NEW ISSUE **RATINGS: (See "RATINGS" herein)**
Book Entry Only

In the opinion of Squire Patton Boggs (US) LLP, Bond Counsel, under existing law (i) assuming continuing compliance with certain covenants and the accuracy of certain representations, interest on the 2021 Senior Lien 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, and any profit made on the sale, exchange or other disposition of, the 2021 Senior Lien Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. Interest on the 2021 Senior Lien 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.

$135,010,000
STATE OF OHIO
TURNPIKE REVENUE BONDS,
2021 SERIES A

ISSUED BY THE
OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

Dated: Date of Delivery **Due: February 15 in the years shown herein**

The State of Ohio Turnpike Revenue Bonds, 2021 Series A (the "2021 Senior Lien Bonds") are being issued by the Ohio Turnpike and Infrastructure Commission, a body both corporate and politic of the State of Ohio (the "Commission"), under the Amended and Restated Master Trust Agreement (Eighteenth Supplemental Trust Agreement) dated as of April 8, 2013, as amended and supplemented by various supplemental trust agreements, including the Twenty-Fourth Supplemental Trust Agreement dated as of February 15, 2021 (collectively, the "Senior Lien Trust Agreement"), each between the Commission and The Huntington National Bank, Columbus, Ohio, as trustee (the "Senior Lien Trustee"). The 2021 Senior Lien Bonds are being issued for the purpose of providing funds to finance costs of making certain capital improvements to the Turnpike System (as hereinafter defined), to fund a required increase in the Senior Lien Debt Service Reserve Requirement, and to pay costs of issuance of the 2021 Senior Lien Bonds.

The 2021 Senior Lien Bonds will be dated the date of initial issuance and delivery thereof and will bear interest from their delivery date at the rates shown on the inside front cover, calculated on the basis of a year of 360 days consisting of twelve 30 day months. The 2021 Senior Lien Bonds shall be issued in the denominations of $5,000 and integral multiples thereof. The inside cover page of this Official Statement contains information concerning the maturity schedules, principal amounts, interest rates, prices and yields of the 2021 Senior Lien Bonds.

The 2021 Senior Lien Bonds are subject to redemption prior to maturity as described herein. See "DESCRIPTION OF THE 2021 SENIOR LIEN BONDS - Redemption of 2021 Senior Lien Bonds" herein.

THE 2021 SENIOR LIEN BONDS AND THE INTEREST THEREON WILL BE SPECIAL OBLIGATIONS OF THE STATE OF OHIO ISSUED BY THE COMMISSION AND WILL BE PAYABLE SOLELY FROM THE SYSTEM PLEDGED REVENUES. NOTHING IN THE 2021 SENIOR LIEN BONDS, THE SENIOR LIEN TRUST AGREEMENT, OR ANY OTHER DOCUMENT WILL REPRESENT OR CONSTITUTE GENERAL OBLIGATIONS, DEBT OR BONDED INDEBTEDNESS OF THE COMMISSION, THE STATE OF OHIO OR ANY POLITICAL SUBDIVISION OR AGENCY THEREOF, AND THE HOLDERS OR OWNERS OF THE 2021 SENIOR LIEN BONDS WILL NOT BE GIVEN THE RIGHT, AND HAVE NO RIGHT, TO HAVE EXCISE TAXES, AD VALOREM TAXES OR OTHER TAXES LEVIED BY THE STATE OF OHIO OR THE TAXING AUTHORITY OF ANY OTHER POLITICAL SUBDIVISION FOR THE PAYMENT OF THE PRINCIPAL OF OR INTEREST OR REDEMPTION PREMIUM, IF ANY, ON THE 2021 SENIOR LIEN BONDS. NEITHER THE GENERAL CREDIT, FAITH NOR RESOURCES OF THE COMMISSION OR THE STATE OF OHIO, OR ANY POLITICAL SUBDIVISION OR AGENCY THEREOF, ARE PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR INTEREST OR REDEMPTION PREMIUM, IF ANY, ON THE 2021 SENIOR LIEN BONDS.

The 2021 Senior Lien Bonds will be payable from and secured by a pledge of and a senior lien on System Pledged Revenues, as defined in the Senior Lien Trust Agreement, on parity with other outstanding and any additional Senior Lien Bonds (as herein defined) that may be issued under the Senior Lien Trust Agreement. See "SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS" herein.

The 2021 Senior Lien Bonds are offered when, as and if issued and received by the Underwriters, subject to prior sale and to withdrawal or modification of the offer without notice. Certain legal matters relating to the issuance of the 2021 Senior Lien Bonds are subject to the approving opinions of Squire Patton Boggs (US) LLP, Bond Counsel (see "LEGAL MATTERS" and "TAX MATTERS" herein). Certain legal matters will be passed upon for the Commission by its General Counsel, Jennifer L. Stueber, Esq. Certain legal matters will be passed upon for the Underwriters by Tucker Ellis LLP. The 2021 Senior Lien Bonds are expected to be available for delivery through The Depository Trust Company on or about February 16, 2021.

Citigroup **Wells Fargo Securities**

Huntington Capital Markets **Jefferies LLC** **Loop Capital Markets** **Stifel**

Date: January 26, 2021

$135,010,000
STATE OF OHIO
TURNPIKE REVENUE BONDS, 2021 SERIES A

$60,170,000 5.00% Term Bond Maturing February 15, 2046, Price 132.054, Yield 1.530%* CUSIP** 67760HNJ6

$74,840,000 5.00% Term Bond Maturing February 15, 2051, Price 131.404, Yield 1.590%* CUSIP** 67760HNK3

* Priced at the stated yield to the February 15, 2031 optional redemption date at a redemption price of 100%.

** CUSIP (Committee on Uniform Securities Identification Procedures) numbers have been assigned by an organization not affiliated with the Commission or the Underwriters, and such parties are not responsible for the selection or use of the CUSIP numbers. The CUSIP numbers are included solely for the convenience of bondholders and no representation is made as to the correctness of such CUSIP numbers. CUSIP numbers assigned to securities may be changed during the term of such securities based on a number of factors including, but not limited to, the refunding or defeasance of such issue or the use of secondary market financial products. None of the Commission or the Underwriters has agreed to, and there is no duty or obligation to, update this Official Statement to reflect any change or correction in the CUSIP numbers set forth above.

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

MEMBERS

Name	Title	Membership Term Expires
Jerry N. Hruby	Chairman*	6/30/21
Timothy J. Paradiso	Vice-Chairman*	6/30/23
Sandra K. Barber	Secretary-Treasurer*	6/30/24
Vacant	Member	6/30/25
Guy C. Coviello	Member	6/30/23
Vickie Eaton Johnson	Member	6/30/22
Jack Marchbanks, Ph.D.	Ex-Officio Member	(a)
Kimberly Murnieks	Ex-Officio Non-Voting Member	(b)
Sen. Rob McColley	Non-Voting Member	(c)
Vacant	Non-Voting Member	(d)

* Officers are elected for four-year terms; the current terms expire on June 30, 2023.
(a) While Director of Ohio Department of Transportation
(b) While Director of Office of Budget and Management
(c) Appointed by President of Ohio Senate
(d) Appointed by Speaker of Ohio House of Representatives

EXECUTIVE STAFF

FERZAN M. AHMED, P.E., Executive Director
JENNIFER L. STUEBER, General Counsel
MARTIN S. SEEKELY, Deputy Executive Director, Chief Financial Officer/Comptroller
MATTHEW COLE, Director of Administration
ANTHONY YACOBUCCI, P.E., Chief Engineer
DAVID J. MILLER, Director of Audit and Internal Control
LAURIE DAVIS, Director of Toll Operations
ADAM L. GREENSLADE, Director of Governmental Affairs, Marketing and Communications
CHRISS POGORELC, Chief Information Officer
ANDREW HERBERGER, Director of Service Plaza Operations

BOND COUNSEL

SQUIRE PATTON BOGGS (US) LLP
Cleveland, Ohio

MUNICIPAL ADVISOR

PFM FINANCIAL ADVISORS LLC
Cleveland, Ohio

TRUSTEE

THE HUNTINGTON NATIONAL BANK
Columbus, Ohio

INDEPENDENT AUDITORS

PLANTE & MORAN, PLLC
Columbus, Ohio

CONSULTING ENGINEERS

AECOM TECHNICAL SERVICES, INC.
Akron, Ohio

TRAFFIC CONSULTANT

STANTEC CONSULTING SERVICES, INC.
Cleveland, Ohio

This Official Statement does not constitute an offering of any security other than the original offering of bonds (the "2021 Senior Lien Bonds") of the State of Ohio (the "State") by the Ohio Turnpike and Infrastructure Commission (the "Commission") identified on the cover hereof. No person has been authorized by the State or the Commission to give any information or to make any representation, other than that contained in this Official Statement, and if given or made, such other information or representation not so authorized must not be relied upon as having been given or authorized by the Commission or the State. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, and there shall not be any sale of the 2021 Senior Lien Bonds by any person in any jurisdiction in which it is unlawful to make such offer, solicitation or sale.

The information and expressions of opinions 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 the financial position or other aspects of the Commission since the date hereof.

The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters 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 do not guarantee the accuracy or completeness of such information.

THIS OFFICIAL STATEMENT, INCLUDING THE EXHIBITS, CONTAINS FORECASTS, PROJECTIONS AND ESTIMATES THAT ARE BASED ON CURRENT EXPECTATIONS OR ASSUMPTIONS. 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. 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 INCLUDE, AMONG OTHERS, GENERAL ECONOMIC AND BUSINESS CONDITIONS, CHANGES IN POLITICAL, SOCIAL AND ECONOMIC CONDITIONS, REGULATORY INITIATIVES AND COMPLIANCE WITH GOVERNMENTAL REGULATIONS, LITIGATION AND VARIOUS OTHER EVENTS, CONDITIONS AND CIRCUMSTANCES, MANY OF WHICH ARE BEYOND THE CONTROL OF THE COMMISSION. THESE FORWARD-LOOKING STATEMENTS SPEAK ONLY AS OF THE DATE OF THIS OFFICIAL STATEMENT. THE COMMISSION DOES NOT PLAN TO ISSUE ANY UPDATE OR REVISION TO ANY FORWARD-LOOKING STATEMENT CONTAINED HEREIN TO REFLECT ANY CHANGE IN THE COMMISSION'S EXPECTATIONS WITH REGARD THERETO OR ANY CHANGE IN EVENTS, CONDITIONS OR CIRCUMSTANCES ON WHICH ANY SUCH STATEMENT IS BASED, SUBJECT TO ITS CONTRACTUAL OBLIGATIONS OF CONTINUING DISCLOSURE HEREIN.

THE 2021 SENIOR LIEN BONDS HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS OFFICIAL STATEMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS THAT STABILIZE OR MAINTAIN THE MARKET PRICES OF THE 2021 SENIOR LIEN BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

The 2021 Senior Lien Bonds, like all obligations of state and local governments or their agencies and authorities, are subject to changes in value due to changes in the condition of the market for government obligations or changes in the financial position of the Commission due to the economy or otherwise. It is possible under certain market or economic conditions, or if the financial condition of the Commission should change, that the market price of the 2021 Senior Lien Bonds could be adversely affected. With regard to the risk involved in a loss of the exemption of the 2021 Senior Lien Bonds, and the income thereon, from Ohio taxation, see "INVESTMENT CONSIDERATIONS – Changes in Ohio Tax Law" herein. With regard to the risk involved in a downward revision or withdrawal of the ratings for the 2021 Senior Lien Bonds, see "RATINGS" herein.

TABLE OF CONTENTS

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OFFICIAL STATEMENT

$135,010,000
STATE OF OHIO
TURNPIKE REVENUE BONDS,
2021 SERIES A

ISSUED BY THE
OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

INTRODUCTION

This Official Statement has been prepared by the Ohio Turnpike and Infrastructure Commission (the "Commission") in connection with the original issuance and sale by the Commission of the $135,010,000 State of Ohio Turnpike Revenue Bonds, 2021 Series A identified on the cover page hereof (the "2021 Senior Lien Bonds").

All financial and other information presented herein has been provided by the Commission from its records, except for information expressly attributed to other sources (e.g. information relating to the Ohio Department of Transportation). The presentation of information, including tables of receipts from tolls and other sources, is intended to show recent historic information, and is not intended to indicate future or continuing trends in the financial position or other aspects of the Commission. No representation is made that past experience, as might be shown by such financial and other information, will necessarily continue or be repeated in the future.

This Official Statement should be considered in its entirety and no subject discussed should be considered less important than any other subject by reason of its location in the text.

For certain information regarding the impact of the COVID-19 pandemic on the Commission, see below "Response to the COVID-19 Pandemic" and "TOLLS AND TOLL COLLECTION – Recent Impacts – Monthly Transactions and Monthly Toll Revenues."

Terms used in this Official Statement and not otherwise defined shall have the meanings set forth for such terms in the GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT attached to this Official Statement as Exhibit A.

Ohio Turnpike and Infrastructure Commission

The Commission (formerly the Ohio Turnpike Commission) is a body both corporate and politic of the State of Ohio (the "State") created by the Ohio Turnpike Act (the "Act") with the power to construct, operate and maintain the Ohio Turnpike System (herein, the "Turnpike System," as described below) and to finance Infrastructure Projects (as hereinafter defined) authorized by Amended Substitute House Bill 51 ("H.B. 51") as described below. See "THE COMMISSION – The Commission's Role in the Ohio Jobs and Transportation Plan" herein. The Commission's composition, powers, duties, functions, duration and all other attributes are derived from the Act, as amended and supplemented from time to time. See "THE COMMISSION" herein.

Purpose of the Senior Lien Bonds

The proceeds of the 2021 Senior Lien Bonds will be used (i) to provide funds required to pay and reimburse costs of making certain capital improvements to the Turnpike System (as hereinafter defined), (ii) to fund a debt service reserve fund and (iii) to pay costs of issuance of the 2021 Senior Lien Bonds. See "PLAN OF FINANCE" and "SOURCES AND USES OF PROCEEDS" herein.

Senior Lien Trust Agreement

The 2021 Senior Lien Bonds are being issued pursuant to that certain Amended and Restated Master Trust Agreement (Eighteenth Supplemental Trust Agreement) dated as of April 8, 2013 (the "Master Senior Lien Trust Agreement"), between the Commission and The Huntington National Bank, as Trustee (the "Senior Lien Trustee"), as amended and supplemented by various supplemental trust agreements, including the Twenty-Fourth Supplemental Trust Agreement dated as of February 15, 2021 (collectively, the "Senior Lien Trust Agreement") and a resolution adopted by the Commission on December 21, 2020.

Interest Payment Dates on 2021 Senior Lien Bonds

Interest on the 2021 Senior Lien Bonds is payable on each February 15 and August 15, commencing on August 15, 2021 (each an "Interest Payment Date" with respect to the 2021 Senior Lien Bonds).

Redemption

The 2021 Senior Lien Bonds are subject to optional redemption and mandatory sinking fund redemption prior to maturity under certain circumstances as more fully set forth herein. See "DESCRIPTION OF THE 2021 SENIOR LIEN BONDS - Redemption of 2021 Senior Lien Bonds."

Limitation

THE 2021 SENIOR LIEN BONDS AND THE INTEREST THEREON WILL BE SPECIAL OBLIGATIONS OF THE STATE OF OHIO ISSUED BY THE COMMISSION AND WILL BE PAYABLE SOLELY FROM THE SYSTEM PLEDGED REVENUES. NOTHING IN THE 2021 SENIOR LIEN BONDS, THE SENIOR LIEN TRUST AGREEMENT, OR ANY OTHER DOCUMENT WILL REPRESENT OR CONSTITUTE GENERAL OBLIGATIONS, DEBT OR BONDED INDEBTEDNESS OF THE COMMISSION, THE STATE OF OHIO OR ANY POLITICAL SUBDIVISION OR AGENCY THEREOF, AND THE HOLDERS OR OWNERS OF THE 2021 SENIOR LIEN BONDS WILL NOT BE GIVEN THE RIGHT, AND HAVE NO RIGHT, TO HAVE EXCISE TAXES, AD VALOREM TAXES OR OTHER TAXES LEVIED BY THE STATE OF OHIO OR THE TAXING AUTHORITY OF ANY OTHER POLITICAL SUBDIVISION FOR THE PAYMENT OF THE PRINCIPAL OF OR INTEREST OR REDEMPTION PREMIUM, IF ANY, ON THE 2021 SENIOR LIEN BONDS. NEITHER THE GENERAL CREDIT, FAITH NOR RESOURCES OF THE COMMISSION OR THE STATE OF OHIO, OR ANY POLITICAL SUBDIVISION OR AGENCY THEREOF, ARE PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR INTEREST OR REDEMPTION PREMIUM, IF ANY, ON THE 2021 SENIOR LIEN BONDS.

Security for the 2021 Senior Lien Bonds

The 2021 Senior Lien Bonds will be equally and ratably secured on parity with other outstanding and any additional Senior Lien Bonds, which are secured equally and ratably by a lien on and pledge of the System Pledged Revenues.

The 2021 Senior Lien Bonds are further secured by a first pledge and lien on moneys on deposit in the Senior Lien Debt Service Fund, including the Senior Lien Debt Service Reserve Account therein, as more fully described in "SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS."

The following table presents a current summary of the Senior Lien Bonds outstanding prior to the issuance of the 2021 Senior Lien Bonds (collectively, the "Outstanding Senior Lien Bonds"), including the series designation, dated date, original principal amount and outstanding (as of December 31, 2020) principal amount:

Series	Dated Date	Original Principal Amount	Outstanding Principal Amount†
1998 Series A	September 1, 1998	$298,575,000	$155,565,000
2010 Series A	November 18, 2010	131,290,000	19,355,000
2017 Series A	September 28, 2017	114,670,000	112,370,000
2018 Series A	February 15, 2018	73,880,000	73,880,000
2020 Series A	February 13, 2020	81,465,000	81,465,000
Total:		$699,880,000	$442,635,000

†Does not include the principal amount of the series that have been defeased.

The Outstanding Senior Lien Bonds are more fully described in "CERTAIN FINANCIAL INFORMATION – Debt Administration: Outstanding Bonds" herein.

Toll Increases

In conjunction with the Commission's issuance of Senior Lien Bonds and Junior Lien Bonds in 2013, the Commission implemented a series of forward-looking toll increases over a 10-year period starting January 1, 2014 and ending December 31, 2023. Specifically, the Commission, at its July 15, 2013 meeting, implemented a toll increase plan that increases rates by an average of 2.7% each year (the historical rate of inflation) for those 10 years. In addition to the forward-looking toll increase plan implemented beginning in 2014, the Commission has authority to increase tolls further, including if such increase is required by the toll covenants in the Senior Lien Trust Agreement or the Junior Lien Trust Agreement. See "SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS – Toll Rate Covenants." In addition, the Commission expects to make further modifications to its toll system that may impact how tolls are calculated and collected for certain trips. See "TOLLS AND TOLL COLLECTION - Planned Toll Collection System Modernization" herein.

As described above, the Commission implemented a forward-looking toll increase plan starting in 2014. One exception to that 10-year plan for toll increases related to passenger vehicles using *E-ZPass*® and making local trips of less than 30 miles, for which tolls were not increased. After 2023, the Commission's projections currently assume that the toll rate for these particular local trips will experience a one-time increase to equal the same per mile rate as charged for other passenger vehicle *E-ZPass*® trips. See "TOLLS AND TOLL COLLECTION – Planned Toll Collection System Modernization" herein.

The Commission's projections also currently assume that the previously approved 2.7 percent toll rate increase in 2023 will be revised to a 7.7 percent increase (except for local trips of less than 30 miles, as described above) and tolls will increase for all vehicles, regardless of class or payment method, by 7.7 percent on January 1, 2024, 2.7 percent each year for 4 years beginning on January 1, 2025 and then, beginning on January 1, 2029, 2.0 percent annually thereafter. In addition, in connection with the modernization of the toll collection system, the Commission anticipates adding a flat rate toll at three collection points. See "EXHIBIT D – TRAFFIC AND REVENUE STUDY."

The toll increases have been determined by the Commission taking into account the amount necessary to meet existing and projected debt service and operational and maintenance obligations of the Commission. For a complete description of toll increases adopted by the Commission, see "EXHIBIT D - TRAFFIC AND REVENUE STUDY" and "TOLLS AND TOLL COLLECTION" herein.

Traffic and Revenue Study and Projected Results

Attached hereto as Exhibit D is the Ohio Turnpike Investment Grade Traffic and Revenue Study dated January 13, 2021 (the "Traffic and Revenue Study") prepared by Stantec Consulting Services, Inc. (the "Traffic Consultant"). The Traffic and Revenue Study contains forecasts and projections of Turnpike transactions and gross toll revenues along with key assumptions in arriving at those forecasts and projections. Those forecasts assume escalation of toll rates previously approved by the Commission, as described above. Those forecasts also assume that the changes to the toll collection system described herein are timely implemented by the Commission. See "TOLLS AND TOLL COLLECTION – Planned Toll Collection System Modernization" herein. The traffic and gross toll forecasts are subject to future economic and social conditions, demographic developments and regional transportation construction activities that cannot be predicted with certainty. The Traffic and Revenue Study is subject to the limitations and assumptions detailed therein, and should be read in its entirety for a full description of the assumptions and methodologies used to develop such forecasts and the related limitations. See "INVESTMENT CONSIDERATIONS," "TOLLS AND TOLL COLLECTION - New Toll Collection Systems" and "EXHIBIT D - TRAFFIC AND REVENUE STUDY" herein.

