)	3,000	5.5	3,165
October			2,985	(0.8)	2,962	20.2	3,560
November			2,915	(4.5)	2,783	28.5	3,577
December			2,872	(1.6)	2,827	28.4	3,631
January	2,167	(18.7)	1,762	39.6	2,461	33.8	3,293
February	2,340	(100.3)	-7	N/A	2,265	39.7	3,164
March	2,713	(41.4)	1,591	65.9	2,639		
April	2,813	(1.3)	2,775	3.7	2,879		
May	2,989	(2.0)	2,929	6.0	3,104		
Total Year	$13,021		$30,727		$34,615		
June - Feb			$23,432	10.9	$25,993	17.8	$30,619

Commercial Vehicles

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June			$1,845	1.9	$1,879	8.7	$2,043
July			1,753	0.8	1,767	13.0	1,998
August			1,830	6.7	1,952	10.1	2,149
September			1,797	1.9	1,831	4.7	1,916
October			1,758	10.3	1,938	17.4	2,275
November			1,761	3.4	1,821	14.0	2,076
December			1,743	0.6	1,754	12.2	1,968
January	1,430	(25.1)	1,071	60.5	1,720	25.5	2,159
February	1,503	(99.9)	1	N/A	1,621	21.4	1,967
March	1,702	(34.6)	1,112	64.1	1,825		
April	1,738	(5.5)	1,642	13.2	1,858		
May	1,721	6.3	1,829	12.0	2,049		
Total Year	$8,094		$18,142		$22,016		
June - Feb			$13,559	20.1	$16,283	13.9	$18,551

Total Vehicles

Month	2015-16	% Chg	2016-17	% Chg	2017-18	% Chg	2018-19
June			$4,995	(0.3)	$4,978	7.2	$5,334
July			5,133	(2.0)	5,027	7.0	5,379
August			5,166	2.4	5,289	7.9	5,706
September			4,835	(0.1)	4,831	5.2	5,081
October			4,742	3.3	4,900	19.1	5,835
November			4,677	(1.5)	4,604	22.8	5,653
December			4,615	(0.7)	4,581	22.2	5,599
January	3,596	(21.2)	2,834	47.5	4,181	30.4	5,452
February	3,843	(100.2)	-6	N/A	3,886	32.1	5,131
March	4,415	(38.8)	2,703	65.2	4,464		
April	4,551	(2.9)	4,418	7.2	4,737		
May	4,711	1.0	4,758	8.3	5,154		
Total Year	$21,115		$48,869		$56,631		
June - Feb			$36,991	14.3	$42,276	16.3	$49,170

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(3) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.

- Table 9 - Turnpike I-376 (Beaver Valley Expressway);
- Table 10 - Turnpike I-576 (Southern Beltway – Findlay Connector) and;
- Table 11 - Delaware River Bridge.

The information is provided by passenger cars, commercial vehicles, and total vehicles. For comparative purposes, subtotals are provided for June through February for each fiscal year. It should be noted that the Delaware River Bridge (DRB) was converted to a westbound only cashless tolling system in January 2016. Prior to that time, DRB traffic and revenue data were included in the Ticket System. All DRB traffic and revenue data are now shown separately.

As shown in Table 3, Systemwide gross toll revenue increased by 8.1 percent in FY 2016-17, and 7.9 percent in FY 2017-18. Year to date (June 2018 through February 2019) toll revenue growth was 10.4 percent compared to the same period in the prior year. Commercial vehicle toll revenue increased by 13.8 percent and passenger car toll revenue increased by 7.8 percent from June 2018 through February 2019 compared to the same time period in the prior year. These increases in toll revenue were largely due to annual toll increases. Year-to-date transactions grew by 0.1 percent, 3.3 percent, and 0.6 percent for passenger cars, commercial vehicles, and total vehicles, respectively.

It should be noted that the DRB was closed on January 20, 2017 due to a fracture in one of the structural support beams. The structure was closed to all traffic through March 9, 2017. This event negatively impacted the traffic and revenue values for FY 2016-17. CDM Smith analyzed the impact on Turnpike traffic and revenue during the closure and estimated that losses over this period amounted to 1.8 million transactions and $12.1 million in toll revenue. Thus, absent the DRB closure, the total FY 2016-17 Turnpike traffic would have increased by 1.7 percent (instead of 0.8 percent) compared to the previous year. Total toll revenue would have increased by 9.3 percent (instead of 8.1 percent) compared to the previous year.

As previously mentioned, the Ticket System is by far the largest component of both traffic and toll revenue on the Turnpike System. As shown in Table 4, total year-to-date transactions decreased 0.8 percent compared to the same period in the prior year. Year-to-date Passenger car transactions decreased by 1.2 percent during this period. Year-to-date Commercial vehicle activity has been more stable during this period, with traffic increasing 2.0 percent compared to the previous nine-month period. Total revenue for the Ticket System grew by 5.7 percent in FY 2016-17 and by 7.7 percent in FY 2017-18. Year-to-date FY 2018-19 revenue has grown by 9.9 percent compared to the same time frame in the previous year. The above mentioned DRB closure would also have negatively affected Ticket System traffic and revenue in January, February, and March 2017.

The combined Barrier Facilities monthly transaction and revenue data is shown in Table 5. Year-to-date transactions increased 5.4 percent in 2018-19 compared to the same period in the previous year. Commercial vehicle transactions increased 8.0 percent for this time period, while passenger cars grew at 4.9 percent. Total revenue for the combined Barrier Facilities grew 14.7 percent overall year-to-date. Growth in toll revenue at the barrier facilities has outpaced transaction growth due to higher commercial vehicle growth and vehicle classifications adjustments (upon AET conversion) at some facilities. These vehicle classification changes, combined with stronger economic conditions and low fuel prices, likely account for much of the recent revenue growth on these barrier facilities. When such conversions occur, there is a significant increase in video transactions, which also has the effect of increasing the average toll rates.

Traffic and gross toll revenue trends for the six barrier toll facilities are provided in Tables 6 through 11. These six barrier facilities (Turnpikes 43 and 66, the Northeast Extension barrier plazas, Turnpikes I-376 and I-576, and the Delaware River Bridge) contribute about 10 percent of the total Systemwide gross toll revenue.

The effects of ramp-up, inclement weather, alternative routes, and new developments have a more significant impact on these relatively low volume roads. Traffic growth has been positive on most of these barrier facilities thus far in FY 2018-19, countering long term trends. Revenue growth especially has grown, partially due to vehicle classification changes on the Northeast Extension and Findlay Connector Barrier Facilities, combined with the above mentioned AET conversions.

Actual and Assumed Toll Rate Increases

Annual toll rate increases are assumed to occur on the entire Turnpike System. The toll rate increases are assumed to occur at 12:01 AM on first Sunday after January 1 of each year. Rate increase assumptions are unchanged since the 2018 Forecast Study. **Table 12** presents the annual percent increases in toll rates for E-ZPass and cash/video from calendar year 2018 through 2049.

Actual and Assumed E-ZPass Penetration Rates

Table 13 presents the actual and assumed annual E-ZPass penetration rates from calendar year 2016 through 2049. The first three columns show the E-ZPass market share assumptions for the current 2019 Bring Down Letter. These were adjusted slightly on a facility by facility basis, by the amount shown in the three rightmost columns, over assumptions used in the 2018 Forecast Study. Actual experience over the last 12 months has shown that the E-ZPass market share has decreased when compared to the last study in certain cases, most notably for those facilities that have converted to AET.

Table 12
Actual and Assumed Percent Changes in Toll Rates
Pennsylvania Turnpike System

Calendar Year	Percent Changes in Turnpike System's Toll Rates (1)	
	E-ZPass	Cash
2018	6.00	6.00
2019	6.00	6.00
2020	6.00	6.00
2021	5.00	5.00
2022	5.00	5.00
2023	5.00	5.00
2024	5.00	5.00
2025	5.00	5.00
2026	4.00	4.00
2027	3.50	3.50
2028	3.00	3.00
2029	3.00	3.00
2030	3.00	3.00
2031	3.00	3.00
2032	3.00	3.00
2033	3.00	3.00
2034	3.00	3.00
2035	3.00	3.00
2036	3.00	3.00
2037	3.00	3.00
2038	3.00	3.00
2039	3.00	3.00
2040	3.00	3.00
2041	3.00	3.00
2042	3.00	3.00
2043	3.00	3.00
2044	3.00	3.00
2045	3.00	3.00
2046	3.00	3.00
2047	3.00	3.00
2048	3.00	3.00
2049	3.00	3.00

(1) Toll rate increases are the same for all facilities and vehicle classes.

Note:

The toll rate increases in this 2019 Bring Down Letter are actual through 2019.

Table 13
Actual and Assumed Percent E-ZPass Penetration
Pennsylvania Turnpike System

Calendar Year	E-ZPass Penetration Rates: 2019 Bring Down Letter: Cars	Trucks	Total	Difference from 2018 Forecast Study: Cars	Trucks	Total
2016	76.2	89.2	78.0	0.0	0.0	0.0
2017	78.3	90.1	79.9	0.0	0.0	0.0
2018	80.0	90.6	81.5	-0.5	-0.6	-0.5
2019	81.5	91.0	82.9	-0.4	-0.8	-0.4
2020	82.9	91.5	84.1	-0.3	-1.1	-0.4
2021	83.9	92.0	85.1	-0.3	-1.2	-0.4
2022	85.2	92.6	86.3	0.9	-1.0	0.7
2023	86.0	93.1	87.1	1.0	-1.0	0.8
2024	86.8	93.6	87.8	1.1	-1.0	0.9
2025	87.3	93.7	88.3	1.2	-1.1	0.9
2026	87.9	93.8	88.8	1.2	-1.1	0.9
2027	88.3	93.8	89.2	1.1	-1.0	0.9
2028	88.8	93.9	89.5	1.1	-1.0	0.8
2029	89.2	93.9	89.9	1.1	-1.0	0.8
2030	89.6	94.0	90.3	1.1	-1.0	0.8
2031	90.0	94.0	90.6	1.1	-1.0	0.8
2032	90.1	94.0	90.7	1.1	-0.9	0.8
2033	90.1	94.1	90.7	1.0	-0.9	0.8
2034	90.2	94.1	90.8	1.0	-0.9	0.8
2035	90.3	94.2	90.9	1.0	-0.9	0.7
2036	90.3	94.2	90.9	1.0	-0.8	0.7
2037	90.3	94.2	90.9	1.0	-0.8	0.7
2038	90.4	94.3	91.0	0.9	-0.8	0.7
2039	90.4	94.3	91.0	0.9	-0.7	0.7
2040	90.4	94.3	91.0	0.9	-0.7	0.7
2041	90.4	94.4	91.0	0.9	-0.7	0.7
2042	90.4	94.4	91.0	0.9	-0.6	0.7
2043	90.4	94.4	91.1	0.9	-0.6	0.7
2044	90.4	94.4	91.1	0.9	-0.6	0.7
2045	90.5	94.5	91.1	0.8	-0.6	0.7
2046	90.5	94.5	91.1	0.8	-0.5	0.6
2047	90.5	94.5	91.1	0.8	-0.5	0.6
2048	90.5	94.5	91.1	0.8	-0.5	0.6
2049	90.5	94.5	91.1			

Note: The E-ZPass penetration rates for this 2019 Bring Down Letter are actual through 2018 and were actual only through 2017 for the 2018 Forecast Study.

The revised total E-ZPass penetration rates range from 0.5 percentage points lower to 0.9 percentage points higher than those in the 2018 Forecast Study. The downward adjustment to the commercial vehicle rates is largely due to actual observed experience due to AET conversion on barrier facilities. In the twelve months of new data since the 2018 Forecast Study, it can be observed that although E-ZPass transactions are generally growing, video transactions grew at a higher rate and have pushed the E-ZPass percentage downward.

Summary of Changes in Future Year Estimates for U.S. Gross Domestic Product and Pennsylvania Gross State Product

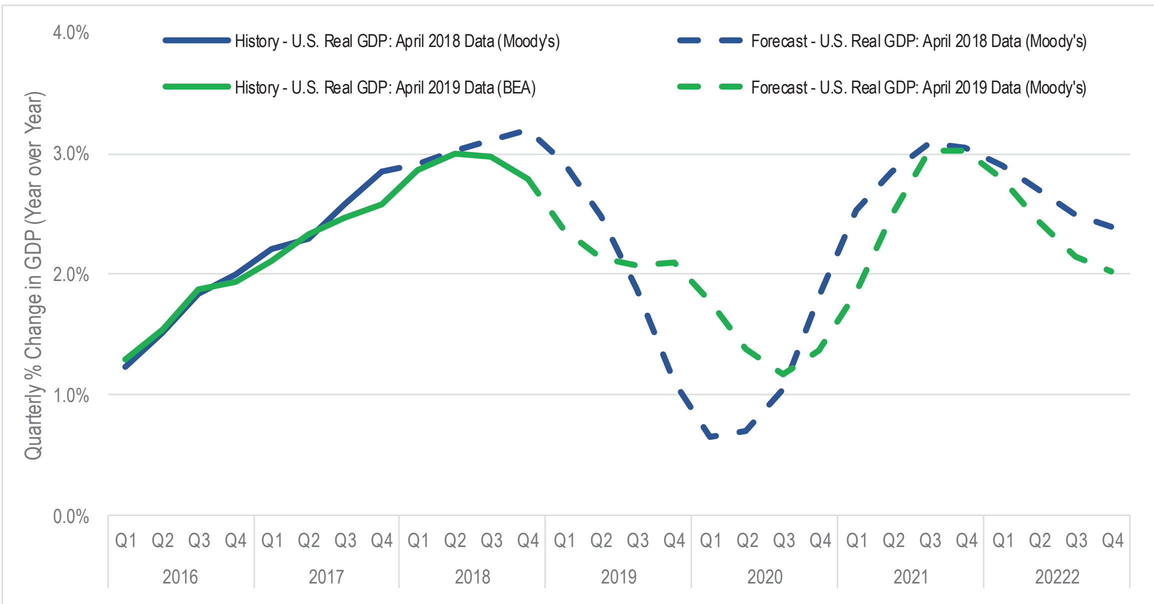
This section presents a comparison of the Gross Domestic Product (GDP) and Gross State Product (GSP) information available for the 2018 Forecast Study with updated forecasts for both measures from Moody's Analytics. This information was a key input in developing estimated growth forecasts for the Turnpike System.

Figure 3 shows actual and estimated GDP at the time of the 2018 Forecast Study as well as the revised figures based on updated Moody's Analytic's forecasts as of March 2019. As shown, actual experience in the second half of 2018 underperformed prior estimates by between about 0.1 to 0.4 percent (though GDP growth remained positive throughout the period). The revised GDP growth estimates in 2019 show a lower growth than the prior forecast for the first half of 2019, but higher growth in the latter half of the year and for most of 2020. Beginning in the fourth quarter of 2020, the revised GDP estimates are less than the prior forecast.

Figure 4 shows GSP trend and forecast data for Pennsylvania. The GSP growth at the end of 2017 and throughout 2018 was lower than the prior estimates by a range of 1.0 to 1.5 percent. The GSP growth estimates for 2019 and 2020 are estimated to be higher than the previous estimates by a range of 0.0 to 1.1 percent. By the fourth quarter of 2020, the March 2019 GSP forecast falls below the April 2018 forecast until at least the end of 2022.

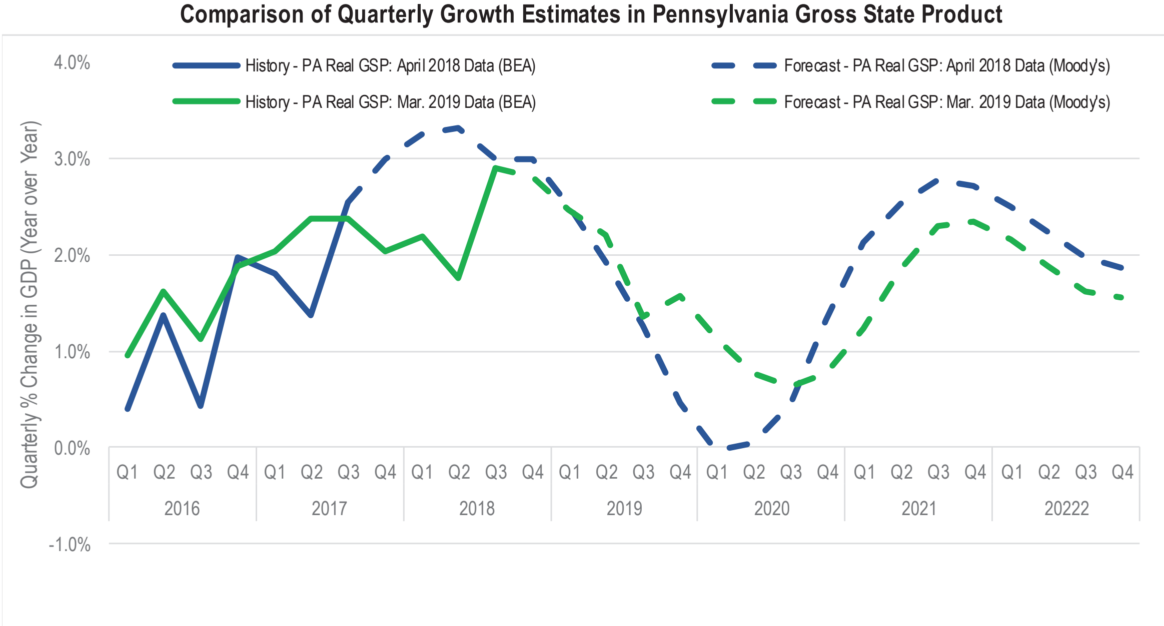
Based on this information alone it would be assumed that actual traffic growth in 2018 would have underperformed CDM Smith's 2018 Forecast Study estimates. As will be discussed below, that was not the case across all the facilities. In fact, actual traffic and toll revenue on the total System slightly outperformed CDM Smith's estimates. This is likely due to other factors, namely motor fuel prices and consumer confidence which are discussed in the next section. The above mentioned AET conversions have also positively affected recent growth trends.

Figure 3
Comparison of Quarterly Growth Estimates in U.S. Gross Domestic Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (April 2018 and April 2019 Releases)

Figure 4
Comparison of Quarterly Growth Estimates in Pennsylvania Gross State Product



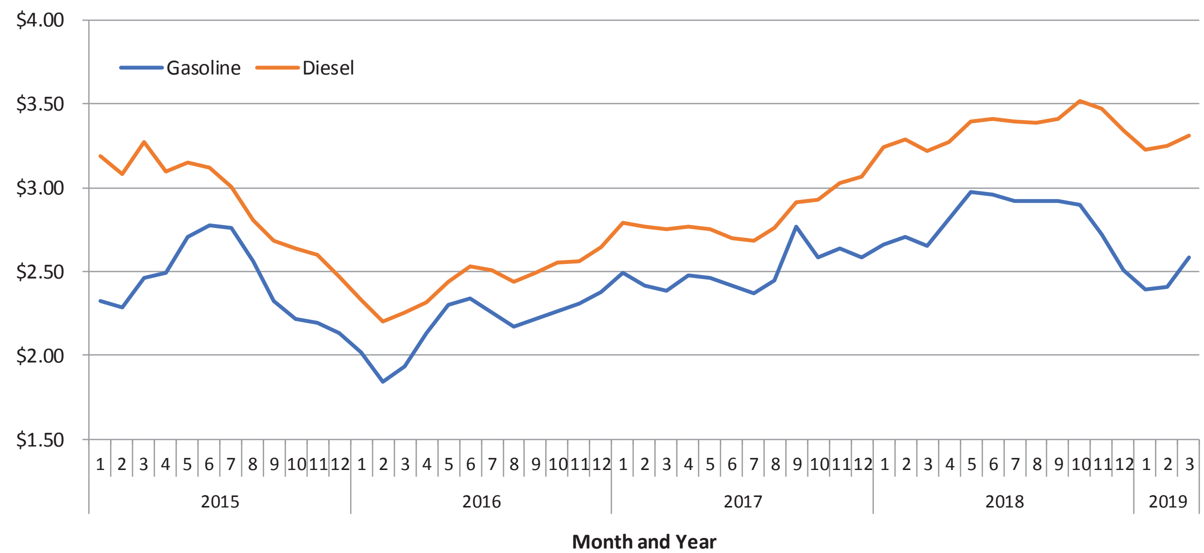
Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (April 2018 and March 2019 Releases)

Summary of Trends in Fuel Prices

Figure 5 portrays gasoline and diesel prices for the Central Atlantic Region from January 2015 through March 2019. As shown, gasoline and diesel prices have followed generally similar trends throughout this period. The exception to this is the first six months of 2015, where gasoline prices rose approximately $0.40 per gallon while diesel prices remained relatively flat. Since that time, both prices have generally moved in tandem, decreasing over the last six months of 2015 and the the first few months of 2016, reaching a low of $1.85 per gallon for gasoline and $2.20 per gallon for diesel in February 2016. Prices for both increased slowly but steadily throughout 2016, 2017, and early 2018, reaching a high of $2.97 per gallon for gasoline in May 2018. Prices fluctuated within a narrow range for the remainder of 2018, with diesel reaching a high of $3.52 per gallon in October 2018. Prices of both gasoline and diesel fell throughout the winter of 2018-19, and have begun to increase again in the spring.

Motor fuel prices have remained relatively stable (and even declined in recent months) compared to price trends available at the time of the 2018 Forecast Study. This may have contributed to the recently observed strong growth on the Turnpike System, especially for commercial vehicles.

Figure 5
Fuel Prices in Central Atlantic Region ($ per Gallon)



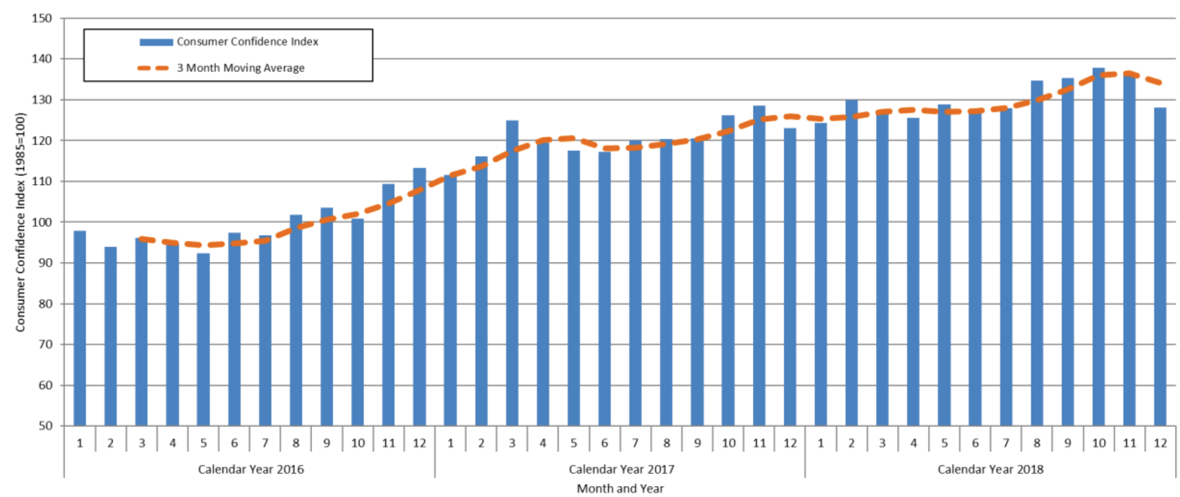
Source: U.S. Energy Information Administration, Release Date 4/8/2019
Note: Retail Prices in USD for Regular All Formulations Retail Gasoline and Number 2 Diesel

Consumer Confidence

Figure 6 shows the Conference Board Consumer Confidence Index for the period between January 2016 and December 2018. The individual blue bars show the index values for each month while the dotted line shows the three-month moving average. As shown, consumer confidence has trended up over the period shown. The average exceeded 99 in 2016, rose to approximately 120 in 2017, and surpassed 130 in 2018. The Consumer Confidence Index has been showing a steady upward trend since the beginning of 2016. By the end of 2016, consumer confidence rose to pre-recession levels for the first time since the 2008 recession, and has continued to grow since then. The most recent two months of November and December 2018 experienced a slight decrease from a high of 137.9 in October, which was the highest level of consumer confidence since September 2000.

Consumer confidence is an important measure in that it highlights consumer's confidence in making purchases, their willingness to travel more, etc. Thus, we can infer that higher consumer confidence spurs demand for various goods and services and that higher demand results in higher traffic on the roadways.

Figure 6
Conference Board Consumer Confidence Index



Committed Roadway Improvements

Table 14 lists major capacity-enhancing roadway improvements with dedicated funding on the Pennsylvania Turnpike system. Most of these projects are part of PTC's statewide total reconstruction initiative, which is a multi-year project to widen the mainline and the Northeast Extension to six lanes (three in each direction). On the Mainline I-76/I-276 this includes work throughout the Pittsburgh, Somerset, Harrisburg, and Philadelphia metro areas. More than 130 miles have been completed as of 2019, with more than 40 additional miles under construction or funded. In addition to roadway widening, Table 14 highlights two additional projects; one to link I-476 (Northeast Extension) to I-81 in the Scranton area and the other to extend Toll 576 (Southern Beltway) an additional 12.5 miles in the Pittsburgh area. These projects will serve to enhance capacity and create additional connections to other routes, both of which are expected to increase the number of travelers, and therefore revenue, on the Pennsylvania Turnpike system.

Actual Versus Estimated Traffic and Toll Revenue

Table 15 provides a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2018 Forecast Study. The analysis period in this table is from March 2018 through February 2019. This twelve-month period corresponds to the period for which actual data currently exists but was estimated at the time of the 2018 Forecast Study.

Systemwide, actual passenger car transactions surpassed estimates by 0.9 percent, and passenger-car toll revenue exceeded estimates by 1.8 percent. Commercial vehicle transactions exceeded estimates by 3.7 percent, and actual commercial vehicle toll revenue was 7.9 percent greater than estimates. When all vehicles are considered, actual transactions were higher than estimates by 1.3 percent and toll revenue exceeded estimates by 4.4 percent. As mentioned earlier in this report, the AET conversions have had a larger than expected positive impact on commercial vehicle growth. This was especially true for the video component of traffic, which have higher toll rates and thus have the effect of increasing average commercial vehicle toll rates.

The same information is provided in Table 15 for each of the Turnpike toll facilities. Actual versus estimated traffic and toll revenue tracks quite closely for the Ticket System. Actual traffic and toll revenue for ticket system would have been even higher absent the negative impact of the DRB closure in January through March 2017.

All barrier facilities overperformed when compared to the 2018 Forecast Study forecasts. Barrier System toll revenue was higher than CDM Smith estimates by between 4.6 percent (Turnpike 66) and 29.2 percent (Turnpike I-576) for both passenger car and commercial revenue combined.

Table 14
Major Committed Roadway Improvements on the Pennsylvania Turnpike System (1)

Milepost	Location	Description	Actual or Assumed Start Date	Assumed Completion Date
Mainline I-76/I-276				
28-31	Alleghany and Butler Counties	Reconstruct and widen to 3 lanes in each direction	Early 2020	2022
40-44	Alleghany County	Replace 6 overhead bridges and widen to 6 lanes in each direction	February 2013	Fall 2019
49-67	Alleghany and Westmoreland Counties	Reconstruct and widen to 3 lanes in each direction	To be determined	To be determined
102-109	Somerset County	Reconstruct and widen to 3 lanes in each direction	Early 2020	Late 2022
128-134	Somerset and Bedford Counties	Reconstruct and widen to 3 lanes in each direction	To be determined	To be determined
149-155	Bedford County	Reconstruct and widen to 3 lanes in each direction	To be determined	To be determined
180-186	Fulton and Huntingdon Counties	Reconstruct and widen to 3 lanes in each direction	To be determined	To be determined
202-206	Cumberland County	Reconstruct and widen to 3 lanes in each direction	September 2016	May 2019
298-308	Berks and Chester Counties	Reconstruct and widen to 3 lanes in each direction	To be determined	To be determined
308-312	Chester County	Reconstruct and widen to 3 lanes in each direction	Fall 2021	Fall 2023
312-316	Chester County	Reconstruct and widen to 3 lanes in each direction	Spring 2020	Late 2022
320-326	Chester and Montgomery Counties	Reconstruct and widen to 3 lanes in each direction	To be determined	To be determined
Northeast Extension I-476				
A31-A38	Montgomery County	Reconstruct and widen to 3 lanes in each direction	Early 2018	Late 2020
A38-A44	Montgomery and Bucks Counties	Reconstruct and widen to 3 lanes in each direction	Spring 2021	Late 2023
	Lackawanna and Luzerne Counties	Link I-476 to I-81 with two interchanges to create a Scranton Beltway	2022	2026
Southern Beltway Toll 576				
US-22 to I-79	Washington and Allegheny Counties	Construct a 12.5-mile cashless tolling extension of Toll 576 from the southern terminus of the Findlay Connector at US-22 to I-79 including four new interchanges	December 2016	2022

(1) The roadway improvement projects shown in this table are a small subset of the projects listed in the PTC's Major Design and Construction Projects website and listed in the Proposed Twelve-Year Program

Table 15
Comparison of Estimated and Actual Traffic Volumes and Gross Toll Revenue
From March 2018 Through February 2019 (1)
Pennsylvania Turnpike System

	Total Traffic (in Thousands)			Total Gross Toll Revenue (in Thousands)		
Facility	Estimated	Actual	Actual as Percent of Estimated	Estimated	Actual	Actual as Percent of Estimated
			Passenger Cars			
Ticket and Gateway Barrier	133,870	132,899	(0.7)	$625,143	$630,328	0.8
Delaware River Bridge	6,845	7,621	11.3	35,386	39,241	10.9
Turnpike 43	11,866	12,463	5.0	19,296	20,693	7.2
Turnpike 66	6,377	6,480	1.6	11,255	11,588	3.0
Northeast Extension (Barrier)	4,257	4,482	5.3	4,248	4,816	13.4
Turnpike I-376	6,522	7,160	9.8	8,724	9,882	13.3
Turnpike I-576	1,481	1,600	8.0	1,334	1,686	26.4
Barrier Subtotal	37,347	39,806	6.6	80,244	87,906	9.5
Total System	171,217	172,706	0.9	$705,387	$718,234	1.8
			Commercial Vehicles			
Ticket and Gateway Barrier	22,381	22,911	2.4	$492,401	$530,370	7.7
Delaware River Bridge	1,220	1,348	10.5	22,238	24,284	9.2
Turnpike 43	1,027	1,089	6.0	4,767	5,254	10.2
Turnpike 66	1,037	1,104	6.5	5,033	5,454	8.4
Northeast Extension (Barrier)	1,126	1,191	5.7	5,900	6,815	15.5
Turnpike I-376	1,312	1,417	8.0	4,182	4,208	0.6
Turnpike I-576	195	285	46.2	534	729	36.4
Barrier Subtotal	5,917	6,433	8.7	42,655	46,744	9.6
Total System	28,297	29,344	3.7	$535,057	$577,114	7.9
			Total Vehicles			
Ticket and Gateway Barrier	156,250	155,810	(0.3)	$1,117,544	$1,160,697	3.9
Delaware River Bridge	8,065	8,969	11.2	57,625	63,525	10.2
Turnpike 43	12,892	13,552	5.1	24,063	25,947	7.8
Turnpike 66	7,413	7,584	2.3	16,288	17,043	4.6
Northeast Extension (Barrier)	5,384	5,673	5.4	10,148	11,630	14.6
Turnpike I-376	7,833	8,577	9.5	12,906	14,091	9.2
Turnpike I-576	1,676	1,885	12.5	1,869	2,415	29.2
Barrier Subtotal	43,264	46,239	6.9	122,899	134,650	9.6
Total System	199,514	202,050	1.3	$1,240,443	$1,295,348	4.4

(1) These 12 months correspond to the period for which actual data exists, but was estimated at the time of CDM Smith's 2018 Forecast Study.
(2) The assumed Findlay conversion date in the 2018 Forecast Study was the end of April 2018. Actual conversion ocurred in June 2018.

Despite actual tolled transaction and toll revenue values overperforming forecasted levels for all Barrier facilities, the total System forecast tracked relatively closely overall. This occurs because the vast majority of traffic and revenue is generated by the Ticket System. Several events occurred on the barrier plazas that influenced the high growth. These include AET conversion at the Northeast Extension Barrier Plazas, Beaver Valley, and the Findlay Connector. Also important was the Stage 1 opening of the I-95 interchange just west of the Delaware River Bridge. The impact of the Stage 1 completion was greater than that assumed in the 2018 Forecast Study. The recent trends for all facilities were considered when adjusting the short-term forecasts for this Bring Down Letter.

Estimated Traffic and Gross Toll Revenue

Updated traffic and gross toll revenue estimates were developed through FY 2048-49 incorporating the following changes into the forecast. All these changes were described in previous sections.

- Actual traffic and revenue experience through February 2019;
- Slightly adjusted short term (through 2022) growth forecasts based on the recent experience of actual traffic and revenue compared to assumptions in the 2018 Forecast Study;
- Revised estimates of E-ZPass penetration rates;
- AET conversion scheduled at AKH and Gateway for October 2019; and
- Slight decreases in long range normal growth rates for commercial vehicles from 2022 through the end of the forecast period.

Other assumptions remain unchanged from the 2018 Forecast Study including:

- Annual Systemwide toll rate increases;
- Structure of the commercial vehicle discount program; and
- Long range economic indicators.

Table 16 shows the total traffic and toll revenue for the Ticket System only. Data for FY 2016-17 and FY 2017-18 reflects a full year of actual experience and FY 2018-19 includes nine months of actual experience (through February 2019). Total toll transactions increase from 157.3 million to 194.3 million over the forecast period, an average annual increase of 0.7 percent. Gross toll revenue increases from $1,004.4 million to $4.2 billion by FY 2048-49. This amounts to an average annual increase of 4.6 percent, reflecting the impact of normal growth plus the annual rate adjustments.

Table 16

Ticket System: Estimated Annual Transactions and Gross Toll Revenue (1)

Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2016-17	(2,3,5)	135,128	22,179	157,307	$564,915	$439,495	$1,004,410
2017-18	(2)	134,127	22,577	156,704	599,384	482,376	1,081,760
2018-19	(4,6)	132,360	22,922	155,282	637,137	538,213	1,175,351
2019-20		131,225	23,118	154,343	670,587	574,230	1,244,817
2020-21		130,693	23,366	154,059	706,891	612,168	1,319,059
2021-22		130,817	23,600	154,418	741,516	648,592	1,390,108
2022-23		131,600	23,821	155,421	782,660	686,348	1,469,009
2023-24		132,766	24,032	156,799	828,208	725,242	1,553,450
2024-25		134,006	24,253	158,258	876,748	766,780	1,643,529
2025-26		135,481	24,493	159,973	926,005	808,389	1,734,394
2026-27		137,046	24,729	161,775	970,726	845,590	1,816,316
2027-28		138,580	24,948	163,528	1,012,261	879,566	1,891,826
2028-29		140,079	25,195	165,274	1,051,564	913,952	1,965,516
2029-30		141,548	25,486	167,034	1,091,994	952,249	2,044,243
2030-31		142,985	25,777	168,762	1,133,951	992,005	2,125,956
2031-32		144,409	26,067	170,476	1,178,775	1,033,276	2,212,051
2032-33		145,818	26,357	172,175	1,226,573	1,076,117	2,302,690
2033-34		147,178	26,647	173,825	1,275,772	1,120,590	2,396,362
2034-35		148,498	26,937	175,435	1,326,473	1,166,769	2,493,242
2035-36		149,781	27,227	177,009	1,378,732	1,214,723	2,593,455
2036-37		151,042	27,512	178,554	1,432,743	1,264,246	2,696,989
2037-38		152,219	27,789	180,007	1,487,947	1,315,252	2,803,199
2038-39		153,355	28,065	181,420	1,544,774	1,368,202	2,912,976
2039-40		154,475	28,343	182,817	1,603,514	1,423,173	3,026,687
2040-41		155,573	28,621	184,194	1,664,171	1,480,250	3,144,421
2041-42		156,645	28,900	185,545	1,726,760	1,539,518	3,266,278
2042-43		157,685	29,180	186,865	1,791,242	1,601,062	3,392,304
2043-44		158,698	29,461	188,159	1,857,745	1,664,977	3,522,722
2044-45		159,686	29,743	189,428	1,926,333	1,731,349	3,657,683
2045-46		160,645	30,026	190,671	1,997,034	1,800,267	3,797,301
2046-47		161,591	30,310	191,902	2,070,076	1,871,837	3,941,913
2047-48		162,525	30,596	193,121	2,145,565	1,946,173	4,091,738
2048-49		163,464	30,885	194,349	2,223,807	2,023,461	4,247,268

(1) Annual toll rate increases are implemented in January of each year.
(2) Reflects actual traffic and revenue experience.
(3) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(4) Reflects actual experience through February 2019.
(5) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(6) The partial I-95 Interchange (Stage 1) opened in September 2018.