The Commission retained the Traffic Consultant to prepare the Traffic and Revenue Study and to project the financial results of the Commission's operations for the years 2021-2051. The projections summarized under the heading "PROJECTED OPERATING RESULTS AND DEBT SERVICE COVERAGE" herein are based upon revenue estimates (taking into account implementation of toll adjustments adopted or to be adopted by the Commission) and operating expense projections and the implementation of the Commission's 2021-2030 capital program (described below). The results of this analysis are included in the Traffic and Revenue Study included as Exhibit D, which should be read in its entirety.

Response to the COVID-19 Pandemic

As widely reported, the outbreak of COVID-19, a new strain of coronavirus that can result in severe respiratory disease, was first detected in December of 2019, and has spread across six continents impacting many countries, including the United States. COVID-19 has been declared a pandemic by the World Health Organization. The COVID-19 outbreak is altering the behavior of businesses and people in a manner that is expected to have negative effects on global and local economies, including the State of Ohio and the Turnpike System. In response to the public health crisis, Ohio Governor Mike DeWine and the Director of the Ohio Department of Health have taken certain actions to limit the spread of the virus and its impact on the State's local communities and health care services, including the declaration of a state of emergency in the State on March 9, 2020 and the closure of all non-essential businesses from March 23, 2020 through May 1, 2020. On May 1, 2020 the State began a phased-in process of reopening of certain businesses. Notwithstanding the phased-in opening of businesses in Ohio, it is not possible at this time to determine whether or when travel patterns and business activities will return to a pre-pandemic level.

On the federal level, President Trump signed the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") on March 27, 2020 to address the economic disruption caused by the COVID-19 pandemic. Funds can be used for costs that are necessary expenditures incurred due to COVID-19. As of October 31, 2020, the Commission has received reimbursement from the Coronavirus Relief Fund totaling $3,111,023 for COVID-19 related costs incurred between March and July of 2020. The Commission has also applied for reimbursement of $128,386 in COVID-19 related costs that were incurred between August and October of 2020.

The impact of COVID-19 and the scope of any adverse impact on Turnpike System finances and operations cannot be fully determined at this time. The COVID-19 pandemic has had a significant adverse impact on travel on the Turnpike, particularly passenger car travel. In the period of March through October, passenger car vehicle miles traveled were 31.1% lower and commercial vehicle miles traveled were 2.5% lower compared to the same time period in 2019. The Turnpike System has seen a decrease in toll revenue from passenger cars of approximately $29.2 million or 25.3 percent in the first eleven months of 2020 and an increase in revenues from commercial vehicles of $0.5 million or 0.4 percent. See "TOLLS AND TOLL COLLECTION - Recent Impacts – Monthly Transaction and Monthly Toll Revenues" and "MANAGEMENT DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS - January 1, 2020 through September 30, 2020" herein. See also "EXHIBIT D - TRAFFIC AND REVENUE STUDY - Socioeconomic Context and COVID-19 Impacts on the Ohio Turnpike."

The Commission has taken the following actions intended to mitigate a portion of the economic effect of the COVID-19 outbreak and the resulting reduction in the use of Turnpike on the Turnpike System's financial position: (1) a hiring freeze was instituted on March 23, 2020, (2) the Commission reduced the number of shifts available to be worked by part-time toll collectors as a result of the reduction in traffic, (3) a reduction in travel and landscaping expenses and (4) certain capital expenditures were postponed until 2021.

While COVID-19 cases slowed in Ohio throughout summer 2020, businesses opened, and Turnpike travel resumed, recent trends show a spike of cases in Ohio, leading to a state-wide mask order, an order to limit mass gatherings, and, as of November 19, 2020, a new stay-at-home order was issued by the Ohio Department of Health for the hours of 10:00 p.m. to 5:00 a.m. It is unknown at this time what impact this order, or additional orders that may be required to address a continuing increase in Ohio cases, may have.

The spread of the COVID-19 virus is unprecedented as it relates to the world economy, leading to increased uncertainty. As additional information on the nature and impact of COVID-19 becomes available, Commission economic forecasts will be adjusted to take into account current immediate trends to enable the Commission to anticipate the effects on its operations and revenues.

THE COMMISSION

Since 1955, the Commission has operated the Ohio Turnpike System (the "Turnpike System"), a modern, limited access highway which travels 241 miles across the State of Ohio from its border with Pennsylvania to its border with Indiana. Various sections of the Turnpike System are designated as Interstate Routes 76, 80 and 90. See "THE TURNPIKE SYSTEM - General" herein.

The Commission determines toll rates, collects revenues, controls disbursements and has title to all assets, except for title to real estate, which the Commission purchases in the name of the State of Ohio with the beneficial use being held by the Commission.

Governance and Oversight

The Commission consists of ten members, including seven voting members. Six of the voting members are appointed by the Governor with the advice and consent of the Ohio Senate, no more than three of whom may be members of the same political party. The seventh voting member is the Director of ODOT, who is a voting member ex-officio. The three remaining members, the Director of the Office of Budget and Management (OBM), a state senator and a state representative, have non-voting status. The state senator and the state representative are named, respectively, by the President of the Ohio Senate and the Speaker of the Ohio House of Representatives. Members appointed prior to July 1, 2013 are serving eight-year terms staggered such that one term starts or expires every two years. Members appointed on and after July 1, 2013 are serving five-year terms.

Legislation was enacted in 1996 to create the Turnpike Oversight Committee, which was subsequently renamed the Turnpike Legislative Review Committee. The Committee consists of six members of the Ohio General Assembly (three each from the Ohio Senate and the Ohio House of Representatives). The Commission is required to report quarterly to the Committee on certain Commission matters, including financial and budgetary matters and on-going and proposed projects of the Commission. The Turnpike Legislative Review Committee is also authorized to review the location of new Turnpike System projects the Commission plans to undertake.

Legislation was enacted in 2007 to require the Commission to (i) notify the Governor and legislative leaders prior to any toll change, (ii) allow certain committee chairs of the legislature responsible for transportation budget matters to request the Commission to provide past budgets and present proposed budgets, (iii) submit its annual budget to the Governor, OBM, the leadership of the Ohio General Assembly and the Ohio Legislative Service Commission for their review, (iv) seek approval of OBM prior to any debt issuance and, in connection therewith, any trust agreements or supplements thereto, and to (v) add the Director of Transportation and the Director of OBM as additional ex-officio members of the Commission.

Ohio Turnpike and Infrastructure Commission Members

Name	Title	Membership Term Expires
Jerry N. Hruby	Chairman*	6/30/21
Timothy J. Paradiso	Vice-Chairman*	6/30/23
Sandra K. Barber	Secretary-Treasurer*	6/30/24
Vacant	Member	6/30/25
Guy C. Coviello	Member	6/30/23
Vickie Eaton Johnson	Member	6/30/22
Jack Marchbanks, Ph.D.	Ex-Officio Member	(a)
Kimberly Murnieks	Ex-Officio Non-Voting Member	(b)
Sen. Rob McColley	Non-Voting Member	(c)
Vacant	Non-Voting Member	(d)

* Officers are elected for four-year terms; the current terms expire on June 30, 2023.
(a) While Director of Ohio Department of Transportation
(b) While Director of Office of Budget and Management
(c) Appointed by President of Ohio Senate
(d) Appointed by Speaker of Ohio House of Representatives

Executive Staff

Executive Director. Ferzan M. Ahmed, P.E. was appointed by the Ohio Turnpike and Infrastructure Commission as Executive Director on February 25, 2019. Ferzan began his career in transportation as an Engineer in Training at the Ohio Department of Transportation ("ODOT") in District 6 where he managed multiple construction projects for 15 years. He then moved to engineering design to become the project manager on the I-70/I-71 reconstruction program, which was ODOT's largest construction project at the time. In 2011, he was appointed as the Deputy Director of ODOT District 6, where he oversaw all ODOT activities in eight counties in Central Ohio including Franklin County. During his tenure, ODOT completed some of Ohio's largest construction projects. In 2016, the Delaware County Commissioners appointed him as the Administrator of Delaware County, Ohio's fastest-growing county. There, he led the effort to create a formal budget process and county-performance metrics. Most recently, Ferzan served as a Vice President and leader of AECOM Technical Services, Inc.'s Ohio Transportation practice. In that role, he worked with ODOT as AECOM Technical Services, Inc.'s Project Principal for DriveOhio autonomous and connected vehicle deployment projects and the Mid-Ohio Regional Planning Commission ("MORPC") Hyperloop Feasibility Study. Ferzan is a registered Professional Engineer in Civil Engineering and formerly served as the Chair of the Ohio Board of Registration for Engineers and Surveyors. He was recently elected to the Board of Directors of the International Bridge, Tunnel and Turnpike Association. Ferzan graduated with a Bachelor of Science degree in Electrical and Computer Engineering from Kansas State University.

General Counsel. Jennifer L. Stueber, Esq., was appointed as the Commission's General Counsel in 2015 bringing with her 20 years of experience representing clients in both the public and private sectors. The General Counsel oversees all legal affairs of the Commission relating to contracts; litigation; personal injury and property damages claims; all dispute resolutions; employment and workers' compensation matters; insurance matters; finance; and real property matters including acquisitions, dispositions and appropriations. The General Counsel also serves as the Commission's Chief Ethics Officer, Public Records Officer and Data Privacy Officer. Jennifer was at a major Cleveland law firm before joining the Commission in 2015 where she advised clients in matters of real estate development, private finance and public finance, including serving as bond counsel for various state and local governments, as well as underwriter's counsel, issuer's counsel, and disclosure counsel. Jennifer is a graduate of Cleveland Marshall College of Law and earned her B.A. degree from The Ohio State University.

Deputy Executive Director, Chief Financial Officer and Comptroller. Martin S. Seekely oversees all financial operations of the Commission, including budgeting, accounts receivable, accounts payable, payroll, *E-ZPass®* Customer accounts, investments, and debt service management. Marty joined the Commission in May 2010 with 31 years of financial experience. During the 16 years that he was employed at Phar-Mor, Inc., he held various positions including Vice President, Chief Financial Officer, and Controller. His financial experience also includes serving as Controller for Boston Distributors, Inc.; Controller for Riser Foods, Inc.; and Assistant Controller at Fisher Foods, Inc. Marty received a B.S.B.A. from John Carroll University and became a Certified Public Accountant in 1985.

Director of Administration. Matthew J. Cole is responsible for the day-to-day operations of the Commission's Human Resources, Safety Services and Office Services Departments. Prior to coming to the Commission in May 2003, Matt worked as a Human Resources Manager for Cuyahoga County, Ohio. His experience includes 20+ years in the public sector and an additional 3 years in the private sector. Prior to working for Cuyahoga County and the Commission, Matt worked for the Bellefaire Jewish Community Board as a Counselor for emotionally and behaviorally troubled youth. Matt holds both a B.A. in Social Work and Criminal Justice and a M.A. in Labor Relations and Human Resources from Cleveland State University. He is certified as a Professional in Human Resources (PHR).

Director of Audit and Internal Control. David J. Miller oversees the entire audit function of the Commission. He has also served as the project manager for the procurement and implementation of the present toll collection system inclusive of electronic tolling via *E-ZPass®*. Previously, Dave held the positions of EDP Auditor and Chief Accountant for the Commission before being placed in charge of the Internal Audit and Toll Audit Departments in 1996. Prior to joining the Commission in 1993, Dave worked in public accounting with the Cleveland Office of Arthur Andersen & Company. While there, he performed financial auditing and tax preparation services for non-SEC clients and specialized in the audit and control of information systems. Dave holds a Bachelor of Arts Degree in Accounting from Grove City College, Pennsylvania. He is a Certified Public Accountant and a Certified Information Systems Auditor.

Director of Toll Operations. Laurie Davis has served as Director of Toll Operations since February 1, 2020. Laurie's tenure with the Commission began in 1985 as a full-time Toll Collector. She was promoted to Assistant Senior Toll Collector in 1990, to Toll Plaza Supervisor in 1992 and to Eastern District Toll Supervisor in 2008. Just four years later in 2012, Laurie was named Superintendent of Toll Operations. During her tenure, she has been a key part of the team that implemented *E-ZPass®* for Turnpike System customers. Additionally, she was project manager for the 2019 ATPM Expansion Project. Laurie studied psychology at Youngstown State University.

Director of Governmental Affairs. Adam L. Greenslade serves as the Commission's liaison with the State legislature as well as the many communities, including cities, townships and 13 counties through which the Turnpike System traverses. Adam brings with him 15 years' experience in government relations and public affairs. Prior to joining the Commission, Adam served as Director of Clydescope Economic Development Corporation in Clyde, Ohio, and was the owner of North Coast Strategy Group, a full-service government relations, public affairs and grant writing firm. He has previous experience working in both chambers of the State legislature and was a registered lobbyist on the state and federal level. Adam is a graduate of The Ohio State University with a degree in Geography - Urban and Regional Systems.

Chief Engineer. Anthony D. Yacobucci, P.E. is a registered Professional Engineer with more than 30 years of experience. Tony has worked at the Commission for the last ten years in progressive roles, including the last five years as Chief Engineer. In this role, Tony is responsible for the administration and supervision of the operational functions of the Commission, including the planning, design, construction and maintenance of the Commission's infrastructure. Prior to joining the Commission in February 2010, Tony worked in the engineering consulting industry where he served in progressive roles, including: Office Leader, Director of Operations and Vice President, with some of the nation's premier consulting engineering firms. During this timeframe, Tony was responsible for the management, operation and strategic vision of four multi−disciplined offices located in Cleveland, Columbus, Cincinnati and Toledo. He also served as the Commission's Consulting Engineer, in compliance with the Master Trust Agreement, from 2000 through 2008. He also played a significant role in the design and construction of the Turnpike System bridges over the Cuyahoga River Valley. Tony has earned both a Bachelor's and Master's degree in Civil Engineering from Cleveland State University.

Chief Information Officer. Chriss Pogorelc has served as the Commission's Chief Information Officer since February 2020. Chriss leads the Commission's Technology Department, which is responsible for implementing and managing efficient, sustainable and reliable Information Technology solutions to meet the present and future operational needs of the Turnpike System. Chriss joined the Commission in 2001 as a Programmer and administrated the Commission's Toll Collection System. He aided in the evolution of the first generation of Automated Toll Payment Machines (ATPM) and was a key part of the team that brought *E-ZPass®* to the Turnpike System in 2009. In 2012, Chriss was promoted to Technology Manager and subsequently led efforts to virtualize the Commission's Data Centers, upgrade the Ethernet Network and was pivotal in upgrading and implementing several of the key data systems. Most recently, Chriss was instrumental in bringing public wi-fi to the Commission's 14 Service Plazas. Chriss is a graduate of Mount Union College where he earned a Bachelor of Science degree in Computer Science.

Director of Service Plaza Operations. Andrew Herberger serves as the Commission's Director of Service Plaza Operations overseeing the Turnpike System's 14 service plaza properties. Andrew has been employed at the Ohio Turnpike and Infrastructure Commission since June of 2004, administering both self-operated and contracted services and managing the system of plazas that serve Ohio's travelers. Prior to working for the Turnpike System, Andrew has been employed in Campus Operations, managing campus Auxiliary Services at several Colleges and Universities including the University of Buffalo, Lakeland College and Case Western Reserve University. Andrew is a graduate of SUNY Erie Community College with a degree in Food Service Administration and has a certificate in Business Administration from State University of New York at Buffalo.

The Commission's Role in the Ohio Jobs and Transportation Plan

In January 2012, ODOT announced a significant budget shortfall that would require postponement of some of the State's largest, most complex transportation construction projects by up to a decade or more. In an effort to address this funding deficit, the Ohio Jobs and Transportation Plan (the "Plan") gave the Commission the ability to raise funds for Infrastructure Projects through the issuance of Turnpike revenue bonds without making disruptive changes to the current Commission structure or the operation and maintenance of the Turnpike System. The Plan called for Turnpike revenue bond proceeds to be used to alleviate the impact of the ODOT budget shortfall and to fund Infrastructure Projects (as defined under Chapter 5537 of the Ohio Revised Code, including any public highway (including all bridges, tunnels, overpasses, underpasses, interchanges, entrance plazas, approaches, and those portions of connecting public roads that serve interchanges) that is constructed or improved with infrastructure funding approved by the Commission) which have a transportation-related "nexus" to the Turnpike System.

As part of the implementation of the Plan, the Ohio General Assembly adopted a number of significant changes to the Act, which became effective July 1, 2013. The changes to the Act included, among other things, the renaming of the Commission as the Ohio Turnpike and Infrastructure Commission and expansion of its purpose to allow the Commission to sell Turnpike revenue bonds to finance Infrastructure Projects.

Junior Lien Bonds - the Commission's Partnership with ODOT

As part of the Plan, the Commission has issued two series of bonds to pay costs of certain transportation infrastructure projects for which the Director of ODOT has submitted funding requests ("Infrastructure Projects"), its (i) $994,812,816 Turnpike Junior Lien Revenue Bonds, 2013 Series A (Infrastructure Projects) and (ii) $425,965,000 Turnpike Junior Lien Revenue Bonds, 2018 Series A (Infrastructure Projects). All Infrastructure Project requests have now been approved and all related bonds have been issued by the Commission. See "THE COMMISSION – The Commission's Role in the Ohio Jobs and Transportation Plan" above. In addition, the Commission has previously issued a series of refunding bonds, its $376,850,000 State of Ohio Turnpike Junior Lien Revenue Refunding Bonds, 2020 Series A (Federally Taxable) (Infrastructure Projects), to refinance a portion of the 2013 Series A Bonds.

The Junior Lien Bonds issued under the Junior Lien Trust Agreement as "Junior Lien Bonds" are subordinate to Senior Lien Bonds issued under the Senior Lien Trust Agreement. The payment of the principal of, premium, if any, and interest on all Junior Lien Bonds issued under the Junior Lien Trust Agreement, are secured equally and ratably by a lien on and pledge of the System Pledged Revenues, which lien and pledge are junior and subordinate to the lien and pledge of the System Pledged Revenues created by the Senior Lien Trust Agreement. THE PAYMENT OF THE OUTSTANDING JUNIOR LIEN BONDS AND ALL ADDITIONAL JUNIOR LIEN BONDS IS SUBJECT TO THE PRIOR RIGHT OF PAYMENT FROM SYSTEM PLEDGED REVENUES TO THE PAYMENT OF ALL SENIOR LIEN BONDS ISSUED UNDER THE SENIOR LIEN TRUST AGREEMENT. UPON AN EVENT OF DEFAULT UNDER THE JUNIOR LIEN TRUST AGREEMENT, THE JUNIOR LIEN TRUSTEE MAY NOT DECLARE THE PRINCIPAL AND INTEREST OF ALL OUTSTANDING JUNIOR LIEN BONDS TO BE IMMEDIATELY DUE AND PAYABLE UNLESS THE SENIOR LIEN TRUSTEE HAS DECLARED ACCELERATION OF MATURITY OF THE OUTSTANDING SENIOR LIEN BONDS AS A RESULT OF A DEFAULT UNDER THE SENIOR LIEN TRUST AGREEMENT.

In August 2013, the Director of ODOT submitted funding requests for Infrastructure Projects to the Commission for consideration and, on September 16, 2013, the Commission's Board approved the funding of specific Infrastructure Projects totaling $930 million. ODOT has expended and the Commission has reimbursed ODOT the full amount approved for these Infrastructure Projects. The funding (in thousands) of each infrastructure project as of September 30, 2020 is as follows:

Project	County	Infrastructure Funds Paid to ODOT*
I-90 Innerbelt Bridge	Cuyahoga	$274,373
Opportunity Corridor	Cuyahoga	21,090
US 250 Widening	Erie	14,000
1-75 Widening	Hancock/Wood	280,104
SR57	Lorain	16,500
I-75/ I-475 Interchange	Lucas	122,200
I-475 and Rt 20 Interchange	Lucas	25,478
1-75 Widening	Lucas	63,000
I-80 Widening	Mahoning/Trumbull	65,500
I-271 Widening	Summit	47,755
		$930,000

*In Thousands

On January 22, 2018 the Commission's Board approved the funding of three additional Infrastructure Projects totaling $450 million. Through September 30, 2020, ODOT has expended $212,163,396 on these Infrastructure Projects and the Commission has reimbursed ODOT $201,616,400 for ODOT's expenditures on these Infrastructure Projects. The entire $450 million in 2018 Junior Lien Bond Proceeds is expected to be paid to ODOT by the end of 2023. The status of the funding (in thousands) of each infrastructure project as of September 30, 2020 is as follows:

Project	County	Project ID #'s	Approved Amount[1]	Amount Expended by ODOT[1]	Infrastructure Funds Paid to ODOT[1]
I-75 Reconstruction	Wood/Lucas	93592	$90,000	$70,965	$66,247
I-75 Reconstruction	Lucas	93594	160,000	80,937	78,453
Opportunity Corridor	Cuyahoga	96833	200,000	60,261	56,917
			$450,000	$212,163	$201,616[2]

[1] In Thousands
[2] Totals may not add due to rounding.

The Commission is required by the Act to make an annual report to the Governor and the General Assembly on the funding of Turnpike System Projects and Infrastructure Projects. The Act further requires the Commission to submit an annual report to the Turnpike Legislative Review Committee on Infrastructure Projects approved and funded by the Commission.

PLAN OF FINANCE

The 2021 Senior Lien Bonds are being issued to provide funds to (i) pay the costs of capital improvements for the Turnpike System, (ii) fund a required increase in the Senior Lien Debt Service Reserve Requirement due to the issuance of the 2021 Senior Lien Bonds, and (iii) pay the costs of issuance of the Senior Lien Bonds.

SOURCES AND USES OF PROCEEDS

The proceeds received from the sale of the 2021 Senior Lien Bonds, and the expected application of these funds is as follows:

Sources:	
Par Amount	$135,010,000.00
Net Original Issue Premium	42,789,645.40
TOTAL SOURCES	$177,799,645.40
Uses:	
Deposit to System Projects Fund	$170,000,000.00
Senior Lien Debt Service Reserve Account Deposit	6,750,500.00
Costs of Issuance[1]	1,049,145.40
TOTAL USES	$177,799,645.40

[1]Includes underwriters' discount, fees and expenses of bond counsel, issuer's counsel and counsel to the underwriters, rating agency fees, printing expenses, fees and expenses of the Municipal Advisor, trustee fees, other miscellaneous costs and expenses, and rounding.

DEBT SERVICE

Set forth in the table below is the total debt service for the Outstanding Senior Lien Bonds and Junior Lien Bonds secured by the System Pledged Revenues.

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ANNUAL SENIOR LIEN BONDS AND JUNIOR LIEN BONDS DEBT SERVICE

Fiscal Year	Outstanding Senior Lien Annual Debt Service	2021 Series A Senior Lien Bonds Principal	Interest	Total	Total Senior Lien Annual Debt Service	Total Junior Lien Annual Debt Service	Total Annual Debt Service
2021	$54,402,721	-	$3,356,499	$3,356,499	$57,759,220	$52,257,067	$110,016,287
2022	59,690,246	-	6,750,500	6,750,500	66,440,746	52,337,408	118,778,154
2023	59,649,658	-	6,750,500	6,750,500	66,400,158	63,390,550	129,790,708
2024	51,440,621	-	6,750,500	6,750,500	58,191,121	82,089,003	140,280,124
2025	43,459,321	-	6,750,500	6,750,500	50,209,821	85,142,680	135,352,501
2026	52,217,746	-	6,750,500	6,750,500	58,968,246	77,162,906	136,131,152
2027	27,775,902	-	6,750,500	6,750,500	34,526,402	95,253,372	129,779,774
2028	27,763,833	-	6,750,500	6,750,500	34,514,333	101,167,043	135,681,376
2029	12,159,833	-	6,750,500	6,750,500	18,910,333	121,317,958	140,228,291
2030	12,148,208	-	6,750,500	6,750,500	18,898,708	126,200,886	145,099,594
2031	11,942,958	-	6,750,500	6,750,500	18,693,458	131,223,200	149,916,658
2032	8,281,135	-	6,750,500	6,750,500	15,031,635	139,382,556	154,414,191
2033	8,282,829	-	6,750,500	6,750,500	15,033,329	139,176,506	154,209,835
2034	8,281,242	-	6,750,500	6,750,500	15,031,742	140,015,209	155,046,951
2035	8,276,512	-	6,750,500	6,750,500	15,027,012	139,639,299	154,666,311
2036	8,273,249	-	6,750,500	6,750,500	15,023,749	141,052,101	156,075,850
2037	11,098,837	-	6,750,500	6,750,500	17,849,337	139,858,849	157,708,186
2038	17,769,437	-	6,750,500	6,750,500	24,519,937	133,051,785	157,571,722
2039	15,744,437	-	6,750,500	6,750,500	22,494,937	131,835,275	154,330,212
2040	16,169,437	-	6,750,500	6,750,500	22,919,937	134,372,961	157,292,898
2041	16,593,187	-	6,750,500	6,750,500	23,343,687	134,433,743	157,777,430
2042	16,584,187	$4,915,000	6,627,625	11,542,625	28,126,812	134,411,194	162,538,006
2043	8,527,687	12,420,000	6,194,250	18,614,250	27,141,937	134,406,314	161,548,251
2044	8,211,698	13,610,000	5,543,500	19,153,500	27,365,198	99,460,074	126,825,272
2045	8,209,106	14,255,000	4,846,875	19,101,875	27,310,981	104,846,129	132,157,110
2046	8,205,201	14,970,000	4,116,250	19,086,250	27,291,451	103,211,904	130,503,355
2047	23,998,265	-	3,742,000	3,742,000	27,740,265	67,333,160	95,073,425
2048	28,447,440	-	3,742,000	3,742,000	32,189,440	43,742,244	75,931,684
2049	-	23,055,000	3,165,625	26,220,625	26,220,625	-	26,220,625
2050	-	25,375,000	1,954,875	27,329,875	27,329,875	-	27,329,875
2051	-	26,410,000	660,250	27,070,250	27,070,250	-	27,070,250
Total	**$633,604,931**	**$135,010,000**	**$178,959,749**	**$313,969,749**	**$947,574,682**	**$3,047,771,376**	**$3,995,346,058**

Totals may not add due to rounding
Source: Ohio Turnpike and Infrastructure Commission

DESCRIPTION OF THE 2021 SENIOR LIEN BONDS

General

The 2021 Senior Lien Bonds are being issued by the Commission pursuant to the Act and the Senior Lien Trust Agreement and will be dated the date of their issuance and delivery. The 2021 Senior Lien Bonds will be issued in the principal amounts, bearing interest at the rates, paying interest on the dates, and maturing (subject to the rights of prior redemption described below) on the dates, all as shown on the inside cover page of this Official Statement.

Interest on the 2021 Senior Lien Bonds will accrue from their date of delivery and will be payable semi-annually to maturity (or earlier redemption) on February 15 and August 15, commencing on August 15, 2021 (each an "Interest Payment Date").

Redemption of 2021 Senior Lien Bonds

The 2021 Senior Lien Bonds are subject to optional redemption and mandatory redemption as set forth below.

Optional Redemption

The 2021 Senior Lien Bonds are subject to redemption prior to maturity at the option of the Commission in whole or in part on any date on or after February 15, 2031, in such order as the Commission shall determine, at a redemption price equal to 100% of the principal amount thereof, plus accrued interest to the redemption date.

Mandatory Redemption

The 2021 Senior Lien Bonds maturing on February 15, 2046 shall be subject to mandatory sinking fund redemption by the Commission prior to maturity at a redemption price equal to 100% of the principal amount thereof, plus accrued interest to the redemption date, on the dates and in the principal amounts set forth below:

Redemption Dates (February 15)	Principal Amounts
2042	$4,915,000
2043	12,420,000
2044	13,610,000
2045	14,255,000
2046	14,970,000†

† Stated Maturity

The 2021 Senior Lien Bonds maturing on February 15, 2051 shall be subject to mandatory sinking fund redemption by the Commission prior to maturity at a redemption price equal to 100% of the principal amount thereof, plus accrued interest to the redemption date, on the dates and in the principal amounts set forth below:

Redemption Dates (February 15)	Principal Amounts
2049	$23,055,000
2050	25,375,000
2051	26,410,000†

† Stated Maturity

Selection of 2021 Senior Lien Bonds to be Redeemed

In the event of a partial redemption of 2021 Senior Lien Bonds of like maturity and interest rate, the Trustee will assign to each 2021 Senior Lien Bond of such series, maturity and interest rate then outstanding a distinctive number for each $5,000 of principal amount thereof, and will select by lot, using such method of selection as it deems proper in its discretion, from the numbers so assigned to such 2021 Senior Lien Bonds, as many numbers as, at $5,000 for each number, equals the principal amount of such 2021 Senior Lien Bonds to be redeemed. The 2021 Senior Lien Bonds to be redeemed will be only so much of the principal amount of each such 2021 Senior Lien Bond of a denomination of more than $5,000 principal amount as equals $5,000 for each number assigned to it and so selected.

Notice of Redemption

The notice of the call for redemption shall (i) identify the 2021 Senior Lien Bonds or portions thereof to be redeemed (specifying the CUSIP numbers of the 2021 Senior Lien Bonds to be redeemed and stating that no representation is made as to the accuracy or correctness of the CUSIP numbers printed therein or on the 2021 Senior Lien Bonds), (ii) specify the redemption price to be paid, (iii) specify the date fixed for redemption, (iv) specify the place or places where the amounts due upon redemption are payable, (v) set forth the name, address, and telephone number of the person from whom information pertaining to the redemption may be obtained, and (vi) except in the case of a conditional notice of optional redemption, state that on the redemption date there shall become due and payable upon each 2021 Senior Lien Bond to be redeemed the redemption price thereof, or the redemption price of the specified portion of the principal amount in the case of a 2021 Senior Lien Bond to be redeemed in part only, with interest accrued to such date, and that from and after such date, interest thereon shall cease to accrue and be payable. If at the time of giving of notice of an optional redemption of 2021 Senior Lien Bonds there has not been deposited with the Trustee moneys or Defeasance Obligations sufficient to redeem all 2021 Senior Lien Bonds called for such redemption, then such notice shall state that the redemption is conditional upon the deposit of moneys or such Defeasance Obligations sufficient for the redemption with the Trustee not later than the opening of business on the redemption date, and such notice will be of no effect and such 2021 Senior Lien Bonds shall not be redeemed unless such moneys or such Defeasance Obligations are so deposited. Such notice will be sent by first class mail not less than thirty (30) days nor more than sixty (60) days prior to the redemption date to Holders whose 2021 Senior Lien Bonds or portion thereof have been called for redemption at the addresses shown in the Bond Register on the Record Date. Failure to mail any such notice or any defect therein will not affect the validity of the proceedings for the redemption of any other 2021 Senior Lien Bonds.

Book Entry Only System

The 2021 Senior Lien Bonds will be issued under a book-entry only system, registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"), New York, New York, as registered owner, in the form of a single, fully registered 2021 Senior Lien Bond representing each maturity, or interest rate within a maturity, as the case may be. The beneficial owners of 2021 Senior Lien Bonds in book entry form have no right to receive 2021 Senior Lien Bonds in the form of physical securities or certificates; ownership of beneficial interests in book entry form will be shown by book entry on the system maintained and operated by DTC and its Participants, and transfers of the ownership of beneficial interests will be made only by book entry by DTC and its Participants, and the 2021 Senior Lien Bonds as such shall not be transferable or exchangeable, except for transfer to another Depository or to another nominee of the Depository, without further action by the Commission. See "EXHIBIT E - Book Entry Only System" attached hereto.

DTC Clearance Procedures

Beneficial interests in the 2021 Senior Lien Bonds may be held through DTC directly as a participant or indirectly through organizations that are participants in such system. See "EXHIBIT E - Book Entry Only System" attached hereto.

Disclaimer by Commission, Trustee, Municipal Advisor and Underwriters

Neither the Commission nor the Trustee has any responsibility or liability for any aspect of the records relating to, or payments made on account of, book-entry interest ownership, or for maintaining, supervising or reviewing any records relating to that ownership.

The Commission, the Trustee, the Commission's Municipal Advisor, and the Underwriters cannot and do not give any assurances that DTC, the Direct and Indirect Participants or others will distribute to the Beneficial Owners (i) payments of principal or interest on the 2021 Senior Lien Bonds paid, or (ii) notices sent to DTC as the Holder or that they will do so on a timely basis, or that DTC or the Direct and Indirect Participants will serve and act in the manner described in this Official Statement. The Commission has been advised by DTC that the current "Rules" applicable to DTC and the Direct and Indirect Participants are on file with the Securities and Exchange Commission and that the current "Procedures" of DTC to be followed in dealing with the Direct and Indirect Participants are on file with DTC.

SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS

Security for 2021 Senior Lien Bonds - General

The 2021 Senior Lien Bonds will be payable solely from and secured by a pledge of and senior lien on System Pledged Revenues. Pursuant to the terms of the Senior Lien Trust Agreement, the Commission has pledged and granted a lien to the Senior Lien Trustee on the System Pledged Revenues to provide for the payment of principal of and interest and premium, if any, on bonds issued under the Senior Lien Trust Agreement ("Senior Lien Bonds") which include the Commission's Outstanding Senior Lien Bonds and any additional Senior Lien Bonds issued under the Senior Lien Trust Agreement in the future, including the 2021 Senior Lien Bonds. The pledge of and lien on System Pledged Revenues for the 2021 Senior Lien Bonds is on a parity with that same pledge and lien for all Senior Lien Bonds Outstanding under the Senior Lien Trust Agreement. The principal of, premium, if any, and interest on all Senior Lien Bonds will be paid from System Pledged Revenues prior to the payment of any Junior Lien Bonds.

System Pledged Revenues consist of Net Revenues and Additional System Payments. The Commission is not presently a party to any agreement or arrangement producing Additional System Payments. Net Revenues consist of Gross Revenues less required deposits to the Expense Fund. Gross Revenues consist of Tolls and certain investment income and insurance proceeds. Gross Revenues have in the past also included moneys received from the Ohio Department of Transportation and designated as System Pledged Revenues by the Commission, but there are currently no such proceeds. Gross Revenues, since January 1, 2004, also include concession revenues derived from the operation of the service plazas (other than funds contractually committed to the Service Plaza Capital Improvements Reserve and other than any allocation of the State fuel tax revenues) and all revenues derived from leases, licenses, royalties, advertising and miscellaneous sales, fees and charges together with all investment earnings thereon. See "EXHIBIT A - GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT - Application of Monies in Gross Revenue Account" herein.

Limitation

THE 2021 SENIOR LIEN BONDS WILL NOT CONSTITUTE GENERAL OBLIGATIONS, DEBT OR BONDED INDEBTEDNESS OF THE COMMISSION OR THE STATE OR ANY POLITICAL SUBDIVISION THEREOF, AND THE HOLDERS THEREOF WILL NOT BE GIVEN THE RIGHT, AND HAVE NO RIGHT, TO HAVE ANY EXCISES OR TAXES LEVIED BY THE COMMISSION OR THE STATE OR ANY POLITICAL SUBDIVISION THEREOF OR APPLIED FOR THE PAYMENT OF THE PRINCIPAL OF OR INTEREST OR REDEMPTION PREMIUM, IF ANY, ON THE 2021 SENIOR LIEN BONDS.

Flow of Funds

Senior Lien Trust Agreement

The Senior Lien Trust Agreement establishes the following funds and accounts: the Revenue Fund (and the Gross Revenue Account and the Additional System Payments Account therein), the Expense Fund (and the Operation, Maintenance and Administrative Expenses Account and the Expense Reserve Account therein), the Senior Lien Debt Service Fund (and the Senior Lien Interest Account, the Senior Lien Principal Account, the Senior Lien Bond Redemption Account and the Senior Lien Debt Service Reserve Account therein), the Series Payments Fund (and, to the extent necessary to segregate and separately account for Series Payments, one or more separate accounts therein), the Renewal and Replacement Fund, the System Projects Fund (and, to the extent necessary, one or more separate Construction Accounts therein), the General Reserve Fund, the Supplemental Payments Fund (and, to the extent necessary to segregate and separately account for Supplemental Payments, one or more separate accounts therein), and the Rebate Fund (and a separate Rebate Account therein for each Series of Senior Lien Bonds, to the extent required by applicable law).

The funds and accounts created by the Senior Lien Trust Agreement constitute trust funds for the purposes provided in the Senior Lien Trust Agreement and are for purposes of accounting, kept separate and distinct from all other funds of the Commission and are to be used only for the purposes and in the manner provided in the Senior Lien Trust Agreement.

The Senior Lien Debt Service Fund and the accounts therein are held by the Senior Lien Trustee. The Revenue Fund, the Series Payments Fund, the Expense Fund, the Renewal and Replacement Fund, the System Projects Fund, the General Reserve Fund and the Rebate Fund have been established and are maintained by the Commission in a bank or trust company which is eligible under the laws of the State to receive deposits of public funds. The Supplemental Payments Fund and the accounts therein have been established and are held in compliance with the document or agreement providing for such Supplemental Payments. For a description of the provisions of the Senior Lien Trust Agreement regarding the deposits and disbursements that are required or permitted to be made to or from the funds and accounts established under the Senior Lien Trust Agreement, see "EXHIBIT A – GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT – Funds and Accounts" herein.

Amounts on deposit in the Gross Revenue Account of the Revenue Fund will be transferred and deposited in the various funds and accounts in the order of priority shown below, subject to the restrictions set forth in the Senior Lien Trust Agreement and the Junior Lien Trust Agreement. Similarly, amounts, if any, on deposit in the Series Payment Fund and Supplemental Payments Fund will be transferred and deposited as shown below. There are currently no deposits to the Series Payments Fund or the Supplemental Payments Fund.

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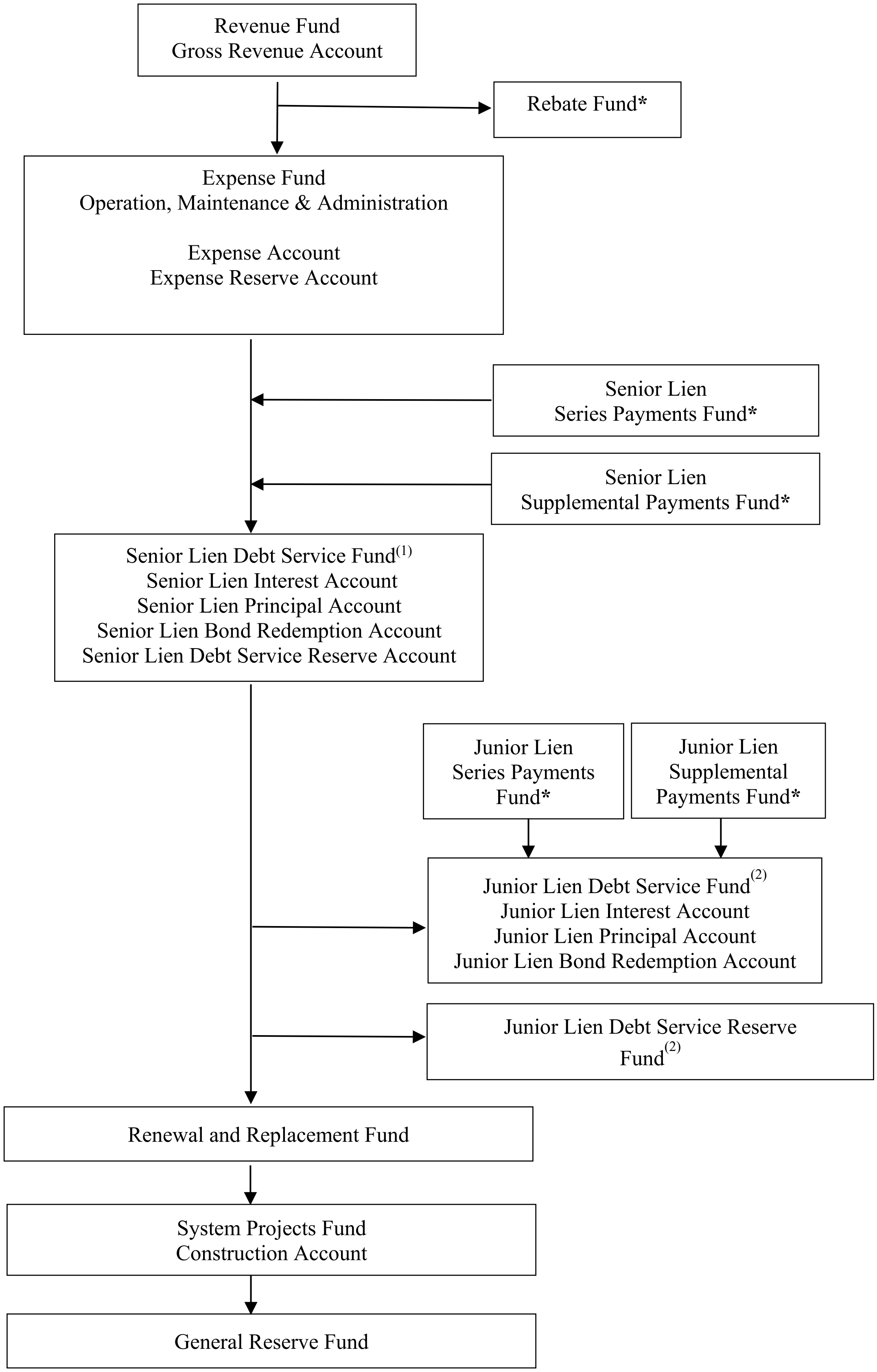


** Currently there are no deposits to these funds.*
(1) Held by Senior Lien Trustee
(2) Held by Junior Lien Trustee

Debt Service Reserve Requirements

Senior Lien Debt Service Reserve Account

The Senior Lien Trust Agreement requires that a balance be maintained in the Debt Service Reserve Account in the Senior Lien Debt Service Fund equal in amount to the Senior Lien Debt Service Reserve Requirement, that being the lower of (1) the Maximum Senior Lien Annual Debt Service Requirement, without credit for Series Payments otherwise permitted to be included by the definition of Senior Lien Annual Debt Service Requirement, or (2) the maximum amount permitted by the Code to be funded from Bond proceeds without requiring yield restriction. In lieu of the amounts required to be on deposit in the Senior Lien Debt Service Reserve Account, the Commission may at any time cause to be deposited into such Debt Service Reserve Account a Reserve Account Credit Facility for the benefit of the Holders. At the time of that deposit, the provider of the Reserve Account Credit Facility, or the Senior Lien Bonds that are secured by the Reserve Account Credit Facility, must be assigned one of the two highest ratings by each Rating Agency that has a rating outstanding on the Bonds. The Reserve Account Credit Facility must be in an amount which, together with other amounts on deposit therein, equals the Senior Lien Debt Service Reserve Requirement or, if the Commission has exercised its option to fund the Senior Lien Debt Service Reserve Account in installments, the amount then required to be on deposit in such Debt Service Reserve Account in accordance with such election. The Reserve Account Credit Facility shall be payable or available to be drawn upon in accordance with the Senior Lien Trust Agreement. Draws on the Reserve Account Credit Facility, if necessary, will be made on a pro-rata basis. Prior to the issuance of the 2021 Senior Lien Bonds, the Senior Lien Debt Service Reserve Requirement is $60,782,713.