The same information is shown for the Barrier Systems in **Table 17**. Total annual toll transactions are estimated to grow from 43.2 million to 66.6 million over the forecast period, an average rate of 1.4 percent.

Barrier System total revenue is estimated to increase from $110.6 million to $535.9 million over the forecast period, an annual rate of 5.1 percent.

Table 18 identifies total combined transactions and gross toll revenue and also factors in estimated toll discounts and adjustments. The vast majority of the discounts and adjustments result from commercial account toll adjustments due to the Turnpike's volume discount program. The volume discount program allows for a 3.0 percent discount to be provided to accounts that accrue $20,000 or more in monthly tolls. Discounts and adjustments shown in Table 18 assume no further changes to the post-paid commercial volume discount program during the forecast period. The result is that the current forecasts have a negative adjustment applied for FY 2016-17 and beyond that equals approximately 1.4 percent of the commercial vehicle gross toll revenue.

As shown in Table 18, total toll transactions are expected to increase from nearly 200.5 million to 260.9 million over the forecast period. This amounts to an average annual growth rate of 0.8 percent. Total net toll revenue is estimated to grow from approximately $1.1 billion in FY 2016-17 to $4.8 billion by FY 2048-49. This reflects an average annual growth rate in gross toll revenue of 4.7 percent. Again, this includes the impact of normal growth plus annual toll rate adjustments.

Table 19 provides a comparison of the current traffic and net toll revenue forecast with the forecast developed as part of the 2018 Forecast Study. As shown, the revised total toll transactions slightly exceed those of the 2018 Forecast report through FY 2021-22. This is because recent experience has shown that actual toll transactions have exceeded estimates by about 1.3 percent (see Table 15). CDM Smith slowly decreased future commercial vehicle growth over time, such that by FY 2022-23, we now estimate that total toll transactions will be about 0.5 percent lower than the previous estimates.

Beginning in FY 2018-19 (which includes nine months of actual data) through FY 2021-22 the new toll revenue forecasts are between 4.0 and 4.6 percent greater than those from the 2018 Forecast Study. As shown in Table 15, actual toll revenue over the last 12 months has exceeded CDM Smith's forecasts by 4.4 percent. The slightly lower long-term growth rates reduce the positive impact of the new revenue forecasts to 2.7 percent by the outer years of the forecast. Unlike with the traffic forecasts, the new revenue forecasts remain higher than the previous forecasts over the entire forecast period. This is because the average toll rates for commercial vehicles is now higher than previously assumed. This occurs because of the lower E-ZPass market share assumptions for commercial vehicles at recently converted AET facilities over the forecast period.

Table 17

Barrier Systems: Estimated Annual Transactions and Gross Toll Revenue (1)

Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2016-17	(2,3,5)	37,671	5,524	43,195	$73,872	$36,694	$110,566
2017-18	(2,6)	38,385	6,073	44,459	79,357	42,042	121,399
2018-19	(4,7,8)	40,285	6,483	46,769	91,843	47,862	139,705
2019-20	(9)	40,635	6,564	47,199	102,331	51,811	154,142
2020-21		40,405	6,636	47,041	108,561	55,615	164,176
2021-22	(10)	42,203	7,090	49,293	115,219	59,920	175,139
2022-23		45,467	7,828	53,295	124,119	64,916	189,035
2023-24		46,553	8,042	54,595	131,671	68,988	200,659
2024-25		47,518	8,225	55,743	139,663	73,254	212,917
2025-26		48,321	8,361	56,682	147,628	77,395	225,023
2026-27		49,039	8,469	57,509	154,926	81,072	235,998
2027-28		49,536	8,529	58,065	161,581	84,335	245,916
2028-29		50,023	8,598	58,621	167,996	87,613	255,609
2029-30		50,473	8,681	59,154	174,555	91,226	265,781
2030-31		50,901	8,762	59,663	181,263	94,967	276,230
2031-32		51,312	8,842	60,154	188,134	98,848	286,982
2032-33		51,709	8,922	60,632	195,209	102,874	298,083
2033-34		52,089	9,002	61,090	202,479	107,048	309,527
2034-35		52,459	9,081	61,540	210,020	111,380	321,400
2035-36		52,816	9,160	61,975	217,878	115,875	333,753
2036-37		53,156	9,238	62,393	226,002	120,524	346,526
2037-38		53,483	9,314	62,798	234,333	125,323	359,656
2038-39		53,808	9,391	63,199	242,928	130,304	373,232
2039-40		54,118	9,468	63,586	251,801	135,475	387,276
2040-41		54,404	9,545	63,949	260,942	140,817	401,759
2041-42		54,682	9,621	64,303	270,389	146,317	416,706
2042-43		54,952	9,697	64,649	280,123	152,006	432,129
2043-44		55,213	9,773	64,986	290,150	157,904	448,055
2044-45		55,468	9,848	65,316	300,482	164,018	464,500
2045-46		55,715	9,923	65,638	311,118	170,355	481,473
2046-47		55,954	9,998	65,951	322,081	176,923	499,004
2047-48		56,188	10,072	66,260	333,390	183,732	517,121
2048-49		56,423	10,147	66,570	345,095	190,803	535,898

(1) Annual toll rate increases are implemented in January of each year.
(2) Reflects actual traffic and revenue experience.
(3) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(4) Reflects actual experience through February 2019.
(5) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(6) The two Northeast Extension Barrier Plazas were converted to AET at the end of April 2018.
(7) The Findlay Connector converted to AET in early June 2018.
(8) The partial I-95 Interchange (Stage 1) opened in September 2018.
(9) Assumes AKH and Gateway will convert to AET at the end of October 2019.
(10) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 18

Total System: Estimated Annual Transactions and Gross Toll Revenue (1)

Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			**Annual Gross Toll Revenue**			**Discounts**	
Fiscal Year		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles	**and Adjustments**	**Net Toll Revenue**
2016-17	(2,3,5)	172,799	27,703	200,501	$638,787	$476,188	$1,114,975	($3,915)	$1,111,061
2017-18	(2,6)	172,512	28,650	201,162	678,741	524,418	1,203,158	(6,552)	1,196,606
2018-19	(4,7,8)	172,645	29,406	202,051	728,980	586,075	1,315,056	(8,334)	1,306,722
2019-20	(9)	171,860	29,682	201,542	772,918	626,041	1,398,959	(8,902)	1,390,057
2020-21		171,098	30,002	201,100	815,452	667,783	1,483,235	(9,496)	1,473,739
2021-22	(10)	173,021	30,690	203,711	856,735	708,513	1,565,247	(10,075)	1,555,172
2022-23		177,067	31,649	208,716	906,779	751,265	1,658,044	(10,683)	1,647,361
2023-24		179,320	32,074	211,394	959,879	794,229	1,754,108	(11,294)	1,742,814
2024-25		181,523	32,478	214,001	1,016,411	840,034	1,856,445	(11,945)	1,844,500
2025-26		183,801	32,854	216,655	1,073,633	885,784	1,959,417	(12,596)	1,946,821
2026-27		186,085	33,198	219,283	1,125,652	926,662	2,052,314	(13,177)	2,039,137
2027-28		188,116	33,477	221,593	1,173,841	963,901	2,137,743	(13,707)	2,124,036
2028-29		190,102	33,793	223,895	1,219,560	1,001,566	2,221,126	(14,242)	2,206,883
2029-30		192,022	34,167	226,188	1,266,549	1,043,475	2,310,025	(14,838)	2,295,186
2030-31		193,886	34,538	228,424	1,315,214	1,086,972	2,402,186	(15,457)	2,386,729
2031-32		195,721	34,909	230,630	1,366,908	1,132,124	2,499,032	(16,099)	2,482,933
2032-33		197,527	35,279	232,806	1,421,783	1,178,990	2,600,773	(16,765)	2,584,008
2033-34		199,267	35,649	234,916	1,478,251	1,227,639	2,705,889	(17,457)	2,688,432
2034-35		200,958	36,018	236,976	1,536,493	1,278,149	2,814,642	(18,175)	2,796,466
2035-36		202,597	36,387	238,984	1,596,610	1,330,598	2,927,208	(18,921)	2,908,287
2036-37		204,198	36,750	240,948	1,658,745	1,384,770	3,043,515	(19,691)	3,023,823
2037-38		205,702	37,103	242,805	1,722,281	1,440,575	3,162,855	(20,485)	3,142,370
2038-39		207,163	37,456	244,619	1,787,702	1,498,506	3,286,208	(21,309)	3,264,899
2039-40		208,593	37,810	246,403	1,855,315	1,558,648	3,413,963	(22,164)	3,391,799
2040-41		209,977	38,165	248,142	1,925,113	1,621,067	3,546,180	(23,052)	3,523,128
2041-42		211,328	38,521	249,849	1,997,149	1,685,835	3,682,984	(23,973)	3,659,011
2042-43		212,637	38,877	251,513	2,071,365	1,753,068	3,824,434	(24,929)	3,799,505
2043-44		213,911	39,233	253,145	2,147,895	1,822,881	3,970,776	(25,921)	3,944,855
2044-45		215,154	39,591	254,745	2,226,815	1,895,368	4,122,183	(26,952)	4,095,230
2045-46		216,360	39,949	256,309	2,308,152	1,970,622	4,278,774	(28,022)	4,250,751
2046-47		217,545	40,308	257,853	2,392,157	2,048,760	4,440,917	(29,133)	4,411,783
2047-48		218,713	40,668	259,381	2,478,954	2,129,905	4,608,859	(30,287)	4,578,572
2048-49		219,887	41,032	260,919	2,568,902	2,214,264	4,783,165	(31,487)	4,751,678

(1) Annual toll rate increases are implemented in January of each year.
(2) Reflects actual traffic and revenue experience.
(3) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(4) Reflects actual experience through February 2019.
(5) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(6) The two Northeast Extension Barrier Plazas were converted to AET at the end of April 2018.
(7) The partial I-95 Interchange (Stage 1) opened in September 2018.
(8) The Findlay Connector converted to AET in early June 2018.
(9) Assumes AKH and Gateway will convert to AET at the end of October 2019.
(10) Reflects opening of Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 19
Comparison of New Traffic and Revenue
Estimates with those from the 2018 Forecast Study
Pennsylvania Turnpike

Traffic and Toll Revenue in Thousands

Fiscal Year		Total Annual Transactions: Current Estimates	Total Annual Transactions: 2018 IG Study	Total Annual Transactions: Percent Difference	Total Annual Adjusted Gross Toll Revenue: Current Estimates	Total Annual Adjusted Gross Toll Revenue: 2018 IG Study	Total Annual Adjusted Gross Toll Revenue: Percent Difference
2016-17	(1,2)	200,501	200,501	0.0	$1,111,061	$1,111,061	0.0
2017-18	(2)	201,162	200,527	0.3	1,196,606	1,184,080	1.1
2018-19	(3)	202,051	199,225	1.4	1,306,722	1,250,929	4.5
2019-20		201,542	199,024	1.3	1,390,057	1,329,382	4.6
2020-21		201,100	199,574	0.8	1,473,739	1,410,906	4.5
2021-22		203,711	203,467	0.1	1,555,172	1,495,468	4.0
2022-23		208,716	209,703	(0.5)	1,647,361	1,589,229	3.7
2023-24		211,394	212,402	(0.5)	1,742,814	1,684,343	3.5
2024-25		214,001	215,027	(0.5)	1,844,500	1,785,814	3.3
2025-26		216,655	217,707	(0.5)	1,946,821	1,888,350	3.1
2026-27		219,283	220,362	(0.5)	2,039,137	1,981,635	2.9
2027-28		221,593	222,700	(0.5)	2,124,036	2,068,126	2.7
2028-29		223,895	225,001	(0.5)	2,206,883	2,151,047	2.6
2029-30		226,188	227,245	(0.5)	2,295,186	2,236,615	2.6
2030-31		228,424	229,436	(0.4)	2,386,729	2,325,657	2.6
2031-32		230,630	231,603	(0.4)	2,482,933	2,419,605	2.6
2032-33		232,806	233,745	(0.4)	2,584,008	2,517,943	2.6
2033-34		234,916	235,826	(0.4)	2,688,432	2,619,547	2.6
2034-35		236,976	237,857	(0.4)	2,796,466	2,724,656	2.6
2035-36		238,984	239,842	(0.4)	2,908,287	2,833,400	2.6
2036-37		240,948	241,788	(0.3)	3,023,823	2,945,731	2.7
2037-38		242,805	243,628	(0.3)	3,142,370	3,060,971	2.7
2038-39		244,619	245,424	(0.3)	3,264,899	3,180,057	2.7
2039-40		246,403	247,204	(0.3)	3,391,799	3,303,400	2.7
2040-41		248,142	248,959	(0.3)	3,523,128	3,431,090	2.7
2041-42		249,849	250,681	(0.3)	3,659,011	3,563,210	2.7
2042-43		251,513	252,362	(0.3)	3,799,505	3,699,804	2.7
2043-44		253,145	254,010	(0.3)	3,944,855	3,841,108	2.7
2044-45		254,745	255,627	(0.3)	4,095,230	3,987,289	2.7
2045-46		256,309	257,208	(0.3)	4,250,751	4,138,460	2.7
2046-47		257,853	258,770	(0.4)	4,411,783	4,294,979	2.7
2047-48		259,381	260,315	(0.4)	4,578,572	4,457,089	2.7

(1) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(2) Reflects actual traffic and revenue experience.
(3) Reflects actual experience through February 2019.

Additional reason for continued increased toll revenue relate to the I-95 Stage 1 interchange opening in September 2018; this brought in more revenue than expected. The Northeast Extension Barrier Facilities and the Findlay Connector AET conversion also changed the vehicle classification systems at these facilities, which raised average toll rates.

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Fiduciary Disclaimer

Current accepted professional practices and procedures were used in the development of these updated traffic and revenue forecasts. However, as with any forecast of the future, there may be differences between forecasted and actual results caused by events and circumstances beyond the control of CDM Smith. In formulating its forecasts, CDM Smith has reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the PTC and other local and state agencies. CDM Smith also has relied upon the reasonable assurances of some independent parties and is not aware of any facts that would make such information misleading.

CDM Smith has 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 to 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 state and local agencies, including the PTC. These estimates and projections may not be indicative of actual or future values, and are therefore subject to substantial uncertainty. Future developments 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 forecasts or projections contained within this report.

While CDM Smith believes that some of the projections or other forward-looking statements contained within the report are based on reasonable assumptions as of the date in the report, 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 this report, 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 the PTC and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to PTC with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to PTC. PTC 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.

*   *   *

Sincerely,

Robert W Pintar Jr.

Robert Pintar, P.E.
Vice President
CDM Smith Inc.

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CDM Smith Inc.

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Pennsylvania Turnpike 2018 Traffic and Revenue Forecast Study

April 2018

PENNA TURN PIKE

Pennsylvania Turnpike Commission

CDM Smith

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Chapter 1

Introduction

This report summarizes the analyses conducted by CDM Smith in developing updated traffic and toll revenue estimates for the various toll facilities operated by the Pennsylvania Turnpike Commission (PTC). CDM Smith forecasts have been used by PTC for more than 20 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 revenue forecasts based on the most current information available.

CDM Smith last developed a detailed investment grade traffic and toll revenue study in March 2015. Since that time additional “bring down” letters have also been developed to update forecasts developed in the 2015 Study. Bring down letters were developed in March 2016 and May 2017. The purpose of a bring down letter is to update actual traffic and revenue experience since the last study and to adjust short term (2 to 5 year) forecasts based on recent trends. Detailed economic analyses are not conducted as part of a bring down letter and therefore longer-term forecasts are not adjusted from those originally developed as part of the latest investment grade study.

This current study included a comprehensive evaluation of the most currently available long term socioeconomic forecasts, and is, therefore, meant to be an update of the March 2015 investment grade study. This forecast includes updated long-term traffic and revenue forecasts through FY 2047-48. PTC’s most recent assumptions regarding future toll rate increases, discount levels for the Commercial Volume Discount Program, and future committed capital improvements have been incorporated into this study. CDM Smith also developed and incorporated estimates of future year E-ZPass penetration for cars and trucks on the PTC’s toll facilities.

PTC has been studying the possible implementation of all electronic tolling (AET) on its facilities. CDM Smith has been a member of the study team analyzing both the potential traffic and toll revenue impacts as well as the potential capital, and maintenance and operating (M&O) cost impacts AET may have on the Turnpike System. AET was implemented on the Delaware River Bridge (plaza 359) in January 2016, and on the Beaver Valley Expressway in May 2017. The traffic and revenue forecasts included in this study also assume the implementation of AET on the Northeast Extension barrier toll plazas, and on the Southern Beltway, both in late April 2018. Over time, all remaining toll facilities will be converted to AET, but toll rates have not yet been set. It is assumed that all future AET conversions will be net revenue neutral.

1.1 Report Structure

This report is comprised of four chapters, including the following:

Chapter 1: Introduction
Chapter 2: Turnpike Characteristics
Chapter 3: Socioeconomic Trends and Forecasts
Chapter 4: Transaction and Toll Revenue Forecasts

The following is a brief description of each chapter following this introduction.

Chapter 2 (Turnpike Characteristics) provides a review of monthly and annual transaction and toll revenue trends. Data are provided for passenger cars and commercial vehicles separately. Information is provided for the entire Turnpike System as well as for each of the individual toll facilities (Ticket System, Turnpike 43, etc.) that make up the Turnpike System. E-ZPass market share trends, historical toll rate adjustments, and changes to the Commercial Volume Discount Program are also summarized in Chapter 2.

Chapter 3 (Socioeconomic Trends and Forecasts) summarizes trends and forecasts in key socioeconomic variables, including population, employment, retail sales, and gross regional product. This data is broken down (at a county level) to reflect the actual market share for the various interchanges on the Turnpike System. Pennsylvania statewide data, as well as data for surrounding states and the United States, are also provided for each of these variables. Trends and forecasts in motor fuel prices are also covered in this chapter. The methodology used to estimate future traffic growth is described in detail. The ultimate product of Chapter 3 is a table showing the assumed normal growth rates used to develop traffic and toll revenue estimates for passenger cars and commercial vehicles for each Turnpike toll facility.

Chapter 4 (Transaction and Toll Revenue Forecasts) begins with a review of the assumed roadway improvement program for the Pennsylvania Turnpike. Planned toll rate adjustments throughout the 30-year forecast period are identified. Because of the toll differential that now exists between cash and E-ZPass, assumptions regarding future E-ZPass market share are important. All assumptions regarding E-ZPass market share throughout the forecast period are discussed in this chapter. Finally, estimates of traffic and gross toll revenue are provided through FY 2047-48. Forecasts are provided for passenger cars and commercial vehicles, for both the Ticket System and the total Barrier System, as well as for the total Turnpike System. Lastly, adjustments are made to the toll revenue forecasts to accounting for video bad debt expenses. Video bad debt expenses is the term PTC uses to describe the portion of toll by plate invoices that are not paid. This is associated with the implementation of AET on the Delaware River Bridge, the Beaver Valley Expressway, the Northeast Extension barrier toll plazas, and the Southern Beltway.

Chapter 2

Turnpike Characteristics

This chapter presents historical transaction and gross toll revenue trends on the Turnpike facilities. It also presents actual trends in the E-ZPass market share and historical toll increases. A comparison is presented between the current Turnpike per-mile toll rate on the Mainline I-76/I-276 and other toll road facilities. Lastly, the PTC's Commercial Volume Discount Program is described.

2.1 The Pennsylvania Turnpike Facilities

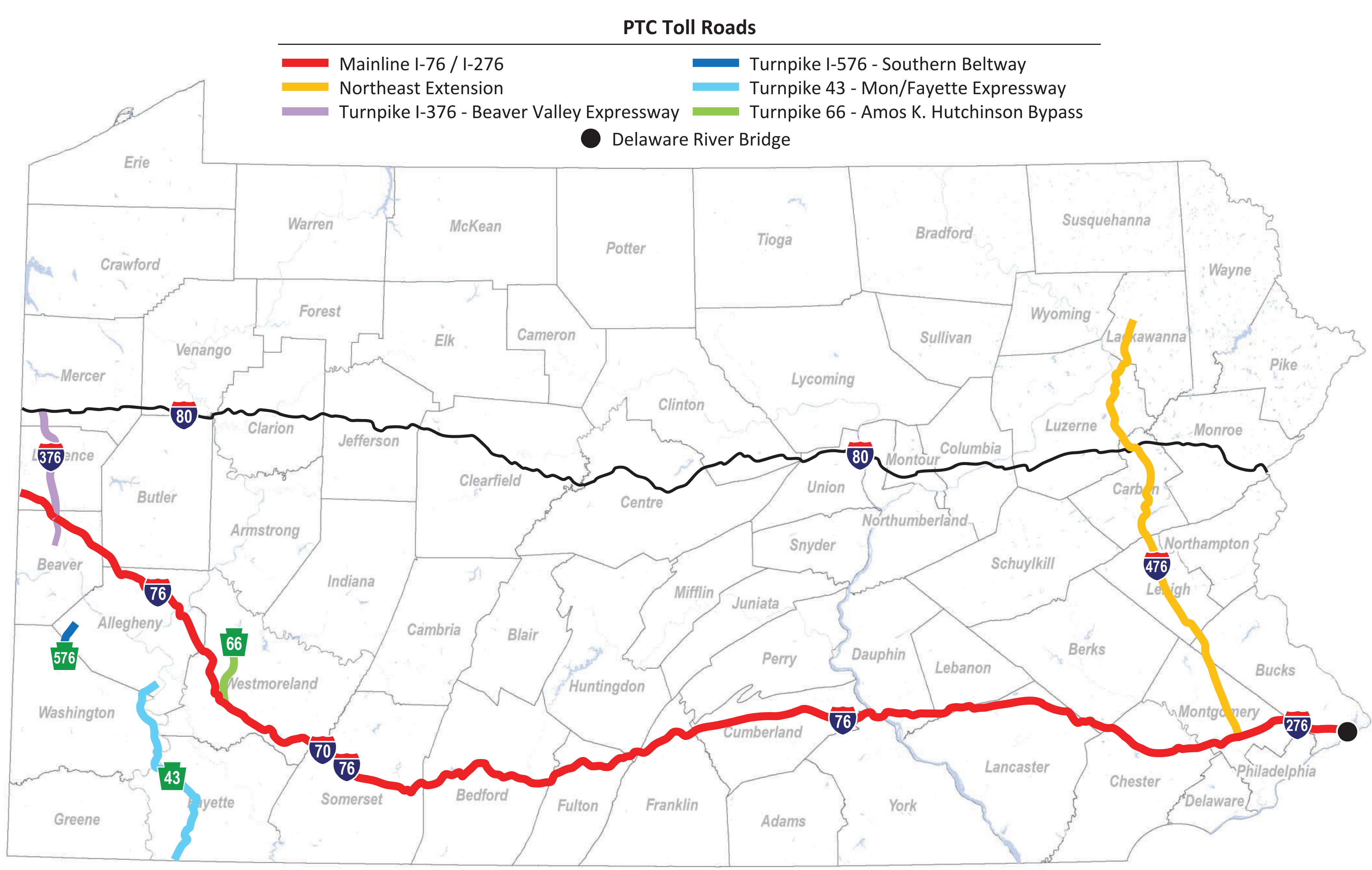
Figure 2-1 provides an overview of the Turnpike System, identifying each of its six toll facilities:

1. Mainline I-76/-276 from Ohio to New Jersey (359 miles) – This description includes the barrier plazas Gateway and Delaware River Bridge.
2. Northeast Extension I-476 (110 miles) – This includes the Clarks Summit and Keyser Avenue barrier plazas.
3. Turnpike 43 – Mon/Fayette Expressway (48 miles)
4. Turnpike 66 – Amos K. Hutchinson Bypass (13 miles)
5. Turnpike I-376 – Beaver Valley Expressway (16 miles)
6. Turnpike I-576 - Southern Beltway – Findlay Connector Section (6 miles)

There are two toll collection systems on the Turnpike System; a Ticket System, and a Barrier System. The Ticket System is comprised of the majority of Mainline I-76/I-276 (from Interchange 30, Warrendale, in western Pennsylvania to Interchange 353, Neshaminy Falls, near the New Jersey border) and the majority of the Northeast Extension (from Interchange 20, Mid-County, to Interchange 131, Wyoming Valley). On the Ticket System, the toll rate is charged by the individual movement on the toll road. The motorist picks up a ticket when entering the Ticket System and pays for the trip upon exiting the Ticket System.

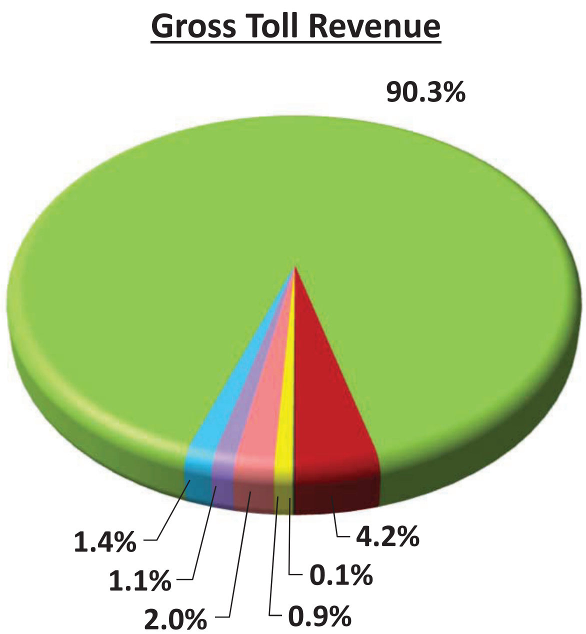
The Barrier System is comprised of Turnpikes I-376 (Beaver Valley Expressway), Turnpike 66 (Amos K. Hutchinson Bypass), Turnpike 43 (Mon/Fayette Expressway) and Turnpike I-576 (Southern Beltway). There are also two barrier plazas on the Mainline I-76/I-276; Gateway (Plaza 2) and the Delaware River Bridge (DRB) (plaza 359). Both Gateway and DRB were converted from Ticket System plazas to Barrier System plazas; DRB in January 2016, and Gateway in June 2003. At Barrier plazas, a defined toll rate is charged for each vehicle class and payment type. The toll is not dependent on a trip.

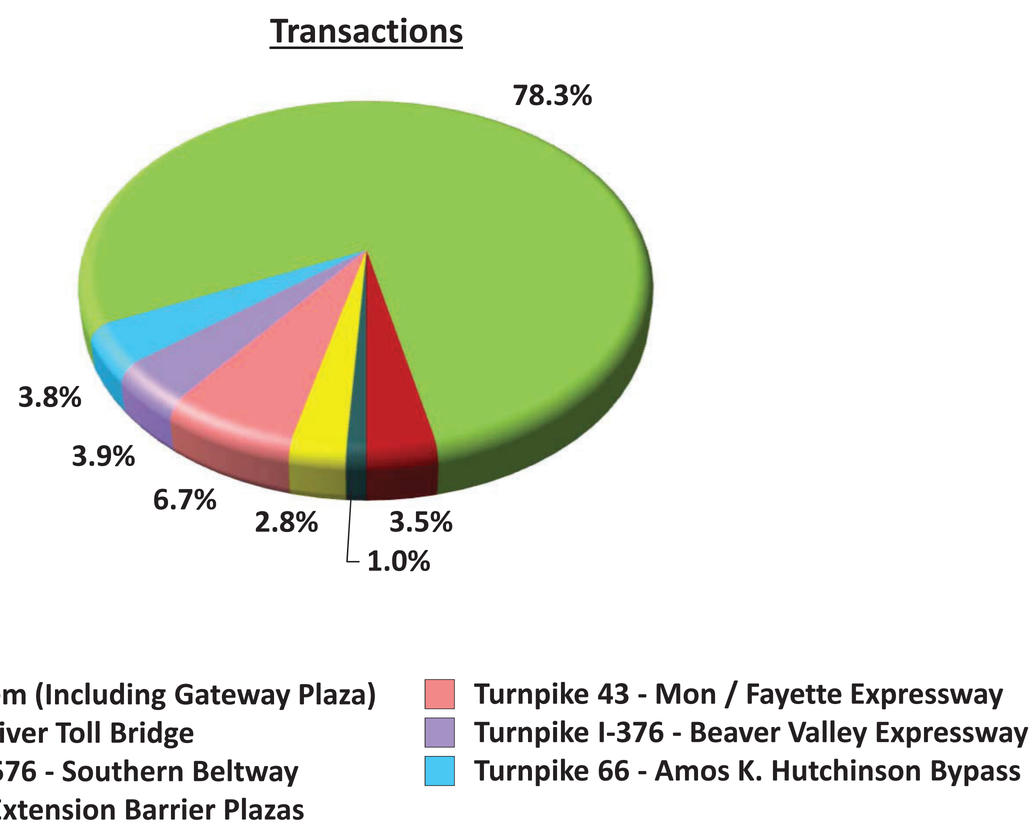
The Ticket System is by far the largest component of the Turnpike System. As seen in Figure 2-2, the Ticket System accounted for 90.3% of the Turnpike System's total gross toll revenue, and 78.3% of the total transactions in calendar year 2017. Fixed barrier locations accounted for only 9.7% of gross toll revenue and 21.7% of transactions.



PENNSYLVANIA TURNPIKE COMMISSION (PTC) TOLL ROAD FACILITIES

FIGURE 2-1





PERCENT OF CALENDAR YEAR 2017 TRANSACTIONS AND GROSS TOLL REVENUE BY FACILITY

FIGURE 2-2

2.2 Toll Rates and Commercial Volume Discount Program

2.2.1 Payment Options

Various payment options are available on the PTC's toll facilities. Most of the Turnpike System accepts payment by electronic toll collection (ETC) via an E-ZPass transponder, and by cash or credit card. A few toll plazas accept only E-ZPass transactions. A recent development, initiated in 2016, is the conversion of some facilities or plazas to All Electronic Tolling (AET). AET facilities or toll locations accept payment through E-ZPass or by a License Plate Tolling system called Toll By Plate (TBP). Traditional cash customers passing through an AET tolling location receive a Toll By Plate invoice. E-ZPass customers are be billed as usual. There are no physical toll plazas on AET facilities. Transactions are identified either by an E-ZPass transponder or by the video capture of a license plate. Toll collection equipment is located on gantries, near or over the roadway. The following toll locations or facilities were converted to AET since 2016:

- Delaware River Bridge (Plaza 359) in January 2016
- Beaver Valley Expressway in May 2017

2.2.2 Historical Toll Rate Increases and E-ZPass/Cash Toll Differential

Since 2009, the PTC has implemented annual toll rate increases on, or close to January 1. Prior to 2009, toll rates were increased at irregular intervals. Table 2-1 shows the toll rate since 1987. The rate increases were generally systemwide, with a few exceptions, as noted.

Table 2-1
Historical Toll Rate Increases
Pennsylvania Turnpike

Date	Percent Increase Cash/TBP	Percent Increase E-ZPass	Comment
1/2/1987	40.0	NA	E-ZPass was not implemented until 2001
6/1/1991	32.0	NA	E-ZPass was not implemented until 2001
8/1/2004	42.5	42.5	
1/4/2009	25.0	25.0	No increase on Turnpike I-576 or Turnpike 43 between Uniontown and Brownsville
1/3/2010	3.0	3.0	No increase on Turnpike I-576
1/2/2011	10.0	3.0	No increase on Turnpike I-576
1/1/2012	10.0	0.0	No increase on Turnpike I-576
1/6/2013	10.0	2.0	
1/5/2014	12.0	2.0	No increase on Turnpike I-576
1/4/2015	5.0	5.0	No increase on Turnpike I-576
1/3/2016	6.0	6.0	No increase on Turnpike I-576
1/8/2017	6.0	6.0	No increase on Turnpike I-576 or Delaware River Bridge (Plaza 359)
1/7/2018	6.0	6.0	No increase on Turnpike I-576 or Delaware River Bridge (Plaza 359)

E-ZPass was phased in beginning in 2001. Initially, E-ZPass tolls and cash tolls were identical, but in 2011, cash tolls were increased by 10.0% over 2010, and E-ZPass tolls were increased by 3.0%, creating a toll differential between the two methods of payment. In 2011, cash tolls were about 7%

greater than E-ZPass tolls. The toll differential was increased through 2014, when the cash toll was about 40% more than the E-ZPass toll. This percent differential has been maintained through 2018. The toll rate differential between E-ZPass and cash incentivizes E-ZPass participation.

The PTC plans to continue annual toll rate increases through the forecast period, and the toll rate increases will be the same for E-ZPass and cash/TBP. The planned annual rate increases are shown in Table 4-2.

2.2.3 Per-Mile Toll Rates

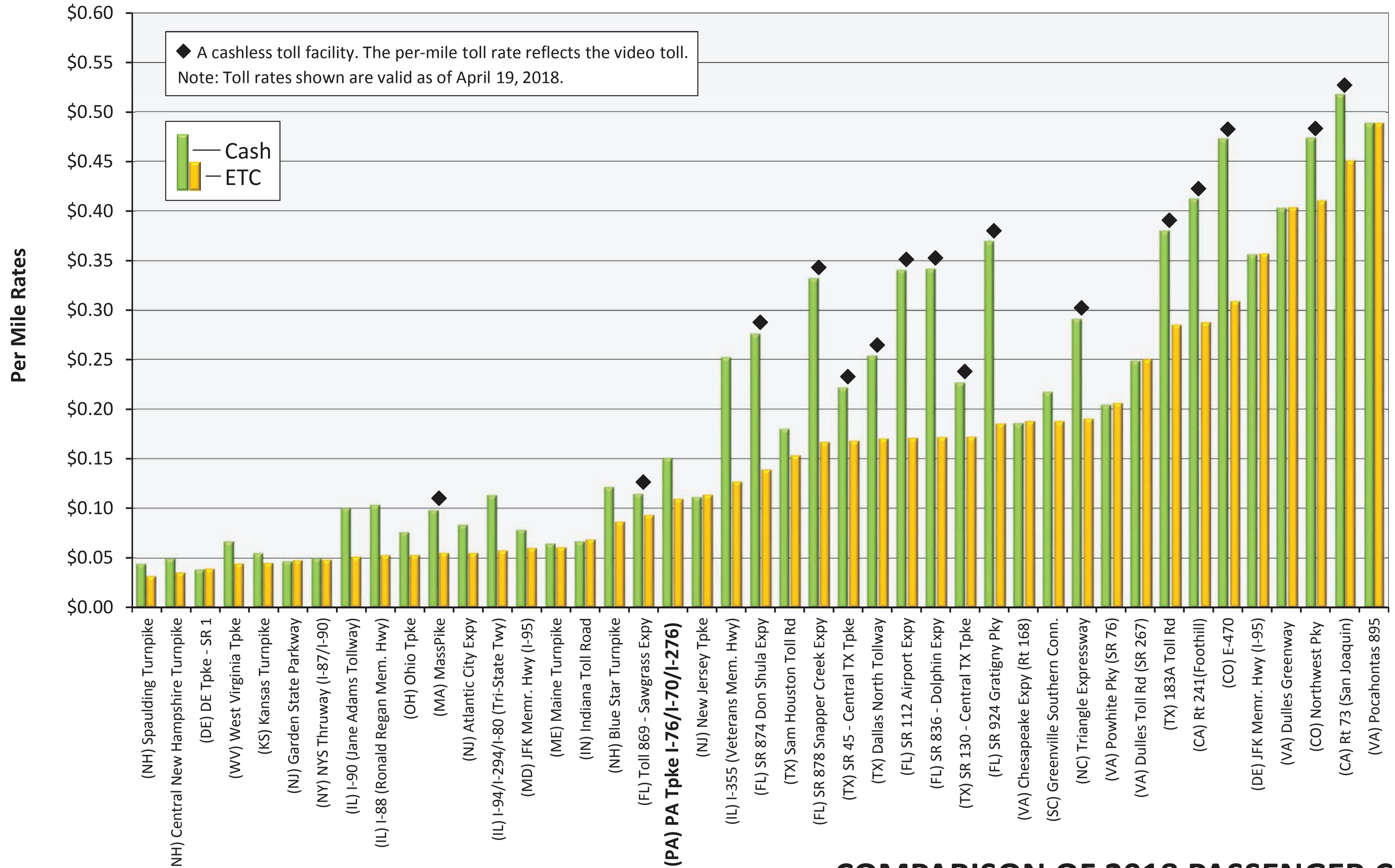
In 2018, a passenger car using cash pays $0.15 per-mile to travel the length of the Mainline, from the Delaware River Bridge through Gateway compared to $0.11 per mile for the same trip using E-Zpass. Figure 2-3 compares 2018 passenger-car per-mile toll rates for a through trip on 44 U.S. toll facilities. The Pennsylvania Turnpike is represented by a through trip on the Mainline I-76/I-276 from Delaware River Bridge through Gateway, which is shown in bold text. The per-mile rates are provided for ETC and cash payments. If the facility is AET, the license plate or video per-mile toll is represented in the cash column. The data is sorted from low to high by the ETC per-mile toll rates. A through trip on the Pennsylvania Mainline I-76/I-276 by a passenger car paying by ETC costs $0.11 per mile, which is comparable to $0.11 per mile on the New Jersey Turnpike.

Figure 2-4 presents a similar comparison of five-axle commercial-vehicle per-mile toll rates for through trips on the same 43 U.S. toll facilities. A trip on the Pennsylvania Mainline I-76/I-276 costs $0.58 per mile for E-ZPass compared to $0.41 on the New Jersey Turnpike in 2018.

Figures 2-3 and 2-4 show the 2018 per-mile rate on the PA Turnpike System falls approximately in the middle of the 43 U.S. toll facilities.

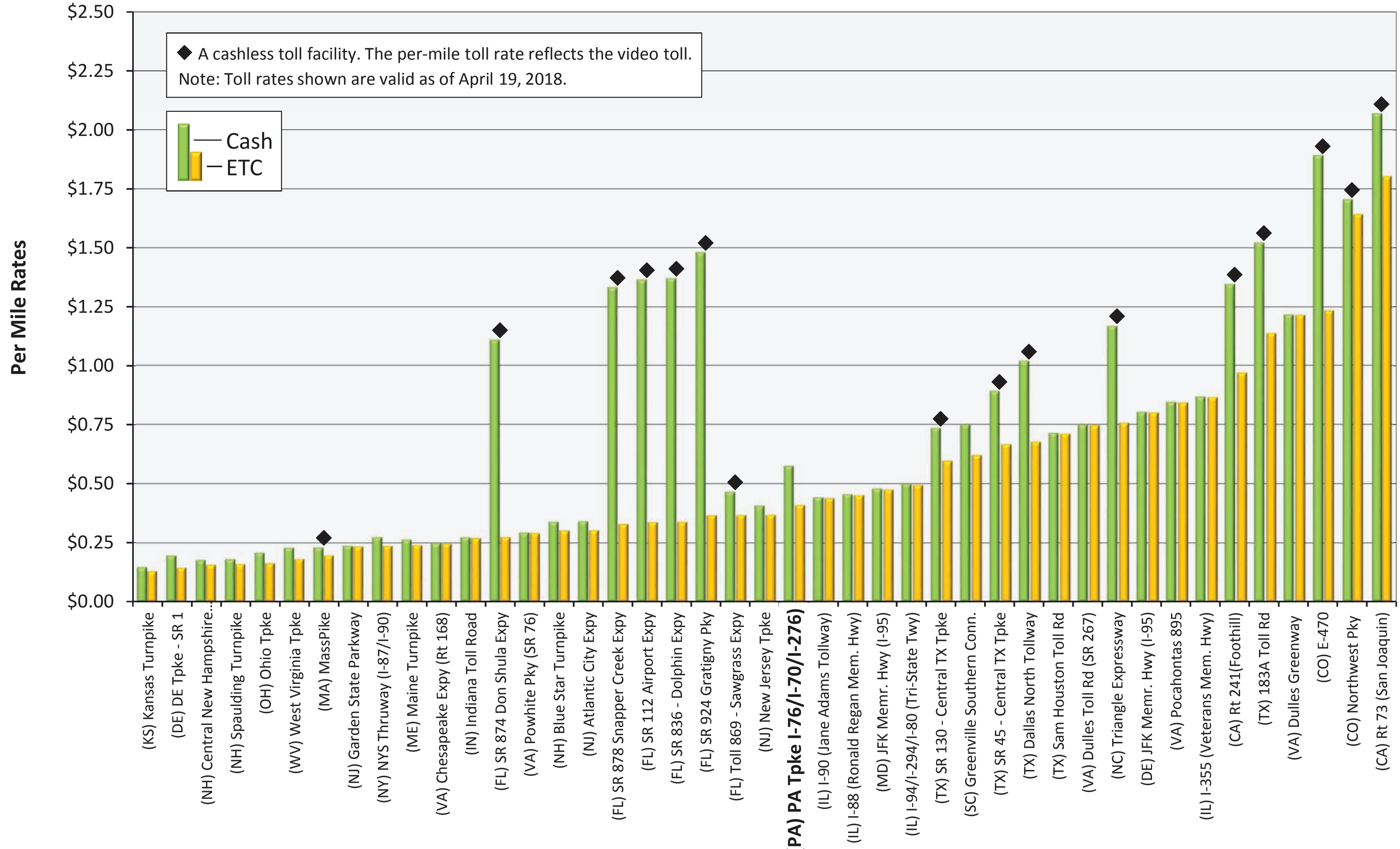
2.2.4 Commercial Volume Discount Program

The PTC operates a Commercial Volume Discount Program. Prior to the implementation of system wide toll rates favorable to E-ZPass customers, a post-paid, commercial volume-discount program was established for high-volume, commercial E-ZPass accounts. Post-paid commercial E-ZPass customers could receive the varying levels of discounts based on the amount of their monthly tolls. With the implementation of E-ZPass and the large toll savings offered to E-ZPass customers, the Commercial Volume Discount Program was modified over the years. Currently, in 2018, commercial accounts that accrue greater than $20,000.00 per month on tolls receive a three percent discount.



COMPARISON OF 2018 PASSENGER CAR PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2-3



COMPARISON OF 2018 FIVE-AXLE VEHICLE PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2-4

2.3 Annual Transaction Trends by Plaza

This section presents long-term annual transaction trends on the Ticket and Barrier Systems by toll plaza. Data is provided from 2003 through 2017 for Ticket and Barrier System toll plazas.

2.3.1 Ticket System Transaction Trends

Average annual daily transactions at the Ticket System's exiting toll plazas are shown in Tables 2-2 through 2-4 for passenger cars, commercial vehicles and total vehicles, respectively. The transactions include both revenue and non-revenue vehicles. Gateway (plaza 2) transactions are included in this table.

Some important changes occurred on the Ticket System that are reflected in the tables. In January 2016, the eastern terminus of the Ticket System was changed from the existing Delaware River Bridge (plaza 359) to the new Neshaminy Falls (plaza 353). Tolled transactions at Neshaminy Falls are collected in the eastbound direction, exiting the Ticket System, and are reported as part of the Ticket System. When Neshaminy Falls opened, the DRB was converted from the Ticket system to a barrier plaza with toll collection in the westbound direction. DRB transactions were counted under the Ticket System until January 2016, when they were reported on the Barrier System. Associated with moving the Ticket System's eastern terminus to Neshaminy Falls, toll collection was ended at Delaware Valley (plaza 358).

It should be noted that the Delaware River Bridge (plaza 359) was closed from January 20 through March 9, 2017 due to a fracture in one of the structural support beams. Although the DRB is on the Barrier System, the closure also negatively affected Ticket System traffic and revenue in January, February, and March 2017.

New access to the Ticket System is also shown in Tables 2-2 through 2-4. Since 2004, four new interchanges opened on the Ticket System; Virginia Drive (Milepost 340) in 2002, Street Road (Milepost 352) in 2010, SR 29 (Milepost 320) in 2012, and Route 903 (Milepost 87) in 2015. These were opened as E-ZPass-only interchanges. No cash is accepted.

In Tables 2-2 through 2-4, transaction trends are summarized by average annual growth rates into the following three periods:

1) The 5-year period from 2007-2012,
2) The 5-year period from 2012-2017, and
3) The 14-year period from 2003-2017.

Passenger-car transaction growth, shown in Table 2-2, averaged 0.3% annually from 2007-2012, and 0.9% annually from 2012-2017. Growth was impacted by the Great Recession which lasted from December 2007 through of June 2009, slow economic recovery, annual toll rate increases, and the closure of the DRB in 2017.

Table 2-3 shows commercial-vehicle transaction trends on the Ticket System. Commercial vehicle transactions averaged annual growth of 0.2% from 2007-2012, and 2.6% growth from 2012-2017. Total-vehicle transaction trends are shown in Table 2-4. Because passenger cars make up about 86% of total Ticket System toll transactions, the trends and growth rates for total vehicles closely mirror those for passenger cars. Total transactions averaged growth of 0.2% from 2007-2012, and 1.0% growth from 2012-2017.

Table 2-2
Passenger Cars - Average Daily Transactions on the Turnpike Ticket System At Exiting Toll Plazas
Includes Revenue and Non-Revenue Vehicles, and Gateway Barrier Plaza

Interchange	Calendar Year															Average Annual Percent Change		
(Milepost)	2003	2004(1)	2005	2006	2007	2008	2009(1)	2010(1)	2011(1)	2012(1)	2013(1)	2014(1)	2015(1)	2016(1)	2017(1)	2007-12	2012-17	2003-17
2 (2)	13,828	16,379	15,873	8,194	8,183	8,096	8,441	8,716	8,743	8,820	8,967	8,942	9,209	9,469	9,494	0.8	1.5	(2.6)
30	7,374	11,585	11,269	11,419	11,940	12,056	12,232	12,118	12,023	11,939	12,413	12,339	12,542	12,704	12,844	(0.0)	1.5	4.0
39	5,448	5,417	5,154	5,181	5,613	5,627	5,495	5,527	5,333	5,416	5,832	5,855	5,540	5,821	5,699	(0.4)	1.0	0.3
48	9,505	9,377	9,101	9,129	9,406	9,226	9,087	8,879	8,576	8,734	9,171	9,147	8,882	9,101	8,889	(0.7)	0.4	(0.5)
57	18,770	18,598	18,087	18,290	18,198	18,305	18,083	17,452	17,172	17,130	17,399	17,336	17,792	17,660	17,576	(0.6)	0.5	(0.5)
67	10,303	10,054	9,437	9,582	9,614	9,068	8,674	8,776	8,718	8,955	8,870	8,783	9,037	8,807	8,675	(0.7)	(0.6)	(1.2)
75	9,394	9,191	8,880	8,779	8,806	8,522	8,433	8,550	8,246	8,539	8,556	8,701	8,861	8,545	8,405	(0.3)	(0.3)	(0.8)
91	2,253	2,239	2,257	2,237	2,478	2,395	2,351	2,371	2,279	2,352	2,393	2,344	2,403	2,385	2,447	(0.5)	0.8	0.6
110	2,061	1,948	1,892	1,927	2,067	2,119	2,104	2,136	2,159	2,156	2,048	2,027	2,101	2,048	2,065	0.4	(0.9)	0.0
146	3,290	3,370	3,163	3,037	3,059	2,994	2,972	2,945	2,848	2,779	2,715	2,773	2,803	2,746	2,707	(1.0)	(0.5)	(1.4)
161	6,820	6,713	6,517	6,356	6,216	6,005	6,356	6,262	6,064	6,023	6,057	6,000	6,087	5,916	5,777	(0.3)	(0.8)	(1.2)
180	715	761	691	676	711	675	655	658	645	610	593	586	608	608	627	(1.5)	0.5	(0.9)
189	488	483	448	443	440	426	409	418	409	391	378	385	406	421	442	(1.2)	2.5	(0.7)
201	670	679	649	658	662	614	603	642	634	628	625	594	605	650	669	(0.5)	1.3	(0.0)
226	5,365	5,262	4,939	4,959	4,973	4,736	4,628	4,899	4,705	4,541	4,637	4,667	4,813	4,541	4,642	(0.9)	0.4	(1.0)
236	4,804	4,796	4,567	4,562	4,661	4,507	4,470	5,074	4,883	4,689	4,762	4,846	5,181	5,128	5,207	0.1	2.1	0.6
242	5,781	5,734	5,352	5,196	5,265	6,068	5,894	5,476	5,371	5,159	5,295	5,530	5,823	5,615	5,656	(0.2)	1.9	(0.2)
247	10,217	10,256	9,917	9,553	9,902	10,073	9,952	10,478	10,155	9,948	10,074	10,175	10,598	10,521	10,535	0.0	1.2	0.2
266	3,663	3,695	3,643	3,602	3,740	3,577	3,484	3,571	3,442	3,519	3,621	3,640	3,815	3,940	4,066	(0.6)	2.9	0.7
286	6,954	7,207	6,969	7,185	7,397	7,060	6,910	6,937	6,766	6,736	6,886	7,026	7,393	7,545	7,713	(0.9)	2.7	0.7
298	7,201	7,359	7,335	7,457	7,446	7,448	7,176	7,018	6,789	6,588	6,737	7,022	7,383	7,501	7,564	(1.2)	2.8	0.4
312	10,421	10,455	10,291	10,558	11,011	10,635	10,234	10,353	10,315	10,347	10,444	10,692	10,522	10,186	9,963	(0.6)	(0.8)	(0.3)
320 (3)										113	3,539	4,667	5,223	5,292	5,453	-	117.1	-
326	26,928	28,231	28,201	28,173	27,069	26,975	27,783	29,284	28,965	28,780	28,066	28,423	29,777	30,197	30,737	0.6	1.3	0.9
333	12,297	12,586	11,861	11,455	11,312	11,848	11,904	12,166	12,093	11,860	11,811	11,598	11,235	11,319	11,313	0.5	(0.9)	(0.6)
20	34,130	35,753	35,452	36,060	36,659	35,518	34,961	35,236	35,478	36,231	36,441	36,305	37,726	38,010	37,978	(0.1)	0.9	0.8
339	22,140	22,015	21,709	21,561	21,203	20,312	20,989	22,973	23,265	23,582	23,852	23,849	24,711	24,709	24,910	1.1	1.1	0.8
340 (4)	1,318	1,541	1,570	1,581	1,537	1,521	1,370	1,422	1,447	1,409	1,484	1,627	1,721	1,842	1,913	(0.9)	6.3	2.7
343	24,850	25,716	25,152	24,609	26,054	25,277	25,165	26,569	26,178	25,858	25,323	24,896	25,105	25,628	25,447	(0.1)	(0.3)	0.2
351	29,503	30,084	29,563	29,433	29,917	29,315	29,196	29,690	28,170	27,512	27,316	26,689	27,226	27,475	27,137	(0.8)	(0.3)	(0.6)
352 (5)								158	1,805	2,146	2,384	2,676	2,949	3,111	3,826	-	12.3	-
353														19,957	18,783	-	-	-
358 (6)	5,755	6,011	5,856	5,854	5,917	5,964	5,767	5,716	5,538	5,386	5,090	4,950	4,951			-	-	-
359 (7)	17,532	18,086	17,844	17,635	17,727	17,274	16,943	17,255	16,846	16,164	16,333	16,608	17,943			-	-	-
31	12,939	13,166	12,941	13,034	13,304	13,389	13,431	13,432	12,950	12,742	12,669	12,472	12,853	13,033	13,741	(0.4)	1.5	-
44	7,378	7,926	7,950	8,149	8,235	8,313	8,399	8,478	8,157	8,040	8,021	7,953	8,091	8,248	8,090	(0.2)	0.1	-
56	14,528	15,392	15,064	15,318	15,581	14,950	15,339	16,008	15,365	15,028	15,012	14,785	15,013	15,093	15,218	(0.4)	0.3	-
74	4,442	4,691	4,562	4,657	4,796	4,811	4,723	4,722	4,580	4,490	4,459	4,385	4,354	4,179	4,256	(0.7)	(1.1)	-
87 (8)													708	1,564	1,779	-	-	-
95	4,599	5,020	4,722	4,750	4,761	4,709	5,021	5,200	4,859	4,640	4,639	4,633	4,693	4,511	4,432	(0.3)	(0.9)	-
105	2,946	3,243	3,033	3,060	3,188	3,062	3,232	3,337	3,234	3,152	3,099	3,102	3,248	3,195	3,291	(0.1)	0.9	-
115	4,013	4,256	4,051	4,047	4,043	4,128	4,289	4,067	3,948	3,856	3,890	3,861	4,036	3,904	3,992	(0.5)	0.7	-
Total	370,623	385,275	375,967	368,356	373,089	367,599	367,153	374,969	369,153	366,989	371,905	372,889	383,965	383,123	383,961	0.3	0.9	0.3
Percent Change Over Prior Year		4.0	(2.4)	(2.0)	1.3	(1.5)	(0.1)	2.1	(1.6)	(0.6)	1.3	0.3	3.0	(0.2)	0.2			

(1) A toll increase occurred on or close to January 1. Refer to table 2-1 for the rate change.
(2) On 6/1/2003 Gateway was a barrier toll plaza with two-way toll collection. On 1/2/2006, toll collection changed from two-way to eastbound toll collection. This reduced the number of toll transactions.
(3) Interchange 320 (Route 29) Opened in December 2012 as an E-ZPass only interchange.
(4) Interchange 340 (Virginia Drive) opened in December 2000 as an E-ZPass only interchange.
(5) Interchange 352 (Street Road) opened in November 2010 as an eastbound only ,E-ZPass only interchange.
(6) Neshaminy Falls opened as the new eastern terminus of the East-West Mainline Ticket System in January 2016.
(7) The Delaware River Bridge mainline toll plaza became part of the Barrier System in January 2016. Toll collection changed from bi-directional to westbound only.
(8) Interchange 87 (Route 903) opened June 2015 as an E-ZPass only interchange.

Table 2-3
Commercial Vehicles - Average Daily Transactions on the Turnpike Ticket System At Exiting Toll Plazas
Includes Revenue and Non-Revenue Vehicles, and Gateway Barrier Plaza

Interchange	Calendar Year															Average Annual Percent Change		
(Milepost)	2003	2004(1)	2005	2006	2007	2008	2009(1)	2010(1)	2011(1)	2012(1)	2013(1)	2014(1)	2015(1)	2016(1)	2017(1)	2007-12	2012-17	2003-17
2 (2)	4,259	5,447	5,760	2,644	2,702	2,621	2,259	2,432	2,515	2,457	2,539	2,650	2,731	2,720	2,779	(0.9)	2.5	(3.0)
30	1,865	3,196	3,340	3,371	3,505	3,412	2,994	3,060	3,116	3,192	3,276	3,428	3,582	3,666	3,805	(0.9)	3.6	5.2
39	513	536	552	527	575	571	544	565	552	560	596	579	586	606	609	(0.3)	1.7	1.2
48	1,048	1,075	1,072	1,081	1,177	1,185	1,104	1,153	1,058	1,073	1,092	1,132	1,223	1,237	1,229	(0.9)	2.8	1.1
57	1,591	1,653	1,680	1,706	1,735	1,636	1,498	1,590	1,606	1,623	1,652	1,694	1,730	1,805	1,838	(0.7)	2.5	1.0
67	837	849	857	853	894	895	869	847	816	857	866	883	912	931	926	(0.4)	1.5	0.7
75	4,255	4,345	4,348	4,389	4,478	4,389	3,902	3,854	3,828	3,830	3,857	3,977	4,123	4,096	4,189	(1.6)	1.8	(0.1)
91	267	318	262	286	306	287	314	334	323	313	311	326	324	317	339	0.2	1.6	1.7
110	729	729	710	715	743	738	652	669	690	690	701	723	728	695	719	(0.7)	0.8	(0.1)
146	1,375	1,454	1,350	1,332	1,327	1,151	1,009	1,077	1,056	1,035	1,024	1,030	1,087	1,105	1,135	(2.4)	1.9	(1.4)
161	2,840	2,888	2,902	2,835	2,910	2,616	2,261	2,440	2,431	2,381	2,338	2,361	2,378	2,416	2,417	(2.0)	0.3	(1.1)
180	173	198	205	218	230	203	169	207	215	210	216	225	239	243	275	(0.9)	5.6	3.4
189	108	106	106	107	108	96	85	100	101	109	105	103	106	116	131	0.1	3.8	1.4
201	161	186	215	214	229	219	193	212	265	291	286	251	258	295	350	2.4	3.7	5.7
226	3,359	3,471	3,430	3,483	3,548	3,350	2,893	2,886	2,889	2,826	2,871	2,990	3,135	3,130	3,200	(2.2)	2.5	(0.3)
236	619	632	668	723	774	690	646	751	774	756	792	811	877	925	974	(0.2)	5.2	3.3
242	995	1,070	1,119	1,154	1,194	1,243	1,146	1,105	1,100	1,003	1,114	1,170	1,237	1,303	1,338	(1.7)	5.9	2.1
247	1,718	1,812	1,895	1,854	1,863	1,817	1,653	1,749	1,743	1,706	1,792	1,885	2,018	2,140	2,178	(0.9)	5.0	1.7
266	499	501	518	538	549	523	469	486	482	481	494	534	537	581	598	(1.3)	4.5	1.3
286	1,437	1,492	1,461	1,507	1,572	1,491	1,325	1,354	1,364	1,350	1,415	1,496	1,593	1,696	1,697	(1.5)	4.7	1.2
298	1,146	1,194	1,160	1,187	1,188	1,084	936	963	995	1,005	1,023	1,137	1,253	1,330	1,336	(1.7)	5.9	1.1
312	935	971	967	996	1,058	908	806	904	929	948	990	1,068	1,119	1,171	1,141	(1.1)	3.8	1.4
320 (3)										6	286	334	356	446	495	-	141.7	-
326	3,137	3,360	3,408	3,486	3,446	3,190	2,902	3,118	3,105	2,993	2,984	3,069	3,249	3,443	3,467	(1.4)	3.0	0.7
333	598	618	626	611	636	663	597	644	629	630	633	660	645	687	678	(0.1)	1.5	0.9
20	3,839	4,124	4,187	4,320	4,433	4,114	3,751	3,883	3,961	4,037	4,150	4,309	4,554	4,798	4,765	(0.9)	3.4	1.6
339	1,373	1,408	1,453	1,424	1,403	1,343	1,260	1,329	1,417	1,437	1,518	1,564	1,678	1,802	1,746	0.2	4.0	1.7
340 (4)	11	13	16	19	20	19	18	20	24	24	30	48	61	63	61	1.6	20.2	12.9
343	1,877	2,040	2,102	2,119	2,210	2,109	1,999	2,109	2,116	2,102	2,130	2,205	2,255	2,396	2,330	(0.5)	2.1	1.6
351	3,204	3,268	3,338	3,374	3,397	3,384	3,111	3,178	3,151	3,105	3,146	3,174	3,323	3,457	3,601	(0.9)	3.0	0.8
352 (5)								4	54	68	84	117	130	143	174	-	20.7	-
353														3,743	3,489			
358 (6)	1,624	1,737	1,807	1,810	1,812	1,529	1,410	1,654	1,571	1,442	1,458	1,514	1,553	0	0	-	-	-
359 (7)	3,296	3,613	3,754	3,790	3,949	4,137	3,768	3,474	3,389	3,231	3,330	3,491	3,740	0	0	-	-	-
31	1,319	1,387	1,409	1,429	1,505	1,495	1,453	1,498	1,450	1,431	1,436	1,562	1,672	1,742	1,660	(0.5)	3.0	-
44	842	869	897	951	990	958	929	965	943	958	998	1,048	1,094	1,120	1,129	(0.3)	3.3	-
56	2,592	2,833	2,909	3,051	3,139	3,118	3,039	3,147	3,114	3,136	3,211	3,309	3,496	3,647	3,644	(0.0)	3.1	-
74	465	496	526	546	596	484	480	527	536	523	530	547	551	582	559	(1.3)	1.3	-
87 (8)													50	133	155	-	-	-
95	1,169	1,235	1,227	1,292	1,336	1,264	1,226	1,337	1,329	1,336	1,385	1,424	1,497	1,547	1,485	(0.0)	2.1	-
105	176	205	209	210	218	400	396	200	209	205	207	209	238	244	235	(0.6)	2.8	-
115	1,250	1,336	1,340	1,329	1,358	1,204	1,167	1,268	1,266	1,258	1,287	1,300	1,420	1,391	1,412	(0.8)	2.3	-
Total	57,500	62,662	63,786	61,480	63,114	60,535	55,230	57,093	57,112	56,614	58,154	60,336	63,340	63,909	64,287	0.2	2.6	0.8
Percent Change Over Prior Year		9.0	1.8	(3.6)	2.7	(4.1)	(8.8)	3.4	0.0	(0.9)	2.7	3.8	5.0	0.9	0.6			

(1) A toll increase occurred on or close to January 1. Refer to table 2-1 for the rate change.
(2) On 6/1/2003 Gateway was a barrier toll plaza with two-way toll collection. On 1/2/2006, toll collection changed from two-way to eastbound toll collection. This reduced the number of toll transactions.
(3) Interchange 320 (Route 29) Opened in December 2012 as an E-ZPass only interchange.
(4) Interchange 340 (Virginia Drive) opened in December 2000 as an E-ZPass only interchange.
(5) Interchange 352 (Street Road) opened in November 2010 as an eastbound only ,E-ZPass only interchange.
(6) Neshaminy Falls opened as the new eastern terminus of the East-West Mainline Ticket System in January 2016.
(7) The Delaware River Bridge mainline toll plaza became part of the Barrier System in January 2016. Toll collection changed from bi-directional to westbound only.
(8) Interchange 87 (Route 903) opened June 2015 as an E-ZPass only interchange.

Table 2-4
Total Vehicles - Average Daily Transactions on the Turnpike Ticket System At Exiting Toll Plazas
Includes Revenue and Non-Revenue Vehicles, and Gateway Barrier Plaza

Interchange	Calendar Year															Average Annual Percent Change		
(Milepost)	2003	2004(1)	2005	2006	2007	2008	2009(1)	2010(1)	2011(1)	2012(1)	2013(1)	2014(1)	2015(1)	2016(1)	2017(1)	2007-12	2012-17	2003-17
2 (2)	18,087	21,826	21,633	10,838	10,884	10,717	10,700	11,148	11,258	11,276	11,506	11,592	11,939	12,189	12,273	0.4	1.7	(2.7)
30	9,239	14,781	14,609	14,791	15,445	15,468	15,226	15,178	15,140	15,131	15,689	15,767	16,124	16,370	16,649	(0.2)	1.9	4.3
39	5,961	5,953	5,706	5,709	6,188	6,198	6,039	6,092	5,885	5,976	6,428	6,434	6,126	6,426	6,309	(0.3)	1.1	0.4
48	10,553	10,452	10,173	10,210	10,583	10,411	10,191	10,032	9,634	9,806	10,263	10,278	10,106	10,338	10,119	(0.8)	0.6	(0.3)
57	20,361	20,251	19,767	19,996	19,933	19,941	19,581	19,042	18,778	18,753	19,051	19,030	19,522	19,465	19,415	(0.6)	0.7	(0.3)
67	11,140	10,902	10,294	10,435	10,507	9,963	9,543	9,623	9,534	9,813	9,737	9,667	9,949	9,738	9,601	(0.7)	(0.4)	(1.1)
75	13,650	13,537	13,228	13,168	13,284	12,912	12,334	12,404	12,074	12,369	12,413	12,678	12,984	12,641	12,594	(0.7)	0.4	(0.6)
91	2,520	2,556	2,520	2,523	2,784	2,681	2,665	2,705	2,602	2,665	2,705	2,670	2,726	2,702	2,786	(0.4)	0.9	0.7
110	2,789	2,676	2,602	2,642	2,810	2,857	2,755	2,805	2,849	2,847	2,750	2,750	2,829	2,743	2,784	0.1	(0.4)	(0.0)
146	4,665	4,824	4,514	4,369	4,386	4,146	3,981	4,022	3,904	3,814	3,739	3,802	3,890	3,851	3,842	(1.4)	0.1	(1.4)
161	9,661	9,601	9,419	9,191	9,126	8,621	8,617	8,702	8,495	8,404	8,396	8,361	8,465	8,333	8,194	(0.8)	(0.5)	(1.2)
180	888	959	896	894	941	878	824	865	860	820	809	811	847	851	902	(1.4)	1.9	0.1
189	596	589	555	550	548	522	494	518	510	500	484	488	512	537	573	(0.9)	2.8	(0.3)
201	831	865	863	872	891	832	796	854	899	919	911	844	863	945	1,019	0.3	2.1	1.5
226	8,724	8,733	8,369	8,442	8,521	8,085	7,521	7,785	7,594	7,367	7,508	7,656	7,948	7,671	7,842	(1.4)	1.3	(0.8)
236	5,422	5,428	5,235	5,285	5,435	5,197	5,116	5,825	5,657	5,445	5,554	5,657	6,057	6,054	6,181	0.0	2.6	0.9
242	6,777	6,803	6,471	6,350	6,459	7,311	7,040	6,581	6,471	6,162	6,409	6,700	7,060	6,918	6,994	(0.5)	2.6	0.2
247	11,936	12,068	11,812	11,407	11,765	11,890	11,604	12,227	11,898	11,654	11,866	12,060	12,616	12,661	12,713	(0.1)	1.8	0.5
266	4,163	4,196	4,161	4,140	4,289	4,100	3,954	4,057	3,924	4,000	4,116	4,173	4,352	4,521	4,664	(0.7)	3.1	0.8
286	8,391	8,699	8,430	8,691	8,969	8,551	8,235	8,291	8,130	8,086	8,301	8,522	8,986	9,241	9,409	(1.0)	3.1	0.8
298	8,347	8,552	8,495	8,644	8,634	8,532	8,112	7,981	7,784	7,593	7,760	8,159	8,636	8,830	8,901	(1.3)	3.2	0.5
312	11,355	11,426	11,259	11,554	12,069	11,543	11,039	11,257	11,244	11,295	11,434	11,760	11,641	11,357	11,103	(0.7)	(0.3)	(0.2)
320 (3)										120	3,826	5,001	5,001	5,001	5,001	-	110.9	-
326	30,064	31,591	31,609	31,659	30,515	30,165	30,685	32,402	32,070	31,773	31,050	31,492	33,026	33,640	34,203	0.4	1.5	0.9
333	12,895	13,204	12,487	12,066	11,948	12,511	12,501	12,810	12,722	12,490	12,445	12,258	11,881	12,006	11,991	0.4	(0.8)	(0.5)
20	37,969	39,877	39,640	40,381	41,091	39,631	38,712	39,119	39,439	40,268	40,590	40,614	42,280	42,808	42,743	(0.2)	1.2	0.8
339	23,513	23,422	23,162	22,984	22,606	21,655	22,249	24,302	24,683	25,019	25,371	25,413	26,389	26,511	26,657	1.0	1.3	0.9
340 (4)	1,329	1,554	1,587	1,599	1,558	1,540	1,388	1,442	1,471	1,433	1,513	1,676	1,782	1,905	1,974	(0.8)	6.6	2.9
343	26,727	27,756	27,254	26,728	28,264	27,385	27,163	28,678	28,294	27,960	27,453	27,102	27,360	28,024	27,777	(0.1)	(0.1)	0.3
351	32,707	33,352	32,900	32,807	33,315	32,700	32,307	32,868	31,321	30,616	30,462	29,863	30,549	30,932	30,738	(0.8)	0.1	(0.4)
352 (5)								162	1,859	2,214	2,467	2,792	3,079	3,254	4,000	-	12.6	-
353														23,700	22,272	-	-	-
358 (6)	7,380	7,748	7,663	7,664	7,728	7,494	7,177	7,370	7,109	6,828	6,548	6,464	6,504	0	0	-	-	-
359 (7)	20,828	21,699	21,598	21,425	21,676	21,411	20,712	20,729	20,235	19,395	19,662	20,100	21,683	0	0	-	-	-
31	14,258	14,553	14,350	14,463	14,809	14,885	14,884	14,930	14,400	14,172	14,105	14,034	14,525	14,776	14,816	(0.4)	0.9	-
44	8,220	8,796	8,848	9,099	9,225	9,271	9,328	9,443	9,100	8,998	9,019	9,001	9,185	9,368	9,219	(0.2)	0.5	-
56	17,120	18,225	17,973	18,369	18,720	18,068	18,378	19,155	18,480	18,164	18,224	18,094	18,508	18,740	18,862	(0.3)	0.8	-
74	4,907	5,188	5,088	5,204	5,393	5,295	5,204	5,249	5,116	5,014	4,989	4,932	4,905	4,761	4,815	(0.7)	(0.8)	-
87 (8)																-	-	-
95	5,768	6,255	5,949	6,042	6,097	5,973	6,247	6,537	6,188	5,976	6,025	6,057	6,190	6,057	5,918	(0.2)	(0.2)	-
105	3,122	3,448	3,242	3,269	3,406	3,463	3,627	3,537	3,443	3,357	3,306	3,311	3,486	3,440	3,526	(0.1)	1.0	-
115	5,263	5,592	5,391	5,377	5,401	5,332	5,456	5,335	5,214	5,114	5,178	5,161	5,456	5,296	5,405	(0.5)	1.1	-
Total	428,123	447,937	439,753	429,836	436,203	428,134	422,383	432,062	426,266	423,604	430,060	433,225	445,969	444,598	444,782	0.2	1.0	0.3
Percent Change Over Prior Year		4.6	(1.8)	(2.3)	1.5	(1.8)	(1.3)	2.3	(1.3)	(0.6)	1.5	0.7	2.9	(0.3)	0.0			

(1) A toll increase occurred on or close to January 1. Refer to table 2-1 for the rate change.
(2) On 6/1/2003 Gateway was a barrier toll plaza with two-way toll collection. On 1/2/2006, toll collection changed from two-way to eastbound toll collection. This reduced the number of toll transactions.
(3) Interchange 320 (Route 29) Opened in December 2012 as an E-ZPass only interchange.
(4) Interchange 340 (Virginia Drive) opened in December 2000 as an E-ZPass only interchange.
(5) Interchange 352 (Street Road) opened in November 2010 as an eastbound only ,E-ZPass only interchange.
(6) Neshaminy Falls opened as the new eastern terminus of the East-West Mainline Ticket System in January 2016.
(7) The Delaware River Bridge mainline toll plaza became part of the Barrier System in January 2016. Toll collection changed from bi-directional to westbound only.
(8) Interchange 87 (Route 903) opened June 2015 as an E-ZPass only interchange.

2.3.2 Barrier System Transaction Trends

Average annual daily traffic trends at the Barrier System's toll plazas are shown in Tables 2-5 through 2-7 for passenger cars, commercial vehicles and total vehicles, respectively. Note that the Delaware River Bridge (Plaza 359) transactions are counted as part of the Barrier System beginning in 2016.

Total Barrier System transactions have been increasing at a faster rate than the Ticket System's. Passenger-car transactions averaged annual growth of 2.8% from 2007-2012, and 3.2% growth from 2012-2017. Higher Barrier System growth rates occur because of the following reasons: 1) these tend to be younger facilities that have historically been adding additional lane miles and sometimes additional interchanges and toll plazas. These facilities also tend to be on the fringe of urban areas and are benefiting from increasing development in their corridors. Lastly, Turnpike I-576 was exempt from scheduled toll increases in 2009 through 2012, and 2014 through 2018. The DRB was exempt from scheduled toll increases in 2017 and 2018. Overall, growth on the Barrier System was also impacted by the Great Recession, slow economic recovery, annual toll rate increases, and the temporary closure of the DRB in 2017.

Commercial-vehicle average daily transaction trends are shown in Table 2-6. They also show stronger annual growth compared to the Ticket System. Commercial-vehicle transactions averaged annual growth of 4.6% from 2007-2012, and 3.3% growth from 2012-2017.

Total Barrier System transactions increased annually by 3.0% from 2007-2012, and 3.2% from 2012-2017, as shown in Table 2-7. Growth would have been higher in 2017 if the Delaware River Bridge (plaza 359) had not been closed from January 20 through March 9, 2017.