In the event that, subsequent to being deposited in the Debt Service Reserve Account, a Reserve Account Credit Facility fails to satisfy the Reserve Account Credit Facility Rating Requirement (as defined below), the Commission is required to deposit funds into the Senior Lien Debt Service Reserve Account in an amount that, together with any other amounts on deposit as well as any Reserve Account Credit Facilities that do meet the Reserve Account Credit Facility Rating Requirement, equals the Senior Lien Debt Service Reserve Requirement. Alternatively, the Commission may deposit another Reserve Account Credit Facility that meets the Reserve Account Credit Facility Rating Requirement to insure over the Reserve Account Credit Facility that does not meet the Reserve Account Credit Facility Rating Requirement. The Commission is also authorized to withdraw the cash or additional Reserve Account Credit Facility that has been so deposited if the initial Reserve Account Credit Facility subsequently meets the Reserve Account Credit Facility Rating Requirement. For purposes of the provisions of the Senior Lien Trust Agreement summarized in this paragraph, "Reserve Account Credit Facility Rating Requirement" means that the provider of a Reserve Account Credit Facility must be rated in one of the two highest rating categories (without giving effect to modifiers or qualifiers) by at least two Rating Agencies. For a further description of the requirements of the Senior Lien Trust Agreement for the funding and application of the Senior Lien Debt Service Reserve Account, see "EXHIBIT A - GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT - Funds and Accounts - Debt Service Reserve Account" herein.

Senior Lien Debt Service Reserve Account Credit Facility

The Commission maintains on deposit a Debt Service Reserve Account Credit Facility in the Senior Lien Debt Service Reserve Account in the principal amount of $49,283,000, which was issued by Assured Guaranty, which expires on February 15, 2028. While the Debt Service Reserve Account Credit Facility is in the Senior Lien Debt Service Account and is available to be drawn upon, such Debt Service Reserve Account Credit Facility is not currently being relied upon by the Commission toward satisfaction of the Senior Lien Debt Service Reserve Requirement.

Toll Rate Covenants

Senior Lien Toll Covenant

The Commission covenants in the Senior Lien Trust Agreement that it will at all times charge and collect or cause to be charged and collected Tolls for the use of the Turnpike System at rates not less than those set forth in the schedule of such Tolls then in effect and as shall be required in order that: (a) Gross Revenues in each Fiscal Year shall equal at least one hundred percent (100%) of the aggregate of: (i) the Cost of Operation, Maintenance and Administration for such Fiscal Year as provided in the Annual Budget; and (ii) any amounts required to be deposited into the Expense Reserve Account in such Fiscal Year; and (b) System Pledged Revenues in each Fiscal Year shall equal at least one hundred percent (100%) of the aggregate in such Fiscal Year of (i) the Annual Debt Service Requirement, (ii) required deposits to the Debt Service Reserve Fund, (iii) deposits and payments required pursuant to the Junior Lien Master Trust Agreement, (iv) deposits and payments required pursuant to any resolution, indenture or other authorizing instrument under which any obligations of the Commission secured by a pledge of the System Pledged Revenues junior and subordinate to the Junior Lien Bonds are issued, and (v) the Renewal and Replacement Requirement; and (c) System Pledged Revenues (plus Supplemental Payments, if any, in an amount not to exceed the aggregate Annual Debt Service Requirement for such Fiscal Year for all Series of Senior Lien Bonds to which such Supplemental Payments are pledged in each Fiscal Year) shall equal at least one hundred twenty percent (120%) of the Annual Debt Service Requirement in such Fiscal Year. For a further description of the Toll rate covenant in the Senior Lien Trust Agreement, see "EXHIBIT A GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT - Tolls" herein.

Additional Bonds Test

Additional Senior Lien Bonds

Subject to conditions and requirements set forth therein, the Senior Lien Trust Agreement permits the Commission from time to time to issue additional Series of Senior Lien Bonds that are payable from and secured by a pledge of System Pledged Revenues on a parity with the Outstanding Senior Lien Bonds for the purpose of: (a) financing System Projects, either alone or jointly with other persons, public bodies or private bodies; (b) financing Non-System Projects, either alone or jointly with other persons, public bodies or private bodies; (c) refunding Outstanding Senior Lien Bonds or Notes issued pursuant to the Senior Lien Trust Agreement; (d) completing any System Project for which Senior Lien Bonds have been previously issued; or (e) refunding Junior Lien Bonds or other subordinated indebtedness. Additional Series of Senior Lien Bonds may also be payable from and further secured by a pledge of Series Payments or Supplemental Payments, but neither the 2021 Senior Lien Bonds nor the Outstanding Senior Lien Bonds are secured by any Series Payments or Supplemental Payments. One condition for the issuance of an additional Series of Senior Lien Bonds is that the amount of the System Pledged Revenues and any Supplemental Payments during the Fiscal Year immediately preceding such issuance, or any twelve (12) consecutive calendar months selected by the Commission out of the fifteen (15) consecutive calendar months immediately preceding such issuance, subject to certain adjustments and verification, shall have been at least 150% of the maximum Annual Debt Service Requirement on the Senior Lien Bonds then outstanding and the Senior Lien Bonds then proposed to be issued. For a further discussion of the requirements for and conditions to the issuance of additional Senior Lien Bonds, see "EXHIBIT A - GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT - Issuance of Bonds" herein.

Additional Junior Lien Bonds

Subject to conditions and requirements set forth therein, the Junior Lien Trust Agreement permits the Commission from time to time to issue additional Series of Junior Lien Bonds that are payable from and secured by a junior pledge of System Pledged Revenues on a parity with the Outstanding Junior Lien Bonds for the purpose of: (a) financing System Projects, either alone or jointly with other persons, public bodies or private bodies; (b) financing Infrastructure Projects, either alone or jointly with other persons, public bodies or private bodies; (c) refunding Outstanding Junior Lien Bonds or Junior Lien Notes issued pursuant to the Junior Lien Trust Agreement; (d) completing any System Project for which Junior Lien Bonds have been previously issued; or (e) refunding Senior Lien Bonds or subordinated indebtedness. Additional Series of Junior Lien Bonds may also be payable from and further secured by a pledge of Junior Lien Series Payments or Junior Lien Supplemental Payments. One condition for the issuance of an additional series of Junior Lien bonds to finance Projects is that either:

(i) the amount of the System Pledged Revenues and any Supplemental Payments during the immediately preceding Fiscal Year or any twelve (12) consecutive calendar months selected by the Commission out of the fifteen (15) consecutive calendar months immediately preceding the issuance of the proposed Junior Lien Bonds, adjusted as hereinafter described, shall have been at least 150% of the Maximum Composite Annual Debt Service Requirement on the Junior Lien Bonds then Outstanding, the Senior Lien Bonds then Outstanding, the Junior Lien Bonds then proposed to be issued and any Senior Lien Bonds then proposed to be issued. The System Pledged Revenues calculated pursuant to this paragraph may be adjusted, at the option of the Commission, if the Commission, prior to the issuance of the proposed Junior Lien Bonds, shall have increased the Tolls for transit over the toll facilities of the Turnpike System. If the Commission elects to adjust System Pledged Revenues, the Net Revenues for the immediately preceding Fiscal Year or the twelve (12) consecutive calendar months shall be adjusted, based upon a certificate of an Independent Consultant, to reflect the Net Revenues that would have been derived from the Turnpike System during such period if such increased Tolls of the Turnpike System had been in effect during all of such period; or

(ii) an Independent Consultant certifies that, based upon reasonable assumptions, System Pledged Revenues (plus Supplemental Payments, if any, in an amount not to exceed the aggregate Annual Debt Service Requirement for each such Fiscal Year for all Series of Senior Lien Bonds and Junior Lien Bonds to which such Supplemental Payments are pledged) are projected to be at least 150% of the Composite Annual Debt Service Requirement for the current Fiscal Year and each successive Fiscal Year during which the Junior Lien Bonds then Outstanding, the Senior Lien Bonds then Outstanding, the Junior Lien Bonds then proposed to be issued and any Senior Lien Bonds then proposed to be issued will be Outstanding.

For purposes of making the required calculations for issuance of additional Junior Lien Bonds, Composite Annual Debt Service Requirement shall mean in each Fiscal Year the sum of the Junior Lien Annual Debt Service Requirement and the Senior Lien Annual Debt Service Requirement.

Issuance of Subordinate Bonds

The Commission may issue other obligations secured by a pledge of the System Pledged Revenues in addition to the Junior Lien Bonds and the Senior Lien Bonds, provided such obligations contain an express statement that such obligations are junior, inferior and subordinate in all respects to the Junior Lien Bonds issued pursuant to the Junior Lien Trust Agreement as to lien on and source and security for payment from the System Pledged Revenues and Junior Lien Special Funds and in all other respects. There are no subordinate bonds currently outstanding.

THE TURNPIKE SYSTEM

General

The first completed section of the Turnpike System, 22 miles from the Pennsylvania Turnpike at the Ohio-Pennsylvania border to an interchange at Mahoning County Road 18, nine miles west of the city of Youngstown, was opened for traffic on December 1, 1954. This Eastgate section had been rushed to completion to relieve congestion of traffic moving to and from the Pennsylvania Turnpike over state and other highways.

The remaining 219 miles of the Turnpike System were opened on October 1, 1955. As traffic flowed through the 17 interchanges and terminals, all service and operating functions were activated – restaurants and service stations, disabled vehicle service, maintenance buildings, the Ohio State Highway Patrol ("OSHP"), and the Turnpike System radio communications system.

Subject to recent changes as a result of the COVID-19 pandemic as described herein, for the most part, the Turnpike System has experienced a relatively steady increase in traffic volume and revenues. In 1956, the first calendar year of full operation, 8,511,931 automobiles and 1,469,023 trucks used the Turnpike System. In 2019, the total annual traffic consisted of 40,684,214 automobiles and 11,766,360 trucks. Annual revenues from tolls, restaurant and service station concessionaire rentals and other sources rose from $15,351,000 in 1956 to $357,448,000 in 2019.

The Turnpike System links the East and Midwest by virtue of its strategic position along the system that directly connects toll roads between Boston, New York City and Chicago, consisting of the Massachusetts Turnpike, New York Thruway, New Jersey Turnpike, Pennsylvania Turnpike, Ohio Turnpike, Indiana Toll Road and Chicago Skyway.

The beginning of the National System of Interstate and Defense Highways early in 1956 resulted in the Commission scrapping plans to build several other toll roads in Ohio (but some of this planning was used in launching Ohio's interstate system). Thus, the Turnpike System, which carries the designation of Project No. 1, is the one and only Turnpike project completed, operated and maintained by the Commission.

Even though the Commission receives no federal funding, all of the 241.26 mile Turnpike has been incorporated by the Federal Highway Administration into the Interstate Highway System. The Turnpike System is designated Interstate Route 80/90 between the Ohio-Indiana line and the Lorain County West Interchange (Milemarker 142), Interstate Route 80 between the Lorain County West Interchange (Milemarker 142) and the Niles-Youngstown Interchange (Milemarker 218), and Interstate Route 76 between the Niles-Youngstown Interchange (Milemarker 218) and the Ohio-Pennsylvania line.

The Turnpike System is linked directly with Interstate Route 75, Interstate Route 280, Interstate Route 480, Interstate Route 71, Interstate Route 77 and Interstate Route 680. There are 31 interchanges on the Turnpike System, 26 of which are accesses to and from U.S., Ohio and Interstate routes and two of which are terminals connecting, respectively, with the Pennsylvania Turnpike in the east and the Indiana Toll Road in the west. The remaining three interchanges connect with county or local roads.

Although the Turnpike System is commonly known and referred to as the Ohio Turnpike, the toll road's official name is The James W. Shocknessy Ohio Turnpike in honor of the man who was a member and Chairman of the Commission from its inception in 1949 until his death in 1976.

Physical Characteristics

The 241.26 mile Turnpike System mainline consists of 160 miles with three eastbound and westbound travel lanes flanked by paved shoulders 14 feet, 3 inches wide on the inside and 10 feet wide on the outside of the mainline roadway and 82 miles with two eastbound and westbound travel lanes flanked by paved shoulders 8 feet wide on the inside and 10 feet wide on the outside. The two-lane sections of the Turnpike System include approximately 59 miles on the western end of the Turnpike System (between mileposts 0 and 59) and 23 miles on the eastern end (between mileposts 218 and 241). The original two-lane sections are reinforced portland cement concrete, all of which has been resurfaced with asphaltic concrete. The shoulders are hard surfaced with three inches of bituminous (penetration) macadam, plus the thickness of the resurfacing asphalt. In the two-lane sections, the mainline roadways are separated by a center strip with a standard width between roadway lanes of 56 feet, consisting of 40 feet of grass median and the inside shoulders. The construction of the third lane sections eliminated the 56 foot center strip, replacing it with two 12 foot traffic lanes, two 14 foot, 3 inch wide inside shoulders and a 50 inch high concrete barrier. The third lane section between Interchange 59 and Interchange 218 consists primarily of full depth asphalt. Ascending grades are kept to a maximum of 2.00 percent and descending grades to a maximum of 3.14 percent. Horizontal and vertical curves are of sufficient radius to provide the best sight distance, as well as ease of travel.

All of the roads and railroads intersected by the Turnpike System cross under or over the Turnpike System's roadways by means of bridges. There are no crossings at grade. To preserve the minimum separation between roadways, twin bridges carry the roadways whenever the Turnpike System crosses over other highways, railroads or rivers.

Employees and Employee Relations

As of December 31, 2020, the Commission had 814 employees compared with 903 employees on December 31, 2019. The Commission's employees are categorized into four groups based on labor organization representation.

The first group is those employees not represented by a labor organization. This group is comprised primarily of individuals employed by the Commission to perform supervisory, management, administrative, financial, engineering and legal functions. This group had 282 employees on December 31, 2020, with the numbers split between field supervisory personnel and personnel working at the Commission's headquarters in Berea, Ohio.

The second group includes the Commission's full-time, non-supervisory field employees in the Toll Collection, Maintenance, and Engineering Departments, except section clerks, chief mechanics and sign shop clerks. The Teamsters Local Union No. 436 is the exclusive representative of this group, which numbered approximately 376 employees as of December 31, 2020.

The third group includes the Commission's part-time toll collectors who are represented as a separate bargaining unit by the Teamsters Local Union No. 436. This group had approximately 147 part-time toll collectors as of December 31, 2020.

The Commission's full-time radio operators form the fourth group and are represented as a separate bargaining unit by the Teamsters Local Union No. 436. This group had approximately 9 full-time radio operators as of December 31, 2020.

Employee benefits provided by the Commission to all full-time employees include medical, dental and vision insurance and contributions to the Ohio Public Employees Retirement System.

The current collective bargaining agreement with each unit represented by a labor organization expired on December 31, 2019; however, the Commission entered into an Extension Agreement which expired December 31, 2020. Negotiations with each unit are currently in process and the Commission will continue to simultaneously negotiate successor collective bargaining agreements with each unit. Additional negotiation sessions are scheduled. By State law, the collective bargaining agreements continue in effect during the period of negotiations until successor agreements are reached. No management or supervisory employees are covered by the collective bargaining agreements. Agreements have been in place with each of these bargaining units for over 20 years.

If union negotiations are unsuccessful, the parties will follow the mandated State law procedure, which includes a required impasse procedure of mediation and then a formal fact-finding hearing. Under State law, only after the parties have pursued the required impasse procedures will a union have the opportunity to call for a strike. In the history of negotiations at the Commission with the current unions, the parties have resolved the agreements at the negotiation stage without the use of the subsequent impasse procedures.

Reduction in Toll Operations Workforce

Electronic tolling has enhanced the overall efficiency of the Commission's toll operations. The long-term efficiencies created as a result of *E-ZPass®* and the installation of the Automated Toll Payment Machines ("ATPMs") at several of the toll plazas as well as the impact of the implementation of the planned new tolling systems as described herein are expected to continue to reduce the number of full-time and part-time toll collectors required on a long-term basis.

As of December 31, 2020, through the combined efforts of a hiring freeze, a voluntary separation plan and layoffs, the Commission has, since 2008, permanently reduced full-time toll collector positions from 306 to 149, and part-time toll collector positions from 308 to 147. During this same time period, the Commission has reduced its overall staffing levels by 33.9%, from 1,231 to 814 on December 31, 2020.

The Commission continues to reduce the number of full and part-time toll collectors primarily through attrition as the number of cash transactions decrease because of increased *E-ZPass®* use and the installation of additional ATPMs.

Retirement Expenses and Post Employment Hospital Care Benefits

Present and retired employees of the Commission are covered under the Ohio Public Employees Retirement System ("OPERS"), a statewide public employee retirement system.

In 2020, employees covered by OPERS contributed at a statutory rate of 10.0% of earnable salary or compensation. As the employer, the Commission's statutory contribution rate for those employees was 14.0% of the same base. These employee and employer contribution rates are the maximums permitted under current State law.

OPERS is one of five statewide public employee retirement systems created by and operating pursuant to Ohio law, all of which currently have unfunded actuarial accrued liabilities. The General Assembly has the power to amend the format of those systems and to revise rates and methods of contributions to be made by public employers and their employees and eligibility criteria, benefits or benefit levels for employee members. Significant changes were last made by the General Assembly in 2012 to assist each of the five retirement systems in addressing its unfunded actuarial accrued liabilities. These bills increased minimum age and service requirements for retirement and disability benefits, revised the calculation of an employee's final average salary on which pension benefits are based to include the five highest years (rather than the three highest years), provided for OPERS pension benefits to be calculated on a lower, fixed formula, changed provisions with respect to future cost–of-living adjustments to limit those adjustments to the lesser of any increase in the Consumer Price Index or three percent, and made other changes.

OPERS administers three pension plans: the Traditional Plan, the Member-Directed Plan and the Combined Plan. At December 31, 2019, the Commission reports a liability of $102,484,000 for its proportionate share of the net pension liability for the Traditional Plan and an asset for its proportionate share of the net pension asset of $386,000 for the Combined Plan. The net pension asset/liability was measured as of December 31, 2018. The total pension asset/liability used to calculate the net pension asset/liability was determined by an actuarial valuation as of December 31, 2018. The Commission's proportion of the net pension asset/liability is determined by a measure of the Commission's proportionate relationship of employer contributions made to OPERS to the total contributions made to OPERS by all employers and non-employer contributing entities to the plan. The Commission's proportion of the net asset/liability is based on the Commission's long-term share of contributions to the plan as compared to the total projected long-term contributions of employers and all non-employer contributing entities. At December 31, 2019, the Commission's proportion was 0.374194% for the Traditional Plan and 0.338199% for the Combined Plan.

The Commission provides postemployment health care benefits through its contributions to the OPERS. The OPERS maintains a cost-sharing, multiple-employer defined benefit post-employment healthcare plan, which includes a medical plan, prescription drug program and Medicare Part B premium reimbursement, to qualifying members.

In order to qualify for postretirement health care coverage, retirees must have 20 or more years of qualifying Ohio service credit. Health care coverage for disability recipients and qualified survivor benefit recipients is available. The health care coverage provided by the OPERS is considered an Other Postemployment Benefit (OPEB) as described in GASB Statement No. 45.

The Ohio Revised Code permits, but does not mandate, the OPERS to provide OPEB benefits to its eligible members and beneficiaries. Authority to establish and amend benefits is provided in Chapter 145 of the Ohio Revised Code.