2.4 Monthly Transactions and Gross Toll Revenue Trends

This section discusses monthly transactions and toll revenue trends by fiscal year (FY) from FY 2013-14 through FY 2017-18 for the Ticket System, Barrier System, and the total Turnpike System. The last actual data point is February 2018. Trend data is provided separately for passenger cars and commercial vehicles. The transaction data includes only toll transactions at exiting toll plazas; non-revenue transactions are not included. These tables present the relationship between the transactions and toll revenue, highlight differenced in seasonal variation. And isolate shorter-term impacts that may not be apparent in annual trends.

2.4.1 Ticket System Monthly Trends

Monthly transaction and toll revenue trends for the Ticket System are presented in Table 2-8 from FY 2014-15 through February of FY 2017-18. Passenger-car transactions increased by 2.1% in FY 2014-15 and decreased by 0.9% in FY 2016-17 compared to the previous year. The decline can be partially attributed to the leap year in 2016, resulting in one less day of transactions in February 2017 compared to 2016. Also, as previously mentioned, the DRB was closed on January 20, 2017 through March 9, 2017 due to a fracture in one of the structural support beams. Although the DRB transactions are not included in the Ticket System, negative traffic impacts were still felt on parts of the Ticket System. Prior to January 2016, the DRB transactions were reported on the Ticket System.

Table 2-5
Passenger Cars - Average Daily Transactions on the Turnpike Barrier System
Includes Revenue and Non-Revenue Vehicles

	Calendar Year (1)															Average Annual Percent Change		
Toll Location	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2007-12	2012-17	2007-17
Northeast Extension Barrier Plazas																		
Keyser Ave.	6,274	6,719	6,489	6,573	6,736	6,782	7,012	6,935	6,970	6,960	7,156	7,017	7,037	6,653	6,575	0.7	(1.1)	(0.2)
Clarks Summit	6,492	6,747	6,519	6,545	6,740	6,790	6,850	6,670	6,673	6,702	7,270	7,135	6,842	6,337	6,104	(0.1)	(1.9)	(1.0)
Subtotal	12,766	13,466	13,008	13,117	13,476	13,572	13,862	13,605	13,643	13,662	14,426	14,152	13,879	12,990	12,679	0.3	(1.5)	(0.6)
Turnpike I-376 - Beaver Valley Expressway (1)																		
East Toll 376	9,782	9,821	9,896	9,854	10,334	10,288	9,897	9,884	9,940	9,685	9,235	8,971	8,918	8,477	8,386	(1.3)	(2.8)	(2.1)
Beaver Falls Rte. 551					434	458	430	455	430	437	425	387	410	391	414	0.1	(1.1)	(0.5)
Moravia Rte. 168					756	808	706	674	778	775	728	712	700	667	656	0.5	(3.3)	(1.4)
West Toll 376	6,176	6,385	6,812	7,047	7,524	7,633	7,617	7,738	7,632	7,430	7,178	7,292	7,333	7,239	7,434	(0.3)	0.0	(0.1)
Mt. Jackson Rte. 108					1,277	1,557	1,390	1,236	1,173	1,094	1,019	953	981	982	1,021	(3.1)	(1.4)	(2.2)
Subtotal	15,958	16,206	16,708	16,901	20,326	20,744	20,040	19,987	19,953	19,419	18,587	18,315	18,342	17,756	17,912	(0.9)	(1.6)	(1.3)
Turnpike 66 - Amos K. Hutchinson Bypass (2)																		
Rte. 136				217	597	806	727	742	731	738	708	749	786	754	755	4.3	0.5	2.4
AKH Mainline	10,476	10,858	11,123	12,053	12,308	12,327	12,114	12,276	11,947	11,843	11,721	11,728	11,623	11,102	11,203	(0.8)	(1.1)	(0.9)
Route 30				861	2,889	4,617	4,645	4,921	4,809	4,686	4,625	4,625	4,599	4,544	4,496	10.2	(0.8)	4.5
Route 130				226	1,260	1,370	1,370	1,397	1,459	1,336	1,326	1,377	1,335	1,325	1,323	1.2	(0.2)	0.5
Route 66				117	580	762	738	752	774	754	753	834	815	850	827	5.4	1.9	3.6
Subtotal	10,476	10,858	11,123	13,473	17,633	19,883	19,594	20,088	19,719	19,356	19,133	19,313	19,158	18,576	18,605	1.9	(0.8)	0.5
Turnpike 43 - Mon/Fayette Expressway (3)																		
Ramp M4	30	29	26	32	39	32	22	22	147	299	315	308	313	295	292	50.7	(0.5)	22.5
M5	1,794	1,884	1,973	2,060	2,151	2,257	2,301	2,477	3,467	4,933	5,224	5,663	6,042	6,055	6,073	18.1	4.2	10.9
Ramp M15								13	109	86	81	77	88	81	82	-	(0.8)	-
Ramp M18								114	228	281	290	284	327	317	296	-	1.0	-
M19								275	3,543	4,537	4,896	5,079	5,587	5,744	5,564	-	4.2	-
Ramp M22											186	160	170	151	149	-	-	-
Ramp M26											740	769	842	796	836	-	-	-
M35 California	2,728	9,365	9,366	9,754	10,224	10,530	10,318	10,515	10,407	10,605	10,587	10,649	11,074	10,635	10,265	0.7	(0.6)	0.0
Ramp M39	1,766	906	868	963	1,030	1,052	1,050	1,067	1,073	1,056	1,046	1,006	1,015	1,026	988	0.5	(1.3)	(0.4)
Ramp M44		736	720	758	745	749	703	692	665	651	641	647	685	670	704	(2.7)	1.6	(0.6)
Ramp M48		2,543	2,790	2,936	3,213	3,301	3,356	3,471	3,478	3,537	3,511	3,579	4,054	3,812	3,830	1.9	1.6	1.8
M52	5,689	6,326	6,746	7,099	7,179	7,351	7,181	7,161	7,149	7,464	7,233	7,033	6,906	6,740	6,802	0.8	(1.8)	(0.5)
Subtotal	12,006	21,789	22,489	23,602	24,581	25,273	24,931	25,807	30,266	33,450	34,751	35,255	37,104	36,325	35,881	6.4	1.4	3.9
I-576 - Southern Beltway																		
SB Rte. 30				80	166	223	262	298	364	555	303	311	305	278	390	27.3	(6.8)	8.9
SB Westport Rd.				59	125	130	153	160	163	190	191	249	348	340	339	8.8	12.3	10.5
Rte. 22				533	2,914	3,320	3,727	3,897	4,135	4,209	4,005	4,154	4,232	4,290	4,363	7.6	0.7	4.1
Subtotal				671	3,204	3,673	4,142	4,355	4,662	4,954	4,498	4,714	4,885	4,909	5,093	9.1	0.6	4.7
Delaware River Bridge (4, 5)																		
DRB														18,450	16,234	-	-	-
All Barrier Facilities																		
Total	51,205	62,320	63,328	67,765	79,221	83,146	82,569	83,842	88,244	90,841	91,394	91,749	93,368	109,004	106,404	2.8	3.2	3.0
Percent Change Over Prior Year	10.2	21.7	1.6	7.0	16.9	5.0	(0.7)	1.5	5.2	2.9	0.6	0.4	1.8	16.7	(2.4)			

(1) Toll rate increases were generally implemented annually from 2009 through 2017. Oftentimes, I-576 was exempted from the programed toll increases. Refer to Table 2-1 for details.
(1) Toll 60 (Turnpike 376) ramp counts were not available from 2002 to 2006.
(2) Toll 66 ramp counts were not available from 2002 to 2005.
(3) On July 11, 2011, the West Virginia section of Turnpike 43 was opened.
(4) In January of 2016, toll collection on the Delaware River Bridge was converted from bidirectional to westbound only, and became a barrier plaza instead of the eastern terminus of the Ticket System.
(5) Transactions were negatively impacted from 1/1/2017 through 3/9/2017 due to the closure of the bridge because of a fracture in a structural support beam.

Table 2-6
Commercial Vehicles - Average Daily Transactions on the Turnpike Barrier System
Includes Revenue and Non-Revenue Vehicles

	Calendar Year (1)															Average Annual Percent Change		
Toll Location	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2007-12	2012-17	2007-17
Northeast Extension Barrier Plazas																		
Keyser Ave.	918	938	1,092	1,227	1,408	1,363	1,306	1,365	1,492	1,532	1,606	1,643	1,687	1,690	1,751	1.7	2.7	2.2
Clarks Summit	957	931	1,038	1,112	1,162	1,096	1,047	1,082	1,149	1,228	1,369	1,436	1,404	1,391	1,429	1.1	3.1	2.1
Subtotal	1,875	1,869	2,130	2,339	2,570	2,459	2,353	2,447	2,641	2,759	2,975	3,079	3,091	3,081	3,180	1.4	2.9	2.2
Turnpike I-376 - Beaver Valley Expressway (1)																		
East Toll 376	1,304	1,328	1,353	1,311	1,490	1,548	1,342	1,506	1,621	1,693	1,729	1,830	1,859	1,826	1,871	2.6	2.0	2.3
Beaver Falls Rte. 551					36	39	31	48	59	59	50	48	51	43	54	10.2	(1.7)	4.1
Moravia Rte. 168					96	145	60	73	92	86	73	97	82	61	76	(2.2)	(2.6)	(2.4)
West Toll 376	870	911	915	998	1,133	1,170	1,034	1,196	1,211	1,226	1,202	1,279	1,272	1,244	1,299	1.6	1.2	1.4
Mt. Jackson Rte. 108					98	108	113	98	133	164	135	148	154	152	163	11.0	(0.1)	5.3
Subtotal	2,174	2,239	2,268	2,309	2,854	3,010	2,580	2,921	3,116	3,228	3,190	3,402	3,418	3,326	3,463	2.5	1.4	2.0
Turnpike 66 - Amos K. Hutchinson Bypass (2)																		
Rte. 136				126	211	183	146	165	183	178	177	749	197	171	168	(3.3)	(1.2)	(2.3)
AKH Mainline	1,813	1,818	1,872	1,935	2,070	2,146	2,010	2,261	2,333	2,348	2,372	2,603	2,514	2,397	2,495	2.6	1.2	1.9
Route 30				142	290	282	265	300	292	315	313	306	283	279	298	1.7	(1.1)	0.3
Route 130				17	38	29	30	26	26	26	28	32	27	29	30	(7.1)	2.8	(2.3)
Route 66				5	15	16	17	18	19	22	19	21	18	18	19	7.2	(3.1)	1.9
Subtotal	1,813	1,818	1,872	2,226	2,623	2,656	2,468	2,770	2,853	2,890	2,908	3,710	3,040	2,893	3,009	2.0	0.8	1.4
Turnpike 43 - Mon/Fayette Expressway (3)																		
Ramp M4	1	1	1	1	1	2	1	1	4	7	8	8	8	7	8	40.1	2.8	20.0
M5	151	135	136	150	140	196	240	275	366	529	665	819	838	742	777	30.4	8.0	18.7
Ramp M15								0	6	7	9	13	14	8	9	-	3.4	-
Ramp M18								6	16	19	20	17	36	16	15	-	(4.4)	-
M19								182	302	437	605	679	751	661	705	-	10.1	-
Ramp M22											29	24	40	15	14	-	-	-
Ramp M26											18	22	27	21	23	-	-	-
M35 California	84	314	303	321	384	478	532	573	574	694	827	1,002	974	871	934	12.6	6.1	9.3
Ramp M39	52	23	23	26	32	34	35	40	45	44	55	61	74	64	85	6.6	14.0	10.3
Ramp M44		37	34	42	46	68	33	29	53	47	53	56	107	100	96	0.0	15.5	7.5
Ramp M48		107	82	59	65	66	60	73	85	97	102	128	165	125	132	8.4	6.4	7.4
M52	92	107	118	108	111	127	125	143	156	173	183	197	210	212	224	9.4	5.3	7.3
Subtotal	382	724	697	707	779	971	1,025	1,322	1,607	2,053	2,573	3,026	3,244	2,842	3,022	21.4	8.0	14.5
I-576 - Southern Beltway																		
SB Rte. 30				2	18	27	31	36	29	38	26	31	37	29	37	16.6	(0.5)	7.7
SB Westport Rd.				1	6	14	56	58	33	37	45	84	146	183	183	44.3	37.6	40.9
Rte. 22				24	210	249	287	311	312	322	356	391	470	426	444	8.9	6.6	7.8
Subtotal				28	234	290	375	405	375	397	427	506	653	637	664	11.2	10.8	11.0
Delaware River Bridge																		
DRB														3,127	2,836	-	-	-
All Barrier Facilities																		
Total	6,244	6,650	6,967	7,608	9,060	9,385	8,801	9,865	10,592	11,328	12,072	13,722	13,446	12,780	13,338	4.6	3.3	3.9
Percent Change Over Prior Year	(0.9)	6.5	4.8	9.2	19.1	3.6	(6.2)	12.1	7.4	6.9	6.6	13.7	(2.0)	(5.0)	4.4			

(1) Toll rate increases were generally implemented annually from 2009 through 2017. Oftentimes, I-576 was exempted from the programed toll increases. Refer to Table 2-1 for details.
(1) Toll 60 (Turnpike 376) ramp counts were not available from 2002 to 2006.
(2) Toll 66 ramp counts were not available from 2002 to 2005.
(3) On July 11, 2011, the West Virginia section of Turnpike 43 was opened.
(4) In January of 2016, toll collection on the Delaware River Bridge was converted from bidirectional to westbound only, and became a barrier plaza instead of the eastern terminus of the Ticket System.
(5) Transactions were negatively impacted from 1/1/2017 through 3/9/2017 due to the closure of the bridge because of a fracture in a structural support beam.

Table 2-7
Total Vehicles - Average Daily Transactions on the Turnpike Barrier System
Includes Revenue and Non-Revenue Vehicles

Toll Location	Calendar Year (1) 2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average Annual Percent Change 2007-12	2012-17	2007-17
Northeast Extension Barrier Plazas																		
Keyser Ave.	7,192	7,657	7,581	7,800	8,144	8,144	8,318	8,300	8,462	8,492	8,761	8,660	8,724	8,343	8,326	0.8	(0.4)	0.2
Clarks Summit	7,449	7,678	7,557	7,656	7,903	7,887	7,897	7,752	7,822	7,930	8,639	8,571	8,246	7,728	7,533	0.1	(1.0)	(0.5)
Subtotal	14,641	15,335	15,138	15,456	16,047	16,031	16,215	16,052	16,284	16,422	17,401	17,231	16,970	16,071	15,859	0.5	(0.7)	(0.1)
Turnpike I-376 - Beaver Valley Expressway (1)																		
East Toll 376	11,086	11,149	11,249	11,165	11,824	11,836	11,239	11,390	11,561	11,377	10,965	10,801	10,777	10,303	10,257	(0.8)	(2.1)	(1.4)
Beaver Falls Rte. 551					471	497	461	503	490	496	476	435	461	434	469	1.0	(1.1)	(0.0)
Moravia Rte. 168					853	953	766	747	869	861	801	809	782	728	732	0.2	(3.2)	(1.5)
West Toll 376	7,046	7,296	7,727	8,044	8,658	8,803	8,651	8,934	8,844	8,655	8,381	8,572	8,605	8,483	8,733	(0.0)	0.2	0.1
Mt. Jackson Rte. 108					1,375	1,665	1,503	1,334	1,306	1,258	1,154	1,101	1,135	1,134	1,184	(1.8)	(1.2)	(1.5)
Subtotal	18,132	18,445	18,976	19,210	23,180	23,754	22,620	22,908	23,070	22,648	21,776	21,717	21,760	21,082	21,375	(0.5)	(1.1)	(0.8)
Turnpike 66 - Amos K. Hutchinson Bypass (2)																		
Rte. 136				343	808	989	873	907	914	916	885	1,497	982	926	923	2.5	0.1	1.3
AKH Mainline	12,288	12,676	12,995	13,988	14,378	14,473	14,124	14,537	14,280	14,191	14,093	14,331	14,137	13,499	13,697	(0.3)	(0.7)	(0.5)
Route 30				1,003	3,178	4,899	4,910	5,221	5,101	5,001	4,938	4,930	4,883	4,823	4,795	9.5	(0.8)	4.2
Route 130				243	1,298	1,399	1,400	1,423	1,485	1,362	1,354	1,409	1,362	1,354	1,354	1.0	(0.1)	0.4
Route 66				122	595	778	754	770	793	776	771	855	833	868	846	5.5	1.7	3.6
Subtotal	12,288	12,676	12,995	15,699	20,256	22,539	22,062	22,858	22,572	22,245	22,041	23,022	22,198	21,469	21,614	1.9	(0.6)	0.7
Turnpike 43 - Mon/Fayette Expressway (3)																		
Ramp M4	31	30	28	33	40	34	23	23	151	306	323	316	321	303	300	50.4	(0.4)	22.4
M5	1,945	2,020	2,110	2,210	2,292	2,453	2,541	2,752	3,833	5,462	5,889	6,482	6,879	6,797	6,850	19.0	4.6	11.6
Ramp M15								13	115	93	90	91	102	89	91	-	(0.4)	-
Ramp M18								120	244	300	310	301	363	333	311	-	0.7	-
M19								457	3,845	4,974	5,501	5,758	6,338	6,406	6,269	-	4.7	-
Ramp M22											215	184	210	166	163	-	-	-
Ramp M26											758	791	869	817	858	-	-	-
M35 California	2,812	9,679	9,669	10,075	10,608	11,008	10,849	11,088	10,981	11,298	11,414	11,651	12,047	11,506	11,199	1.3	(0.2)	0.5
Ramp M39	1,819	929	891	989	1,062	1,087	1,085	1,107	1,118	1,101	1,101	1,067	1,089	1,090	1,073	0.7	(0.5)	0.1
Ramp M44		773	753	799	792	817	736	721	718	698	694	703	793	770	800	(2.5)	2.8	0.1
Ramp M48		2,649	2,872	2,995	3,277	3,368	3,416	3,544	3,563	3,634	3,613	3,707	4,219	3,937	3,962	2.1	1.7	1.9
M52	5,781	6,433	6,863	7,208	7,289	7,478	7,306	7,304	7,305	7,637	7,415	7,230	7,116	6,952	7,027	0.9	(1.7)	(0.4)
Subtotal	12,387	22,513	23,186	24,309	25,360	26,245	25,956	27,129	31,873	35,503	37,324	38,281	40,348	39,167	38,903	7.0	1.8	4.4
I-576 - Southern Beltway																		
SB Rte. 30				82	184	250	293	334	394	593	328	342	342	307	427	26.4	(6.4)	8.8
SB Westport Rd.				60	131	144	209	218	196	227	236	333	494	523	522	11.7	18.1	14.9
Rte. 22				557	3,124	3,569	4,014	4,208	4,447	4,531	4,361	4,546	4,702	4,716	4,807	7.7	1.2	4.4
Subtotal				699	3,438	3,963	4,517	4,760	5,037	5,351	4,925	5,220	5,538	5,546	5,756	9.3	1.5	5.3
Delaware River Bridge																		
DRB														18,450	16,234	-	-	-
All Barrier Facilities																		
Total	57,448	68,970	70,295	75,373	88,281	92,531	91,371	93,707	98,836	102,169	103,467	105,471	106,814	121,785	119,741	3.0	3.2	3.1
Percent Change Over Prior Year	8.9	20.1	1.9	7.2	17.1	4.8	(1.3)	2.6	5.5	3.4	1.3	1.9	1.3	14.0	(1.7)			

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(1) Toll 60 (Turnpike 376) ramp counts were not available from 2002 to 2006.
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(3) On July 11, 2011, the West Virginia section of Turnpike 43 was opened.
(4) In January of 2016, toll collection on the Delaware River Bridge was converted from bidirectional to westbound only, and became a barrier plaza instead of the eastern terminus of the Ticket System.
(5) Transactions were negatively impacted from 1/1/2017 through 3/9/2017 due to the closure of the bridge because of a fracture in a structural support beam.

Table 2-8

Ticket System (Including Gateway Barrier Plaza) - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	11,720	2.3	11,995	0.1	12,013	0.1	12,029
July	12,128	3.8	12,583	(3.1)	12,196	(1.4)	12,020
August	12,285	2.0	12,525	(1.4)	12,348	0.1	12,357
September	11,123	2.2	11,362	1.0	11,480	(0.8)	11,386
October	11,876	1.6	12,064	(1.9)	11,836	(0.1)	11,826
November	10,760	4.8	11,281	0.2	11,301	(1.0)	11,185
December	10,902	3.7	11,302	(2.6)	11,005	(2.5)	10,725
January	9,619	(0.1)	9,605	4.4	10,033	(1.8)	9,851
February	9,101	7.0	9,738	(5.3)	9,226	1.2	9,339
March	10,627	5.1	11,168	(5.2)	10,589		
April	11,381	(3.8)	10,953	2.7	11,247		
May	11,978	(2.2)	11,717	1.2	11,855		
Total Year	133,500	2.1	136,294	(0.9)	135,128		
June - Feb	99,514	3.0	102,456	(1.0)	101,437	(0.7)	100,717

Month	Commercial Vehicles 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	1,852	6.7	1,976	2.6	2,028	(0.1)	2,025
July	1,910	4.6	1,998	(3.5)	1,927	(1.5)	1,898
August	1,862	4.8	1,951	6.7	2,082	0.1	2,084
September	1,838	4.7	1,925	0.8	1,941	(2.0)	1,903
October	1,960	1.9	1,997	(3.4)	1,930	3.6	2,000
November	1,648	6.1	1,748	1.6	1,777	3.3	1,835
December	1,700	3.7	1,763	(1.7)	1,732	(1.1)	1,713
January	1,606	(3.3)	1,552	5.8	1,642	5.8	1,738
February	1,518	5.8	1,606	(5.8)	1,514	6.6	1,614
March	1,763	6.0	1,869	(3.9)	1,796		
April	1,863	(0.3)	1,858	(2.8)	1,807		
May	1,910	0.9	1,927	3.9	2,003		
Total Year	21,430	3.5	22,172	0.0	22,179		
June - Feb	15,894	3.9	16,517	0.3	16,573	1.4	16,811

Month	Total Vehicles 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	13,572	2.9	13,971	0.5	14,041	0.1	14,054
July	14,039	3.9	14,581	(3.1)	14,123	(1.4)	13,919
August	14,147	2.3	14,476	(0.3)	14,430	0.1	14,441
September	12,961	2.5	13,287	1.0	13,421	(1.0)	13,289
October	13,836	1.6	14,061	(2.1)	13,766	0.4	13,826
November	12,408	5.0	13,029	0.4	13,078	(0.4)	13,019
December	12,602	3.7	13,065	(2.5)	12,738	(2.3)	12,439
January	11,225	(0.6)	11,158	4.6	11,675	(0.7)	11,588
February	10,619	6.8	11,345	(5.3)	10,740	2.0	10,953
March	12,390	5.2	13,037	(5.0)	12,384		
April	13,244	(3.3)	12,812	1.9	13,054		
May	13,888	(1.8)	13,644	1.6	13,858		
Total Year	154,930	2.3	158,466	(0.7)	157,307		
June - Feb	115,408	3.1	118,973	(0.8)	118,010	(0.4)	117,528

Toll Revenue (in $1,000s)

Month	Passenger Cars 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	$44,313	6.9	$47,358	6.4	$50,374	8.9	$54,875
July	47,889	10.2	52,753	5.5	55,659	5.0	58,459
August	49,295	5.9	52,191	1.3	52,888	8.1	57,199
September	39,577	10.7	43,823	9.6	48,028	3.7	49,807
October	42,096	8.2	45,567	5.9	48,264	5.5	50,936
November	39,415	10.7	43,632	5.6	46,084	5.9	48,799
December	38,616	9.0	42,110	5.4	44,375	3.9	46,096
January	33,269	8.1	35,973	9.8	39,489	4.0	41,070
February	30,588	15.0	35,190	2.0	35,898	9.1	39,149
March	38,006	13.9	43,273	(0.9)	42,900		
April	42,423	1.4	42,999	14.5	49,234		
May	47,368	1.7	48,163	7.4	51,721		
Total Year	$492,853	8.2	$533,031	6.0	$564,915		
June - Feb	$365,056	9.2	$398,596	5.6	$421,060	6.0	$446,391

Month	Commercial Vehicles 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	$32,122	12.1	$36,014	8.7	$39,137	4.7	$40,969
July	32,910	9.5	36,048	4.1	37,543	2.5	38,493
August	32,392	9.1	35,345	12.5	39,776	6.6	42,397
September	31,894	9.2	34,839	7.8	37,555	3.4	38,829
October	33,863	6.5	36,072	1.3	36,541	12.0	40,913
November	28,909	9.5	31,665	7.0	33,896	10.8	37,560
December	29,865	6.8	31,906	6.0	33,828	6.0	35,866
January	30,336	3.4	31,378	9.0	34,189	14.2	39,045
February	28,569	13.2	32,343	(2.2)	31,628	17.3	37,084
March	33,479	10.8	37,096	2.3	37,948		
April	34,384	6.6	36,662	1.8	37,308		
May	34,854	7.7	37,552	6.9	40,145		
Total Year	$383,576	8.7	$416,919	5.4	$439,495		
June - Feb	$280,859	8.8	$305,610	6.0	$324,093	8.4	$351,157

Month	Total Vehicles 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	$76,435	9.1	$83,371	7.4	$89,511	7.1	$95,844
July	80,798	9.9	88,801	5.0	93,201	4.0	96,952
August	81,686	7.2	87,536	5.9	92,665	7.5	99,596
September	71,471	10.1	78,662	8.8	85,583	3.6	88,636
October	75,959	7.5	81,639	3.9	84,805	8.3	91,850
November	68,323	10.2	75,297	6.2	79,980	8.0	86,360
December	68,480	8.1	74,016	5.7	78,203	4.8	81,962
January	63,605	5.9	67,351	9.4	73,678	8.7	80,116
February	59,157	14.2	67,533	(0.0)	67,526	12.9	76,233
March	71,485	12.4	80,369	0.6	80,848		
April	76,807	3.7	79,661	8.6	86,542		
May	82,222	4.2	85,715	7.2	91,866		
Total Year	$876,429	8.4	$949,950	5.7	$1,004,410		
June - Feb	$645,915	9.0	$704,206	5.8	$745,154	7.0	$797,547

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 2-1 for details.

(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.

(3) Abnormally severe winter weather negatively impacted traffic and toll revenue in January and February 2014, particularly among passenger cars.

(4) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(5) Before January 2016, Delaware River Bridge traffic and revenue were included in Ticket System reporting.

In FY 2017-18, through February, passenger-car transactions decreased by 0.7% compared to the same period in FY 2016-17. The months of September and December in 2017 both had one less weekday compared to the same months in 2016. The months of November 2017 through January 2018 were negatively impacted by abnormally severe winter weather.

Growth in passenger-car toll revenue was much stronger than growth in transactions due to annual toll rate increases. Passenger-car toll revenue increased 8.2% in FY 2015-16 and 6.0% in FY 2016-17. In the current fiscal year, passenger-car toll revenue on the Ticket System increased by 6% through February 2018 compared to the same period in the previous year.

Commercial-vehicle transactions increased 3.5% in in FY 2014-15, and 0.0% in FY 2015-16. Year-to-date, FY 2017-18 commercial-vehicle transactions increased by 1.4% over the same period in the prior year. Annual toll revenue increased 8.7% in FY 2015-16, 5.4% in FY 2016-17, and 8.4% in FY 2017-18 through February 2018. These increases in toll revenue were driven primarily by annual toll rate increases and by increased transactions.

Total Ticket System transactions increased by 2.3% in FY 2015-16 and decreased by 0.7% in FY 2016-17. In FY 2017-18, transactions through February 2018 decreased compared to the same period in the prior year by 0.4%. Total Ticket System toll revenue increased by 8.4% in FY 2015-16, and by 5.7% in FY 2016-17. Toll revenue year to date in FY 2017-18 (through February 2018) increased by 7% compared to the same period in the prior year.

2.4.2 Barrier System Monthly Trends

Table 2-9 presents monthly transaction and toll revenue trends for the Barrier System. Passenger-car transactions increased by 1.5% in FY 2014-15, by 7.9% in FY 2015-16, and by 6.8% in FY 2016-17. Passenger-car transactions increased by 1.5% in FY 2017-18 year-to-date compared to the previous year. A positive impact in toll transactions can be seen from January 2016 through December 2016 due to the addition of the Delaware River Bridge (plaza 359) transactions to the Barrier System. The negative impact associated with the temporary DRB closure can be seen in January through March 2017. The large percent increases in transactions in January and February 2018 compared to the prior year are due to the returned traffic on the DRB. September and December 2017 had one less weekday compared to the same months in 2016.

Passenger-car toll revenue increased by 37.5% in FY 2015-16, and by 33.7% in FY 2016-17. In the FY 2017-18, passenger-car toll revenue increased by 6.4% through February 2018 compared to the same period in the previous year. These large toll revenue increases are due to the annual toll rate increases and to inclusion of the DRB toll revenue into the Barrier System.

Commercial-vehicle transactions increased 9.2% in FY 2015-16, and by 7.3% in FY 2016-17. Year-to-date, FY 2017-18 commercial-vehicle transactions increased 9.7% over the same period in the prior year. Commercial-vehicle toll revenue increased by 49.9% in FY 2015-16, and by 39.0% in FY 2016-17. FY 2017-18 commercial-vehicle toll revenue increased by 13.8% through February 2018. These increases in toll revenue were driven by increased transactions, particularly the inclusion of the DRB, and by annual toll increases.

Table 2-9

Combined Barrier Facilities - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18	Commercial Vehicles 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18	Total Vehicles 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	2,816	1.3	2,854	18.5	3,382	0.8	3,409	409	3.0	421	23.9	522	5.2	549	3,225	1.6	3,275	19.2	3,904	1.4	3,958
July	3,009	1.7	3,060	17.2	3,587	(2.4)	3,502	441	(2.1)	431	14.1	492	5.9	521	3,450	1.2	3,491	16.9	4,079	(1.4)	4,023
August	3,140	(2.6)	3,059	18.3	3,619	(0.5)	3,600	439	(0.0)	439	21.7	534	8.1	578	3,579	(2.3)	3,498	18.7	4,154	0.6	4,178
September	2,851	0.3	2,858	16.8	3,337	0.0	3,338	437	0.5	439	14.1	501	5.5	529	3,288	0.3	3,297	16.4	3,839	0.7	3,867
October	3,001	0.1	3,004	13.2	3,399	(0.1)	3,395	452	0.2	452	10.4	500	9.5	547	3,452	0.1	3,456	12.8	3,899	1.1	3,942
November	2,597	3.3	2,684	17.7	3,158	(0.8)	3,133	363	3.8	377	21.9	459	6.2	488	2,960	3.4	3,060	18.2	3,617	0.1	3,620
December	2,589	2.7	2,658	14.6	3,046	(0.8)	3,021	347	2.0	353	19.1	421	2.7	432	2,936	2.6	3,011	15.1	3,467	(0.4)	3,453
January	2,286	16.8	2,670	(3.5)	2,576	4.5	2,692	329	19.8	394	(5.7)	372	17.7	438	2,616	17.2	3,065	(3.8)	2,948	6.2	3,129
February	2,148	27.5	2,738	(20.3)	2,181	20.1	2,619	304	28.0	389	(22.5)	302	39.2	420	2,453	27.5	3,127	(20.6)	2,483	22.4	3,039
March	2,585	22.3	3,160	(10.5)	2,827			379	23.7	468	(10.3)	420			2,963	22.5	3,629	(10.5)	3,247		
April	2,728	15.5	3,152	0.0	3,152			399	19.0	475	(2.8)	462			3,127	16.0	3,627	(0.4)	3,614		
May	2,942	14.8	3,378	0.8	3,405			415	22.1	507	6.5	539			3,357	15.7	3,885	1.5	3,945		
Total Year	32,692	7.9	35,274	6.8	37,671			4,714	9.2	5,147	7.3	5,524			37,406	8.1	40,422	6.9	43,195		
June - Feb	24,437	4.7	25,584	10.6	28,286	1.5	28,708	3,521	5.0	3,697	11.0	4,103	9.7	4,501	27,958	4.7	29,281	10.6	32,389	2.5	33,209

Toll Revenue (in $1,000s)

Month	Passenger Cars 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18	Commercial Vehicles 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18	Total Vehicles 2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	$3,445	5.5	$3,633	89.9	$6,899	1.5	$7,002	$1,516	5.6	$1,601	120.1	$3,524	4.3	$3,674	$4,961	5.5	$5,234	99.1	$10,423	2.4	$10,677
July	3,638	6.5	3,873	88.9	7,316	(0.7)	7,263	1,627	0.3	1,631	104.3	3,333	3.6	3,454	5,265	4.5	5,504	93.5	10,649	0.6	10,717
August	3,771	2.9	3,881	87.9	7,291	1.7	7,413	1,602	2.2	1,638	117.4	3,561	7.1	3,813	5,373	2.7	5,518	96.6	10,851	3.4	11,226
September	3,465	3.8	3,596	87.5	6,741	1.1	6,813	1,596	2.3	1,634	109.9	3,429	3.3	3,543	5,062	3.3	5,229	94.5	10,171	1.8	10,355
October	3,615	4.1	3,764	79.4	6,754	1.7	6,870	1,644	4.3	1,714	95.6	3,353	9.9	3,686	5,259	4.2	5,478	84.5	10,107	4.4	10,556
November	3,120	8.4	3,381	87.9	6,352	(0.5)	6,323	1,341	6.7	1,432	123.8	3,204	5.6	3,384	4,461	7.9	4,812	98.6	9,556	1.6	9,706
December	3,151	5.9	3,336	85.5	6,187	1.0	6,249	1,290	5.2	1,357	124.9	3,053	2.7	3,133	4,440	5.7	4,693	96.9	9,240	1.5	9,382
January	2,869	78.8	5,130	(4.8)	4,885	16.1	5,671	1,273	114.4	2,728	(11.7)	2,408	32.0	3,177	4,141	89.7	7,858	(7.2)	7,293	21.3	8,848
February	2,695	102.0	5,443	(43.8)	3,059	77.4	5,428	1,184	134.8	2,779	(53.1)	1,305	133.5	3,046	3,879	112.0	8,222	(46.9)	4,364	94.2	8,474
March	3,271	90.0	6,215	(17.4)	5,133			1,461	120.9	3,227	(17.2)	2,671			4,732	99.5	9,442	(17.3)	7,804		
April	3,449	81.9	6,276	2.8	6,449			1,529	115.1	3,288	(1.7)	3,232			4,978	92.1	9,563	1.2	9,680		
May	3,711	81.5	6,736	1.0	6,806			1,559	116.6	3,378	7.2	3,622			5,271	91.9	10,114	3.1	10,427		
Total Year	$40,201	37.5	$55,263	33.7	$73,872			$17,621	49.9	$26,406	39.0	$36,694			$57,822	41.2	$81,670	35.4	$110,566		
June - Feb	$29,769	21.1	$36,037	54.0	$55,484	6.4	$59,030	$13,072	26.3	$16,514	64.5	$27,169	13.8	$30,911	$42,841	22.7	$52,550	57.3	$82,654	8.8	$89,941

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 2-1 for details.

(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.

(3) Abnormally severe winter weather negatively impacted traffic and toll revenue in January and February 2014, particularly among passenger cars.

(4) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.

(5) Before January 2016, Delaware River Bridge traffic and revenue were included in Ticket System reporting.

Total Barrier System transactions increased by 8.1% in FY 2015-16, and by 6.9% in FY 2016-17. In FY 2017-18, transactions through February 2018 increased over the same time-period in the prior year by 2.5%. Total Barrier System toll revenue increased by 41.2% in FY 2015-16, and by 35.4% in FY 2016-17. Toll revenue year to date in FY 2017-18 has increased by 8.8% compared to the same period in the prior year. Positive impacts to the Barrier System are seen from January 2016 through December 2016 due to adding the Delaware River Bridge transactions to Barrier System (they were previously counted in the Ticket System). The recovery of traffic on the DRB is seen in January and February 2017 compared to the same period in the prior year.

2.4.3 Total Turnpike System Monthly Trends

Table 2-10 presents the monthly transaction and toll revenue trends for the total Turnpike System. Passenger-car transactions increased by 3.2% in FY 2015-16, and 0.7% in FY 2016-17. Passenger-car transactions decreased by 0.2% in FY 2017-18 year-to-date compared to the previous year. Passenger-car toll revenue increased at a faster annual rate than transactions due to toll increases that were implemented each year. Passenger-car toll revenue increased 10.4% in FY 2015-16, 8.6% in FY 2016-17, and 6.1% through February 2018 compared to the same time-period in the previous year.

Commercial-vehicle transactions increased 4.5% in FY 2015-16, 1.4% in FY 2016-17, and 3.1% in FY 2017-18 over the same period in the prior year. Toll revenue increased 10.5% in FY 2015-16, 7.4% in FY 2016-17, and 8.8% in FY 2017-18 through February 2018.

Total transactions increased 3.4% in FY 2015-16, 0.8% in FY 2016-17, and 0.2% in FY 2017-18 over the same period in the prior year. Toll revenue increased 10.4% in FY 2015-16, 8.1% in FY 2016-17, and 7.2% in FY 2017-18 through February 2018.

Transactions and toll revenue were negatively impacted by the temporary closure of the DRB from January 20 through March 9, 2017. CDM Smith estimated that the DRB closure caused a total Systemwide decrease of 1.5 million transactions and $12.1 million in toll revenue in FY 2016-17.

2.5 Comparison of Commercial Activity and Total Turnpike Toll Transactions

Table 2-11 presents a comparison between three measures of economic growth, and transaction growth on the Turnpike System from 2010 through 2017. Annual percent changes in Turnpike System transactions over the prior year are compared to annual percent changes in the U.S. gross domestic product (GDP), the Tri-State (NJ, NY, PA) gross regional product (GRP), and the PA gross state product (GSP). U.S. gross domestic product (GDP) is actual through 2017, while the gross regional product and gross state product data for 2017 are estimates.

Passenger-car transactions increased by 2.3 percent in 2015, 3.1 percent in 2016 and decreased by 1.1 percent in 2017. Commercial vehicle growth, increased 3.9 percent in 2015, 4.2 percent in 2016 and 0.2 percent in 2017. The U.S. GDP, Tri-State GRP, and PA GSP all experienced growth in 2017.

While there is a correlation between economic activity and Turnpike System toll transactions, it is likely that transactions are also being dampened by the annual toll rate increases that have been implemented since 2009. 2017 Turnpike transactions were also negatively impacted by the temporary closure of the DRB from January 20, 2017 through March 9, 2017.

Table 2-10
Total Turnpike System - Monthly Transaction and Revenue Trends
Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18	2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18	2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	14,535	2.2	14,849	3.7	15,395	0.3	15,438	2,261	6.0	2,398	6.4	2,550	1.0	2,575	16,797	2.7	17,246	4.1	17,945	0.4	18,013
July	15,138	3.3	15,643	0.9	15,783	(1.7)	15,522	2,351	3.3	2,429	(0.4)	2,419	(0.0)	2,419	17,489	3.3	18,072	0.7	18,202	(1.4)	17,942
August	15,425	1.0	15,584	2.5	15,967	(0.1)	15,957	2,301	3.9	2,390	9.5	2,616	1.7	2,662	17,726	1.4	17,974	3.4	18,583	0.2	18,619
September	13,974	1.8	14,220	4.2	14,817	(0.6)	14,724	2,275	3.9	2,364	3.3	2,442	(0.4)	2,431	16,249	2.1	16,584	4.1	17,260	(0.6)	17,156
October	14,876	1.3	15,067	1.1	15,236	(0.1)	15,221	2,412	1.6	2,450	(0.8)	2,429	4.9	2,547	17,288	1.3	17,517	0.8	17,665	0.6	17,768
November	13,358	4.5	13,965	3.5	14,458	(1.0)	14,317	2,011	5.7	2,125	5.2	2,236	3.9	2,323	15,368	4.7	16,090	3.8	16,695	(0.3)	16,640
December	13,491	3.5	13,960	0.7	14,051	(2.2)	13,746	2,046	3.4	2,116	1.7	2,153	(0.4)	2,146	15,537	3.5	16,076	0.8	16,204	(1.9)	15,891
January	11,905	3.1	12,276	2.7	12,609	(0.5)	12,542	1,935	0.6	1,947	3.4	2,014	8.0	2,175	13,840	2.8	14,222	2.8	14,622	0.7	14,718
February	11,249	10.9	12,477	(8.6)	11,407	4.8	11,958	1,822	9.5	1,996	(9.0)	1,815	12.0	2,034	13,072	10.7	14,472	(8.6)	13,223	5.8	13,992
March	13,211	8.5	14,328	(6.4)	13,416			2,142	9.2	2,338	(5.2)	2,216			15,353	8.5	16,666	(6.2)	15,632		
April	14,109	(0.0)	14,105	2.1	14,400			2,262	3.1	2,333	(2.8)	2,268			16,371	0.4	16,438	1.4	16,668		
May	14,921	1.2	15,095	1.1	15,260			2,325	4.7	2,434	4.5	2,542			17,245	1.6	17,529	1.6	17,802		
Total Year	166,192	3.2	171,569	0.7	172,799			26,144	4.5	27,319	1.4	27,703			192,336	3.4	198,887	0.8	200,501		
June - Feb	123,951	3.3	128,040	1.3	129,723	(0.2)	129,425	19,415	4.1	20,214	2.3	20,676	3.1	21,312	143,366	3.4	148,254	1.4	150,399	0.2	150,737

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18	2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18	2014-15	% Chg	2015-16	% Chg	2016-17	% Chg	2017-18
June	$47,759	6.8	$50,991	12.3	$57,273	8.0	$61,877	$33,638	11.8	$37,614	13.4	$42,661	4.6	$44,643	$81,397	8.9	$88,606	12.8	$99,935	6.6	$106,521
July	51,527	9.9	56,625	11.2	62,975	4.4	65,722	34,536	9.1	37,680	8.5	40,876	2.6	41,947	86,063	9.6	94,305	10.1	103,851	3.7	107,669
August	53,065	5.7	56,072	7.3	60,179	7.4	64,611	33,994	8.8	36,983	17.2	43,337	6.6	46,210	87,060	6.9	93,054	11.2	103,516	7.1	110,821
September	43,042	10.2	47,419	15.5	54,770	3.4	56,620	33,490	8.9	36,472	12.4	40,984	3.4	42,371	76,532	9.6	83,891	14.1	95,754	3.4	98,991
October	45,711	7.9	49,331	11.5	55,018	5.1	57,806	35,507	6.4	37,786	5.6	39,895	11.8	44,599	81,218	7.3	87,117	8.9	94,912	7.9	102,405
November	42,534	10.5	47,013	11.5	52,436	5.1	55,122	30,250	9.4	33,096	12.1	37,100	10.4	40,944	72,785	10.1	80,109	11.8	89,536	7.3	96,066
December	41,766	8.8	45,446	11.3	50,563	3.5	52,345	31,154	6.8	33,264	10.9	36,880	5.7	39,000	72,921	7.9	78,709	11.1	87,443	4.5	91,344
January	36,138	13.7	41,103	8.0	44,374	5.3	46,741	31,609	7.9	34,106	7.3	36,597	15.4	42,222	67,747	11.0	75,209	7.7	80,971	9.9	88,964
February	33,282	22.1	40,633	(4.1)	38,957	14.4	44,576	29,753	18.0	35,122	(6.2)	32,933	21.9	40,130	63,035	20.2	75,755	(5.1)	71,890	17.8	84,707
March	41,277	19.9	49,488	(2.9)	48,033			34,940	15.4	40,322	0.7	40,619			76,218	17.8	89,811	(1.3)	88,653		
April	45,872	7.4	49,275	13.0	55,683			35,912	11.2	39,950	1.5	40,540			81,784	9.1	89,224	7.8	96,223		
May	51,080	7.5	54,899	6.6	58,526			36,413	12.4	40,930	6.9	43,767			87,493	9.5	95,829	6.7	102,293		
Total Year	$533,054	10.4	$588,295	8.6	$638,787			$401,197	10.5	$443,325	7.4	$476,188			$934,251	10.4	$1,031,620	8.1	$1,114,975		
June - Feb	$394,825	10.1	$434,633	9.6	$476,545	6.1	$505,421	$293,931	9.6	$322,123	9.0	$351,263	8.8	$382,067	$688,756	9.9	$756,756	9.4	$827,807	7.2	$887,488

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 2-1 for details.
(2) Leap year occurred in 2016, resulting in negative traffic and toll revenue impacts in February 2017 compared to February 2016.
(3) Abnormally severe winter weather negatively impacted traffic and toll revenue in January and February 2014, particularly among passenger cars.
(4) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(5) Before January 2016, Delaware River Bridge traffic and revenue were included in Ticket System reporting.

Table 2-11
Near-term Measures of Commercial Activity and Growth in Total Turnpike System Transactions

Percent Change over Prior Year

Calendar Year	Gross Domestic Product Growth(1) (U.S.)	Gross Regional Product Growth(1) (NJ, NY, PA)	Gross State Product Growth(1) (PA)	PA Turnpike System Percent Transaction Growth(2) Passenger Cars	Commercial Vehicles	All Vehicles
2010	2.5%	2.6%	2.7%	1.0%	4.0%	1.3%
2011	1.6%	0.4%	1.3%	-1.1%	1.0%	-0.9%
2012	2.2%	2.5%	1.6%	0.3%	0.6%	0.3%
2013	1.7%	0.6%	1.6%	0.6%	3.0%	0.9%
2014	2.6%	1.5%	2.0%	0.0%	4.2%	0.5%
2015	2.9%	1.9%	2.3%	2.3%	3.9%	2.5%
2016	1.5%	0.5%	0.6%	3.1%	4.2%	3.3%
2017	2.3%	1.6%	1.9%	-1.1%	0.2%	-0.9%

(1) The percent changes in U.S. GDP, GRP, and GSP are based on chained 2009 dollars. The U.S. GDP is actual through 2017. The GRP and GSP are actual through 2016. Actual data was obtained from the U.S. Bureau of Economic Analysis. Forecast data was from Moody's Analytics baseline forecast (April 2018 for regional, February 2018 for Pennsylvania).

(2) Turnpike System growth rates are actual through 2017.

2.6 Annual Transaction and Gross Toll Revenue Trends

Table 2-12 provides a summary of annual total Turnpike System transactions and adjusted gross toll revenue trends from FY 1996-97 through FY 2016-17. Note that transactions and adjusted toll revenue in Table 2-12 reflect final audited Turnpike System totals including adjustments and discounts available from the Commercial Volume Discount Program described earlier in this chapter.

The Turnpike System has experienced decreasing annual growth in transactions and consistent growth in toll revenue. Transaction growth likely decreased in response to the Great Recession, which officially lasted from December 2007 to June 2009, a slow economic recovery, and annual toll rate increases since 2009. Toll revenue increase annually primarily due to the toll rate increases.

Between FY 1996-97 and FY 2006-07, total Turnpike System transactions increased from 144.1 million to 185.4 million, an average annual increase of 2.6%. From FY 2006-07 to FY 2016-17, total turnpike transactions grew from 185.4 million to 200.5 million, an average annual increase of 0.8%. In the 20 years between FY 1996-97 and FY 2016-17, total Turnpike System transactions increased by an annual average of 1.7%. Adjusted Turnpike System toll revenue increased by 6.4% per year from FY 1996-97 through FY 2006-07, by 6.5% per year from FY 2006-07 through FY 2016-17, and by 6.4% per year from FY 1996-97 through FY 2016-17.

Table 2-12
Annual Systemwide Traffic and Adjusted Toll Revenue Trends
Pennsylvania Turnpike System
(Values in Thousands)

	Transactions						Adjusted Toll Revenue					
Fiscal [1] Year	Cars	Percent Change Over Prior Year	Trucks	Percent Change Over Prior Year	Total	Percent Change Over Prior Year	Cars	Percent Change Over Prior Year	Trucks	Percent Change Over Prior Year	Total	Percent Change Over Prior Year
1996-97	126,654		17,479		144,133		179,303		140,837		320,140	
1997-98	132,472	4.6	18,627	6.6	151,099	4.8	186,290	3.9	149,036	5.8	335,326	4.7
1998-99	136,399	3.0	19,833	6.5	156,232	3.4	191,804	3.0	158,761	6.5	350,565	4.5
1999-00	138,762	1.7	21,341	7.6	160,103	2.5	195,301	1.8	172,035	8.4	367,336	4.8
2000-01	141,033	1.6	21,278	(0.3)	162,311	1.4	193,563	(0.9)	172,337	0.2	365,900	(0.4)
2001-02	150,496	6.7	22,298	4.8	172,794	6.5	212,650	9.9	163,101	(5.4)	375,751	2.7
2002-03	156,220	3.8	23,179	4.0	179,399	3.8	219,201	3.1	168,021	3.0	387,222	3.1
2003-04	163,612	4.7	24,407	5.3	188,019	4.8	228,515	4.2	180,229	7.3	408,744	5.6
2004-05 [1]	163,316	(0.2)	25,109	2.9	188,425	0.2	309,032	35.2	236,126	31.0	545,158	33.4
2005-06	160,590	(1.7)	25,311	0.8	185,901	(1.3)	321,268	4.0	267,369	13.2	588,637	8.0
2006-07	160,107	(0.3)	25,316	0.0	185,423	(0.3)	322,781	0.5	269,861	0.9	592,642	0.7
2007-08	164,097	2.5	25,455	0.5	189,552	2.2	332,035	2.9	265,637	(1.6)	597,672	0.8
2008-09 [1]	162,638	(0.9)	23,583	(7.4)	186,220	(1.8)	356,345	7.3	260,047	(2.1)	616,392	3.1
2009-10 [1]	163,599	0.6	22,933	(2.8)	186,531	0.2	415,981	16.7	302,057	16.2	718,038	16.5
2010-11 [1]	165,231	1.0	23,812	3.8	189,043	1.3	435,752	4.8	328,105	8.6	763,856	6.4
2011-12 [1]	164,955	(0.2)	24,125	1.3	189,080	0.0	455,133	4.4	342,646	4.4	797,779	4.4
2012-13 [1]	163,690	(0.8)	24,207	0.3	187,897	(0.6)	471,514	3.6	350,226	2.2	821,740	3.0
2013-14 [1]	163,788	0.1	24,891	2.8	188,679	0.4	497,671	5.5	368,395	5.2	866,066	5.4
2014-15 [1]	166,192	1.5	26,144	5.0	192,336	1.9	533,054	7.1	401,197	8.9	934,251	7.9
2015-16 [1]	171,569	3.2	27,319	4.5	198,887	3.4	588,295	10.4	443,325	10.5	1,031,620	10.4
2016-17 [1]	172,799	0.7	27,703	1.4	200,501	0.8	638,787	8.6	476,188	7.4	1,114,975	8.1

Average Annual Percent Change

	Transactions			Adjusted Toll Revenue		
Fiscal Year	Cars	Trucks	Total	Cars	Trucks	Total
FY 1996-97 - FY 2006-07	2.4	3.8	2.6	6.1	6.7	6.4
FY 2006-07 - FY 2016-17	0.8	0.9	0.8	7.1	5.8	6.5
FY 1996-97 - FY 2016-17	1.6	2.3	1.7	6.6	6.3	6.4

(1) PTC Fiscal Years begin June 1 and end May 31.
(2) A toll increase occurred during this fiscal year. Refer to table 2-1.

Figure 2-5 illustrates Turnpike System historical transactions and adjusted gross toll revenue on an annual basis from FY 1997-98 to FY 2016-17. Toll increases are represented by a black star over the fiscal year in which the increase was implemented. Figure 2-5 clearly shows the greater rate of growth in Turnpike System toll revenue compared to the comparatively flat growth in toll transactions since 2009. The low transaction growth rates are attributed to annual toll rate increases since 2009 and a slow economic recovery from the Great recession of 2007.

2.7 E-ZPass Market Share

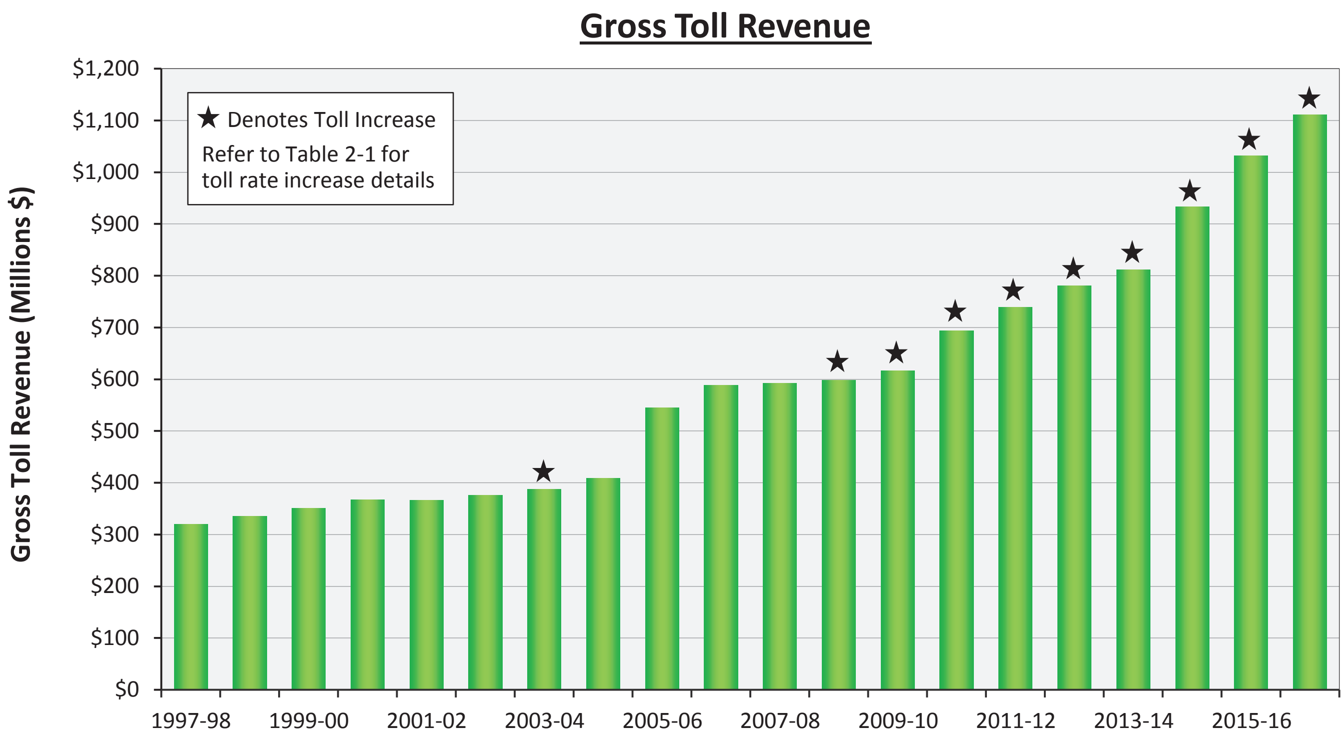
Table 2-13 shows the historical growth in E-ZPass transactions as a percent of total toll transactions on the Turnpike System. Over the past 12 years, passenger-car E-ZPass market share has increased by 35.5 percentage points, from 40.4% to 76.9% of total toll transactions. Commercial-vehicle market share growth has been nearly as large, increasing by 29.4 percentage points, from 60.2% in FY 2005-06 to 89.6% in FY 2016-17. Total Turnpike System E-ZPass usage has grown from 43.2% to 78.7 percent from FY 2005-06 to FY 2016-17.

Table 2-14 presents monthly E-ZPass market share trends on the Ticket System for FY 2016-17. It is apparent from a comparison of Tables 2-13 and 2-14 that the E-ZPass participation was slightly higher on the Ticket System than on the Turnpike System as a whole. Ticket System E-ZPass penetration averaged 78.4% for passenger cars, 89.6% for commercial vehicles, and 80% for all vehicles. Monthly trend data shows that E-ZPass penetration is lowest in the summer months, and peaks in the winter months of January and February. There is less variation in Commercial-vehicle E-ZPass market share by month compared to passenger cars.

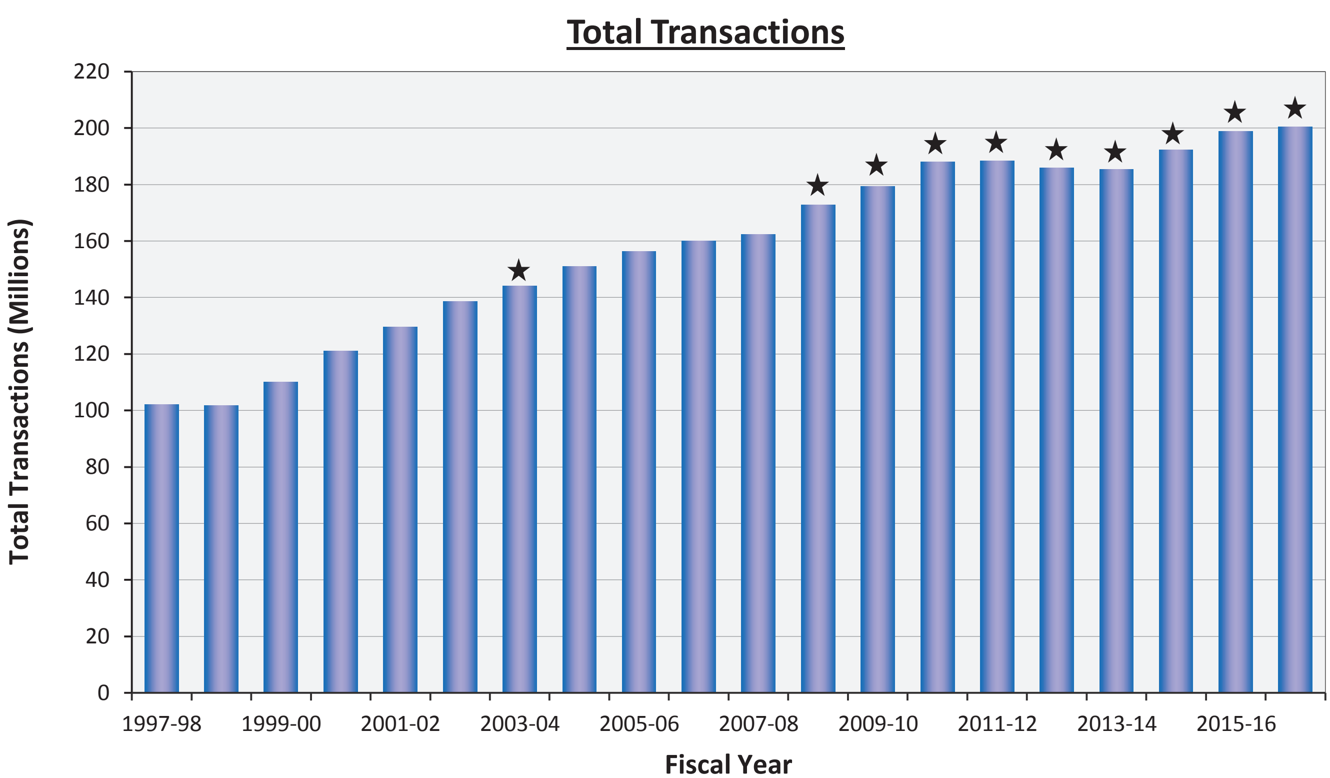
Table 2-13
Annual E-ZPass Market Share: Turnpike System
Based on Toll Transactions

	Annual Percent E-ZPass Market Share By Vehicle Class		
Fiscal[1] Year	Passenger Cars	Commercial Vehicles	Total
2005-06	40.4 %	60.2 %	43.2 %
2006-07	44.3	67.9	47.6
2007-08	46.8	71.1	50.1
2008-09[2]	50.4	74.3	53.4
2009-10[2]	53.9	76.1	56.6
2010-11[2,3]	57.5	77.7	60.1
2011-12[2,3]	61.8	80.0	64.1
2012-13[2,3]	66.1	82.7	68.2
2013-14[2,3]	70.1	85.0	72.0
2014-15[2,3]	72.8	86.7	74.7
2015-16[2]	74.8	88.4	76.7
2016-17[2]	76.9	89.6	78.7

(1) PTC Fiscal Years begin June 1 and end May 31.
(2) A toll increase occurred during this year. Refer to table 2-1.
(3) The toll differential increased between E-ZPass and cash.



Note: Toll revenue includes the adjustments associated with the Commercial Vehicle Volume Discount Program.



PENNSYLVANIA TURNPIKE SYSTEM HISTORICAL TRANSACTIONS AND ADJUSTED GROSS TOLL REVENUE

CDM Smith

FIGURE 2-5

Table 2-14
Monthly E-ZPass Market Share: Ticket System
Based on Toll Transactions Including Gateway Plaza

	FY 2016-17 (1) Percent E-ZPass Market Share By Vehicle Class		
Month	Passenger Cars	Commercial Vehicles	Total Vehicles
June 2016	76.2 %	88.3 %	77.9 %
July	74.4	87.8	76.2
August	76.4	88.5	78.1
September	77.8	88.7	79.3
October	78.3	89.2	79.8
November	78.9	90.1	80.4
December	79.2	90.6	80.7
January 2017	81.0	91.1	82.4
February	80.9	90.9	82.3
March	80.5	90.6	81.9
April	79.3	90.0	80.7
May	79.4	89.7	80.9
FY Total	78.4 %	89.6 %	80.0 %

(1) PTC Fiscal Years begin June 1 and end May 31.

Chapter 3

Socioeconomic Trends and Growth Forecasts

Historical and forecast socioeconomic data was collected and evaluated to understand how the state and the major sub-regions are growing. Discussions with local Metropolitan Planning Organization (MPO) representatives was also conducted to confirm and substantiate the socioeconomic data and understand underlying trends. This information was then used in an econometric analysis to estimate long-term baseline travel demand on the Pennsylvania Turnpike.

3.1 Socioeconomic Trends and Forecasts

An evaluation of long-term socioeconomic trends and forecasts for the areas along and surrounding the Pennsylvania Turnpike provided context and inputs for the traffic growth analysis. The tables and figures that follow, summarize the socioeconomic data which were reviewed, including population, employment, unemployment rates, retail sales, gross regional product, and retail gasoline prices.

An economic growth analysis identified any potential explanatory factors that may have influenced historical growth in toll transactions. Such explanatory factors were tested and applied within a regression-based econometric analysis to derive traffic growth forecasts.

In the subsequent tables, socioeconomic trends are presented as compound average annual percent change (AAPC), mostly in decade increments from 1980 through 2050. It should be noted that year 2016 was the last year in which a full year of historical data was available at the time the analysis was performed. Geographically, the United States is presented along with the Commonwealth of Pennsylvania and the surrounding states of New Jersey, New York, Ohio, and West Virginia. Additionally, the Pennsylvania counties along the Pennsylvania Turnpike are presented in Figure 3-1, and grouped for ease of presentation into four aggregations:

- **Pittsburgh Area Counties:** Allegheny, Armstrong, Beaver, Butler, Indiana, Lawrence, Washington, and Westmoreland;
- **Interurban Area Counties:** Adams, Bedford, Blair, Cambria, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, Somerset, and York;
- **Philadelphia Area Counties:** Berks, Bucks, Chester, Delaware, Montgomery, and Philadelphia; and,
- **Northeastern Corridor Counties:** Carbon, Lackawanna, Lehigh, Luzerne, Northampton, and Wyoming.

3.1.1 Population Trends and Forecasts

Historical population growth trends and forecasts for the study area are presented in Table 3-1 and Figure 3-2. The historical trends were extracted from data available from the United States Census Bureau (census years and intercensal 2016 estimates), while forecasts of population growth rates are from the Woods & Poole, Inc. 2017 Complete Economic and Demographic Data Source (CEDDS)[1], available through year 2050.

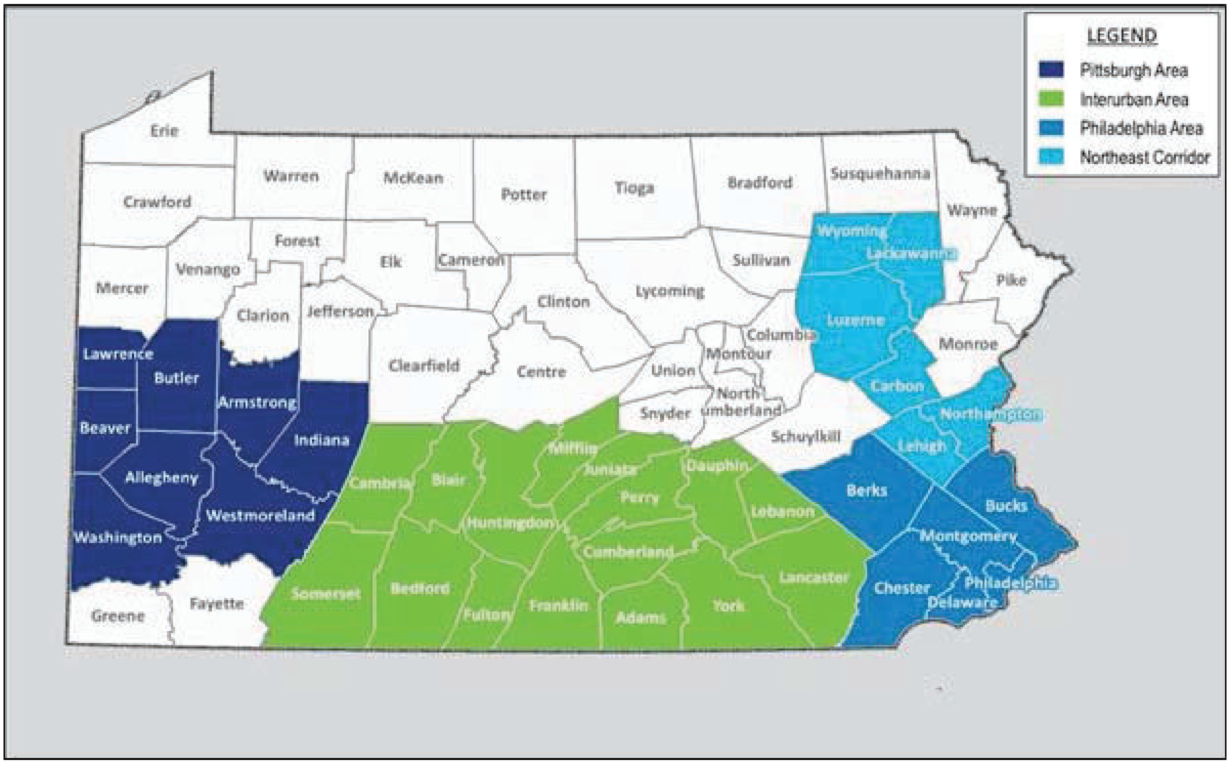


Figure 3-1
Pennsylvania County Groupings

Historic population growth along the Pennsylvania Turnpike and the surrounding states has generally been considerably lower, relative to the US. Pennsylvania's population has increased slowly since 1980, with no growth in that decade, followed by 0.3% annually from 1990 through 2010. Since 2010, the growth declined to 0.1% per year through 2016. In contrast, the U.S. growth rate has been at least three times the rate in Pennsylvania during all time periods.

Population growth along the Pennsylvania Turnpike corridor was similar to statewide growth. This is reasonable considering that the counties in the four aggregations referenced above constitute more than 80% of the statewide total. Within the Pennsylvania Turnpike corridor counties, the Pittsburgh Area has experienced a continuous population decline since the 1980s, whereas the other areas to the east of Pittsburgh experienced modest population growth.

Population is forecasted to generally continue the historical trends, with relatively modest growth rates in Pennsylvania, the surrounding states, and the counties along and surrounding the Turnpike. Pennsylvania population growth is forecasted to average 0.4% annually through 2030, and thereafter decelerate to 0.1% through 2050. Within the Commonwealth, Pittsburgh is forecast to continue contracting; the Northeast Corridor and the Philadelphia Area are forecast to exhibit population

[1] Woods & Poole Economics, Inc. Washington, D.C. Copyright 2017. 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.

growth like Pennsylvania, and the Interurban counties between Pittsburgh and Philadelphia are forecast to grow relatively faster.

Table 3-1
Population Trends and Forecasts

Geography	History				Forecast		
	1980-'90	1990-'00	2000-'10	2010-'16	2016-'30	2030-'40	2040-'50
Pittsburgh Area	(0.7%)	(0.2%)	(0.3%)	(0.1%)	(0.1%)	(0.2%)	(0.3%)
Interurban Area	0.5%	0.7%	0.8%	0.3%	0.8%	0.6%	0.5%
Philadelphia Area	0.2%	0.4%	0.5%	0.3%	0.4%	0.2%	0.1%
Northeast Corridor	0.2%	0.2%	0.6%	0.1%	0.4%	0.3%	0.2%
Subtotal PA	0.0%	0.3%	0.4%	0.2%	0.4%	0.2%	0.1%
Maryland	1.3%	1.0%	0.9%	0.7%	0.9%	0.7%	0.6%
New Jersey	0.5%	0.8%	0.4%	0.4%	0.5%	0.4%	0.2%
New York	0.2%	0.5%	0.2%	0.4%	0.4%	0.2%	0.1%
Ohio	0.0%	0.5%	0.2%	0.1%	0.3%	0.2%	0.1%
Pennsylvania	0.0%	0.3%	0.3%	0.1%	0.4%	0.2%	0.1%
West Virginia	(0.8%)	0.1%	0.2%	(0.2%)	0.3%	0.2%	0.1%
Subtotal States	0.2%	0.5%	0.3%	0.3%	0.4%	0.3%	0.2%
United States	0.9%	1.2%	0.9%	0.8%	0.9%	0.8%	0.7%

Source: United States Census Bureau and Woods & Poole Economics, Inc. 2017

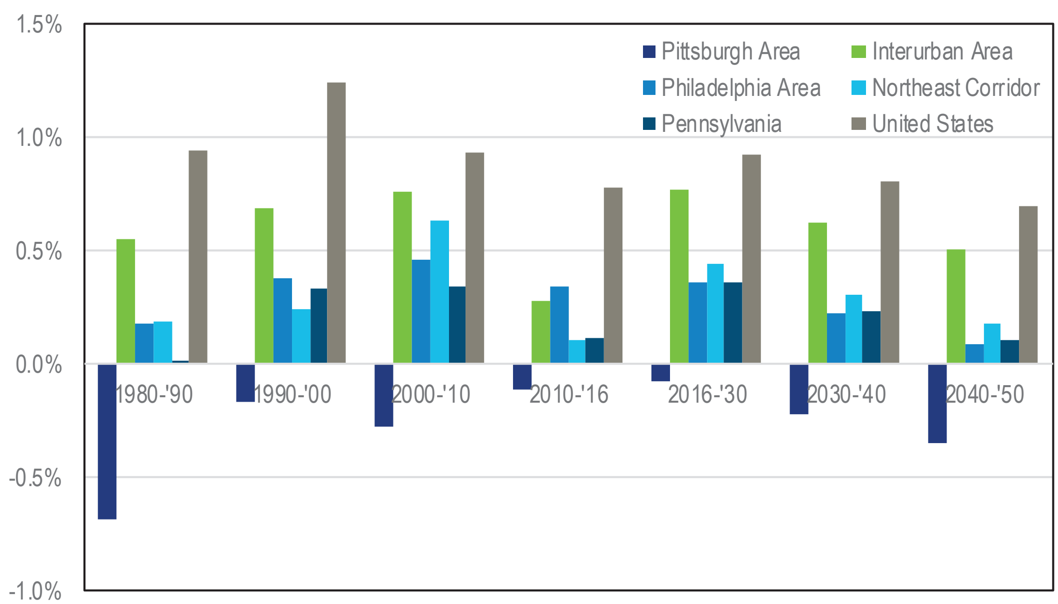


Figure 3-2
Population Trends and Forecasts

3.1.2 Employment and Unemployment Trends and Forecasts

The historical employment trends were extracted from data available from the United States Department of Commerce (Bureau of Economic Analysis from 1980 through 2016), while future growth rates are based on Woods & Poole data. Additional Bureau of Labor Statistics (BLS) unemployment data for the three major metro areas (which differs from the four Pennsylvania Turnpike socioeconomic groupings) is also compared/contrasted to state and national levels.

Employment - Historical employment growth generally decelerated from 1980 through 2010, with the pronounced reduction in average growth during the 2000-2010 decade, reflective of the recession that officially occurred from December 2007 through June 2009. Since 2010, employment growth has rebounded to longer-term historical averages, with Pennsylvania exhibiting 1.1% average growth since 2010. As with population, employment growth within Pennsylvania was historically slower than the nation (about half the rate). The Pittsburgh Area experienced the slowest relative historical employment growth, while the Interurban and Philadelphia Areas experienced the highest relative growth. Historical employment growth trends and forecasts for the study area are presented in Table 3-2 and Figure 3-3.