Federal law requires Commission employees hired after March 31, 1986 to participate in the federal Medicare program, which requires matching employer and employee contributions, each being 1.45% of the wage base. Otherwise, Commission employees who are covered by a State retirement system are not currently covered under the federal Social Security Act. OPERS is not subject to the funding and vesting requirements of the federal Employee Retirement Income Security Act of 1974.

For further information on OPERS, see the notes to the Basic Financial Statements included in Exhibit C. OPERS issues a stand-alone financial report. Interested parties may obtain a copy by visiting https://www.opers.org/financial/reports.shtml, making a written request to the OPERS, 277 East Town Street, Columbus, Ohio 43215-4642 or by calling (614) 222-5601 or (800) 222-7377.

Services to Customers

The Commission offers a number of services for the convenience and safety of Turnpike customers. The Commission has contracted with several private companies through competitive bidding to operate restaurants and service stations at the Commission's 14 service plazas, to provide disabled vehicle service to stranded motorists and to furnish ambulance and fire-fighting assistance in the event of an accident or other emergency situation.

Disabled Vehicle Service

Roadway vehicle-repair trucks on the Turnpike System are equipped to assist temporarily stranded drivers in getting vehicles started again. On-the-spot service includes changing tires, supplying emergency gasoline, replacing broken fan belts and other minor repairs. Towing service is available for the removal of vehicles requiring garage work off the Turnpike System.

Service Plazas

The Commission currently operates 14 service plazas on the Turnpike System to meet the needs of the traveling public. The Commission has contracted with several private companies to operate restaurants and service stations at each of the seven pairs of service plazas, which are approximately 30 miles apart. The farthest distance between pairs of service plazas is 56.1 miles. Restaurants and service stations are located at all service plazas, which are typically open 24 hours each day throughout the year. The service stations at the service plazas have gasoline, diesel fuel and assorted automotive accessories for sale. The restaurants at the service stations offer travelers a variety of food and beverage choices. Prices for food, fuel and other items sold at the service plazas are competitive with those charged at similar, off-Turnpike establishments in the same general vicinities. Additionally, Turnpike maps, motel-hotel lists, traffic updates and other touring aids are available at the service plazas for travelers.

Turnpike Maintenance

Providing Turnpike customers with a well-maintained highway is a task performed by the Commission's Maintenance Department. Personnel are assigned to the eight maintenance buildings, spaced at approximately 30-mile intervals along the Turnpike System. Maintenance workers are responsible for keeping the Turnpike System facilities operational and the roadway and pavement in a comfortable-riding, clean and safe condition by performing routine roadway maintenance, patching, joint repair, guardrail repair, lighting maintenance, fabricating and installing roadway signage, mowing, landscaping, applying herbicides and snow and ice removal. Mechanics are employed to maintain the Commission's service vehicles and equipment for such tasks. Weather monitoring stations along the road utilize embedded sensors in certain mainline bridges to provide advance notice of the need to initiate snow and ice operations. The Maintenance Department is also responsible for administering compliance with environmental and other state regulations relative to water systems, wastewater treatment plants, sanitary sewer pumping stations and underground storage tanks.

Ohio State Highway Patrol

The OSHP polices the Turnpike System on a continual, full-time basis. OSHP operates patrol cars and airplanes to enforce the Commission's traffic regulations, as well as to perform service to ill, stranded or otherwise distressed travelers. Under a contract between the Commission and the OSHP, the Commission uses toll revenue to reimburse the patrol for all costs of operating on the Turnpike System.

As part of its continued commitment to safety, the Commission has funded the implementation of Multi-Agency Radio Communications System ("MARCS") for OSHP on the Turnpike System. This system enables OSHP troopers and law enforcement personnel serving communities adjacent to the Turnpike System to effectively communicate with each other, thus providing an additional level of safety and support for both Turnpike motorists and for communities near the Turnpike System corridor.

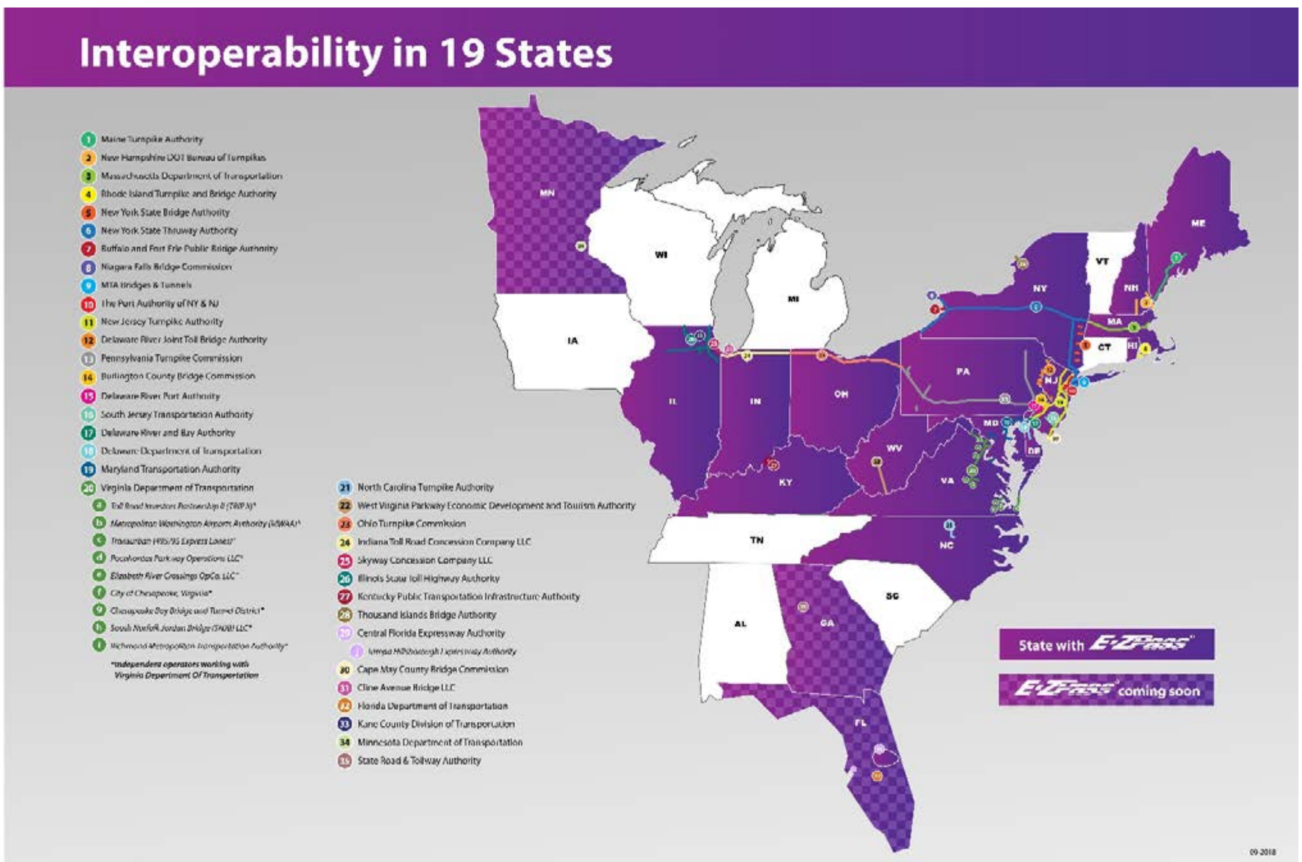
Radio Communications Systems

In the interest of improved efficiency and effectiveness, the Commission has also migrated to the Ohio MARCS 800 MHz two-way radio communication system for Turnpike operations. MARCS is of particular value to Turnpike customers as it provides greater interoperability between Turnpike personnel and emergency services providers such as OSHP, EMS, EMS life flight, fire departments and contracted disabled vehicle services when responding to vehicle accidents or incidents along the Turnpike System corridor.

TOLLS AND TOLL COLLECTION

The Commission implemented its current toll collection system ("TCS") in 2009, including electronic tolling collection technology (*E-ZPass*®). Vehicles travelling the Turnpike System are classified based on seven vehicle classifications, based on the number of axles and height of the vehicle over the first two axles. The vehicle classification along with distance traveled determines the appropriate toll fare. Customers using an *E-ZPass*® compatible transponder pay a lower toll fare for travel on the Turnpike System than non-*E-ZPass*® customers.

The Turnpike System is part of the network of 43 other U.S. toll authorities in 19 states that use *E-ZPass*®, as shown on the map below.



Use of *E-ZPass*® provides the Commission with a more efficient means of collecting tolls. It also provides improved service by affording customers the convenience of not having to stop to pay their tolls. Implementation of *E-ZPass*® also provides for increased vehicle throughput in existing toll lanes, thereby avoiding the need for future expansion of toll plaza facilities.

The Commission currently operates ATPMs at the twenty-one least-traveled interchanges. These self-serve machines allow customers to pay their tolls with cash or credit cards without the assistance of a collector. The devices include 4-way insertion of toll tickets, coin baskets and remote functionality. With video surveillance cameras installed at each plaza and audio communications installed in the toll lanes, use of these ATPMs enables operation of these low-volume plazas in an unstaffed mode either 24 hours a day or during certain off-peak hours.

Planned Toll Collection System Modernization

The Commission developed a strategic plan for modernizing the TCS that was recommended to and approved for implementation by the Commission Board on December 18, 2017. The construction and implementation of the new TCS is currently in process and is expected to be completed in the first half of 2023. For a complete description of the planned new TCS as adopted by the Commission, see Section 4 of "EXHIBIT D - TRAFFIC AND REVENUE STUDY".

Customer Service Center

As part of the TCS modernization plan, a new, state-of-the-art customer service center system ("CSC") is planned that is expected to upgrade existing customer service operations and provide significant advancements in improved customer experience, communication methods, data availability, and security primarily through the implementation of software upgrades needed to interface with the TCS modernization plan. That CSC will continue to be operated by the Commission's staff within existing space at the Commission's Berea, Ohio headquarters to service the customer service needs of the almost 450,000 *E-ZPass*® customers that have their accounts with the Commission. *E-ZPass*® usage is currently growing at approximately 2% per year and a bump in *E-ZPass*® usage is anticipated when higher speed gateless *E-ZPass*® lanes are implemented as part of the modernization plan.

The new CSC is planned to include a new *E-ZPass*® Ohio website (www.ezpassoh.com). When fully implemented, the improved CSC is expected to only perform functions related to administering and managing the *E-ZPass*® Ohio program. All unpaid toll processing functions that are expected to arise from gateless *E-ZPass*® lane operations are intended to be outsourced to one or more vendors. The implementation of the CSC is currently in process and is expected to be fully operational by February 2021. See Section 4 of "EXHIBIT D – TRAFFIC AND REVENUE STUDY."

Unpaid Toll Processing Services

The Commission plans to contract with one or more vendors to perform license plate image review, unpaid toll transaction processing functions (e.g. registered vehicle address lookup, generation and mailing of unpaid toll notices, customer service related to unpaid tolls, etc.) and collection of unpaid tolls. The Commission expects that unpaid toll processing will allow the Commission to be financially responsible while providing low speed and highway speed non-stop travel for its *E-ZPass*® travel customers.

Capital Cost Estimates

The Commission engaged a consultant in 2017 to prepare budgetary estimates of the capital costs of modernizing the Turnpike System. These costs are estimated to be approximately $204 to $232 million in 2020 dollars with approximately $65 to $72 million for the TCS, CSC and Unpaid Toll Processing capital costs and approximately $139 to $160 million for toll plaza and mainline infrastructure improvements.

Revenue and Operating Cost Impacts

The Commission currently estimates that the modernized TCS and CSC will result in approximately $257 million of operating cost savings over 30 years. In the opening year of the modernized TCS, it is estimated that there will be approximately $2.7 million less in operating costs and approximately $2.4 million more net revenue.

Toll Rate History

The Turnpike System's toll rates for commercial vehicles, which historically have been among the lowest in the country, continue to remain among the lowest even after the adjustments and implementation of the *E-ZPass®* program.

In conjunction with the Commission's issuance of Senior Lien Bonds and Junior Lien Bonds in 2013, the Commission implemented a series of forward-looking toll increases over a 10-year period starting January 1, 2014 and ending December 31, 2023. Specifically, the Commission, at its July 15, 2013 meeting, implemented a toll increase plan that increases rates by an average of 2.7% each year (the historical rate of inflation) for those 10 years. In addition to the forward-looking toll increase plan implemented beginning in 2014, the Commission has authority to increase tolls further, including if such increase is required by the toll covenants in the Senior Lien Trust Agreement or the Junior Lien Trust Agreement. See "SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS – Toll Rate Covenants." In addition, the Commission expects to make further modifications to its toll system that may impact how tolls are calculated and collected for certain trips. See "TOLLS AND TOLL COLLECTION - Planned Toll Collection System Modernization" herein.

As described above, the Commission implemented a forward-looking toll increase plan starting in 2014. One exception to that plan for toll increases is related to passenger vehicles using *E-ZPass®* and making local trips of less than 30 miles over the same 10 year period, for which tolls were not increased. After 2023, the Commission's projections currently assume that the toll rate for these local trips will experience a one-time increase to equal the same per mile rate as charged for all *E-ZPass®* trips. See "TOLLS AND TOLL COLLECTION – Planned Toll Collection System Modernization" herein.

The following tables set forth: (i) the axle-based vehicle classifications and recent historical toll rates (both per trip, from January 1, 2017 to January 1, 2021, and per mile, for the years 2015 to 2019); and (ii) historical comparative traffic information for the years 2015 to 2019.

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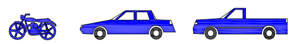
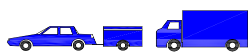
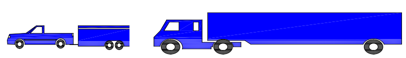
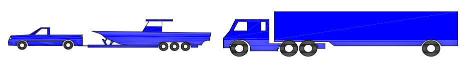
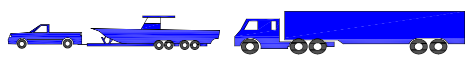
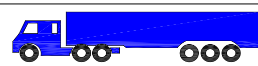
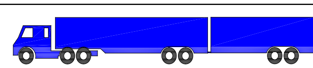
OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION
COST OF A ONE-WAY FULL LENGTH TRIP ACROSS THE OHIO TURNPIKE
HISTORICAL AXLE BASED TOLLS THROUGH JANUARY 1, 2021

Class	Description	Example	January 1, 2017		January 1, 2018		January 1, 2019		January 1, 2020		January 1, 2021	
			E-ZPASS	NON E-ZPASS	E-ZPASS	NON E-ZPASS	E-ZPASS	NON E ZPASS	E-ZPASS	NON E-ZPASS	E-ZPASS	NON E-ZPASS
1	Low 2-axle vehicles and all motorcycles (including motorcycles pulling trailers).		$ 12.50	$ 18.25	$ 12.75	$ 18.75	$ 13.25	$ 19.25	$ 13.50	$ 20.00	$ 14.00	$ 20.50
2	Low 3-axle vehicles and high 2-axle vehicles.		$ 22.25	$ 31.25	$ 22.75	$ 32.00	$ 23.50	$ 32.75	$ 24.00	$ 33.75	$ 24.75	$ 34.75
3	Low 4-axle vehicles and high 3-axle vehicles.		$ 26.75	$ 36.75	$ 27.50	$ 37.75	$ 28.25	$ 38.75	$ 29.00	$ 39.75	$ 29.75	$ 40.75
4	Low 5-axle vehicles and high 4-axle vehicles.		$ 33.25	$ 43.50	$ 34.25	$ 44.50	$ 35.25	$ 45.75	$ 36.25	$ 47.00	$ 37.25	$ 48.25
5	Low 6-axle vehicles and high 5-axle vehicles.		$ 39.00	$ 49.00	$ 40.00	$ 50.25	$ 41.00	$ 51.75	$ 42.25	$ 53.00	$ 43.25	$ 54.50
6	High 6-axle vehicles.		$ 55.50	$ 67.75	$ 57.00	$ 69.75	$ 58.75	$ 71.50	$ 60.25	$ 73.50	$ 62.00	$ 75.50
7	All vehicles with 7 or more axles.		$ 80.00	$ 92.25	$ 82.25	$ 94.75	$ 84.50	$ 97.50	$ 86.75	$ 100.00	$ 89.00	$ 102.75

Toll Rates Per Mile *Last Five Years*

Class		2015	2016	2017	2018	2019
Vehicle Classification by Axles and Height (Non *E-ZPass*®):						
1	Low 2-axle vehicles and all motorcycles	$ 0.07	$ 0.07	$ 0.08	$ 0.08	$ 0.08
2	Low 3-axle vehicles and high 2-axle vehicles	0.12	0.13	0.13	0.13	0.14
3	Low 4-axle vehicles and high 3-axle vehicles	0.14	0.15	0.15	0.16	0.16
4	Low 5-axle vehicles and high 4-axle vehicles	0.17	0.18	0.18	0.18	0.19
5	Low 6-axle vehicles and high 5-axle vehicles	0.19	0.20	0.20	0.21	0.21
6	High 6-axle vehicles	0.27	0.27	0.28	0.29	0.30
7	All vehicles with 7 or more axles	0.36	0.37	0.39	0.39	0.41
Vehicle Classification by Axles and Height (*E-ZPass*®):						
1	Low 2-axle vehicles and all motorcycles	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05
2	Low 3-axle vehicles and high 2-axle vehicles	0.09	0.09	0.09	0.09	0.10
3	Low 4-axle vehicles and high 3-axle vehicles	0.11	0.11	0.11	0.11	0.12
4	Low 5-axle vehicles and high 4-axle vehicles	0.13	0.13	0.14	0.14	0.15
5	Low 6-axle vehicles and high 5-axle vehicles	0.15	0.16	0.16	0.17	0.17
6	High 6-axle vehicles	0.21	0.22	0.23	0.24	0.24
7	All vehicles with 7 or more axles	0.31	0.32	0.33	0.34	0.35

Source: Ohio Turnpike and Infrastructure Commission, CFO/Comptroller's Office.

Comparative Traffic Statistics

The following tables set forth historic information with respect to System Traffic and Revenues for the period 2015 to 2019:

	2015	2016	2017	2018	2019
Number of Vehicles (In Thousands):					
Passenger Cars	42,110	43,472	43,598	42,322	40,684
Commercial Vehicles	11,284	11,425	11,615	11,987	11,766
Total	**53,394**	**54,897**	**55,213**	**54,309**	**52,450**
Percentage of Vehicles:					
Passenger Cars	78.9%	79.2%	79.0%	77.9%	77.6%
Commercial Vehicles	21.1%	20.8%	21.0%	22.1%	22.4%
Number of Miles (In Thousands):					
Passenger Cars	1,998,170	2,029,904	2,017,044	1,969,692	1,925,672
Commercial Vehicles	1,003,117	1,007,742	1,020,875	1,064,791	1,056,200
Total	**3,001,287**	**3,037,646**	**3,037,919**	**3,034,483**	**2,981,872**
Percentage of Miles:					
Passenger Cars	66.6%	66.8%	66.4%	64.9%	64.6%
Commercial Vehicles	33.4%	33.2%	33.6%	35.1%	35.4%
Toll Revenue (In Thousands):					
Passenger Cars	$ 122,183	$ 126,063	$127,537	$ 126,365	$ 125,422
Commercial Vehicles	158,004	162,376	168,262	179,675	181,186
Total	**$ 280,187**	**$ 288,439**	**$295,799**	**$ 306,040**	**$ 306,608**
Percentage of Toll Revenue:					
Passenger Cars	43.6%	43.7%	43.1%	41.3%	40.9%
Commercial Vehicles	56.4%	56.3%	56.9%	58.7%	59.1%
Average Miles per Trip:					
Passenger Cars	47.5	46.7	46.3	46.5	47.3
Commercial Vehicles	88.9	88.2	87.9	88.8	89.8
Average Toll Revenue per Trip:					
Passenger Cars	$2.90	$2.90	$2.93	$ 2.99	$ 3.08
Commercial Vehicles	14.00	14.21	14.49	14.99	15.40
Average Toll Revenue per Mile:					
Passenger Cars	$0.06	$0.06	$0.06	$ 0.06	$ 0.07
Commercial Vehicles	0.16	0.16	0.16	0.17	0.17

Vehicles by Class (In Thousands)

Class		2015	2016	2017	2018	2019
Vehicle Classification by Axles and Height:						
1	Low 2-axle vehicles and all motorcycles	42,110	43,472	43,598	42,322	40,684
2	Low 3-axle vehicles and high 2-axle vehicles	1,328	1,379	1,417	1,458	1,427
3	Low 4-axle vehicles and high 3-axle vehicles	713	734	769	796	781
4	Low 5-axle vehicles and high 4-axle vehicles	473	499	512	534	522
5	Low 6-axle vehicles and high 5-axle vehicles	8,335	8,358	8,442	8,722	8,545
6	High 6-axle vehicles	257	273	291	294	312
7	All vehicles with 7 or more axles	178	182	184	183	179
Subtotal		53,394	54,897	55,213	54,309	52,450
Add Non-Revenue[1]		386	443	416	419	484
Total Vehicles		**53,780**	**55,340**	**55,629**	**54,728**	**52,934**

Percentage of Vehicles Using *E-ZPass®*:	2015	2016	2017	2018	2019
Passenger cars (Class 1)	47.6%	50.2%	52.8%	55.5%	57.9%
Commercial vehicles (Class 2-7)	82.1%	83.6%	84.7%	85.9%	87.8%
Total	54.9%	57.1%	59.5%	62.2%	64.6%

Source: Ohio Turnpike and Infrastructure Commission, CFO/Comptroller's Office.

Notes: [1] Non-revenue vehicles represent traffic of officials, employees, agencies and representatives of the Commission while in the discharge of their official duties, police officers of the United States, of the State of Ohio and of its political subdivisions, and vehicles of contractors used in the maintenance of the Turnpike System and its buildings.

Toll Revenue by Class *(In Thousands)*

Class		2015	2016	2017	2018	2019
Vehicle Classification by Axles and Height:						
1	Low 2-axle vehicles and all motorcycles	42,110	43,472	43,598	42,322	40,684
2	Low 3-axle vehicles and high 2-axle vehicles	1,328	1,379	1,417	1,458	1,427
3	Low 4-axle vehicles and high 3-axle vehicles	713	734	769	796	781
4	Low 5-axle vehicles and high 4-axle vehicles	473	499	512	534	522
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6	High 6-axle vehicles	257	273	291	294	312
7	All vehicles with 7 or more axles	178	182	184	183	179
Subtotal		53,394	54,897	55,213	54,309	52,450
Add Non-Revenue (1)		386	443	416	419	484
Total Vehicles		**53,780**	**55,340**	**55,629**	**54,728**	**52,934**

Percentage of Vehicles Using *E-ZPass*®:		**2015**	**2016**	**2017**	**2018**	**2019**
	Passenger cars (Class 1)	47.6%	50.2%	52.8%	55.5%	57.9%
	Commercial vehicles (Class 2-7)	82.1%	83.6%	84.7%	85.9%	87.8%
Total		54.9%	57.1%	59.5%	62.2%	64.6%

Source: Ohio Turnpike and Infrastructure Commission, CFO/Comptroller's Office.

Notes: (1) Non-revenue vehicles represent traffic of officials, employees, agencies and representatives of the Commission while in the discharge of their official duties, police officers of the United States, of the State of Ohio and of its political subdivisions, and vehicles of contractors used in the maintenance of the Turnpike System and its buildings.

Recent Impacts – Monthly Transactions and Monthly Toll Revenues

The Commission has been closely monitoring traffic volume on the Turnpike System as a result of the COVID-19 pandemic. Before the COVID-19-related impacts, passenger car vehicle miles traveled were 2.7% higher and commercial vehicle miles traveled were 0.8% higher (through March 15, 2020) when compared to the same period in 2019. Due to the impact of COVID-19 in the period of March through October, passenger car vehicle miles traveled were 31.1% lower and commercial vehicle miles traveled were 2.5% lower compared to the same time period in 2019. The following tables show monthly toll transactions and monthly revenues through November 30, 2020, as compared to the same periods in 2019.

2019 and 2020 Monthly Traffic and Toll Revenue Information

	January	February	March	April	May	June	July	August	September	October	November	Eleven Months
Number of Vehicle Miles Traveled *(In Thousands):*												
2019												
Passenger Cars	110,732	106,400	141,486	149,299	175,311	191,308	213,524	211,431	161,517	160,471	147,894	1,769,373
Commercial Vehicles	82,513	78,174	87,676	88,175	92,829	91,572	92,909	96,870	88,893	95,331	82,169	977,111
Total	193,245	184,574	229,162	237,474	268,140	282,880	306,433	308,301	250,410	255,802	230,063	2,746,484
2020												
Passenger Cars	114,244	108,830	96,985	47,470	92,230	131,495	161,758	164,200	137,683	135,394	113,061	1,303,350
Commercial Vehicles	82,984	79,061	86,525	72,972	79,530	90,028	93,793	97,400	95,448	100,099	88,472	966,312
Total	197,228	187,891	183,510	120,442	171,760	221,523	255,551	261,600	233,131	235,493	201,533	2,269,662
Percentage Change												
Passenger Cars	3.2%	2.3%	-31.5%	-68.2%	-47.4%	-31.3%	-24.2%	-22.3%	-14.8%	-15.6%	-23.6%	-26.3%
Commercial Vehicles	.6%	1.1%	-1.3%	-17.2%	-14.3%	-1.7%	1.0%	.5%	7.4%	5.0%	7.7%	-1.1%
Total	2.1%	1.8%	-19.9%	-49.3%	-35.9%	-21.7%	-16.6%	-15.1%	-6.9%	-7.9%	-12.4%	-17.4%
Toll Revenue *(In Thousands):*												
2019												
Passenger Cars	$ 7,156	$ 6,870	$ 9,236	$ 9,696	$ 11,448	$ 12,559	$ 14,010	$ 13,873	$ 10,510	$ 10,388	$ 9,664	$ 115,410
Commercial Vehicles	14,334	13,557	15,201	15,247	15,967	15,691	15,889	16,613	15,297	16,468	14,211	168,475
Total	$ 21,490	$ 20,427	$ 24,437	$ 24,943	$ 27,415	$ 28,250	$ 29,899	$ 30,486	$ 25,807	$ 26,856	$ 23,875	$ 283,885
2020												
Passenger Cars	$ 7,469	$ 7,201	$ 6,453	$ 3,131	$ 6,105	$ 8,721	$ 10,716	$ 10,869	$ 9,128	$ 8,954	$ 7,436	$ 86,183
Commercial Vehicles	14,827	14,122	15,489	13,129	14,187	15,944	16,550	17,135	16,934	17,752	15,728	171,797
Total	$ 22,296	$ 21,323	$ 21,942	$ 16,260	$ 20,292	$ 24,665	$ 27,266	$ 28,004	$ 26,062	$ 26,706	$ 23,164	$ 257,980
Percentage Change												
Passenger Cars	4.4%	4.8%	-30.1%	-67.7%	-46.7%	-30.6%	-23.5%	-21.7%	-13.1%	-13.8%	-23.1%	-25.3%
Commercial Vehicles	3.4%	4.2%	1.9%	-13.9%	-11.1%	1.6%	4.2%	3.1%	10.7%	7.8%	10.7%	2.0%
Total	3.8%	4.4%	-10.2%	-34.8%	-26.0%	-12.7%	-8.8%	-8.1%	1.0%	-.6%	-3.0%	-9.1%

Toll Rates for the Years 2021 Through 2023

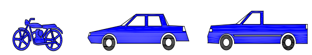
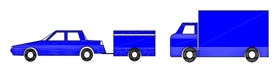
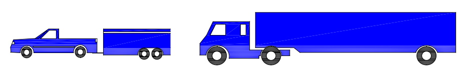
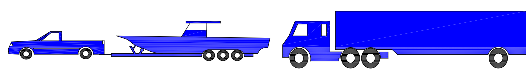
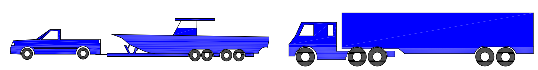
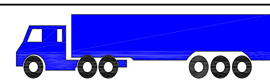
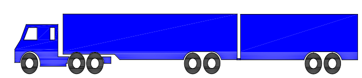
The table below sets forth the axle-based vehicle classifications and approved toll rates for the years 2021 through 2023.

The Commission may increase rates further if such increase is required by the toll covenants in the Senior Lien Trust Agreement or the Junior Lien Trust Agreement. See “SECURITY AND SOURCE OF PAYMENT FOR THE 2021 SENIOR LIEN BONDS – Toll Rate Covenant” herein.

The Commission’s projections currently assume that the previously approved 2.7 percent toll rate increase in 2023 will be revised to a 7.7 percent increase (except for local trips of less than 30 miles, as described above) and tolls will increase for all vehicles, regardless of class or payment method, by 7.7 percent on January 1, 2024, 2.7 percent each year for 4 years beginning on January 1, 2025 and then, beginning on January 1, 2029, 2.0 percent annually thereafter. See “EXHIBIT D – TRAFFIC AND REVENUE STUDY.”

The toll increase projections have been determined by the Commission taking into account the amount necessary to meet existing and projected debt service and operational and maintenance obligations of the Commission. For a complete description of toll increases adopted by the Commission, see “EXHIBIT D - TRAFFIC AND REVENUE STUDY” and “TOLLS AND TOLL COLLECTION.”

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION
APPROVED TOLL RATE SCHEDULE FOR YEARS 2021 THROUGH 2023
COST OF A ONE-WAY FULL LENGTH TRIP ACROSS THE OHIO TURNPIKE

Class	Description	Example	January 1, 2021		January 1, 2022		January 1, 2023	
			E-ZPASS	NON E-ZPASS	E-ZPASS	NON E-ZPASS	E-ZPASS	NON E-ZPASS
1	Low 2-axle vehicles and all motorcycles (including motorcycles pulling trailers).		$ 14.00	$ 20.50	$ 14.25	$ 21.00	$ 14.75	$ 21.50
2	Low 3-axle vehicles and high 2-axle vehicles.		$ 24.75	$ 34.75	$ 25.50	$ 35.50	$ 26.00	$ 36.50
3	Low 4-axle vehicles and high 3-axle vehicles.		$ 29.75	$ 40.75	$ 30.50	$ 42.00	$ 31.25	$ 43.00
4	Low 5-axle vehicles and high 4-axle vehicles.		$ 37.25	$ 48.25	$ 38.25	$ 49.50	$ 39.25	$ 51.00
5	Low 6-axle vehicles and high 5-axle vehicles.		$ 43.25	$ 54.50	$ 44.50	$ 56.00	$ 45.75	$ 57.50
6	High 6-axle vehicles.		$ 62.00	$ 75.50	$ 63.50	$ 77.50	$ 65.25	$ 79.50
7	All vehicles with 7 or more axles.		$ 89.00	$ 102.75	$ 91.50	$ 105.50	$ 94.00	$ 108.25

OTHER REVENUE SOURCES

The Turnpike System is a fee-for-service facility, with 85.0% of its revenue typically derived from tolls. However, the Commission has worked diligently to produce revenue from other sources in order to keep tolls as low as possible. In 2019, such additional sources included the following categories, and provided the following additional revenue for the Commission: food and fuel concessions ($17,140,000), investments ($22,027,000), fuel taxes ($3,451,000), and other sources such as advertising, and special permits ($3,529,000).

CERTAIN FINANCIAL INFORMATION

Management of the Commission is responsible for establishing and maintaining an internal control structure designed to ensure that the assets of the Commission are protected from loss, theft or misuse and to ensure that adequate accounting data are compiled to allow for the preparation of financial statements in conformity with generally accepted accounting principles. The internal control structure is designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived; and (2) the valuation of costs and benefits requires estimates and judgments by management.

Risk Management

The Commission is self-insured for worker's compensation. Reimbursement for medical bills, and employee lost time compensation are paid directly by the Commission in accordance with the BWC Billing and Reimbursement Manual.

The Commission is generally self-insured up to $100,000 per occurrence in accordance with its comprehensive insurance program, which includes: Commercial General Liability (including terrorism coverage); Automobile Liability; Public Officials Liability; Employment Practices Liability; Employers Liability; Employee Benefits Liability ($1,000 deductible per occurrence); Crime Insurance ($50,000 single loss retention); Umbrella and Excess Liability Insurance coverage; Bridge and Use Occupancy ($100,000 deductible per occurrence); Property, Computer Equipment, Maintenance Equipment and Boiler & Machinery ($50,000 deductible per occurrence); Cyber Security ($50,000 retention each claim); and Pollution Liability coverage ($50,000 deductible each incident). In addition, the Commission purchases commercial stop-loss insurance for employee health care claims in excess of $250,000 per covered person per contract year. Paid claims have not exceeded the limits of the Commission's commercial policies for each of the last three fiscal years. The Commission also pays unemployment claims to the State of Ohio as incurred.

Matters are reported to the insurer(s) when it is probable that a liability may exist or loss has occurred and the estimated amount or nature of that liability/loss is such that one or more insurance coverages may respond. Claim liabilities are based upon the estimated ultimate net cost of resolving the claims, including specific incremental claim adjustment expenses.

Accounting System

In order to facilitate compliance with its Master Trust Agreements, the Commission's accounting system is organized and operated on a "fund basis." The operations of each fund are accounted for using a separate set of self-balancing accounts. The accounts of all funds are combined into a single proprietary (enterprise) fund for external reporting purposes. The accounting policies of the Commission are more fully described in Notes to the Financial Statements of the Commission set forth as Exhibit C hereto.

Debt Administration: Outstanding Bonds

Pursuant to the Senior Lien Trust Agreement, the Fifth Supplemental Trust Agreement and a resolution adopted by the Commission on June 22, 1998, the Commission issued its $298,575,000 Turnpike Revenue Refunding Bonds, 1998 Series A, dated September 1, 1998. The Outstanding aggregate principal amount of 1998 Series A Bonds was $155,565,000 as of December 31, 2020.

Pursuant to the Senior Lien Trust Agreement, the Seventeenth Supplemental Trust Agreement and a resolution adopted by the Commission on October 25, 2010, the Commission issued its $131,290,000 Turnpike Revenue Refunding Bonds, 2010 Series A Bonds, dated November 18, 2010. The Outstanding aggregate principal amount of 2010 Series A Bonds was $19,355,000 as of December 31, 2020.

Pursuant to the Senior Lien Trust Agreement, the Twentieth Supplemental Trust Agreement and a resolution adopted by the Commission on August 21, 2017, the Commission issued its $114,670,000 Turnpike Revenue Refunding Bonds, 2017 Series A Bonds, dated September 28, 2017. The Outstanding aggregate principal amount of 2017 Series A Bonds was $112,370,000 as of December 31, 2020.

Pursuant to the Senior Lien Trust Agreement, the Twenty-Second Supplemental Trust Agreement and a resolution adopted by the Commission on January 22, 2018, the Commission issued its $73,880,000 Turnpike Revenue Bonds, 2018 Series A Bonds, dated February 15, 2018. The Outstanding aggregate principal amount of 2018 Series A Bonds was $73,880,000 as of December 31, 2020.

Pursuant to the Senior Lien Trust Agreement, the Twenty-Third Supplemental Trust Agreement and a resolution adopted by the Commission on December 16, 2019, the Commission issued its $81,465,000 principal amount of State of Ohio Turnpike Revenue Refunding Bonds, 2020 Series A (Federally Taxable), dated February 13, 2020. The Outstanding aggregate principal amount of 2020 Series A Bonds was $81,465,000 as of December 31, 2020.

The Outstanding Senior Lien Bonds are payable from and secured by a pledge of and a senior lien on System Pledged Revenues on a parity with the 2021 Senior Lien Bonds and with any other bonds that may be issued and Outstanding under the Senior Lien Trust Agreement in the future.

Pursuant to the Junior Lien Trust Agreement, the First Supplemental Trust Agreement and a resolution adopted by the Commission on July 15, 2013, the Commission issued its $994,812,816 Turnpike Junior Lien Revenue Bonds, 2013 Series A Bonds, dated August 15, 2013. The outstanding aggregate accreted principal amount of 2013 Series A Junior Lien Bonds was $796,819,851 as of December 31, 2020.

Pursuant to the Junior Lien Trust Agreement, the Second Supplemental Trust Agreement and a resolution adopted by the Commission on January 22, 2018, the Commission issued its $425,965,000 Turnpike Junior Lien Revenue Bonds, 2018 Series A Bonds, dated February 15, 2018. The outstanding aggregate principal amount of 2018 Series A Junior Lien Bonds was $425,965,000 as of December 31, 2020.

Pursuant to the Junior Lien Trust Agreement, the Third Supplemental Trust Agreement and a resolution adopted by the Commission on December 16, 2019, the Commission issued its $376,850,000 State of Ohio Turnpike Junior Lien Revenue Refunding Bonds, 2020 Series A (Federally Taxable) (Infrastructure Projects) dated February 13, 2020. The outstanding aggregate principal amount of 2020 Series A Junior Lien Bonds was $376,850,000 as of December 31, 2020.

The 2013 Junior Lien Bonds, the 2018 Junior Lien Bonds and the 2020 Junior Lien Bonds are subordinate to the Senior Lien Bonds issued by the Commission under the Senior Lien Trust Agreement. The 2013 Junior Lien Bonds, the 2018 Junior Lien Bonds and the 2020 Junior Lien Bonds, along with any additional Junior Lien Bonds that may be issued under the Junior Lien Trust Agreement, are equally and ratably secured by a junior pledge of and junior lien on System Pledged Revenues (as defined in the Junior Lien Trust Agreement). System Pledged Revenues must be applied to payment obligations relating to the Senior Lien Bonds before being used to pay any obligations relating to the Junior Lien Bonds.

Debt Service Coverage Policy for Senior Lien Bonds

By a Resolution adopted on July 15, 2013, the Commission established a policy that it will use its best efforts to cause System Pledged Revenues to equal at least 200% of Senior Lien Debt Service Requirements, and to take action necessary to re-establish or maintain such percentage, including review of revenues and reduction of expenditures. This policy is in addition to the requirement contained in the Senior Lien Trust Agreement that System Pledged Revenues, plus Supplemental Payments, if any, equal at least 120% of the Annual Debt Service Requirement for the Senior Lien Bonds. See "SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS – Toll Rate Covenants" herein. However, this is a best efforts policy as described above, is not a legal obligation of the Commission, is subject to change at any time, and should not be relied upon by the Holders or Beneficial Owners of the 2021 Senior Lien Bonds. The actual results for the five most recent years are shown in the table titled "Revenue Bond Coverage" herein.

Days Cash on Hand Policy

By a Resolution adopted on July 15, 2013, the Commission also adopted a policy that it will use its best efforts to maintain a minimum of 365 days cash on hand among the following reserves: (1) the General Reserve Fund, (2) the Non-Trust Reserve Fund, (3) the Service Plaza Capital Reserve Fund, (4) the Fuel Tax Fund, (5) the System Project Fund and (6) the Renewal and Replacement Reserve. However, this is a best efforts policy, is not a legal obligation of the Commission, is subject to change at any time, and should not be relied upon by the Holders or Beneficial Owners of the 2021 Senior Lien Bonds.

RESULTS OF OPERATIONS

Set forth below are certain revenue and expense items and certain other financial information derived from the Commission's audited financial statements for each of the Commission fiscal years 2015 through 2019. The revenues and operating expenses below were derived by adjusting information contained in the Commission's audited financial statements, which are prepared in conformity with generally accepted accounting principles. This information is qualified by, and should be read in conjunction with, the audited financial statements for the Commission's fiscal year ended December 31, 2019 included as Exhibit C to this Official Statement. See also "MANAGEMENT DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS" below.

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Revenue Bond Coverage
Dollars in Thousands

	2015	2016	2017	2018	2019
Pledged Revenues					
Passenger Car Toll Revenues	$ 122,183	$ 126,063	$ 127,537	$ 126,365	$ 125,422
Commercial Vehicle Toll Revenues	158,004	162,376	168,262	179,675	182,186
Special Toll Permit Revenues	3,413	3,427	3,423	3,529	3,529
Pledged Concession Revenues	15,432	15,631	16,418	16,637	16,476
Investment Earnings	557	841	1,512	4,171	4,716
Other Pledged Revenues	4,245	4,967	5,575	6,160	6,662
Total Pledged Revenues(1)	$ 303,834	$ 313,305	$ 322,727	$ 336,537	$ 338,991
Expenses Paid from Pledged Revenues (2)					
Administration and Insurance	$ 10,269	$ 11,177	$ 11,240	$ 11,638	$ 12,689
Maintenance of Roadway and Structures	35,810	38,319	37,936	39,770	39,455
Services and Toll Operations	51,911	54,072	56,200	54,503	53,313
Traffic Control, Safety, Patrol and Communications	13,912	14,399	13,386	13,429	14,391
Total Expenses Paid from Pledged Revenues	$ 111,902	$ 117,967	$ 118,762	$ 119,340	$ 119,848
Deposit to Reserve Account	$ 376	$ 374	$ 354	$ 151	$ 127
Net Revenues Available for Debt Service	$ 191,556	$ 194,964	$ 203,611	$ 217,046	$ 219,016
Senior Lien Debt Service Requirements					
Principal	$ 30,737	$ 32,266	$ 34,277	$ 36,693	$ 47,480
Interest	29,149	27,628	25,093	26,120	24,005
Less Interest Earned	(685)	(877)	(933)	(1,264)	(1,409)
Total Senior Lien Debt Service Requirements	$ 59,201	$ 59,017	$ 58,437	$ 61,549	$ 70,076
Calculated Debt Coverage Ratio	3.24	3.30	3.48	3.53	3.13
Junior Lien Debt Service Requirements					
Principal	$ -	$ -	$ -	$ 6,725	$ 5,512
Interest	36,146	36,146	36,146	52,790	55,783
Less Interest Earned	(725)	(931)	(991)	(1,972)	(2,661)
Less Interest Income transferred from Infrastructure Fund	(3,729)	(2,725)	(1,427)	(4,931)	(9,986)
Total Junior Lien Debt Service Requirements	$ 31,692	$ 32,490	$ 33,728	$ 52,612	$ 48,648
Combined Debt Service Requirement	$ 90,893	$ 91,507	$ 92,165	$ 114,161	$ 118,724
Combined Debt Coverage Ratio	2.11	2.13	2.21	1.90	1.84

(1) Gross Revenues per the Amended and Restated Master Trust Agreement dated April 8, 2013, as amended in 2013 - consisting of tolls, special toll permits, certain realized investment earnings, appropriations from the Ohio Department of Transportation, leases, licenses, royalties, advertising, miscellaneous sales, fees, charges and certain concession revenues.