Although employment since 2010 (e.g., the recession) rebounded to longer-term historical growth patterns, the forecast is for decelerating growth. Average annual growth for Pennsylvania and the United States is forecast to grow at 1.0% and 1.3%, respectively, through 2030, then decelerate to 0.8% and 1.1%, respectively, between 2030 and 2040, then to 0.6% and 1.0% through 2050.

Table 3-2
Employment Trends and Forecasts

Geography	History				Forecast		
	1980-'90	1990-'00	2000-'10	2010-'16	2016-'30	2030-'40	2040-'50
Pittsburgh Area	0.4%	0.9%	0.1%	0.8%	0.7%	0.5%	0.4%
Interurban Area	1.8%	1.2%	0.4%	1.0%	1.2%	0.9%	0.7%
Philadelphia Area	1.3%	0.7%	0.4%	1.5%	1.0%	0.8%	0.7%
Northeast Corridor	1.1%	0.9%	0.5%	1.4%	1.1%	0.8%	0.7%
Subtotal PA	1.1%	0.9%	0.4%	1.2%	1.0%	0.8%	0.6%
Maryland	2.8%	1.2%	0.8%	1.5%	1.3%	1.1%	1.0%
New Jersey	1.8%	1.0%	0.4%	1.4%	1.1%	0.8%	0.7%
New York	1.2%	0.7%	0.6%	1.8%	1.0%	0.8%	0.7%
Ohio	1.2%	1.5%	(0.6%)	1.3%	0.9%	0.7%	0.6%
Pennsylvania	1.1%	0.9%	0.3%	1.1%	1.0%	0.8%	0.6%
West Virginia	(0.1%)	1.2%	0.3%	(0.1%)	0.9%	0.7%	0.6%
Subtotal States	1.4%	1.0%	0.3%	1.4%	1.0%	0.8%	0.7%
United States	2.0%	1.8%	0.5%	1.9%	1.3%	1.1%	1.0%

Source: United States Bureau of Economic Analysis and Woods & Poole Economics, Inc. 2017

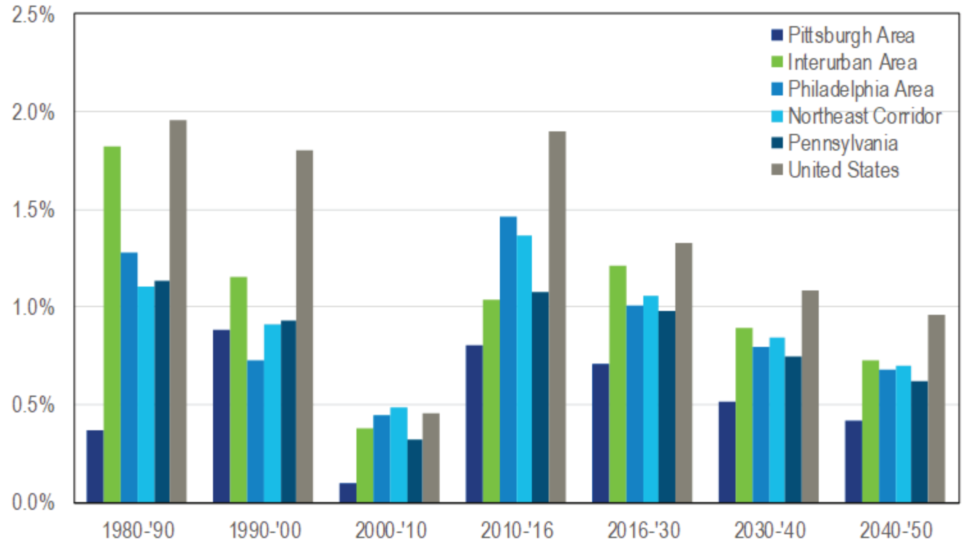


Figure 3-3
Employment Trends and Forecasts

Unemployment - Seasonally-unadjusted monthly unemployment rates prior to the last recession (January 2007 through November/December 2017) are presented in Figure 3-4 for the three major Metropolitan Statistical Areas (MSA) in Pennsylvania located along the Turnpike Mainline. These are the Philadelphia-Camden-Wilmington MSA, the Harrisburg-Carlisle MSA, and the Pittsburgh MSA. Additionally, unemployment data for the Commonwealth of Pennsylvania and the United States are also presented for comparison purposes. As the data are seasonally-unadjusted, the graph depicts both the seasonal cyclicality, and the longer-term trends.

Unemployment rates for the Commonwealth and MSAs generally parallel the nation, with a steep increase in 2008 and 2009, followed by a decade of steady decline to around 4.0%. Although the trends parallel, the Pennsylvania rates for most of the recent decade were below the United States. Harrisburg-Carlisle generally exhibited the lowest relative unemployment rates, reflective of the more stable government employment in the State Capitol (compared to more volatile private-sector employment). Philadelphia-Camden-Wilmington exhibited slightly higher unemployment rates than either Pittsburgh or Pennsylvania for most of the last decade. However, since the end of 2015, the unemployment rate in the Philadelphia MMSA has generally been slightly lower than Pennsylvania, whereas the unemployment rate in the Pittsburgh MSA has tracked slightly higher than the Commonwealth.

3.1.3 Real Retail Sales

Retail sales (in real, or constant dollar terms) trends and forecasts for the study area are presented in Table 3-3 and Figure 3-5. These data were extracted from data available from Woods & Poole. Nationally, growth in real retail sales grew 2.0% in the 1980s, accelerated to 3.4% in the 1990s, and was a tepid 0.6% in the decade from 2000 to 2010 (due to recession in 2008/09). Since the recession, annual growth nationally has rebounded to 2.8%. Pennsylvania trends in real retail sales paralleled the national historical trend, albeit at a relatively slower pace, with recent, post-recession annual growth of 2.3%. Within the Commonwealth, the Pittsburgh Area experienced the lowest post-recession relative growth (2.0%), while the Northeast Corridor experienced the highest (2.8%).

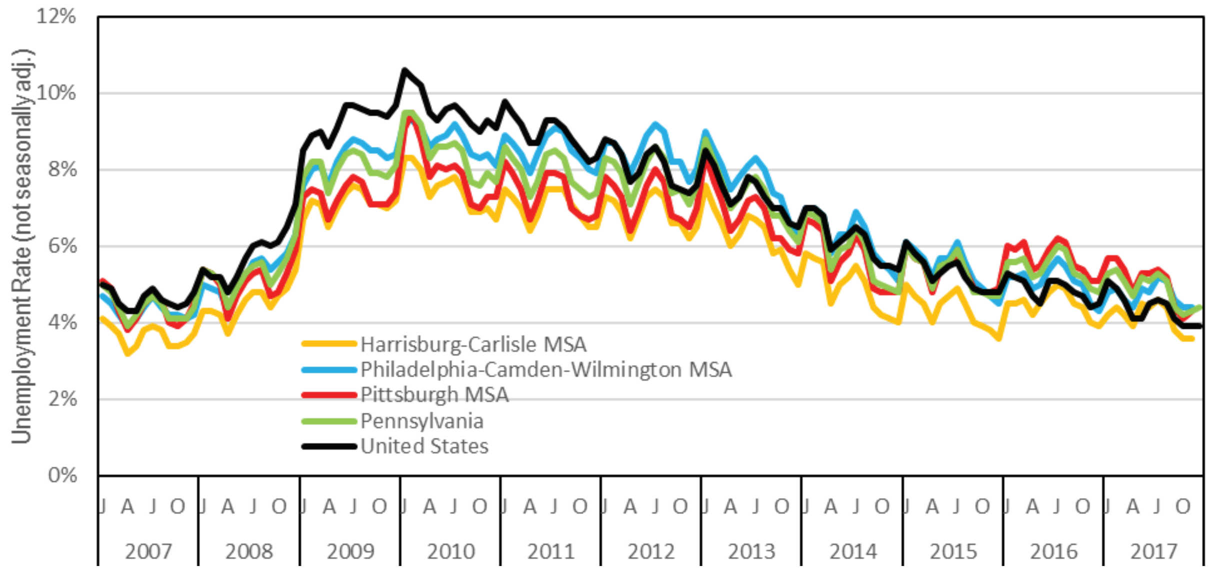


Figure 4-4
Trends in Unemployment Rates

Growth in real retail sales is forecast to decelerate from the recent rebounded growth since the recession. Nationally, Woods & Poole forecasts an average annual growth of about 1.5% through the end of the forecast period. Pennsylvania is forecast to grow at a slower relative pace, at 1.0% or lower. Within the Commonwealth, growth in retail sales within the Interurban Area are forecasted to be slightly higher than those of the other three clustered areas surrounding the Turnpike; and of these three, the Pittsburgh Area is forecast to grow at the slowest relative average rate.

Table 3-3
Real Retail Sales Trends and Forecasts

Geography	History				Forecast		
	1980-'90	1990-'00	2000-'10	2010-'16	2016-'30	2030-'40	2040-'50
Pittsburgh Area	0.3%	2.4%	0.1%	2.0%	0.5%	0.3%	0.4%
Interurban Area	2.2%	2.7%	(0.0%)	2.4%	1.3%	1.2%	1.3%
Philadelphia Area	2.1%	2.6%	0.3%	2.1%	1.1%	0.9%	1.0%
Northeast Corridor	1.6%	2.5%	1.7%	2.8%	0.9%	0.8%	0.9%
Subtotal PA	1.6%	2.5%	0.4%	2.2%	1.0%	0.8%	0.9%
Maryland	2.5%	2.7%	0.2%	2.4%	1.5%	1.3%	1.4%
New Jersey	2.2%	2.7%	0.2%	2.4%	1.1%	0.9%	1.0%
New York	1.5%	2.4%	0.9%	2.6%	1.0%	0.8%	0.9%
Ohio	1.2%	3.0%	(0.6%)	2.5%	0.9%	0.8%	0.9%
Pennsylvania	1.6%	2.5%	0.3%	2.3%	1.0%	0.8%	0.9%
West Virginia	(0.2%)	2.9%	0.2%	2.2%	0.9%	0.8%	0.9%
Subtotal States	1.6%	2.6%	0.3%	2.4%	1.0%	0.9%	1.0%
United States	2.0%	3.4%	0.6%	2.8%	1.5%	1.4%	1.5%

Source: Woods & Poole Economics, Inc. 2017

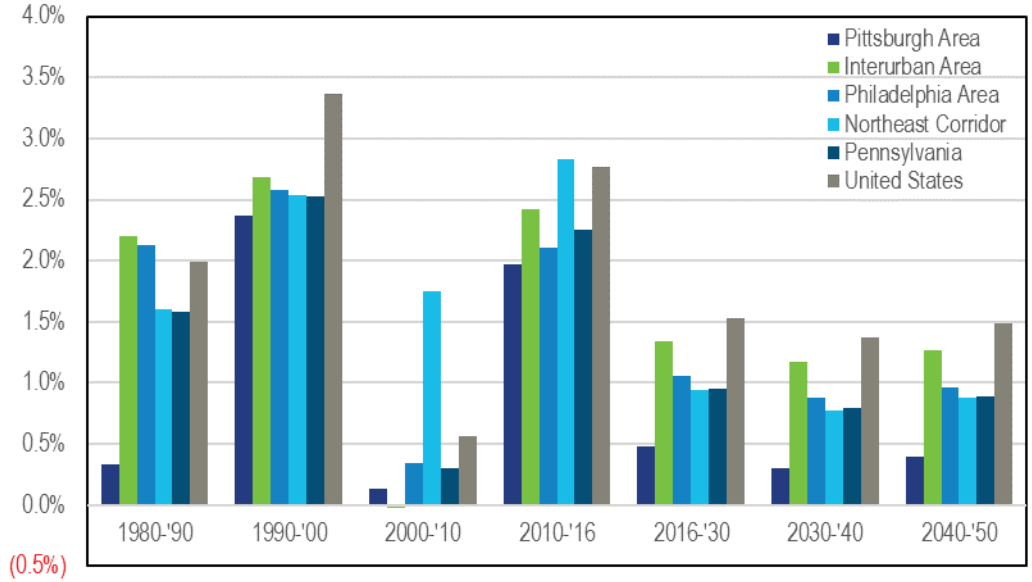


Figure 5-5
Real Retail Sales Trends and Forecasts

3.1.4 Real Gross Regional Product (GRP)

Real gross regional product (or gross state product/gross domestic product, depending on the geographic focus) is the inflation-adjusted standard metric for total economic activity in an area. Real GRP trends and forecasts for the study area are presented in Table 3-4 and Figure 3-6 and are sourced to Woods & Poole, based on data from the Bureau of Economic Analysis.

National real gross domestic product (GDP) decelerated from an annual average of 3.6% in the 1990s to less than half that (1.7%) in the decade from 2000 to 2010 (reflective of the recession). Since the recession, national real GDP increased 2.5% annually. Pennsylvania's real gross state product (GSP) growth pattern was similar, with 2.7% in the 1990's, decelerating to 1.8% from 2000 to 2010 and increasing slightly to 2.0% per annum from 2010 to 2016. Within the Commonwealth, the two major MSAs (Pittsburgh and Philadelphia) historically exhibited the highest relative growth rates in real GRP.

Real GRP growth forecasts are for 2.1% per annum for the United States through 2030 and 1.8% for Pennsylvania. As with the growth forecasts for other socioeconomic variables, a general deceleration in growth is forecast for GRP. In the corridor counties, like the entire Commonwealth, real GRP growth is projected to average 1.8% through 2030, with a general deceleration thereafter. And, within the Pennsylvania Turnpike corridor, the Pittsburgh and Philadelphia Areas are forecast to have the slowest relative growth.

Table 3-4
Real Gross Regional Product Trends and Forecasts

Geography	History				Forecast		
	1980-'90	1990-'00	2000-'10	2010-'16	2016-'30	2030-'40	2040-'50
Pittsburgh Area	0.9%	2.8%	1.7%	2.4%	1.5%	1.4%	1.3%
Interurban Area	2.8%	2.6%	1.5%	1.8%	2.0%	1.7%	1.5%
Philadelphia Area	3.2%	2.8%	2.0%	1.9%	1.8%	1.7%	1.7%
Northeast Corridor	2.1%	2.7%	1.6%	1.5%	1.7%	1.5%	1.3%
Subtotal PA	2.4%	2.7%	1.8%	2.0%	1.8%	1.6%	1.5%
Maryland	4.5%	2.9%	2.9%	1.6%	2.0%	1.8%	1.7%
New Jersey	4.7%	2.7%	1.0%	1.4%	1.7%	1.5%	1.4%
New York	3.2%	2.5%	1.7%	1.8%	1.9%	1.7%	1.6%
Ohio	2.0%	3.2%	0.3%	2.8%	1.8%	1.6%	1.4%
Pennsylvania	2.3%	2.7%	1.8%	2.0%	1.8%	1.6%	1.5%
West Virginia	(0.2%)	2.2%	2.6%	0.8%	1.1%	1.0%	0.8%
Subtotal States	3.0%	2.7%	1.5%	1.9%	1.8%	1.6%	1.5%
United States	3.1%	3.6%	1.7%	2.5%	2.1%	1.8%	1.7%

Source: Woods & Poole Economics, Inc. 2017

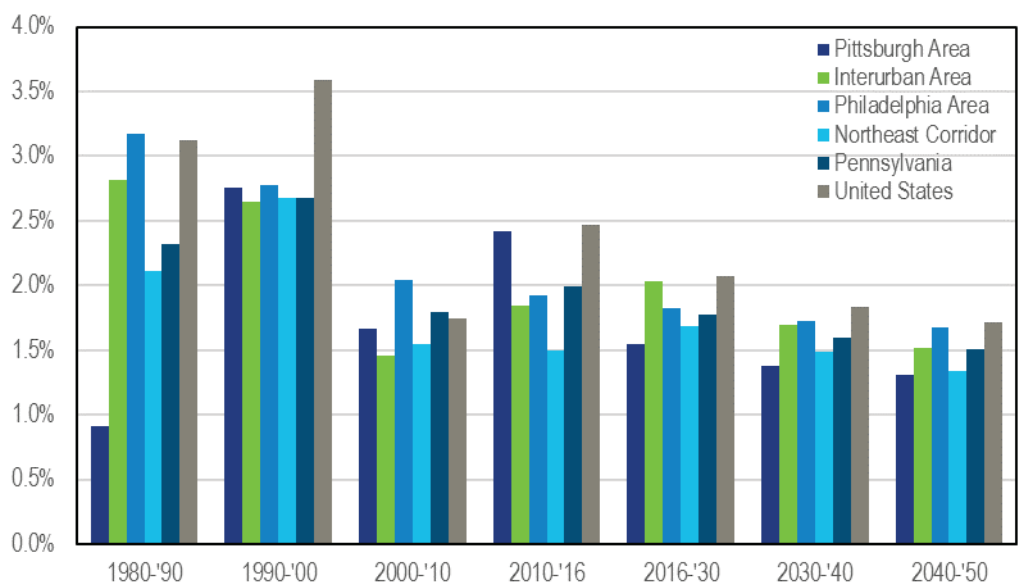
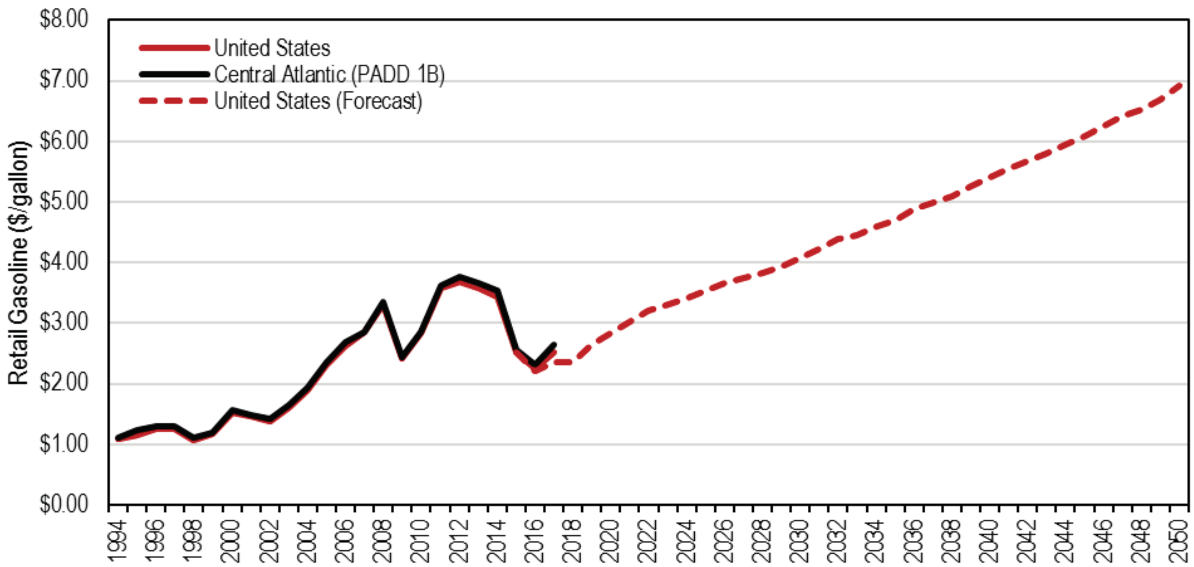


Figure 6-6
Real Gross Regional Product Trends and Forecasts

3.1.5 Motor Fuel Prices

Historical gasoline prices (in current dollars/gallon for all grades, all formulations) for the Central-Atlantic region (NY, NJ, PA, DE, and D.C.) and the United States are presented in Figure 3-7. The data was obtained from the U.S. Energy Information Administration (EIA). Average annual gasoline prices for the United States and the Central-Atlantic region were nearly identical historically, with the Central Atlantic region between $0.01 and $0.11 per gallon above the national price. Prices peaked at close to $3.70 per gallon in 2012[2], and declined through 2016. Prices in 2017 increased by more than $.025/gallon over 2016, and that upward trend is forecast to continue through 2050. According to the EIA Annual Energy Outlook 2017, future average national gasoline prices are forecasted to steadily increase to $7.00/gallon by 2050 in current dollars.



Source: Energy Information Administration

Figure 7-7
Gasoline Prices

3.2 MPO Outreach and Regional Economic Conditions

To supplement the socioeconomic data analysis, additional qualitative inputs were collected for the geographic areas represented by four of the five major metropolitan planning organizations (MPO) within, or near, the Pennsylvania Turnpike corridors. The inputs were collected via discussions with representatives from the MPOs. As shown in Figure 3-8, the geographic areas covered by these five MPOs partially overlap with the four Pennsylvania Turnpike areas analyzed in the previous subsection. While characteristics reviewed and discussed varied by MPO, they generally include: housing and residential, employment and industry, and freight and shipping. The five MPOs include:

- Southwestern Pennsylvania Commission (SPC)
- Delaware Valley Regional Planning Commission (DVRPC)
- Tri-County Regional Planning Commission (TCRPC)
- Lackawanna-Luzerne Metropolitan Planning Organization (LLMPO)
- Lehigh Valley Planning Commission (LVPC)

[2] Please note that in sub-annual terms, gas prices reached their high for the last two decades of around $4.15 per gallon in July of 2008 (not shown in the Figure).

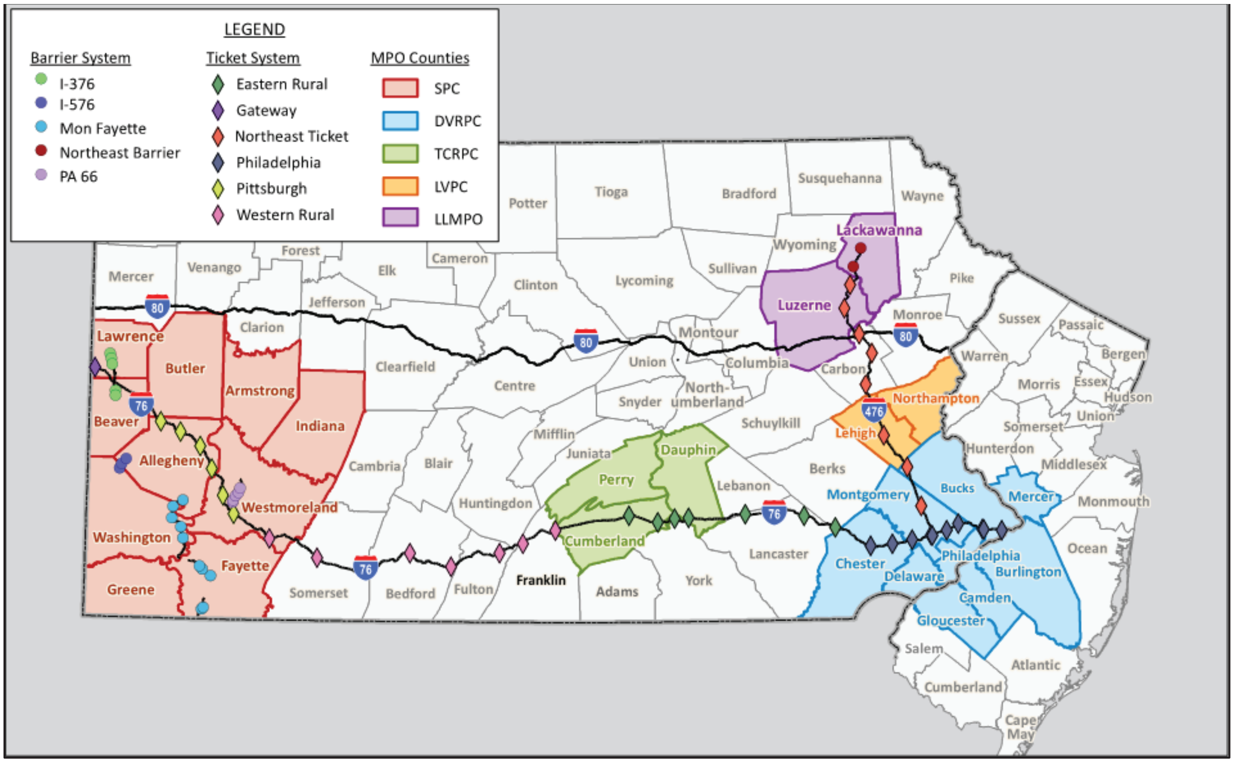


Figure 8-8
Pennsylvania MPOs

3.2.1 Southwestern Pennsylvania Commission

The Southwestern Pennsylvania Commission includes the eight Pittsburgh area counties as well as the two counties bordering West Virginia (Fayette and Greene).

Housing and Residential – Residential development continues to be led by Cranberry Township in Butler County, north of downtown Pittsburg. West of Pittsburg, residential (and commercial) development continues in Westmorland County (east of Monroeville) as the Southern Beltway (Route 576) nears completion. Southwest of Pittsburg, the residential development is growing to support the Southpoint commercial development (Washington County). Downtown Pittsburg also continues to develop as several properties shift from commercial to residential use. Such downtown residential properties accommodate smaller household size than the suburbs.

Employment and Industry – The Southpoint suburban business park in in Cecil Township, 17 miles south of Pittsburg, accommodates over 300 businesses. Marcellus Shale oriented energy firms include and Noble Energy, Rice Energy, Range Resources, CONSOL Energy, DPS Property, Chesapeake Energy, Columbia Gas. Other high technology (telecom/engineering specialty service) firms include: Southpointe Telecom, Ansys, Crown Castle, Mylan Labs, etc. While coal output and employment continue to decline, gas related activity associated with fracking continues to produce high volumes despite area wells being generally built-out.

Freight and Shipping – Local distribution facilities, including Amazon, continue to expand throughout the area. In fact, the Pittsburg area made the narrowed list of 20-cities seeking to attract the new Amazon headquarters, which would significantly affect growth trends.

3.2.2 Delaware Valley Regional Planning Commission

The Delaware Valley Regional Planning Commission includes five of the six Philadelphia area Pennsylvania Turnpike counties (excludes Berks), and four neighboring New Jersey counties (Burlington, Camden, Gloucester, and Mercer).

Housing and Residential – Both the urban core (Philadelphia) and the 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. These especially include: Conshohocken Borough (*Montgomery County*), Upper Makefield Township (*Bucks County*), Spring City (*Chester County*), and *Washington Township* (Mercer County) NJ. While housing prices are increasing, potential solutions include regional transit improvements and inclusionary zoning policies. Further, private developers are increasingly pressured to provide more incentives beyond low-income housing tax credits[i].

Employment and Industry – Regionally, the largest industry sectors include services, retail, manufacturing, FIRE[3], and freight transport. Growth continues in both the Philadelphia core and the suburban area. In Philadelphia, employment is led by education, healthcare, and technology – with Comcast operations growing the fastest. Additionally, the Philadelphia International Airport (PHL) and the American Airlines hub-operations are major employers. Downtown, University of Pennsylvania (UPENN) and Drexel University enroll over 50,000 students and employ thousands of staff.

Amtrak and SEPTA rail lines converge at the 30th street station, close to UPENN, where development continues, including possibly an Amazon facility. However, many physical constraints, (e.g., many at-grade rail lines) require large-scale development/planning. Such development would significantly affect the City and region. Also, Naval Yard redevelopment (South Philly) of 1,200 acres is expected to average about 1,000 new jobs per year for the next 15-20 years, which will affect the I-95 corridor but is not close to the Pennsylvania Turnpike.

While downtown office development is static, the market is growing in the suburbs, such as a new office park in Blue Bell. An old golf course in the King of Prussia Mall area is also being redeveloped as a casino with mixed-use conversion (housing/commercial). And, an 800-acre redevelopment in Willow Grove (Montgomery County) is anticipated to attract 30,000 jobs and several thousand residents, depending on proposal adopted.

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 PHL, air cargo operations continue to expand (Cargo City and UPS), despite new runway expansion delays (10+ years). In neighboring New Jersey, freight center growth continues along the New Jersey Turnpike (NJTP) interchange 8A. Similarly, freight center growth in Leigh Valley also affects traffic volumes in the northern DVRPC.

Growth Summary – City-Center redevelopment will generate minor effects on future traffic due to mixed city-center trends and transport improvements. Current employment levels of around 300,000

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[3] Financial, insurance, and real estate services

continues to fall, as the 60,000-population level continues to rise as offices and big-box stores convert to housing. Envisioned urban-core transport improvements (both Turnpike and transit) will help accommodate Philadelphia population growth and employment trends.

Suburban growth appears stronger as employment continues to branch-out from the core. Specific development is anticipated along the Turnpike's I-76 corridor. Suburban growth will also increase suburb-to-suburb commuting with heavy reliance on limited access roadway facilities such as I-76 and the Northeast Extension. High growth suburban counties include Bucks (north of core) and Chester (west). Montgomery (northwest), which grew rapidly over the past twenty years, has little vacant land available, and is turning to mixed-use and redevelopment.

3.2.3 Tri-County Regional Planning Commission

Within the sixteen-county Interurban Turnpike area, the Tri-County Regional Planning Commission comprises the three central counties of Cumberland, Dauphin, and Perry. While each reflects distinct socioeconomic conditions, the region continues transitioning to a post-manufacturing economy.

Housing and Residential – Anchored by Harrisburg, the state capitol, is the densest and most populous of the three counties. However, its population decline between 1970 and 2000 reflected a relocation to the suburbs of Cumberland County. Comparatively, Perry County remains very rural with low population levels and growth rates.

Employment and Industry – Regional iron and steel manufacturing centered in Harrisburg (Dauphin County) has been replaced by the Penn State Hershey Medical Center, the Giant Food Stores corporate headquarters, and the Hershey Company Resort and Factory. Recent Harrisburg development has been constrained by fiscal financial issues and the reality that half of assessed city property is exempt from current taxes (capitol and other state-owned facilities). Such development constraints spurred a 10-year tax abatement redevelopment incentive package, an updated future land use plan, zoning code changes, and other measures. Resultant development prospects include talk of new large-scale office and residential projects.

In Cumberland County, the Department of Defense is the major employer, which supports the New Cumberland Army Depot and the Naval Support Activity in Mechanicsburg – largest inland supply depot in the U.S. Comparatively, Perry County has an agriculture-based economy, which exhibits slow to moderate growth as the retail/commercial sector expands slowly.

Freight and Shipping – A UPS regional hub in suburban Harrisburg lies just north of the Harrisburg International Airport (MDT), which is undergoing an air cargo apron expansion. A FedEx shipment center is also located in Middletown (north of I-76). Also, a major rail intermodal facility (3rd largest east of Mississippi River) located in Dauphin County accommodates a diverse commodity mix and has major roadway connections.

Other – Local toll rates are considered very high by local commuters, which has led to toll road avoidance commute patterns. I-83 reconstruction over the next decade will stress such commutes and the overall Harrisburg highway system. This illustrates potential externality effects in historical toll transactions, as well as in future transaction growth.

3.2.4 Lackawanna-Luzerne Metropolitan Planning Organization

The MPO lies within the Northeast Pennsylvania Turnpike analysis area and comprises the two northern counties of Lackawanna and Luzerne.

Housing and Residential – With the oldest housing stock in the nation, reuse has been limited to the urban cores of Scranton and Wilkes-Barre (W/B). Urban land redevelopment initiatives (Keystone Opportunity Zone, State Land Bank), continue to help remove troubled properties and stem the cycle of vacancy/abandonment/foreclosure. However, such initiatives struggle to successfully stimulate property demand. Nonetheless, population remains stable with residential in-migration into downtown Scranton induced by the Medical College enrollment and reverse suburbanization trends of older residents seeking more-urbanized access to retail, entertainment, medical, etc.

Suburban population is also increasing slightly, although undercounted due to the Latino immigrants and a significant Bhutanese community. Anecdotal observations by local community leaders of suburban housing, retail, school enrolment, etc. suggest that the immigrant enclaves are expected to continue expanding.

Employment and Industry – Both counties continue to transition to a post-manufacturing, post-coal economy. Additionally, Scranton financial issues constraining development include pension payments, struggling school district budgets, and disproportionate local service taxes on low-income workers. Nonetheless, freight distribution and shipping (see below), the Casino, and other development facilitate modest economic growth in the region.

Located between Scranton and W/B, the Mohegan Sun Pocono Casino continues to expand (new 8-story hotel) with much land held for future development (e.g., golf course, water park, etc.). With continued traffic volume increases, the Casino seeks a new I-81 interchange. Noteworthy, concerns about a negative Casino impact downtown business has not arisen.

The Humboldt Industrial Park, south of W/B in Hazel Township along I-81, continues to develop, and currently employees around 10,000. North of the I-476 Turnpike terminus, Clark Summit continues to evolve as parcel land use turns commercial (banks, restaurants, pharmacies, etc.), which addresses previously underserved local service needs.

Freight and Shipping – A very strong and growing sector of the regional economy. Several regional distribution-centers and box-warehouses lie in the valley between Scranton and W/B along the Turnpike (I-476) and I-81. These centers/warehouses serve the whole northeast U.S. Over two dozen facilities range in size from 0.3 million to over 1.2 million sq. ft. Major distributors include Chewy, Adidas, Patagonia, Lowes, etc. Continued successful growth of the facilities have also led to expanded back-office support operations. Such growth led to planned expansion of Highway 6, north of the I-81/I-84 interchange. Further, the Wilkes-Barre/Scranton Int'l Airport (AVP) continues to support the regional freight and shipping sector. The recent airport master plan focuses on developing vacant parcels for air-based warehousing/manufacturing (0.5 million sq. ft. mixed-use) and distribution.

3.2.5 Lehigh Valley Planning Commission

The Lehigh Valley Planning Commission lies within the Northeast Turnpike analysis area and comprises the two southern counties of Lehigh and Northampton. We reached out to the MPO several times but were unable to engage. Located between the DVRPC and LLMPO, regional characteristics reflect a cross between the small urban LLMPO and the suburban fringe of the DVRPC, which confirms the historical socioeconomic trends and growth forecast findings.

3.2.6 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 corroborated and substantiated the socioeconomic trends with local depictions of where residential and/or business growth was (or was not) occurring and why.

3.3 Economic Growth Analysis

An econometric analysis was conducted to estimate long-term baseline travel demand on the Pennsylvania Turnpike. Historical travel demand was econometrically estimated via regression equations for groups of toll plazas, the rationale for which will be explained in Section 3.3.1.2. 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. Twenty demand equations were tested for either individual plazas or groups of proximate plazas, for both passenger cars (PC) and commercial vehicles (CV). A majority of the twenty plaza-vehicle grouping equations yielded statistically-significant, defensibly-logical results. Forecasts were conducted through 2050.

Subsequent toll modeling analyses conditionally incorporates these econometrically-derived baseline travel demand forecasts, which consider a range of future toll policies and rate structures in estimating future revenue potential.

3.3.1 Econometric Modeling

CDM Smith developed an econometric model for the PA Turnpike System, using multivariate regression analysis to develop long-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 Turnpike. A resulting correlative relationship between historical trends in corridor traffic and one or more independent variables is, in turn, applied in forecasting future Turnpike transaction growth, given available and credible forecasts for the independent variable(s). CDM Smith regression-tested annual transaction data for 10 plaza groupings, described in Section 3.3.1.2, against geographically-weighted independent socioeconomic data, (for passenger cars and commercial vehicles) to derive long-term transaction forecasts.

3.3.1.1 Regression Testing

Highway travel occurs for myriad 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 and an indexed toll variable were tested as explanatory factors for historical travel.

Multiple regression equations were tested and evaluated for each toll plaza-vehicle grouping to account for the numerous possible combinations of relevant geographies (county clusters) for each possible socioeconomic variable, and combinations with either/both fuel and toll index factors. A single "best fit" equation was identified for each toll-plaza grouping and used in the developing transactions forecasts.

3.3.1.2 Toll Plaza Groupings (Dependent Variables)

Toll plazas were clustered into the ten groupings (from 69 individual plazas) to reduce regression testing to a reasonably manageable data universe, based-on geographic proximity, similarities in historical travel demand patterns, data availability, and other characteristics such as operating history. These toll plaza groupings are identified in Table 3-5 and shown graphically in Figure 3-9. Some individual toll plazas were excluded from the groupings due to data gaps (e.g., I-376 and PA 66), staggered plaza openings/closings (e.g., Mon Fayette), or too short annual data (e.g., I-576), as inclusion would artificially distort the historical demand trends. Of the 69 individual toll plazas, 39 were included in the groupings. The 30 toll plazas excluded from the ten groups mostly pertain to the barrier-system facilities.