(2) Operating expenses exclude non-cash GASB 68 pension expense and GASB OPEB expense.

Set forth below are certain revenue and expense items and certain other financial information derived from the Commission's unaudited financial statements for the nine months ended September 30, 2020* and the nine months ended September 30, 2019. This information has not been reviewed by the Commission's auditors. This information is qualified by, and should be read in conjunction with, the audited financial statements for the Commission's fiscal year ended December 31, 2019 included as Exhibit C to this Official Statement.

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* For additional information regarding the impact of the COVID-19 pandemic on the period ended October 31, 2020, see "INTRODUCTION - Response to the COVID-19 Pandemic" and "TOLLS AND TOLL COLLECTION – Recent Impacts".

Interim Revenue Bond Coverage (Unaudited)

Dollars in Thousands

	9 Months Ended 9/30/2020	9 Months Ended 9/30/2019
Pledged Revenues		
Passenger Car Toll Revenues	$ 69,794	$ 95,357
Commercial Vehicle Toll Revenues	138,318	137,797
Special Toll Permit Revenues	2,595	2,669
Pledged Concession Revenues	8,672	12,258
Investment Earnings	1,142	3,804
Other Pledged Revenues	5,515	4,996
Total Pledged Revenues	$ 226,036 (1)	$ 256,881 (1)
Expenses Paid from Pledged Revenues (2)		
Administration and Insurance	$ 9,624	$ 9,245
Maintenance of Roadway and Structures	30,214	29,503
Services and Toll Operations	37,537	40,229
Traffic Control, Safety, Patrol and Communications	10,475	10,785
Total Expenses Paid from Pledged Revenues	87,850	89,762
Deposit to Reserve Account	$ 335	$ 127
Net Revenues Available for Debt Service	$ 137,851	$ 166,992
Senior Lien Debt Service Requirements:		
Principal	$ 26,475	$ 41,292
Interest	16,151	18,127
Less Interest Earned	(798)	(1,016)
Total Senior Lien Debt Service Requirements	$ 41,828	$ 58,403
Calculated Debt Coverage Ratio	3.30	2.86
Junior Lien Debt Service Requirements:		
Principal	$ 1,994	$ 4,262
Interest	38,684	41,854
Less Interest Earned	(1,503)	(1,977)
Less Interest Income transferred from Infrastructure Fund	(6,156)	(9,986)
Total Junior Lien Debt Service Requirements	$ 33,019	$ 34,153
Combined Debt Service Requirement	$ 74,847	$ 92,556
Combined Debt Coverage Ratio	1.84	1.80

(1) Gross Revenues per the Amended and Restated Master Trust Agreement dated April 8, 2013, as amended in 2013 - consisting of tolls, special toll permits, certain realized investment earnings, appropriations from the Ohio Department of Transportation, leases, licenses, royalties, advertising, miscellaneous sales, fees, charges and certain concession revenues.

(2) Operating expenses exclude non-cash GASB 68 pension expense and GASB OPEB expense.

MANAGEMENT DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS

Discussion of Operating Results: 2015 through September 30, 2020

Over the last five years, the Commission has continued to recover from a decline in traffic and revenues because of the recession while implementing the Governor's Jobs and Transportation Plan which will, when fully implemented, provide $1.38 billion for Infrastructure Projects across northern Ohio. With the exception of recent decline due to the COVID-19 pandemic, the number of vehicles and the number of vehicle miles traveled has increased since the recession. The increase in traffic combined with annual 2.7% toll increases in January of 2015 through January of 2019 has caused annual operating revenue to increase by $27.2 million or 14.2% since 2015. During this time period operating and maintenance costs (excluding depreciation and GASB 68 expense) have increased by an average of $2.0 million per year, or 1.8% per year since 2015.

2015

Passenger car traffic volume increased by 4.4 percent and commercial traffic volume increased by 3.3 percent during 2015. The number of miles traveled by passenger cars increased by 4.8 percent while the miles traveled by commercial vehicles increased by 3.6 percent during 2015. Toll rates were increased for all classes of vehicles by 2.7 percent on January 1, 2015. The increased toll revenue from passenger cars of approximately $7.3 million or 6.4 percent was a result of the toll rate increase and the increase in passenger car vehicle miles traveled partially offset by a lower average toll rate resulting from the effect of increased *E-ZPass®* use. Revenues from commercial vehicles increased $8.3 million or 5.5 percent in 2015 as a result of the toll rate increase and the increase in commercial vehicle miles traveled. Total expenses increased by $118.8 million or 26.5 percent in 2015 compared to the prior year. Total expenses include payments to ODOT and payments to ODOT increased by $115.5 million in 2015. Fringe benefit expenses, which are allocated to each area based on wages, decreased $1.0 million from 2014 due to lower pension expenses due to the implementation of GASB 68 and lower workers' compensation costs. The 4.3 percent increase in Administration and Insurance expense was primarily due to an increase in outside legal and professional fees. The 3.1 percent decrease in Maintenance of Roadway and Structures expense is the result of lower wages in 2015 compared to the harsher winter weather in 2014 partially offset by higher salt costs due to an increase in the price of salt. The 1.7 percent increase in Services and Toll Operations expense is due primarily to higher credit card fees. The Commission made $306.3 million in payments to ODOT in 2015 to pay for Infrastructure Projects. Interest expense decreased $0.5 million in 2015 due to the payments made on outstanding debt.

2016

Passenger car traffic volume increased by 3.2 percent and commercial traffic volume increased by 1.2 percent during 2016. The number of miles traveled by passenger cars increased by 1.6 percent while the miles traveled by commercial vehicles increased by 0.5 percent during 2016. The increased toll revenue from passenger cars of approximately $3.9 million or 3.2 percent that resulted from the toll rate increase and the increase in passenger car vehicle miles traveled was partially offset by a lower average toll rate resulting from the effect of increased *E-ZPass®* use. Revenues from commercial vehicles increased $4.4 million or 2.8 percent in 2016 as a result of the toll rate increase and the increase in commercial vehicle miles traveled. Total expenses decreased by $16.1 million in 2016 compared to the prior year. Total expenses include payments to ODOT and payments to ODOT decreased by $26.9 million in 2016. Fringe benefit expenses, which are allocated to each area based on wages, increased $6.6 million from 2015 primarily due to a $4.1 million increase in pension expenses and a $2.0 million increase in employee health benefit costs. The 12.8 percent increase in Administration and Insurance expense was primarily due to the increase in fringe benefit costs. The 11.3 percent increase in Maintenance of Roadway and Structures expense is the result of higher fringe benefit costs, higher contamination remediation costs and higher salt costs due to an increase in the price of salt. The 7.5 percent increase in Services and Toll Operations expense is due primarily to the increase in fringe benefit costs and higher credit card fees. The Commission made $279.4 million in payments to ODOT in 2016 to pay for Infrastructure Projects. Interest expense decreased $1.5 million in 2016 primarily due to an increase in capitalized interest on construction projects.

2017

Passenger car traffic volume increased by 0.3 percent and commercial traffic volume increased by 1.7 percent during 2017. The number of miles traveled by passenger cars decreased by 0.6 percent while the miles traveled by commercial vehicles increased by 1.3 percent during 2017. Toll rates were increased for all classes of vehicles by 2.7 percent on January 1, 2017. The toll rate increase was partially offset by the decrease in passenger car vehicle miles traveled and the effect of increased *E-ZPass®* use, which resulted in an increase in toll revenue from passenger cars of approximately $1.5 million or 1.2 percent. Revenues from commercial vehicles increased $5.9 million or 3.6 percent in 2017 as a result of the toll rate increase and the increase in commercial vehicle miles traveled. Total expenses decreased by $154.6 million or 28.1 percent in 2017 compared to the prior year. Total expenses include payments to ODOT and payments to ODOT decreased by $173.0 million in 2017. Fringe benefit expenses, which are allocated to each area based on wages, increased $10.9 million from 2016 due primarily to a $9.9 million increase in pension expenses and a $0.7 million increase in employee health benefit costs. The 9.7 percent increase in Administration and Insurance expense was primarily due to the increase in fringe benefit costs. The 10.8 percent increase in Maintenance of Roadway and Structures expense is the result of higher fringe benefit costs partially offset by lower contamination remediation costs and lower salt costs due to a decrease in the price of salt from the high levels in 2015. The 10.9 percent increase in Services and Toll Operations expense is due primarily to the increase in fringe benefit costs, higher wage rates and higher credit card fees. The Commission made $106.4 million in payments to ODOT in 2017 to pay for Infrastructure Projects, a decrease of $173.0 million from 2016. Interest expense decreased $0.3 million in 2017 primarily due lower interest expense due to a reduction in outstanding debt from 2016 partially offset by a decrease in capitalized interest on construction projects.

2018

Passenger car traffic volume decreased by 2.9 percent and commercial traffic volume increased by 3.2 percent during 2018. The number of miles traveled by passenger cars decreased by 2.3 percent while the miles traveled by commercial vehicles increased by 4.3 percent during 2018. Toll rates were increased for all classes of vehicles by 2.7 percent on January 1, 2018. The toll rate increase was offset by the decrease in passenger car vehicle miles traveled and the effect of increased *E-ZPass®* use, which resulted in a decrease in toll revenue from passenger cars of approximately $1.2 million or 0.9 percent. Revenues from commercial vehicles increased $11.4 million or 6.8 percent in 2018 as a result of the toll rate increase and the increase in commercial vehicle miles traveled. Total expenses decreased by $42.8 million or 10.8 percent in 2018 compared to the prior year. Total expenses include payments to ODOT and payments to ODOT decreased by $58.3 million in 2018. Fringe benefit expenses, which are allocated to each area based on wages, decreased $6.7 million from 2017 due primarily to a $8.3 million decrease in pension expenses and a $1.3 million decrease in employee health benefit costs offset by a $3.4 million increase in OPEB expense. The 1.1 percent decrease in Administration and Insurance expense was primarily due to the decrease in fringe benefit costs. The 2.5 percent decrease in Maintenance of Roadway and Structures expense is the result of lower fringe benefit costs and lower salt costs due to a decrease in the price of salt partially offset by higher contamination remediation costs. The 4.9 percent decrease in Services and Toll Operations expense is due primarily to the decrease in fringe benefit costs, lower wages due to a reduction in personnel and lower utility costs partially offset by higher credit card fees. The Commission made $48.1 million in payments to ODOT in 2018 to pay for Infrastructure Projects, a decrease of $58.3 million from 2017. Interest expense increased $18.8 million in 2018 primarily due to the issuance of the 2018 Series A bonds.

2019

Passenger car traffic volume decreased by 3.9 percent and commercial traffic volume decreased by 1.8 percent during 2019. The number of miles traveled by passenger cars decreased by 2.2 percent while the miles traveled by commercial vehicles decreased by 0.8 percent during 2019. Toll rates were increased for all classes of vehicles by 2.7 percent on January 1, 2019. The toll rate increase was offset by the decrease in passenger car vehicle miles traveled and the effect of increased *E-ZPass®* use, which resulted in a decrease in toll revenue from passenger cars of approximately $0.7 million or 0.7 percent. Revenues from commercial vehicles increased $2.5 million or 1.4 percent in 2019 as a result of the toll rate increase and the decrease in commercial vehicle miles traveled. Total expenses increased by $68.0 million or 19.2 percent in 2019 compared to the prior year. Fringe benefit expenses, which are allocated to each area based on wages, increased $10.5 million from 2018 due primarily to a $9.7 million increase in pension expenses and a $0.7 million increase in OPEB expense. The 18.5 percent increase in Administration and Insurance expense was primarily due to the increase in fringe benefit costs and an increase in legal and professional fees. The 9.4 percent increase in Maintenance of Roadway and Structures expense was primarily due to the increase in fringe benefit costs partially offset by lower contamination remediation costs. The 6.0 percent increase in Services and Toll Operations expense is due primarily to the increase in fringe benefit costs and higher credit card fees partially offset by lower wages due to a reduction in personnel and lower utility costs. The 9.0 percent increase in Traffic Control, Safety and Patrol was due to a $0.7 million increase in costs from the Ohio Highway Patrol and the increase in fringe benefit costs. The Commission made $99.6 million in payments to ODOT in 2019 to pay for Infrastructure Projects, an increase of $51.5 million from 2018. Interest expense increased $1.5 million in 2019 primarily due to the issuance of the 2018 Series A bonds in February of 2018.

January 1, 2020 through September 30, 2020

Traffic was greatly impacted by the effects of COVID-19 in the first nine months of 2020. In April of 2020, when people were urged to stay at home and many businesses were closed, passenger car vehicle miles travelled decreased 68.2 percent from the previous year and commercial vehicle miles travelled decreased 17.2 percent from the previous year. Since then, the decline from 2019 steadily lessened. In September of 2020, passenger car vehicle miles traveled were 14.8 percent lower than the previous year and commercial vehicle miles travelled were 7.4 percent higher than the previous year.

Passenger car traffic volume decreased by 27.0 percent and commercial traffic volume decreased by 5.0 percent during the first nine months of 2020 from the first nine months of 2019. The number of miles traveled by passenger cars decreased by 27.8 percent while the miles traveled by commercial vehicles decreased by 2.7 percent during the first nine months of 2020. Toll rates were increased for all classes of vehicles by 2.7 percent on January 1, 2020. The toll rate increase was offset by the decrease in passenger car vehicle miles traveled and the effect of increased *E-ZPass®* use, which resulted in a decrease in toll revenue from passenger cars of approximately $25.6 million or 26.8 percent. Revenues from commercial vehicles increased $0.5 million or 0.4 percent in the first nine months of 2020 as a result of the toll rate increase and the decrease in commercial vehicle miles traveled. Total expenses increased by $31.1 million or 10.6 percent in the first nine months of 2020 compared to the prior year. The 4.1 percent increase in Administration and Insurance expense was primarily due to the increase in wage and fringe costs. The 2.4 percent increase in Maintenance of Roadway and Structures expense was primarily due to the increase in wage and fringe benefit costs partially offset by lower contamination remediation costs. The 6.7 percent decrease in Services and Toll Operations expense is due primarily to a decrease in toll collectors wage costs and lower utility costs. The 2.9 percent decrease in Traffic Control, Safety and Patrol was due to a $0.2 million decrease in costs from the Ohio Highway Patrol and a decrease in wage and fringe benefit costs. The Commission made $103.7 million in payments to ODOT in the first nine months of 2020 to pay for Infrastructure Projects, an increase of $36.1 million from the first nine months of 2019. Interest expense decreased $1.5 million in the first nine months of 2020 primarily due to savings from the refunding of all of the Senior Lien 2013 Series A Bonds and certain Junior Lien 2013 Series A (Infrastructure Projects) Bonds in February of 2020.

LONG-TERM TURNPIKE SYSTEM CAPITAL IMPROVEMENT PROGRAM

Overview of Approved 2021 Capital Budget and Projected Capital Program for 2021-2030

The Commission prepares a one-year capital budget which is approved by the Commission before the start of each calendar year. The capital budget details the construction projects and equipment purchases planned for the year that are necessary to maintain the Turnpike System in good condition.

Each year the Commission also prepares a long-term projection of future capital expenditures for at least the next ten years. The long-term projection is used to plan for sequencing of large capital projects and to forecast the need for toll increases or debt issuances.

The table below sets forth the Commission's long-term projection for the next ten years including the approved capital budget for 2021. The long-term projections of future capital expenditures have been prepared by the Commission's Chief Engineer.

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TOTAL CAPITAL PROGRAM	10 YEAR PROJECTION									
	2021 Budget	2022	2023	2024	2025	2026	2027	2028	2029	2030
TOTAL	**$ 183,618,249**	**$ 181,980,102**	**$ 146,094,460**	**$ 119,448,218**	**$ 159,582,754**	**$ 180,583,811**	**$ 189,823,033**	**$ 235,147,371**	**$ 199,492,178**	**$ 192,156,399**
Pavement Replacement	$ 78,556,668	$ 64,770,000	$ 33,448,860	$ -	$ 33,555,397	$ 68,453,010	$ 69,822,070	$ 71,218,511	$ 72,642,882	$ 37,047,870
Resurfacing	$ 12,704,224	$ 11,220,000	$ 27,570,600	$ 31,730,119	$ 26,736,074	$ 21,639,984	$ 22,072,783	$ 22,514,239	$ 22,964,524	$ 29,518,786
Interchange Resurfacing	$ 730,346	$ 2,313,360	$ 1,900,811	$ 3,035,055	$ 10,569,950	$ 2,295,384	$ -	$ 5,559,639	$ 8,171,153	$ 2,234,823
Bridge Deck Replacements	$ 21,033,110	$ 26,236,950	$ 41,735,057	$ 42,157,798	$ 49,948,683	$ 41,134,372	$ 62,749,570	$ 68,429,169	$ 53,116,427	$ 70,146,914
Bridge Deck Overlays	$ -	$ 1,730,292	$ -	$ 1,990,284	$ 8,871,544	$ 18,101,022	$ 3,214,742	$ 2,371,148	$ 10,848,739	$ 1,809,465
Bridge Painting	$ 3,848,000	$ -	$ -	$ 6,261,127	$ 6,386,350	$ 6,514,077	$ 6,644,358	$ 6,777,245	$ 6,912,790	$ 7,051,046
Misc Bridge Repairs	$ -	$ -	$ -	$ 4,350,953	$ 4,437,972	$ 4,526,731	$ 4,617,266	$ 4,709,611	$ 4,803,803	$ 4,899,880
Culverts & Drainage	$ 300,000	$ 765,000	$ 1,040,400	$ 795,906	$ 811,824	$ 828,061	$ 844,622	$ 861,514	$ 878,745	$ 896,319
Interchange Lighting	$ 250,000	$ -	$ -	$ 1,641,689	$ 437,303	$ -	$ 1,501,175	$ 1,233,688	$ 2,515,553	$ 2,638,764
Sign Structure Upgrades	$ -	$ -	$ -	$ -	$ 346,378	$ 253,939	$ 354,741	$ 551,369	$ 503,814	$ 239,019
Service Plazas	$ 4,333,200	$ 2,856,000	$ 3,017,160	$ 1,697,933	$ 3,680,269	$ 2,760,202	$ 2,252,325	$ 2,871,714	$ -	$ 1,912,148
Toll Plazas	$ 23,206,000	$ 33,660,000	$ 5,285,232	$ 11,439,822	$ 270,608	$ 276,020	$ 281,541	$ 287,171	$ 292,915	$ 298,773
Maintenance Buildings	$ 225,000	$ 510,000	$ 520,200	$ 530,604	$ 541,216	$ 552,040	$ 563,081	$ 33,311,884	$ 585,830	$ 19,121,481
Telecommunications	$ -	$ 8,680,200	$ -	$ 1,082,432	$ -	$ -	$ 1,390,811	$ 666,238	$ 1,195,093	$ -
Toll Collection System	$ 21,176,196	$ 16,998,300	$ 19,091,340	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Renewal Replacement	$ 13,005,505	$ 11,220,000	$ 11,444,400	$ 11,673,288	$ 11,906,754	$ 12,144,889	$ 12,387,787	$ 12,635,542	$ 12,888,253	$ 13,146,018
Miscellaneous	$ 4,250,000	$ 1,020,000	$ 1,040,400	$ 1,061,208	$ 1,082,432	$ 1,104,081	$ 1,126,162	$ 1,148,686	$ 1,171,659	$ 1,195,093

Replacement of the Original Concrete Pavement

The Commission has completed a review and analysis of the condition of the concrete pavement of the original two directional roadway lanes (965 lane miles), which is more than 60 years old. A Master Plan has been developed identifying the required pavement replacement sequence. The first pavement section was reconstructed in 2011 and the last pavement section is projected to be reconstructed in 2041.

The Commission has projected between $119.4 million and $235.1 million annually through 2030 for all capital projects, including replacement of the original concrete pavement and is being funded over the next ten years with $170 million in proceeds of the Senior Series 2021A Bonds. The remainder is expected to be funded from operations.

Funding of Capital Improvement Program

While it is anticipated that the Commission will primarily finance its ongoing capital improvement program from its existing cash balances and resources generated from future operations, at the discretion of the Commission, additional bonds may be issued in the future to finance a portion of these costs. The amount of any Senior Lien Bonds issued on a parity basis with the Outstanding Senior Lien Bonds, including the 2021 Senior Lien Bonds, under the Senior Lien Trust Agreement will be limited by the provisions of the Senior Lien Trust Agreement. See "EXHIBIT A – GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT – Issuance of Bonds" herein.