Note that the Delaware River Bridge (DRB) and the Southern Beltway (I-576) were not econometrically tested similarly to other groupings. The DRB changed operations recently, therefore, the historical trend may not appropriately correspond with current and future conditions. The I-576 opened in 2006, and the relatively short historical data includes a ramp-up trend that does not statistically correspond to any regional socioeconomic characteristics.

Where available, historical traffic data were used as continuous annual time series from 1987 through 2016. Annualized data were available for most of the ticket-system facilities, exempting a few toll plazas that opened after 1987 (and thus excluded). However, the barrier-system data were more limited; available only since 1994 with data gaps, or toll plazas that were opened too recently to provide a statistically defensible trend (insufficient number of data points). Many of the 30 excluded toll plazas from the groupings are barrier toll plazas with shorter historical operating timeframes than 1994 to 2016.

Table 3-5
Toll Plaza Groupings

	Plaza Grouping	Type	Included	Excluded
1	Gateway	Ticket	1	0
2	Pittsburgh	Ticket	5	1
3	Western Rural	Ticket	7	0
4	Eastern Rural	Ticket	7	0
5	Philadelphia	Ticket	6	5
6	Northeast Ticket	Ticket	7	2
7	Northeast Barrier	Barrier	2	0
8	I-376	Barrier	2	3
9	PA 66	Barrier	1	4
10	Mon Fayette	Barrier	1	11

Source: CDM Smith

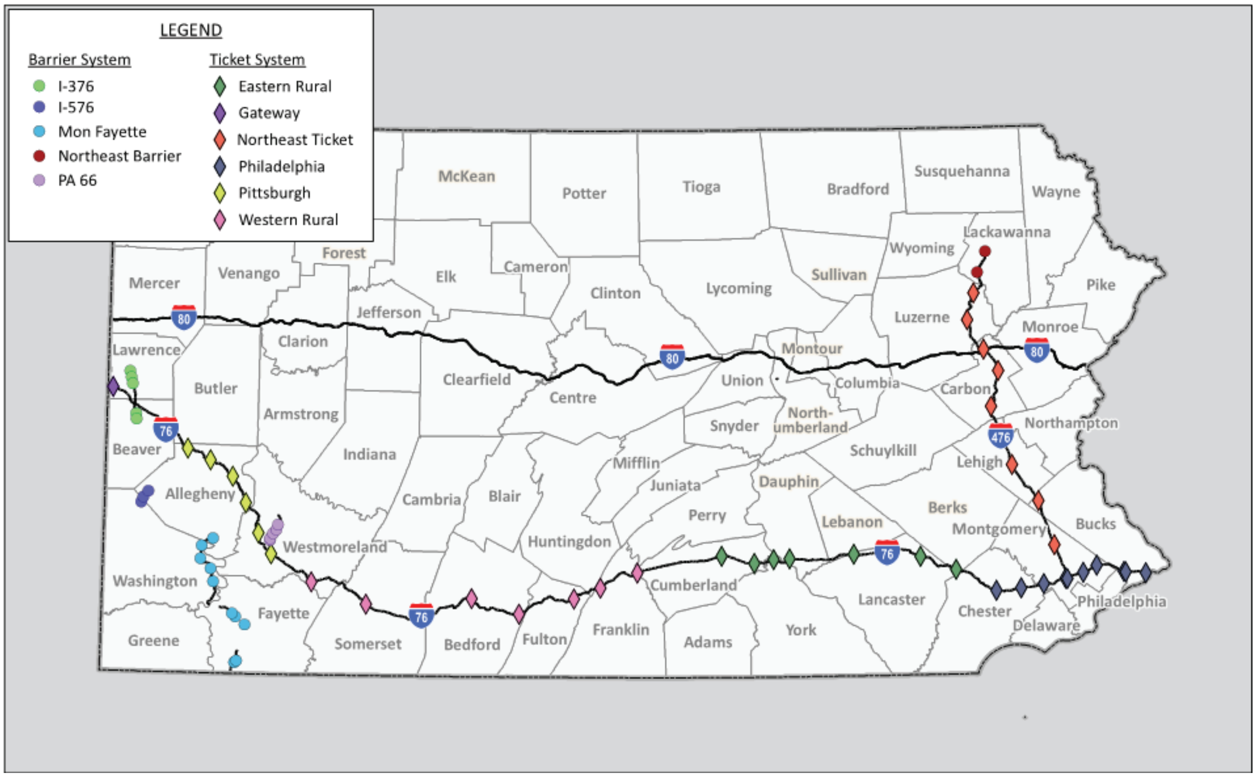

Figure 9-9
Toll Plaza Groupings

3.3.1.3 Socioeconomic Data (Independent Variables)

Data inputs include historical and forecasts data for the possible explanatory independent variables, which include socioeconomics for geographies surrounding the Turnpike (i.e., Pennsylvania and surrounding states' counties). Data compiled for regression testing included:

- Pennsylvania Turnpike Commission – historical transactions and toll rate schedule
- 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
- Moody's Analytics – historical and forecast real gross regional product (GRP)

Socioeconomic data was tested as an explanatory variable at various combinations of counties surrounding the toll plazas groupings. Data was compiled for all counties in Pennsylvania, New York, New Jersey, Delaware, Maryland, Virginia, West Virginia, and Ohio.

3.3.1.4 Regression Caveats

Econometrically-derived long-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.

3.3.1.5 Regression Equations and Forecasting

A final regression equation was estimated for each toll plaza/vehicle grouping, relating historical annual travel demand with a regional socioeconomic variable, and sometimes with a toll index and/or fuel prices as additional explanatory factors. A regression summary for the ten-toll plaza/vehicle groupings is provided in Table 3-6. After testing the compiled socioeconomics at various regional county clusters, it was determined that real GRP was the best-suited explanatory variable for most equations, and population for a couple of equations.

Geographically, regional combinations of contiguous counties in Pennsylvania, New Jersey, Delaware, Maryland, West Virginia, and Ohio served as logical and statistically-acceptable catchment areas. 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 Pennsylvania Turnpike system. Catchment areas regionalize socioeconomic variables as related to travel demand; however, 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.

Most of the twenty equations exhibited sensible relationships with acceptable statistics; however, despite concerted due-diligence, a few equations could not be improved upon while yielding poor statistics or questionable relationships. In such instances, the historical travel demand patterns did not trend well with any regional socioeconomics and/or the toll rate factors, and are instead probably more influenced by localized, sub-county factors such as toll plaza operating characteristics, diversion potentials, construction closures, etc. Such historical transaction volatility disjointed from regional socioeconomic trends was encountered for single toll plaza equations (i.e., Gateway CV) and the smaller barrier-system facilities (i.e., Northeast Barrier PC and CV, and I-376 PC). Contrastingly, the ticket-system groupings with multiple major toll plazas that contribute to a significant majority of the total Pennsylvania Turnpike transactions and revenues (I-76 and the Northeast Extension/I-476) exhibited statistically-significant equations and coefficients, with consistent relationships across adjacent groupings and logical results.

Table 3-6
Regression Summary

Grouping/Vehicles	Start Yr.	Adj. R2	Independent Variables			PA	Non-PA	Counties
Gateway PV	1987	91.90%	GDP			4	4	8
Pittsburgh PV	1987	95.10%	GDP	Toll Index		13	10	23
Western Rural PV	1987	92.10%	GDP	Toll Index		12	7	19
Eastern Rural PV	1987	97.80%	GDP	Toll Index		12	9	21
Philadelphia PV	1987	93.10%	GDP	Toll Index		13	12	25
Northeast Ticket PV	1987	99.10%	Population	Toll Index	Fuel Price	10	5	15
Northeast Barrier PV	1994	44.70%	Population			7	0	7
I-376 PV	1994	85.40%	GDP	Toll Index		2	0	2
PA 66 PV	1994	92.10%	GDP	Toll Index		2	0	2
Mon Fayette PV	1994	95.40%	GDP	Toll Index		2	3	5
Gateway CV	1987	68.40%	GDP	Toll Index		1	4	5
Pittsburgh CV	1987	95.20%	GDP	Toll Index		18	15	33
Western Rural CV	1987	94.70%	GDP	Toll Index		15	12	27
Eastern Rural CV	1987	97.80%	GDP	Toll Index		14	13	27
Philadelphia CV	1987	91.70%	GDP	Toll Index		5	7	12
Northeast Ticket CV	1987	99.60%	GDP			14	2	16
Northeast Barrier CV	1994	77.30%	GDP			3	0	3
I-376 CV	1994	96.00%	GDP			5	0	5
PA 66 CV	1994	95.70%	GDP	Toll Index		2	0	2
Mon Fayette CV	1994	92.40%	GDP			3	2	5

Source: CDM Smith

Aside from the four abovementioned equations at single- and small barrier-system toll plaza groupings with poor statistical fits, the remaining equations that correspond to a significant majority of Pennsylvania Turnpike toll transactions and revenues exhibit robust adjusted R^2 statistics, ranging between 91.6% and 99.6%. Such relatively high statistical fits indicate good relationships.

With the final equations, socioeconomic, toll index, and fuel price forecasts were applied to the regression coefficients, as appropriate, to estimate future long-term travel demand. Socioeconomic forecasts were obtained from both Woods & Poole Economics, Inc. at a detailed county level and Moody's Analytics at a more macroscopic statewide and metropolitan statistical area (MSA) level. Both sources forecast almost identical long-term annual real GRP trends for comparable statewide and MSA geographies, with very minor average growth rate differentials through 2035 and slight divergence thereafter. Given the availability of Woods & Poole forecasts at a granular county level, it was applied to equations to forecast baseline travel demand. Fuel price forecasts were applied to the Northeast passenger car equation, sourced from the EIA; and, the toll index forecast assumes a 6% annually-recurring increase through 2020, 5% thereafter through 2025, and a deceleration to 3% in 2028 and thereafter.

In further traffic and revenue modeling, it was decided that forecast growth estimates from the four sub-par equations fits not be applied. Instead, it was decided that alternative growth forecasts from a simpler, non-econometric based extrapolation of most recent historical trends be employed. A similar recommendation to consider simpler, alternative forecasts for the remaining barrier-system forecasts was also made because of the more localized characteristics of such facilities. Given the acceptable logic and statistical significance of the ticket-system equations, it was recommended that the econometric-based growth forecasts be applied in further traffic and revenue modeling for those major facilities.

3.3.2 Demand Growth Results

Econometrically-derived travel demand forecasts for the Pennsylvania Turnpike are summarized in Table 3-7 below, based on applied forecasts for the regional socioeconomics, toll index, and fuel prices to the respective regression coefficients. Compound average growth rates (CAGR) for the plaza groupings are shown for three historical timeframes as comparative context, and generally in ten-year future increments through year 2050. The last column in Table 3-7 presents the average growth over the entire 2016 through 2050 forecast period.

Table 3-7
Transaction Growth Summary

Grouping/Vehicles	'87-'16	'94-'16	'07-'16	'16-'30	'30-'40	'40-'50	'16-'50
Gateway PV	1.7%	1.4%	1.7%	1.2%	1.0%	1.0%	1.1%
Pittsburgh PV	0.8%	0.7%	-0.3%	0.4%	0.6%	0.5%	0.5%
Western Rural PV	0.9%	0.8%	-0.6%	0.4%	0.6%	0.5%	0.5%
Eastern Rural PV	2.2%	1.9%	0.4%	1.7%	1.6%	1.5%	1.6%
Philadelphia PV	2.1%	1.4%	0.3%	0.9%	1.0%	0.8%	0.9%
Northeast Ticket PV	3.0%	2.0%	-0.3%	2.5%	2.2%	1.2%	2.0%
Northeast Barrier PV	#N/A	0.4%	-0.4%	0.8%	0.5%	0.2%	0.5%
I-376 PV	#N/A	1.7%	-1.4%	2.0%	1.4%	0.8%	1.5%
PA 66 PV	#N/A	3.0%	-1.1%	1.0%	0.8%	0.4%	0.8%
Mon Fayette PV	#N/A	3.1%	0.5%	0.5%	0.6%	0.3%	0.5%
Gateway CV	0.6%	0.7%	0.1%	0.5%	0.6%	0.5%	0.5%
Pittsburgh CV	1.4%	1.4%	-0.2%	0.9%	1.0%	0.9%	1.0%
Western Rural CV	1.4%	1.5%	-1.3%	0.6%	1.0%	0.9%	0.8%
Eastern Rural CV	2.6%	2.6%	0.5%	2.1%	2.0%	1.8%	2.0%
Philadelphia CV	1.8%	2.3%	0.7%	1.2%	1.3%	1.2%	1.2%
Northeast Ticket CV	4.1%	3.6%	1.3%	2.8%	2.3%	2.1%	2.5%
Northeast Barrier CV	#N/A	1.6%	2.1%	0.8%	0.8%	0.8%	0.8%
I-376 CV	#N/A	4.7%	1.8%	3.1%	2.1%	1.7%	2.4%
PA 66 CV	#N/A	4.5%	1.7%	1.3%	0.7%	0.2%	0.8%
Mon Fayette CV	#N/A	6.3%	9.6%	2.1%	1.7%	1.5%	1.8%

Source: CDM Smith

Average annual growth rates vary by toll plaza grouping, vehicle category, and period (hence, subcategorizing the facilities as conducted); consequently, it is challenging to concisely summarize. However, generally, passenger car growth was historically slower than commercial vehicle growth. Barrier-system facilities' transactions generally grew relatively faster than the older ticket-system facilities. Also, for the major ticket-system groupings, the western portions (Gateway, Pittsburgh, and Western Rural) grew slower than the eastern portions (Eastern Rural, Philadelphia, and the Northeast Extension). All three generalized relativities are expected to continue through the econometric-based growth forecasts. Additionally, the future growth in transactions is universally forecasted to decelerate relative to historical trends.

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 2017 forecasts with actual observations, etc.) prior to further modeling are expected, which consider additional factors such as long-term roadway capacities, etc. Also, some of the econometrically-based forecasts for smaller, barrier-system facilities may be dismissed due to relatively weak descriptor statistics and supplanted with alternative growth assumptions via recent trend extrapolations or other non-econometric means.

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[i] Arvedlund, E. (2014, December 7). Conference to look at region's affordable housing. Retrieved from: http://articles.philly.com/2014-12-07/real_estate/56807054_1_affordable-housing-low-income-housing-tax-credits-affordability

Chapter 4

Transaction and Toll Revenue Forecasts

Traffic and gross toll revenue forecasts are presented in this chapter for the Ticket System, the Barrier System, and the total Turnpike System. Forecasts are presented by fiscal year from 2017-18 through 2047-48. Also presented in this chapter are important inputs to the forecasts, including committed roadway projects, assumed future toll rate increases and assumed future E-ZPass market shares.

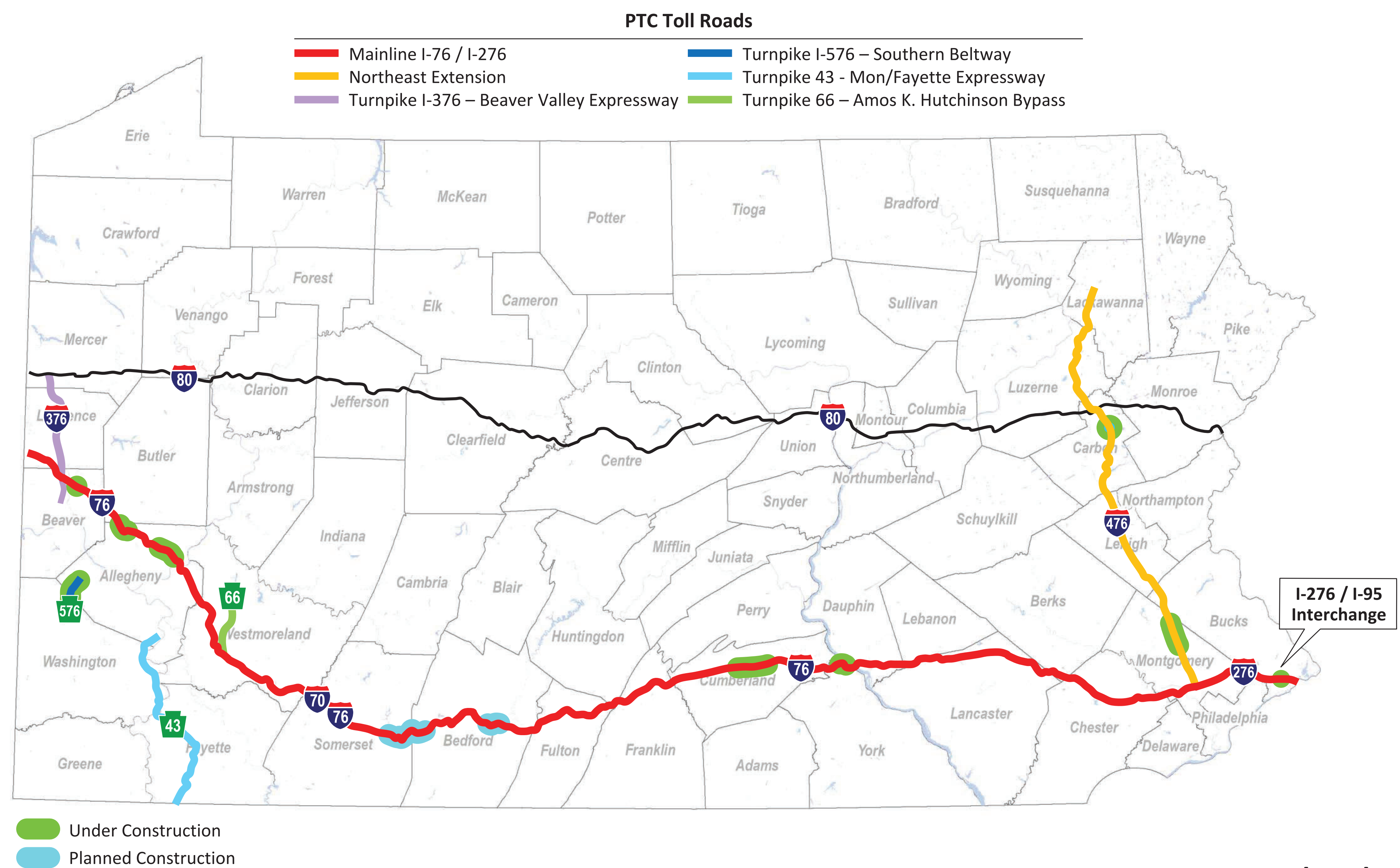
4.1 Committed Turnpike System Roadway Improvements

Through discussions with PTC personnel and by reviewing both the PTC Construction website and the State Transportation Improvement Plan (STIP) and Twelve-Year Program (TYP), CDM Smith identified the major committed roadway improvements that would potentially impact traffic and toll revenue on the Turnpike System. Projects were identified on the Mainline I-76/276 and the Northeast Extension. **Table** 4-1 lists the identified projects and Figure 4-1 presents the locations of the projects. A brief description of each project is provided below.

Table 4-1
Major Committed Roadway Improvements on the Pennsylvania Turnpike Sytem (1)

Milepost	Location	Description	Actual or Assumed Start Date	Assumed Completion Date
Mainline I-76/I-276				
12-14	Beaver County	Reconstruct and widen to 3 lanes in each direction	September 2013	December 2020
28-31	Alleghany and Butler Counties	Reconstruct and widen to 3 lanes in each direction	2019	2021
40-48	Alleghany County	Replace 6 overhead bridges and widen to 6 lanes in each direction	February 2013	Fall 2019
124-134	Somerset and Bedford Counties	Reconstruct and widen to 3 lanes in each direction	To be determined	To be determined
149-155	Bedford County	Reconstruct and widen to 3 lanes in each direction	To be determined	To be determined
202-206	Cumberland County	Reconstruct and widen to 3 lanes in each direction	September 2016	December 2018
242-245	York County	Reconstruct and widen to 3 lanes in each direction	Spring 2015	Spring 2018
Mainline I-76/I-276 and I-95 Interchange				
356-360	I-95 to Delaware River Bridge (Bucks County)	•Widen I-276 to 3 lanes in each direction	Fall 2014	December 2017
		•Construct and open new ramps between I-95 and I-276	Fall 2015	September 2018
Northeast Extension I-476				
A31-A38	Montgomery County	Reconstruct and widen to 3 lanes in each direction	Early 2018	Late 2020
A89	Hawk Falls Bridge (Carbon County)	Completely replace two existing bridges	June 2012	June 2022
Southern Beltway Toll 576				
I-376 to U.S. 22	Washington and Allegheny Counties	Convert the existing Findlay Connector to a cashless tolling facility	2017	Spring 2018
US-22 to I-79	Washington and Allegheny Counties	Construct a 12.5-mile cashless tolling extension of Toll 576 from the southern terminus of the Findlay Connector at US-22 to I-79 including four new interchanges	December 2016	Summer 2021

(1) The roadway improvement projects shown in this table are a small subset of the projects listed in the PTC's Major Design and Construction Projects website and listed in the Proposed Twelve Year Program



PENNSYLVANIA TURNPIKE COMMISSION (PTC)
MAJOR ROADWAY IMPROVEMENT PROJECTS

FIGURE 4-1

4.1.1 Mainline I-76/I-276 Roadway Improvement Projects

Milepost (MP) 12 to 14 Roadway and Bridge Reconstruction – This two-phase project involves the total reconstruction and widening of two miles of the mainline Interstate 76 between Milepost 12 and Milepost 14. Upon completion of this project the existing four-lane facility, will be upgraded to include six 12-foot travel lanes, three in each direction, 12-foot shoulders and 10-foot medians in each direction. In order to accommodate the new six lane facility, three early action bridges including, two overhead Norfolk Southern railroad bridges will be replaced prior to the start of construction of the Turnpike mainline. Stage 1 of the project was completed in November 2017. Stage 2 is anticipated to be completed in December 2020.

MP 28 to MP 31 Reconstruction and Widening – This project involves the full-depth reconstruction and widening of the Pennsylvania Turnpike from four travel lanes to six travel lanes from Milepost 28 to Milepost 31 in Cranberry Township, Butler County and Marshall Township, Allegheny County. The project will begin on the east side of the Cranberry Interchange, tying into the eastbound acceleration lane and westbound deceleration lane. The project will end on the west side of the Warrendale Toll Plaza and result in two lanes of Express E-ZPass in each direction. Project design is scheduled to be completed in spring 2019, with construction lasting from summer 2019 to 2021.

MP 40 to MP 48 Reconstruction and Widening – Beginning in early 2013, the PTC started total roadway reconstruction and widening of eight miles of the PA Turnpike and replacement of six bridges crossing over the highway. With more than 40,000 cars and trucks traveling this stretch per day, it is one of the busiest parts of the Turnpike in the region. When complete, this project will tie directly into the newly constructed, three-lane Allegheny River Bridges completed in October 2010. The project is scheduled to be completed in late 2019.

MP 124 to MP 134 Reconstruction and Widening – This project includes the reconstruction and widening of approximately nine miles of the PA Turnpike, including some curve flattening on the mainline, replacement of three overhead bridges and three mainline bridges. Also included is the New Baltimore Slope Remediation project located from Milepost 127.9 (Tunnel Road) to Milepost 128.7 (0.3 miles West of Findley Street) in Allegheny Township, Somerset County. The widening of the Turnpike mainline will be completed in two construction contracts, one from Milepost 124.5 to Milepost 130.5 and one from Milepost 130.5 to Milepost 133.8. Upon completion of the projects, the Turnpike will be widened from 82 feet to 122 feet and will consist of six travel lanes (three in each direction) with a 26-foot median and 12-foot outside shoulders. The three overhead bridges have been replaced and the New Baltimore Slope Remediation is substantially complete. The turnpike widening schedule has yet to be determined.

MP 149.5 to MP 155.5 Reconstruction and Widening – The PTC plans to invest $150 million to provide for the total roadway reconstruction and widening of six miles of the PA Turnpike, which includes replacing or eliminating bridges. The project area begins at Milepost 149.5 east of the Bedford Interchange (Exit 146) and continues to Milepost 155.5 west of the Breezewood Interchange (Exit 161), in Snake Spring and West Providence Townships, Bedford County.

MP 202 to MP 206 Reconstruction and Widening – This project will reconstruct the existing roadway, shoulders, and median and add a third travel lane in each direction for a five-mile stretch just east of the Blue Mountain interchange in Cumberland County. Phase 1, which included construction of a third lane and shoulders in each direction was completed in December 2017. Phase

2, during which traffic will be shifted onto these outside lanes while the median and interior lanes are excavated and reconstructed, is ongoing and expected to be completed in December 2018.

MP 242 to MP 245 Reconstruction and Widening – This project involves widening the existing 4-lane highway to six lanes (three in each direction) with a 26-foot median from just east of the Harrisburg West interchange (MP 242) to the tie in to the new Susquehanna River Bridge Project (MP 245.4), which will complete six lanes from the Harrisburg West Interchange to the Harrisburg East Interchange (Exit 247). Two lanes of traffic in each direction will be maintained on the Turnpike at most times during construction. All mainline work being is expected to be completed in 2018.

4.1.2 Pennsylvania Turnpike I-276/I-95 Interchange Project

This is a major project that will be completed in three stages. The project includes the construction of a high-speed, full-access interchange between I-276 and a re-designated I-95, making I-95 continuous through the mid-Atlantic region. The project also includes roadway widening on I-276 from immediately west of Interchange 351 (Bensalem) eastward to the western side of the Delaware River Bridge. A new parallel bridge on I-276 will be constructed over the Delaware River. In addition, the project includes changes to the tolling locations and toll structure on I-276.

The following describes the three stages of the I-276/I-95 Interchange Project. Only Stage 1 is under active construction. Estimated traffic and toll revenue impacts associated with Stage 1 are included in this study. Stages 2 and 3 are described below only for informational purposes.

Stage 1: (Mile post 356 to 360), expected completion in 2018

- The new westbound mainline toll plaza on I-276 just west of the Delaware River Bridge was opened in January 2016. Tolls are collected based on a vehicle's number of axles.
- Simultaneously with the opening of the new westbound toll plaza, a new eastern terminus of the I-276/I-76 Ticket System opened. This new mainline toll plaza is located between the Street Road Interchange and I-95.
- I-276 roadway widening from Interchange 351 to the Delaware River Bridge was completed in 2017.
- New high-speed ramps between I-95 and I-276 (northbound I-95 to eastbound I-276, and westbound I-276 to southbound I-95) are anticipated to open in September 2018.

Stage 2 (MP 351 to MP 356) includes the remaining six ramp movements of the new interchange and completion of the mainline widening. This stage is not currently funded, although final design has continued on some contracts.

Stage 3 (MP 320) brings an additional bridge over the Delaware River parallel to the existing bridge. This stage is not funded and is unlikely to begin construction until after 2025.

4.1.3 Northeast Extension (I-476) Roadway Improvement Projects

MP A31 to MP A38 Total Reconstruction Project - This section of the Turnpike will be completely reconstructed from the ground up and widened from two lanes in each direction with limited shoulders to three lanes in each direction with 12-foot right and left shoulders. The overhead bridges along the project corridor are only wide enough to accommodate the current roadway width, so they need to be replaced before the mainline Turnpike widening can occur. Construction on the overhead bridges began in the spring of 2013. Construction on the mainline Turnpike recently began; the opening of northbound and southbound traffic to three lanes in each direction is scheduled for late fall 2020. The anticipated completion of the entire project is expected to occur by early summer 2021.

Hawk Falls Bridge Replacement Project (MP 89) – The goal of this project is to completely replace the Hawk Falls Bridge and the Hickory Run Bridge. The bridge carries two lanes of Turnpike traffic, in each direction, over Mud Run in Penn Forest Township and Kidder Township, Carbon County. The new bridge will carry two traffic lanes and shoulders in each direction. The existing Hickory Run Bridge, directly to the north of the Hawk Falls Bridge, will also be replaced. This three-span mainline bridge, measuring 111' in length, carries the Turnpike over Hickory Run Road (SR 0534). Estimated project completion is June 2022.

4.1.4 Southern Beltway (Toll 576)

Findlay Connector Cashless Tolling Conversion - This project will convert the Findlay Connector (Toll 576) to a cashless tolling facility by constructing overhead gantries and demolishing existing toll facilities on exit ramps. This work is part of the PA Turnpike's conversion to cashless tolling on Toll 576, which will eventually connect to the Southern Beltway once work there is complete.

Southern Beltway – The current Toll 576, referred to as the Findlay Connector, runs six miles south from I-76 at Pittsburgh International Airport to U.S. 22. This section of highway was opened in 2006. The Southern Beltway project will extend Toll 576 another 13 miles southeast from U.S. 22 to I-79 near the Allegheny/Washington County line and include four new interchanges. The project is divided into nine construction segments, with the last one expected to be completed in summer 2021, when the highway will be opened to traffic. The entire length of Toll 576 will be a cashless tolling facility.

4.2 Construction Related Impacts on Turnpike System Traffic

Ongoing construction related impacts stemming from roadway widening and reconstruction projects on the Turnpike System are expected to be minimal. Construction projects on the Turnpike System are planned to minimize lane closures or any restrictions to the Turnpike. When such measures are necessary, they are conducted overnight to avoid interfering with heavier daytime traffic volumes. Generally, preference is given to Turnpike mainline traffic and construction-related disruptions are more likely to affect cross streets and Turnpike access points. Two travel lanes are maintained in both directions during construction activities.

For purposes of conservatism, the only positive traffic and toll revenue impacts that are included as part of this study are for the Mainline I-76/I-276 and I-95 Interchange Project and the opening of the Southern Beltway to I-79. As shown in Table 4-1, the partial I-95 Interchange project is assumed to open in September 2018; it is estimated to add approximately $6.5 million to total System toll revenue in the first full year of operation. The Southern Beltway toll road extension to I-79 is currently assumed to open in the summer of 2021. To be conservative from a toll revenue perspective, we have assumed a January 2022 opening date for this project. It is expected to add approximately $6.7 million to total System toll revenue in 2022.

4.3 Assumed Toll Rate Increases on the Turnpike

At the direction of the PTC, annual toll rate increases are assumed to occur on the entire Turnpike System. The toll rate increases are assumed to occur within several days of January 1 of each year. Table 4-2 presents actual and assumed percent increases in toll rates for each calendar year from 2015 through 2048.

As shown in Table 4-2, the assumed percent increases in toll rates are identical for cars and trucks, and for E-ZPass and cash transactions throughout the forecast period. Future toll-rate increases range from 3.0 to 6.0% per year between 2019 and 2048. Consistent with the PTC tolling policy, all E-ZPass tolls are rounded to the nearest cent, and cash toll rates are rounded up to the nearest nickel.

At the direction of the PTC, the toll rate increases shown in Table 4-2 were used in the development of the traffic and toll revenue forecasts, including the assumption that the percent toll rate increases are the same for both E-ZPass and cash transactions. The PTC reserves the right to implement toll rate differentials between E-ZPass and cash in future years.

Table 4-2
Actual and Assumed Future Toll Rate Increases (1)

Calendar Year	Percent Increase For Cars and Trucks		Sample Toll Rates (2)					
			$1.00 Toll		$2.50 Toll		$10.00 Toll	
	Cash	E-ZPass	Cash	E-ZPass	Cash	E-ZPass	Cash	E-ZPass
2015 (3)	5.0	5.0	$1.00	$1.00	$2.50	$2.50	$10.00	$10.00
2016 (3)	6.0	6.0	1.10	1.06	2.65	2.65	10.60	10.60
2017 (3)	6.0	6.0	1.20	1.12	2.85	2.81	11.25	11.24
2018 (3)	6.0	6.0	1.30	1.19	3.05	2.98	11.95	11.91
2019	6.0	6.0	1.40	1.26	3.25	3.16	12.70	12.62
2020	6.0	6.0	1.50	1.34	3.45	3.35	13.50	13.38
2021	5.0	5.0	1.60	1.41	3.65	3.52	14.20	14.05
2022	5.0	5.0	1.70	1.48	3.85	3.70	14.95	14.75
2023	5.0	5.0	1.80	1.55	4.05	3.89	15.70	15.49
2024	5.0	5.0	1.90	1.63	4.30	4.08	16.50	16.26
2025	5.0	5.0	2.00	1.71	4.55	4.28	17.35	17.07
2026	4.0	4.0	2.10	1.78	4.75	4.45	18.05	17.75
2027	3.5	3.5	2.20	1.84	4.95	4.61	18.70	18.37
2028	3.0	3.0	2.30	1.90	5.10	4.75	19.30	18.92
2029	3.0	3.0	2.40	1.96	5.30	4.89	19.90	19.49
2030	3.0	3.0	2.50	2.02	5.50	5.04	20.50	20.07
2031	3.0	3.0	2.60	2.08	5.70	5.19	21.15	20.67
2032	3.0	3.0	2.70	2.14	5.90	5.35	21.80	21.29
2033	3.0	3.0	2.80	2.20	6.10	5.51	22.50	21.93
2034	3.0	3.0	2.90	2.27	6.30	5.68	23.20	22.59
2035	3.0	3.0	3.00	2.34	6.50	5.85	23.90	23.27
2036	3.0	3.0	3.10	2.41	6.70	6.03	24.65	23.97
2037	3.0	3.0	3.20	2.48	6.95	6.21	25.40	24.69
2038	3.0	3.0	3.30	2.55	7.20	6.40	26.20	25.43
2039	3.0	3.0	3.40	2.63	7.45	6.59	27.00	26.19
2040	3.0	3.0	3.55	2.71	7.70	6.79	27.85	26.98
2041	3.0	3.0	3.70	2.79	7.95	6.99	28.70	27.79
2042	3.0	3.0	3.85	2.87	8.20	7.20	29.60	28.62
2043	3.0	3.0	4.00	2.96	8.45	7.42	30.50	29.48
2044	3.0	3.0	4.15	3.05	8.75	7.64	31.45	30.36
2045	3.0	3.0	4.30	3.14	9.05	7.87	32.40	31.27
2046	3.0	3.0	4.45	3.23	9.35	8.11	33.40	32.21
2047	3.0	3.0	4.60	3.33	9.65	8.35	34.45	33.18
2048	3.0	3.0	4.75	3.43	9.95	8.60	35.50	34.18

(1) Future toll rate increases are assumed to be implemented within several days of January 1.
(2) By PTC Policy, cash toll rates are rounded up to the nearest nickel and E-ZPass rates are rounded to the nearest penny.
(3) Reflects actual toll rate increases on the Turnpike System.

4.4 Estimated E-ZPass Market Shares in Future Years

Because a price differential has been established between cash and E-ZPass toll rates, it is important to estimate future year E-ZPass market shares in order to forecast gross toll revenues. Historically, cash and E-ZPass toll rates were virtually identical until 2011, differing only because cash rates were rounded up to the nearest nickel while E-ZPass rates were rounded up to the nearest cent. There was no reason for a customer to choose E-ZPass over cash based solely on the toll rate.

In 2011, 2012, 2013 and 2014, differential toll rate increases were implemented. As a result of these differential rate increases, cash toll rates are theoretically 39.5% greater than E-ZPass rates. The actual differential is even greater for lower price tolls due to the effect of rounding up to the nearest nickel for cash rates. The differential creates incentives for cash customers to shift to E-ZPass, and for new accounts to favor E-ZPass over cash.

Future year E-ZPass market shares were developed based on the assumed future toll rate increases shown in Table 4-2, and the historic trends in E-ZPass market share. Table 4-3 presents the actual percent E-ZPass market shares from calendar years 2011 through 2017, and the estimated percent E-ZPass market shares from 2018 through 2048 for passenger cars and commercial vehicles. Also shown are the percentage point increases in the E-ZPass market share over the prior year.

In 2011, the E-ZPass market share totaled 60.2% for passenger cars and 79.0% for commercial vehicles. By 2017, those values increased to 78.3% for passenger cars and 90.1% for commercial vehicles. A large portion of those increases were the direct result of increasing discounts for E-ZPass trips versus cash trips implemented from 2011 through 2014.

The estimated E-ZPass market shares for calendar years 2018 through 2048 continues to increase, but at a lower rate than in the recent past. This is because the toll differential is assumed to remain constant over this time period and because the E-ZPass market share is reaching its saturation point. In practical terms, there will likely always be customers who choose not to use E-ZPass. As shown in Table 4-3, by 2048 passenger car E-ZPass market share is estimated at 89.7% and the commercial vehicle market share is estimated to be 95.0%. For purposes of this analysis, it was assumed that the maximum E-ZPass market share would be 95.0%. Given the already high participation rate by commercial vehicles, they reach this level by 2030.

Table 4-3
Actual and Estimated E-ZPass Market Share
Pennsylvania Turnpike System

Calendar Year		Passenger Cars: Percent Market Share	Passenger Cars: Percent Increase in Market Share	Commercial Vehicles: Percent Market Share	Commercial Vehicles: Percent Increase in Market Share	Total Vehicles: Percent Market Share	Total Vehicles: Percent Increase in Market Share
2011	(1)	60.2		79.0		62.6	
2012	(1)	64.3	4.1	81.6	2.6	66.5	3.9
2013	(1)	68.8	4.5	84.2	2.6	70.8	4.3
2014	(1)	72.0	3.2	86.0	1.8	73.9	3.1
2015	(1)	73.9	1.9	87.8	1.8	75.8	1.9
2016	(1)	76.2	2.3	89.2	1.4	78.0	2.2
2017	(1)	78.3	2.1	90.1	0.9	79.9	1.9
2018	(2)	80.5	2.2	91.1	1.0	82.0	2.1
2019	(2)	81.9	1.4	91.9	0.8	83.3	1.3
2020	(2)	83.2	1.3	92.6	0.7	84.5	1.2
2021	(2)	84.2	1.0	93.1	0.5	85.5	1.0
2022	(2)	84.3	0.1	93.6	0.5	85.6	0.1
2023	(2)	85.0	0.7	94.1	0.5	86.3	0.7
2024	(2)	85.6	0.6	94.6	0.5	86.9	0.6
2025	(2)	86.2	0.6	94.8	0.2	87.4	0.5
2026	(2)	86.7	0.5	94.8	0.0	87.9	0.5
2027	(2)	87.2	0.5	94.9	0.1	88.3	0.4
2028	(2)	87.7	0.5	94.9	0.0	88.7	0.4
2029	(2)	88.1	0.4	94.9	0.0	89.1	0.4
2030	(2)	88.6	0.5	95.0	0.1	89.5	0.4
2031	(2)	88.9	0.3	95.0	0.0	89.8	0.3
2032	(2)	89.0	0.1	95.0	0.0	89.9	0.1
2033	(2)	89.1	0.1	95.0	0.0	90.0	0.1
2034	(2)	89.2	0.1	95.0	0.0	90.1	0.1
2035	(2)	89.3	0.1	95.0	0.0	90.1	0.0
2036	(2)	89.3	0.0	95.0	0.0	90.2	0.1
2037	(2)	89.4	0.1	95.0	0.0	90.2	0.0
2038	(2)	89.4	0.0	95.0	0.0	90.2	0.0
2039	(2)	89.5	0.1	95.0	0.0	90.3	0.1
2040	(2)	89.5	0.0	95.0	0.0	90.3	0.0
2041	(2)	89.5	0.0	95.0	0.0	90.3	0.0
2042	(2)	89.5	0.0	95.0	0.0	90.4	0.1
2043	(2)	89.6	0.1	95.0	0.0	90.4	0.0
2044	(2)	89.6	0.0	95.0	0.0	90.4	0.0
2045	(2)	89.6	0.0	95.0	0.0	90.4	0.0
2046	(2)	89.6	0.0	95.0	0.0	90.4	0.0
2047	(2)	89.7	0.1	95.0	0.0	90.5	0.1
2048	(2)	89.7	0.0	95.0	0.0	90.5	0.0

(1) Actual E-ZPass market share.
(2) Estimated E-ZPass market share.

4.5 Transaction and Gross Toll Revenue Forecasts

This section summarizes the forecasts of toll transactions and toll revenue based on the information provided in the preceding sections of this report. All previously discussed information regarding future transaction growth rates in the various Turnpike corridors (Chapter 3) as well as assumed toll rates, E-ZPass market share, etc. are all brought together to develop the following forecasts.

A more detailed approach was taken in developing the short term forecast over the next two calendar years (2018 and 2019). Forecasts were developed on monthly basis during these two years for passenger cars and commercial vehicles and for each Turnpike toll facility (Ticket System, Beaver Valley, Mon/Fayette Expressway, etc.). This accomplished two things. First it allowed us to take into account the most recent growth trends on all facilities. Second, it allowed us to create a "normal" calendar year by 2019, correcting for such things as adverse weather, the number of weekdays and weekend days in a month, and unique impacts such as the closure of the DRB in early 2017. Once a normalized 2019 was developed, the longer-term growth rates established through the socioeconomic analysis described in Chapter 3 were applied to it and all future years throughout the forecast period.

Table 4-4 shows the historical and near term forecast of toll transaction growth rates on the Turnpike in relation to actual and estimated GDP, GRP and GSP between 2010 and 2020. As shown, the recent low growth experience in 2017 (-0.9%) is estimated to continue over the short term, with total toll transactions forecasted to grow by only 0.0% in 2018 and -0.5% in 2019. This is in spite of estimated positive GDP, GRP and GSP growth (between 2.0% and 3.0%) over this same period. The low growth in 2017 was impacted by the 7-week closure of the DRB, but it is also likely that the effect of recent toll increases also dampened traffic growth. CDM Smith factored in continued low growth in 2018 and 2019 to account for the continued impact of toll increases. In addition, we have factored in negative growth in January and February 2019 to reflect more normal negative weather impacts. After 2019, we begin to factor in the longer-term growth rates established in Chapter 3, and factoring in the programed toll increases throughout the forecast period. Overall, total Turnpike System toll transaction growth is estimated to average just under 0.9% over the entire 30-year forecast period.

Table 4-4

Actual and Forecasted Measures of Commercial Activity and Growth in Total Turnpike System Transactions

Percent Change over Prior Year

Calendar Year	Gross Domestic Product Growth(1) (U.S.)	Gross Regional Product Growth(1) (NJ, NY, PA)	Gross State Product Growth(1) (PA)	PA Turnpike System Percent Transaction Growth(2)		
				Passenger Cars	Commercial Vehicles	All Vehicles
2010 (actual)	2.5%	2.6%	2.7%	1.0%	4.0%	1.3%
2011 (actual)	1.6	0.4	1.3	-1.1	1.0	-0.9
2012 (actual)	2.2	2.5	1.6	0.3	0.6	0.3
2013 (actual)	1.7	0.6	1.6	0.6	3.0	0.9
2014 (actual)	2.6	1.5	2.0	0.0	4.2	0.5
2015 (actual)	2.9	1.9	2.3	2.3	3.9	2.5
2016 (actual)	1.5	0.5	0.6	3.1	4.2	3.3
2017 (actual)	2.3	1.6	1.9	-1.1	0.2	-0.9
2018 (forecast)	3.0	3.0	3.0	-0.2	1.6	0.0
2019 (forecast)	2.6	2.0	2.2	-0.7	0.1	-0.5
2020 (forecast)	0.9	0.2	0.3	0.0	0.9	0.1

(1) The percent changes in U.S. GDP, GRP, and GSP are based on chained 2009 dollars. The U.S. GDP is actual through 2017. The GRP and GSP are actual through 2016. Actual data was obtained from the U.S. Bureau of Economic Analysis. Forecast data was from Moody's Analytics baseline forecast (April 2018 for regional, February 2018 for Pennsylvania).

Table 4-5 shows estimated Ticket System transactions and gross toll revenue through FY 2047-48. Actual data is shown for FY 2016-17 and for the first nine months of FY 2017-18 (through February 2018). As shown, total ticket toll transactions are estimated to increase from about 157.3 million in FY 2016-17 (the latest full year of actual experience) to just over 198.2 million by FY 2047-48; this represents a total increase over this period of 26.0% or an average annual growth rate of 0.75%. Annual gross toll revenue is estimated to increase from $1.0 billion in FY 2016-17 to just over $4.0 billion by FY 2047-48. This represents an average annual increase of about 4.6% and includes the impacts of normal growth, annual toll rate increases, and the impact of the I-95 Interchange.

Table 4-6 identifies the same transaction and gross toll revenue information for the Barrier System. As shown, total transactions are estimated to increase from about 43.2 million in FY 2016-17 to 62.1 million by FY 2047-48; this represents a total increase over this period of 43.7% or an average annual increase of about 1.18%. This is slightly greater than the rate of growth for the Ticket System but is positively impacted by the addition of the Southern Beltway extension to I-79 in January 2022. This adds two more mainline tolling zones to this corridor. Absent these two new tolling zones, average annual growth over the forecast period would have been about 0.70%. Estimated annual toll revenue is expected to increase from about $110.6 million in FY 2016-17 to $450.4 million by the end of the forecast period. This represents a 4.6% annual rate of increase. Again, this is influenced by normal growth, toll increases, and the impact of the Southern Beltway extension to I-79.

Table 4-7 identifies total combined transactions and gross toll revenue and also factors in estimated toll discounts and adjustments. The vast majority of the discounts and adjustments results from commercial account toll adjustments due to the Turnpike's volume discount program. The volume discount program allows for a 3.0% discount to be provided to accounts that accrue $20,000 or more in monthly tolls. Discounts and adjustments shown in Table 4-7 assume no further changes to the post-paid commercial volume discount program during the forecast period. The result is that the current forecasts have a negative adjustment applied for FY 2017-18 and beyond that equals 1.3% of the commercial vehicle gross toll revenue, which is based on the most recent 12 months of actual experience.

As shown in Table 4-7, total transactions increase from 200.5 million in FY 2016-17 to just over 260.3 million by FY 2047-48; this represents a total increase of about 30.0%, or an average annual increase of 0.85%, over the forecast period. Total net toll revenue, after discounts and adjustments, is estimated to grow from approximately $1.1 billion in FY 2016-17 to just under $4.5 billion by FY 2047-48, representing a 4.6% average annual rate of growth. This includes normal growth, toll increase impacts, additional revenue from the I-95 Interchange and Southern Beltway projects, and toll discounts and adjustments.

Table 4-5
Ticket System: Estimated Annual Transactions and Gross Toll Revenue (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year		Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2016-17	(2) (4)	135,128	22,179	157,307	$564,915	$439,495	$1,004,410
2017-18	(3)	134,129	22,408	156,537	598,105	472,972	1,071,077
2018-19	(5)	133,599	22,374	155,973	633,248	499,276	1,132,524
2019-20		133,412	22,527	155,939	671,305	531,859	1,203,164
2020-21		133,773	22,728	156,501	711,251	565,746	1,276,997
2021-22		134,685	22,978	157,663	751,554	599,878	1,351,432
2022-23		135,928	23,256	159,183	795,590	636,850	1,432,440
2023-24		137,132	23,532	160,664	841,671	676,000	1,517,670
2024-25		138,413	23,818	162,231	890,797	717,976	1,608,773
2025-26		139,936	24,125	164,061	940,670	760,445	1,701,115
2026-27		141,553	24,430	165,983	985,925	799,239	1,785,164
2027-28		143,137	24,720	167,857	1,027,955	835,336	1,863,291
2028-29		144,685	25,009	169,695	1,067,694	870,468	1,938,162
2029-30		146,203	25,298	171,501	1,108,561	906,942	2,015,504
2030-31		147,687	25,587	173,274	1,151,269	944,806	2,096,076
2031-32		149,157	25,875	175,033	1,197,183	984,113	2,181,296
2032-33		150,613	26,163	176,776	1,245,743	1,024,916	2,270,659
2033-34		152,018	26,451	178,469	1,295,726	1,067,273	2,362,999
2034-35		153,382	26,739	180,120	1,347,237	1,111,254	2,458,491
2035-36		154,707	27,027	181,734	1,400,330	1,156,926	2,557,256
2036-37		156,009	27,310	183,318	1,455,206	1,204,091	2,659,296
2037-38		157,224	27,584	184,808	1,511,294	1,252,670	2,763,964
2038-39		158,398	27,859	186,257	1,569,031	1,303,100	2,872,131
2039-40		159,554	28,134	187,688	1,628,713	1,355,455	2,984,168
2040-41		160,689	28,410	189,099	1,690,343	1,409,816	3,100,159
2041-42		161,796	28,687	190,483	1,753,937	1,466,264	3,220,202
2042-43		162,870	28,965	191,835	1,819,457	1,524,879	3,344,336
2043-44		163,916	29,244	193,160	1,887,030	1,585,753	3,472,783
2044-45		164,936	29,524	194,460	1,956,723	1,648,967	3,605,690
2045-46		165,928	29,805	195,733	2,028,563	1,714,605	3,743,168
2046-47		166,905	30,087	196,992	2,102,783	1,782,770	3,885,552
2047-48		167,869	30,371	198,240	2,179,492	1,853,568	4,033,060

(1) Annual toll rate increases are implemented in January of each year (see Table 4-2).
(2) Reflects actual traffic and revenue experience.
(3) Reflects actual experience through February 2018.
(4) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(5) Reflects the impacts for I-95 Interchange Stage 1 beginning in September 2018.

Table 4-6
Barrier Systems: Estimated Annual Transactions and Gross Toll Revenue (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

	Annual Traffic			Annual Gross Toll Revenue		
Fiscal Year	Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2016-17 (2) (4)	37,671	5,524	43,195	$73,872	$36,694	$110,566
2017-18 (3) (5)	38,035	5,955	43,989	78,464	41,223	119,687
2018-19 (6)	37,302	5,950	43,252	81,686	43,778	125,464
2019-20	37,065	6,020	43,084	86,357	47,391	133,748
2020-21	36,984	6,089	43,073	91,059	50,866	141,925
2021-22 (7)	39,380	6,423	45,803	97,662	54,886	152,548
2022-23	43,538	6,982	50,520	106,192	59,651	165,844
2023-24	44,579	7,159	51,738	112,616	63,672	176,288
2024-25	45,478	7,318	52,796	119,363	67,894	187,257
2025-26	46,198	7,448	53,646	126,061	71,996	198,058
2026-27	46,818	7,561	54,379	132,178	75,666	207,844
2027-28	47,202	7,641	54,843	137,722	78,999	216,721
2028-29	47,585	7,721	55,306	143,030	82,241	225,271
2029-30	47,945	7,799	55,744	148,412	85,603	234,015
2030-31	48,286	7,876	56,162	153,936	89,086	243,022
2031-32	48,619	7,952	56,571	159,617	92,690	252,308
2032-33	48,941	8,028	56,969	165,446	96,415	261,861
2033-34	49,254	8,103	57,357	171,451	100,275	271,726
2034-35	49,559	8,178	57,737	177,687	104,279	281,967
2035-36	49,855	8,253	58,108	184,160	108,434	292,594
2036-37	50,143	8,327	58,470	190,827	112,727	303,553
2037-38	50,420	8,400	58,820	197,668	117,147	314,815
2038-39	50,695	8,473	59,168	204,724	121,725	326,449
2039-40	50,969	8,546	59,516	212,023	126,474	338,497
2040-41	51,240	8,619	59,860	219,566	131,401	350,966
2041-42	51,505	8,692	60,198	227,337	136,507	363,845
2042-43	51,762	8,765	60,527	235,334	141,800	377,134
2043-44	52,013	8,837	60,850	243,568	147,287	390,855
2044-45	52,257	8,909	61,166	252,049	152,975	405,024
2045-46	52,494	8,981	61,475	260,776	158,871	419,647
2046-47	52,725	9,052	61,777	269,765	164,983	434,748
2047-48	52,951	9,124	62,075	279,034	171,319	450,353

(1) Annual toll rate increases are implemented in January of each year (see Table 4-2).
(2) Reflects actual traffic and revenue experience.
(3) Reflects actual experience through February 2018.
(4) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(5) Reflects Northeast Extension Barrier and PA I-576 conversion to cashless tolling beginning in April 2018.
(6) Reflects the impacts for I-95 Interchange Stage 1 beginning in September 2018.
(7) Reflects opening of the Southern Beltway between US 22 and I-79 beginning in January 2022.

Table 4-7
Total System: Estimated Annual Transactions and Gross Toll Revenue (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

		Annual Traffic			**Annual Gross Toll Revenue**		**Discounts**	
	Passenger	Commercial	Total	Passenger	Commercial	Total	**and**	**Net**
Fiscal Year	Cars	Vehicles	Vehicles	Cars	Vehicles	Vehicles	**Adjustments (8)**	**Toll Revenue**
2016-17 (2) (4)	172,799	27,703	200,501	$638,787	$476,188	$1,114,975	($3,915)	$1,111,061
2017-18 (3) (5)	172,164	28,363	200,527	676,570	514,194	1,190,764	(6,685)	1,184,080
2018-19 (6)	170,901	28,324	199,225	714,934	543,054	1,257,989	(7,060)	1,250,929
2019-20	170,477	28,547	199,024	757,662	579,250	1,336,913	(7,530)	1,329,382
2020-21	170,757	28,817	199,574	802,310	616,612	1,418,922	(8,016)	1,410,906
2021-22 (7)	174,066	29,401	203,467	849,216	654,764	1,503,980	(8,512)	1,495,468
2022-23	179,466	30,237	209,703	901,782	696,502	1,598,284	(9,055)	1,589,229
2023-24	181,712	30,691	212,402	954,287	739,671	1,693,958	(9,616)	1,684,343
2024-25	183,891	31,136	215,027	1,010,161	785,869	1,796,030	(10,216)	1,785,814
2025-26	186,134	31,573	217,707	1,066,731	832,441	1,899,172	(10,822)	1,888,350
2026-27	188,371	31,991	220,362	1,118,104	874,905	1,993,009	(11,374)	1,981,635
2027-28	190,339	32,361	222,700	1,165,677	914,335	2,080,013	(11,886)	2,068,126
2028-29	192,271	32,730	225,001	1,210,723	952,709	2,163,433	(12,385)	2,151,047
2029-30	194,148	33,097	227,245	1,256,973	992,545	2,249,518	(12,903)	2,236,615
2030-31	195,974	33,463	229,436	1,305,205	1,033,893	2,339,098	(13,441)	2,325,657
2031-32	197,776	33,827	231,603	1,356,800	1,076,804	2,433,604	(13,998)	2,419,605
2032-33	199,554	34,191	233,745	1,411,190	1,121,330	2,532,520	(14,577)	2,517,943
2033-34	201,272	34,554	235,826	1,467,177	1,167,548	2,634,725	(15,178)	2,619,547
2034-35	202,940	34,917	237,857	1,524,924	1,215,534	2,740,458	(15,802)	2,724,656
2035-36	204,562	35,280	239,842	1,584,489	1,265,360	2,849,849	(16,450)	2,833,400
2036-37	206,151	35,637	241,788	1,646,032	1,316,818	2,962,850	(17,119)	2,945,731
2037-38	207,644	35,984	243,628	1,708,962	1,369,817	3,078,779	(17,808)	3,060,971
2038-39	209,093	36,332	245,424	1,773,755	1,424,825	3,198,580	(18,523)	3,180,057
2039-40	210,524	36,680	247,204	1,840,736	1,481,930	3,322,666	(19,265)	3,303,400
2040-41	211,929	37,030	248,959	1,909,909	1,541,216	3,451,125	(20,036)	3,431,090
2041-42	213,302	37,379	250,681	1,981,275	1,602,771	3,584,046	(20,836)	3,563,210
2042-43	214,632	37,730	252,362	2,054,791	1,666,679	3,721,470	(21,667)	3,699,804
2043-44	215,929	38,081	254,010	2,130,598	1,733,040	3,863,638	(22,530)	3,841,108
2044-45	217,194	38,433	255,627	2,208,771	1,801,942	4,010,714	(23,425)	3,987,289
2045-46	218,422	38,786	257,208	2,289,339	1,873,476	4,162,815	(24,355)	4,138,460
2046-47	219,630	39,140	258,770	2,372,548	1,947,752	4,320,300	(25,321)	4,294,979
2047-48	220,821	39,495	260,315	2,458,526	2,024,887	4,483,412	(26,324)	4,457,089

(1) Annual toll rate increases are implemented in January of each year (see Table 4-2).
(2) Reflects actual traffic and revenue experience.
(3) Reflects actual experience through February 2018.
(4) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(5) Reflects Northeast Extension Barrier and PA I-576 conversion to cashless tolling beginning in April 2018.
(6) Reflects the impacts for I-95 Interchange Stage 1 beginning in September 2018.
(7) Reflects opening of the Southern Beltway between US 22 and I-79 beginning in January 2022.
(8) No changes are assumed in the commercial discount program throughout the forecast period. Impacts are assumed to remain constant at -1.3% of total gross commercial toll revenue, which is based on actual experience during the most recent fiscal year.

Fiduciary Disclaimer

Current accepted professional practices and procedures were used in the development of these updated traffic and revenue forecasts. However, as with any forecast of the future, there may be differences between forecasted and actual results caused by events and circumstances beyond the control of CDM Smith. In formulating its forecasts, CDM Smith has reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the PTC and other local and state agencies. CDM Smith also has relied upon the reasonable assurances of some independent parties and is not aware of any facts that would make such information misleading.

CDM Smith has 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 to 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 state and local agencies, including the PTC. These estimates and projections may not be indicative of actual or future values and are therefore subject to substantial uncertainty. Future developments 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 forecasts or projections contained within this report.

While CDM Smith believes that some of the projections or other forward-looking statements contained within the report are based on reasonable assumptions as of the date in the report, 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 this report, 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 the PTC and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to PTC with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to the PTC. PTC 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 G

FORM OF CONTINUING DISCLOSURE AGREEMENT

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CONTINUING DISCLOSURE AGREEMENT

PENNSYLVANIA TURNPIKE COMMISSION
TURNPIKE REVENUE REFUNDING BONDS, SERIES A OF 2022

This Continuing Disclosure Agreement ("***Disclosure Agreement***") is executed and delivered this 28th day of September, 2022, by the Pennsylvania Turnpike Commission (the "***Commission***") in connection with the issuance and sale by the Commission of $254,730,000 aggregate principal amount of its Turnpike Revenue Refunding Bonds, Series A of 2022 (the "***2022A Bonds***").

In consideration of the mutual covenants, promises and agreements contained herein and intending to be legally bound hereby, the Commission agrees as follows:

SECTION 1. DEFINITIONS

In this Disclosure Agreement and any agreement supplemental hereto (except as otherwise expressly provided or unless the context clearly otherwise requires), terms defined in the recitals hereto shall have the meanings set forth therein, and the following terms shall have the meanings specified below:

"***Annual Filing Date***" means the November 30th immediately following the preceding Fiscal Year ended May 31st, commencing with the Fiscal Year ending May 31, 2022, and each anniversary thereof. If November 30th falls on a day that is not a Business Day, the Annual Filing Date shall be the first Business Day thereafter. The Commission may adjust the Annual Filing Date upon change of its Fiscal Year by providing written notice of such change and the new Annual Filing Date to the Dissemination Agent and the Repository, provided that the period of time between the end of the new Fiscal Year and the new Annual Filing Date does not exceed the period of time between the end of the existing Fiscal Year and the current Annual Filing Date.

"***Business Day***" means a day other than: (a) a Saturday or a Sunday, (b) a day on which banks are required or authorized to be closed, (c) a day on which the Commission is required or authorized to be closed, or (d) a day on which the New York Stock Exchange is closed.

"***Dissemination Agent***" means Digital Assurance Certification, L.L.C., acting in its capacity as the initial Dissemination Agent with respect to the continuing disclosure obligations set forth herein, or any successor Dissemination Agent designated in writing by the Commission.

"***EMMA***" means the Electronic Municipal Market Access system, a service of the MSRB, or any successor thereto.

"***MSRB***" means the Municipal Securities Rulemaking Board established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934, as amended.

"***Official Statement***" shall mean the Official Statement dated September 13, 2022 with respect to the public offering of the 2022A Bonds.

"***Registered Owner" or "Owners***" shall mean the person or persons in whose name a 2022 Bond is registered on the books of the Commission kept for that purpose. For so long as the 2022A Bonds are registered in the name of the Securities Depository or its nominee, "***Registered Owner***" shall mean and include the holder of a book-entry credit evidencing an interest in the 2022A Bonds, including holders of book-entry credits who may file their names and addresses with the Commission for the purposes of receiving notices and giving direction under this Disclosure Agreement.

"***Repository***" means each entity authorized and approved by the SEC from time to time to act as a repository for purposes of complying with the Rule. As of the date hereof, the only Repository recognized by the SEC for such purpose is the MSRB, which currently accepts continuing disclosure filings through the EMMA website at http://emma.msrb.org.

"***Representative***" shall mean, BofA Securities, Inc., as representative of itself and the other Underwriters of the 2022A Bonds.

"***Rule***" shall mean Rule 15c2-12 promulgated by the SEC under the Securities Exchange Act of 1934, as amended.

"***SEC***" means the United States Securities and Exchange Commission.

"***Securities Depository***" shall mean The Depository Trust Company, New York, New York, or its nominee, Cede & Co., or any successor thereto.

"***Underwriters***" shall mean the underwriters of the 2022A Bonds, as set forth in the Official Statement.

SECTION 2. AUTHORIZATION AND PURPOSE OF DISCLOSURE AGREEMENT

This Disclosure Agreement is authorized to be executed and delivered by the Commission in order to enable the Underwriter to comply with the requirements of the Rule. This Disclosure Agreement relates solely to the 2022A Bonds.

SECTION 3. ANNUAL FINANCIAL INFORMATION

The Commission agrees to provide or cause to be provided no later than the Annual Filing Date to the MSRB via EMMA, annual financial information (the "***Annual Financial Information***"), consisting of the following: (a) financial and operating data of the type set forth in the Official Statement in Tables I, II and III of APPENDIX A – "THE PENNSYLVANIA TURNPIKE COMMISSION – CERTAIN FINANCIAL INFORMATION"; (b) the Commission's audited financial statements for such fiscal year; and (c) a summary of any material legislative or regulatory developments affecting Act 44 and/or Act 89 (each as defined in the Official Statement), since the Commission's most recent Annual Financial Information filing.

The Commission's audited financial statements shall be prepared in accordance with generally accepted accounting principles consistently applied as in effect from time to time; provided, however, that the Commission reserves the right to change the basis upon which its audited financial statements are prepared at any time and from time to time. Should the Commission exercise its right to change the basis upon which its audited financial statements are prepared as provided in the immediately preceding sentence, it shall provide notice of any such accounting change to the MSRB via EMMA, which notice shall include a reference to the specific federal or state law or regulation requiring or permitting such accounting change and a description of such change. In the event that audited financial statements are not available by the Annual Filing Date, the Annual Financial Information will contain unaudited financial statements and the audited financial statements will be provided for filing when available.

Any or all of the items listed above may be included by specific reference to documents previously filed with the MSRB via EMMA, or the SEC, including, but not limited to, official statements of debt issues with respect to the Commission. If the document incorporated by reference is a final official statement, it must be available from the Repository. The Commission will clearly identify each such document so incorporated by reference.

SECTION 4. EVENT DISCLOSURE

The Commission agrees that it shall provide, in a timely manner, not to exceed ten business days after occurrence, to the MSRB via EMMA on such form and in such format as shall be required by the MSRB for such filings, notice of any of the following events with respect to the 2022A Bonds within the meaning of the Rule (each a "***Reportable Event***");

(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 2022A Bonds, or other material events affecting the tax status of the 2022A Bonds;

(7) Modifications to the rights of the holders of the 2022A Bonds, if material;

(8) Bond calls, if material, and tender offers;

(9) Defeasance of all or any portion of the 2022A Bonds;

(10) Release, substitution or sale of property securing repayment of the 2022A Bonds, if material;

(11) Rating changes;

(12) Bankruptcy, insolvency, receivership or similar event of the Commission[1];

(13) The consummation of a merger, consolidation, or acquisition involving the Commission or the sale of all or substantially all of the assets of the Commission, 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;

(14) Appointment of a successor or additional trustee or the change of name of the trustee, if material;

(15) Incurrence of a financial obligation of the Commission, if material, or agreement to covenants, events of default, remedies, priority rights or other similar terms of a financial obligation of the Commission, any of which affects holders of the 2022A Bonds, if material; and

(16) Default, event of acceleration, termination event, modification of terms or other similar events under the terms of a financial obligation of the Commission, any of which reflect financial difficulties.

The foregoing sixteen Reportable Events are quoted from the Rule. The SEC requires the listing of the Reportable Events set forth in clauses (1) through (16) above although some of such events may not be applicable to the 2022A Bonds.

SECTION 5. <u>NOTICE OF FAILURE TO PROVIDE DISCLOSURE</u>

The Commission covenants to provide in a timely manner to the MSRB notice of a failure (of which the Commission has knowledge) to provide the required Annual Financial Information on or before the Annual Filing Date.

SECTION 6. <u>AMENDMENT; WAIVER</u>

The Commission may amend this Disclosure Agreement and waive any of the provisions hereof, but no such amendment or waiver shall be executed and effective unless (a) the amendment or waiver is made in connection with a change in legal requirements, change in law or change in the identity, nature or status of the Commission or the governmental operations conducted by the Commission, (b) this Disclosure Agreement, as modified by the amendment or waiver, would have complied with the requirements of the Rule at the time of original issuance of the 2022A Bonds, taking into account any interpretations of the Rule provided by the SEC, and (c) the amendment or waiver does not materially impair the interests of the Registered Owners of the 2022A Bonds.

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[1] This event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person.

Evidence of compliance with the foregoing conditions shall be satisfied by delivery to the Commission of an opinion of counsel having recognized skill and experience in the issuance of municipal securities and federal securities law to the effect that the amendment or waiver satisfies the conditions set forth in the preceding sentence. Notice of any amendment or waiver shall be filed by the Commission with the MSRB (via EMMA) and shall be sent to the Registered Owners of the 2022A Bonds. The Commission reserves the right to terminate its obligation to provide Annual Financial Information and notices of Reportable Events, as set forth above, if and when the Commission no longer remains an obligated person with respect to the 2022A Bonds within the meaning of the Rule.

SECTION 7. OTHER INFORMATION

Nothing in this Disclosure Agreement shall preclude the Commission from disseminating any other information with respect to the Commission or the 2022A Bonds, using the means of communication provided in this Disclosure Agreement or otherwise. Any election by the Commission to furnish any information not specifically required pursuant to this Disclosure Agreement, or by the means of communication provided for herein, shall not be deemed to be an additional contractual undertaking and the Commission shall have no obligation to furnish such information in any subsequent notice or by the same means of communication.

SECTION 8. BENEFIT; DEFAULT

The Commission acknowledges that its agreement to the disclosure undertaking set forth herein pursuant to the Rule is intended to be for the benefit of the Registered Owners from time to time of the 2022A Bonds, and shall be enforceable by such Registered Owners; provided that the right to enforce the provisions of this undertaking shall be limited to a right to obtain specific enforcement of the Commission's obligations under this Disclosure Agreement and any failure by the Commission to comply with the provisions of this undertaking shall not be an Event of Default under the 2022A Bonds or the Amended and Restated Trust Indenture dated as of March 1, 2001, as amended and supplemented through the date hereof, including being supplemented with respect to the 2022A Bonds, by that certain Supplemental Trust Indenture No. 64 dated as of September 1, 2022, and as it may be further amended and supplemented from time to time, between the Commission and U.S. Bank Trust Company, National Association, as trustee. In the event the Commission fails to comply with any provision of this Disclosure Agreement, any Registered Owner of the 2022A Bonds shall have the right, by mandamus, suit, action or proceeding at law or in equity, to compel the Commission to perform each and every term, provision and covenant contained in this Disclosure Agreement.

SECTION 9. FILING WITH EMMA; OTHER FILINGS

All filings required hereby shall be done electronically through EMMA in the form specified by the MSRB and accompanied by identifying information as prescribed by the MSRB or as otherwise specified by the MSRB.

In addition to filings through EMMA, the Commission may file any of the information necessary to be filed hereunder with such other electronic systems and entities as are approved by the SEC by interpretive letter or "no action" letter for receipt of such information in compliance with the requirements of paragraph (b)(5) of the Rule.

SECTION 10. TERM OF DISCLOSURE AGREEMENT

This Disclosure Agreement shall terminate (a) upon payment or provision for payment in full of the 2022A Bonds, or (b) upon repeal or rescission of Section (b)(5) of the Rule, or (c) an opinion of counsel having nationally recognized skill and experience in the issuance of municipal securities and federal securities law to the effect that Section (b)(5) of the Rule is invalid or unenforceable.

SECTION 11. BENEFICIARIES

This Disclosure Agreement shall inure solely to the benefit of the Commission, the Underwriters and the Registered Owners from time to time of the 2022A Bonds, and nothing herein contained shall confer any right upon any other person.

SECTION 12. NO PERSONAL RECOURSE

No personal recourse shall be had for any claim based on this Disclosure Agreement against any member, officer, or employee, past, present or future, of the Commission, or of any successor body.

SECTION 13. ENTIRE AGREEMENT

This Disclosure Agreement sets forth the entire understanding and agreement of the Commission with respect to the matters herein contemplated and no modification or amendment of or supplement to this Disclosure Agreement shall be valid or effective unless the same is in writing and signed by the parties hereto.

SECTION 14. COUNTERPARTS; ELECTRONIC SIGNATURES

This Disclosure Agreement may be executed in counterparts with the same force and effect as if all signatures appeared on a single instrument. The parties to this Disclosure Agreement acknowledge that any party may execute this Disclosure Agreement pursuant to digital or electronic means. Notwithstanding any time stamp accompanying a digital or electronic signature indicating an earlier time, this Disclosure Agreement shall be effective upon the delivery to the respective parties of a fully-executed version of this Disclosure Agreement.

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SECTION 15. GOVERNING LAW

The internal laws of the Commonwealth of Pennsylvania shall govern the construction and interpretation of this Disclosure Agreement; provided that, to the extent that the SEC, the MSRB or any other federal or state agency or regulatory body with jurisdiction in connection with the 2022A Bonds shall have promulgated any rule or regulation governing the subject matter hereof (including without limitation the Rule), this Disclosure Agreement shall be interpreted and construed in a manner consistent therewith.

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SIGNATURE PAGE TO
CONTINUING DISCLOSURE AGREEMENT

PENNSYLVANIA TURNPIKE COMMISSION
TURNPIKE REVENUE REFUNDING BONDS, SERIES A OF 2022

IN WITNESS WHEREOF, this Continuing Disclosure Agreement has been executed and delivered as of the day and year first written above.

PENNSYLVANIA TURNPIKE COMMISSION

By:____________________________________
Name: Richard C. Dreher
Title: Chief Financial Officer

DESCRIPTION OF PURCHASED REFUNDED BONDS

Bond		Maturity/Sinking Fund Redemption Date	Interest Rate	Par Amount
Turnpike Revenue Bonds, Series C of 2013:				
	2043 Term Bond	12/1/2035	5.000%	$11,185,000*
	2043 Term Bond	12/1/2036	5.000%	12,175,000*
	2043 Term Bond	12/1/2037	5.000%	515,000*
Turnpike Revenue Bonds, Series A of 2014A:				
	Serial Bond	12/1/2029	5.000%	2,915,000
	Serial Bond	12/1/2031	5.000%	5,230,000
	Serial Bond	12/1/2032	5.000%	5,755,000
	Serial Bond	12/1/2033	5.000%	1,395,000
Turnpike Revenue Bonds, Series C of 2014:				
	Serial Bond	12/1/2029	5.000%	6,050,000
	Serial Bond	12/1/2030	5.000%	6,725,000
	Serial Bond	12/1/2031	5.000%	10,535,000
	Serial Bond	12/1/2032	5.000%	10,950,000
	Serial Bond	12/1/2033	5.000%	8,795,000
Turnpike Revenue Refunding Bonds, Series of 2014:				
	Serial Bond	12/1/2031	5.000%	42,050,000
	Serial Bond	12/1/2032	5.000%	42,665,000
	Serial Bond	12/1/2033	5.000%	56,115,000
Turnpike Revenue Bonds, Series A-1 of 2015:				
	Serial Bond	12/1/2030	5.000%	6,070,000
	Serial Bond	12/1/2031	5.000%	9,165,000
	Serial Bond	12/1/2032	5.000%	8,240,000
Turnpike Revenue Bonds, Series B of 2015:				
	Serial Bond	12/1/2032	5.000%	5,885,000
Turnpike Revenue Refunding Bonds, First Series of 2020 (Federally Taxable):				
	Serial Bond	12/1/2026	2.355%	95,000
	Serial Bond	12/1/2029	2.633%	10,000
	Serial Bond	12/1/2032	2.933%	1,090,000
	Serial Bond	12/1/2033	2.983%	650,000
	2039 Term Bond	12/1/2035	3.337%	1,630,000*
	2043 Term Bond	12/1/2040	3.437%	11,035,000*
	2043 Term Bond	12/1/2041	3.437%	6,895,000*

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* This amount will be credited against the obligation of the Commission to redeem term bonds on such scheduled mandatory redemption dates.

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