PROJECTED OPERATING RESULTS AND DEBT SERVICE COVERAGE

Projected debt coverage ratios of 1.83 or better are expected on the Senior Lien Bonds and the Junior Lien Bonds combined.

The following table shows estimated annual net revenues of the Turnpike System for the fiscal years ending 2021 through 2031. These net revenues were derived by deducting estimated expenses, estimated by the Traffic Consultant, from the annual revenues of the Turnpike System as estimated by the Traffic Consultant. In the opinion of the Traffic Consultant, its forecast of traffic volume and revenue is reasonable and has been prepared in accordance with accepted practices for such study. Reference is made to the Traffic and Revenue Study for the data and assumptions on which the projections of the Commission's net revenues are based. The Traffic and Revenue Study should be read in its entirety for a description of the specific and overall assumptions made by the Traffic Consultant in making those projections. See "EXHIBIT D - TRAFFIC AND REVENUE STUDY" and "INVESTMENT CONSIDERATIONS" herein.

The table below reflects the Commission's assumptions described under "PLAN OF FINANCE" and "DEBT SERVICE". Actual operating results and debt service coverage may vary from the projections in the following table due to several factors. These factors include, but are not limited to, fluctuating economic conditions, changes in construction schedules, and the timing and amount of future debt issuance. Accordingly, there may be material variances between the following projections and actual results during the forecast period of 2021 through 2031.

The Commission's independent auditors have not compiled, examined or performed any procedures with respect to the prospective financial information contained in the following table, nor have they expressed any opinion or other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information.

Projected Operating Results ($000)
(FY 2021 -2031)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Gross Revenues											
Passenger Car Toll Revenue	117,700	124,500	132,600	143,900	148,200	153,200	156,800	160,200	165,800	168,700	171,800
Commercial Toll Revenue	194,200	199,800	216,000	233,500	241,000	248,800	256,900	265,200	272,000	279,000	286,200
Total Toll Revenue	311,900	324,300	348,600	377,400	389,200	402,000	413,700	425,400	437,800	447,700	458,000
Special Toll Permits	3,719	3,812	3,907	4,005	4,105	4,208	4,313	4,421	4,531	4,645	4,761
Fee Revenue	-	-	1,300	2,700	2,700	2,700	2,700	2,700	2,600	2,600	2,600
Concessions/Service Plazas	13,551	17,630	18,071	18,523	18,986	19,460	19,947	20,446	20,957	21,481	22,018
Lease & License/Other	7,341	8,300	8,800	9,300	9,800	10,300	10,800	11,300	11,800	12,300	12,800
Pledged Funds Investment income	297	500	900	1,600	2,200	3,100	3,800	3,800	4,500	5,400	6,000
Total Other Revenue	24,908	30,242	32,978	36,128	37,791	39,768	41,560	42,667	44,388	46,425	48,179
Total Gross Revenue	336,808	354,542	381,578	413,528	426,991	441,768	455,260	468,067	482,188	494,125	506,179
Gross Operating Expenses Paid from Pledged Revenues	123,030	124,902	127,612	129,631	131,817	134,074	136,509	138,908	141,471	144,102	147,001
Net Revenues Available for Debt Service	213,778	229,640	253,966	283,897	295,174	307,694	318,751	329,159	340,717	350,023	359,178
Senior Lien Debt Service Requirements:											
Existing Debt Service	59,759	60,783	53,847	45,661	51,827	32,459	28,275	14,958	12,291	12,120	8,939
2021 Series A Issuance	5,607	6,751	6,751	6,751	6,751	6,751	6,751	6,751	6,751	6,751	6,751
Less Interest Earned	(365)	(475)	(579)	(752)	(1,151)	(1,258)	(1,417)	(1,519)	(1,504)	(1,503)	(1,485)
Total Senior Lien Debt Service Requirements	65,001	67,058	60,018	51,660	57,426	37,951	33,609	20,190	17,537	17,368	14,204
Junior Lien Debt Service Requirements:											
Existing Debt Service	52,342	55,717	78,158	85,140	78,869	92,986	101,172	119,489	127,160	132,325	140,233
Less Interest Earned	(434)	(620)	(972)	(1,313)	(1,946)	(2,332)	(2,706)	(3,147)	(3,190)	(3,219)	(3,264)
Less Interest on Infrastructure Funds	(400)	(125)	(25)	-	-	-	-	-	-	-	-
Total Junior Lien Debt Service Requirements	51,508	54,972	77,161	83,827	76,923	90,654	98,466	116,342	123,970	129,106	136,969
Composite Debt Service Requirements	116,509	122,031	137,180	135,487	134,350	128,605	132,076	136,532	141,507	146,474	151,174
Senior Lien Debt Coverage	3.29x	3.42x	4.23x	5.5x	5.14x	8.11x	9.48x	16.3x	19.43x	20.15x	25.29x
Composite Debt Coverage	1.83x	1.88x	1.85x	2.1x	2.2x	2.39x	2.41x	2.41x	2.41x	2.39x	2.38x

LONG-TERM PRO FORMA DEBT SERVICE COVERAGE

Attached as Exhibit F is a table projecting operating results and projected debt service coverage for the Commission for the years 2021 through 2051 upon the issuance of the 2021 Senior Lien Bonds.

The net revenues in the table were derived by deducting estimated expenses, estimated by the Traffic Consultant, from the annual revenues of the Turnpike System as estimated by the Traffic Consultant. In the opinion of the Traffic Consultant, its forecast of traffic volume and revenue is reasonable and has been prepared in accordance with accepted practices for such study. Reference is made to the Traffic and Revenue Study for the data and assumptions on which the projections of the Commission's net revenues are based. The Traffic and Revenue Study should be read in its entirety for a description of the specific and overall assumptions made by the Traffic Consultant in making those projections. See "EXHIBIT D - TRAFFIC AND REVENUE STUDY" and "INVESTMENT CONSIDERATIONS" herein.

Actual operating results and debt service coverage may vary from the projections in the table shown as Exhibit F due to several factors. These factors include, but are not limited to, fluctuating economic conditions, changes in construction schedules, and the timing and amount of future toll increases. Accordingly, there may be material variances between the projections shown in the table attached as Exhibit F and actual results during the forecast period of 2021 through 2051.

The Commission's independent auditors have not complied, examined or performed any procedures with respect to the prospective financial information contained in the table attached as Exhibit F, nor have they expressed any opinion or other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information.

INVESTMENT CONSIDERATIONS

The following is a discussion of certain investment considerations that should be evaluated in connection with an investment in the 2021 Senior Lien Bonds. This discussion does not purport to be either comprehensive or definitive. The order in which such considerations and risks are presented is not intended to reflect either the likelihood that a particular event will occur or the relative significance of such an event. Moreover, there may well be other considerations and risks associated with an investment in the 2021 Senior Lien Bonds in addition to those set forth herein. Investors are advised to read the entire Official Statement, including the Exhibits hereto, to obtain information essential to the making of an informed investment decision.

Traffic Study

As the Traffic Consultant for the Commission, Stantec Consulting Services, Inc. was requested by the Commission to prepare the Traffic and Revenue Study presenting its analyses and findings relative to recent trends in traffic and revenue with respect to the Turnpike System, including the impacts of the COVID-19 pandemic. See "EXHIBIT D – TRAFFIC AND REVENUE STUDY." The revenue forecasts contained in the Traffic and Revenue Study are based upon certain assumptions and limits set forth or incorporated therein which should be reviewed by potential investors to assure an understanding of some of the risks inherent in such estimates and projections. The Traffic and Revenue Study is not a guarantee of any future events or trends and the forecasts therein are subject to future economic and social conditions and demographic developments that cannot be predicted with certainty. Further, the estimates, projections and assumptions in the Traffic and Revenue Study are inherently subject to significant economic and competitive uncertainties and contingencies, many of which are beyond the control of the Commission.

Failure to achieve or realize any of the assumptions listed in the Traffic and Revenue Study may have a materially adverse effect upon the revenues actually realized by the Commission.

In addition, as set forth in the Traffic and Revenue Study, there is a 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. 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. See "EXHIBIT D – TRAFFIC AND REVENUE STUDY."

Commission Revenues May Decline

The information provided with respect to toll revenues collected by the Commission is based on historical data. The amount of future toll revenues to be collected by the Commission depends upon a number of factors, some of which are not in the control of the Commission. Some of these factors include a decline in traffic on the Turnpike System due to general economic conditions, diversion of traffic to alternative non-toll routes, increased fuel costs, limited supply of fuel, availability of alternate forms of travel and shipping, and government regulations, such as Clean Air Act requirements, increased mileage standards or higher fuel taxes, which could significantly restrict motor vehicle use, as well as international events affecting fuel supply and costs. Although the Commission has covenanted in the Senior Lien Trust Agreement and the Junior Lien Trust Agreement to fix, charge and collect tolls for the use of the Turnpike System in amounts required by the toll covenants in such Trust Agreements, there can be no assurance that the traffic on the Turnpike System will continue to be sufficient for the Commission to generate the necessary revenues to meet its obligations under the Senior or Junior Lien Trust Agreements.

Ratings of the 2021 Senior Lien Bonds Could be Lowered or Withdrawn

Three credit rating agencies have assigned credit ratings to the 2021 Senior Lien Bonds. The ratings of the 2021 Senior Lien Bonds are not a recommendation to purchase, hold or sell the 2021 Senior Lien Bonds, and the ratings do not comment on the market price or suitability of the 2021 Senior Lien Bonds for a particular investor. The ratings of the 2021 Senior Lien Bonds may not remain for any given period of time and may be lowered or withdrawn depending on, among other things, each rating agency's assessment of the Commission's financial strength.

Certain Matters Relating to Enforceability of Obligations

The remedies available to owners of the 2021 Senior Lien Bonds upon an event of default under the Senior Lien Trust Agreement 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 Lien Trust Agreement, 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 2021 Senior Lien 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.

Bankruptcy Risk

The rights and remedies of owners of 2021 Senior Lien Bonds 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. 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 OHIO TURNPIKE ACT DOES NOT CURRENTLY AUTHORIZE THE COMMISSION TO FILE A PETITION UNDER THE BANKRUPTCY CODE.

Legislative Action

Legislation is introduced from time to time in the State Legislature which, if adopted, may affect the Commission and/or the Turnpike System. The Commission cannot predict whether or not these bills will be enacted into law or how such legislation may affect the Commission and its ability to pay debt service on the 2021 Senior Lien Bonds.

Technological and Cybersecurity Risk Factors

The Commission is dependent on technology to conduct general business operations, including toll collection and customer account services that depend on the ability to process, record and monitor a large number of electronic transactions generated by equipment that handles credit card information and records transponder information on vehicles, which equipment is located throughout the Turnpike System. Computer hacking, cyber-attacks or other malicious activities as well as new or expanded technology implementation or unexpected system malfunctions could disrupt Turnpike System services. Further, security 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 recognizes that the safety and security of its data is of the highest priority and strives to continuously improve its security systems to protect its customers' sensitive and confidential information. The Commission has engaged security experts to design and implement controls, policies and procedures in connection with the adoption of the NIST Special Publication (SP) 800-53 Framework along with the Transportation Systems Sector (TSS) Cybersecurity Framework Implementation Guidance, and to further the Commission's compliance with the Payment Card Industry Data Security Standards.

The Commission now has a security 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 is performed regularly by qualified third parties. The Commission 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. The Commission has implemented security awareness training and simulated phishing attacks. 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 experts to assist the Commission with any data or system breaches.

Although the Commission devotes significant resources to maintaining and regularly upgrading 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.

Impact of COVID-19

The full extent to which the COVID-19 pandemic impacts the Commission's operations and financial condition in the future will depend on future developments, which are highly uncertain and cannot be predicted with confidence. The COVID-19 pandemic has had, and is likely to continue to have, adverse impacts on toll revenues, but the extent of the impact is impossible to predict at this time. For additional information regarding the State of Ohio's and the Commission's response to the COVID-19 Pandemic and impacts on monthly traffic and toll revenue, see "INTRODUCTION – Response to the COVID-19 pandemic," "TOLLS AND TOLL COLLECTION – Recent Impacts – Monthly Transactions and Monthly Toll Revenues," and "EXHIBIT D – TRAFFIC AND REVENUE STUDY – Socioeconomic Context and COVID-19 Impacts on the Ohio Turnpike and – Long-Term Transaction and Toll Revenue Estimates."

ELIGIBILITY UNDER OHIO LAW FOR INVESTMENT AND AS SECURITY FOR THE DEPOSIT OF PUBLIC MONEYS

To the extent that a particular investor is governed by Ohio law with respect to its investments, and subject to any applicable limitations under other provisions of Ohio law, the 2021 Senior Lien Bonds are lawful investments for banks, savings and loan associations, credit union share guaranty corporations, trust companies, trustees, fiduciaries, insurance companies, including domestic for life and domestic not for life, trustees or other officers having charge of sinking and bond retirement or other funds of the State or its political subdivisions and taxing districts, the commissioners of the sinking fund of the State, the administrator of workers' compensation, the State teachers retirement system, the public employees retirement system, the school employees retirement system, and the Ohio police and fire pension fund, and are acceptable as security for the repayment of the deposit of public moneys.

Beneficial Owners of the 2021 Senior Lien Bonds should make their own determination as to such matters of legality of investment in, or pledge of book-entry interests in, the 2021 Senior Lien Bonds.

LITIGATION

To the knowledge of the Executive Director of the Commission, no litigation or administrative action or proceeding is pending or threatened restraining or enjoining, or seeking to restrain or enjoin, the issuance and delivery of the 2021 Senior Lien Bonds, or the collection of System Pledged Revenues to pay the debt service on the 2021 Senior Lien Bonds or any Outstanding Bonds, or contesting or questioning the proceedings and authority under which the 2021 Senior Lien Bonds are authorized and are to be issued, sold, executed or delivered, or the validity of the 2021 Senior Lien Bonds. A no-litigation certificate to such effect will be delivered to the Underwriters at the time of original delivery of the 2021 Senior Lien Bonds to the Underwriters.

The Commission is a party to various legal proceedings seeking damages or injunctive relief generally incidental to its operations. These proceedings are unrelated to the issuance of the 2021 Senior Lien Bonds or the pledge of the security therefor. The ultimate disposition of such proceedings is not presently determinable, but will not, in the opinion of officials of the Commission, have a material adverse effect on the issuance of the 2021 Senior Lien Bonds, the pledge of the security therefor, or the Commission's performance of its obligations under the Senior Lien Trust Agreement.

UNDERWRITING

Citigroup Global Markets Inc., as representative of the underwriters identified on the cover page (the "Underwriters") and pursuant to a Bond Purchase Agreement with the Commission (the "Purchase Contract"), has agreed to purchase the 2021 Senior Lien Bonds at a price equal to $177,311,592.55. The purchase price reflects an underwriting discount of $488,052.85 and an original issue premium of $42,789,645.40. The obligation of the Underwriters to accept delivery of the 2021 Senior Lien Bonds is subject to various conditions set forth in the Purchase Contract, but the Underwriters are obligated to purchase all of the 2021 Senior Lien Bonds if any are purchased.

The Underwriters are purchasing the 2021 Senior Lien Bonds as originally issued for purpose of resale. The Underwriters reserve the right to join with dealers and other underwriters in offering the 2021 Senior Lien Bonds to the public. The Underwriters may offer and sell the 2021 Senior Lien Bonds to certain dealers (including dealer banks and dealers depositing the 2021 Senior Lien Bonds into unit investment trusts, certain of which may be sponsored or managed by the Underwriters), and others at prices lower than the public offering prices noted on the cover page. The initial offering prices of the 2021 Senior Lien Bonds may be changed, from time to time, by the Underwriters.

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 activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the 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) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the issuer.

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

Citigroup Global Markets Inc., an underwriter of the 2021 Senior Lien Bonds, has entered into a retail distribution agreement with Fidelity Capital Markets, a division of National Financial Services LLC (together with its affiliates, "Fidelity"). Under this distribution agreement, Citigroup Global Markets Inc. may distribute municipal securities to retail investors at the original issue price through Fidelity. As part of this arrangement, Citigroup Global Markets Inc. will compensate Fidelity for its selling efforts.

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

Wells Fargo Bank, National Association, acting through its Municipal Finance Group ("WFBNA"), the co-senior managing underwriter of the 2021 Senior Lien Bonds, has entered into an agreement (the "WFA Distribution Agreement") with its affiliate, Wells Fargo Clearing Services, LLC (which uses the trade name "Wells Fargo Advisors") ("WFA"), for the distribution of certain municipal securities offerings, including the 2021 Senior Lien Bonds. Pursuant to the WFA Distribution Agreement, WFBNA will share a portion of its underwriting or remarketing agent compensation, as applicable, with respect to the 2021 Senior Lien Bonds with WFA. WFBNA has also entered into an agreement (the "WFSLLC Distribution Agreement") with its affiliate Wells Fargo Securities, LLC ("WFSLLC"), for the distribution of municipal securities offerings, including the 2021 Senior Lien Bonds. Pursuant to the WFSLLC Distribution Agreement, WFBNA pays a portion of WFSLLC's expenses based on its municipal securities transactions. WFBNA, WFSLLC, and WFA are each wholly-owned subsidiaries of Wells Fargo & Company.

Huntington Capital Markets is a trade name under which securities and investment banking products and services of Huntington Bancshares Incorporated and its subsidiaries, including Huntington Securities, Inc. ("HSI"), are marketed. Municipal sales, trading and underwriting services are provided through HSI, which is a broker-dealer registered with the Securities and Exchange Commission.

RATINGS

Fitch Ratings, Moody's Investors Service and S&P Global Ratings have assigned ratings of "AA (stable outlook)", "Aa2 (stable outlook)" and "AA- (negative outlook)", respectively, to the 2021 Senior Lien Bonds.

Each such rating reflects only the views of such rating agency. Any explanation of the significance of the rating may only be obtained from Fitch Ratings, 33 Whitehall Street, New York, New York 10004, telephone (800) 893-4824; Moody's Investors Service, Inc., 7 World Trade Center at 250 Greenwich Street, New York, New York 10007, telephone (212) 553-1653; and S&P Global Ratings, 55 Water Street, New York, New York 10041, telephone (212) 512-4595, respectively.

The Commission furnished to the rating agencies certain information and materials, some of which may not have been included in this Official Statement, relating to the 2021 Senior Lien Bonds, the Commission and the Turnpike System. Generally, rating agencies base their ratings on such information and materials, as well as investigation, studies and assumptions by the rating agency. There can be no assurance that a rating, when assigned, will continue for any given period of time or that it will not be lowered or withdrawn entirely by a rating agency if, in its judgment, circumstances so warrant. In addition, the Commission currently expects to provide to the rating agencies (but assumes no obligation to furnish to the Underwriters or the Holders) further information and materials that any of them may request. The Commission does not, however, obligate itself hereby to furnish such information and materials, and may issue unrated bonds and notes from time to time. Failure by the Commission to furnish such information and materials, or the issuance of unrated bonds or notes, may result in the suspension or withdrawal of a rating agency's rating on the 2021 Senior Lien Bonds. Any lowering, suspension or withdrawal of such ratings may have an adverse effect on the marketability or market price of the 2021 Senior Lien Bonds. A securities rating is not a recommendation to buy, sell or hold securities and may be subject to revision or withdrawal at any time.

LEGAL MATTERS

Legal matters incident to the issuance of the 2021 Senior Lien Bonds and with regard to the exemption from federal income taxation of interest on the 2021 Senior Lien Bonds and the exemption from Ohio taxation of interest and other income on the 2021 Senior Lien Bonds (see "TAX MATTERS" herein) are subject to the approving opinions of Squire Patton Boggs (US) LLP, Bond Counsel. A signed copy of those opinions, dated and speaking as of the date of original delivery of the Bonds to the Underwriters, will be delivered to the

Underwriters at the time of original delivery. Assuming no change in applicable law prior to the date of delivery of such opinions, the opinions will be substantially in the form attached hereto as Exhibit B.

In its capacity as Bond Counsel, Squire Patton Boggs (US) LLP, has reviewed those portions (excluding certain information concerning the book entry system therein and in Exhibit E) of this Official Statement pertaining solely to the 2021 Senior Lien Bonds and the Senior Lien Trust Agreement contained under the captions "DESCRIPTION OF THE 2021 SENIOR LIEN BONDS," "SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS," "LEGAL MATTERS," "TAX MATTERS" and Exhibit A attached hereto. Said firm has not been retained to pass upon, and will express no opinion as to the accuracy, completeness or fairness of any other information in this Official Statement, including its exhibits (other than Exhibits A and B), or in any other reports, financial information, offering or disclosure documents or other information pertaining to the Commission or the 2021 Senior Lien Bonds that may be prepared or made available by the Commission or others to the Holders of the 2021 Senior Lien Bonds or others.

Certain legal matters will be passed upon for the Commission by its General Counsel, Jennifer L. Stueber, Esq. Certain legal matters will be passed upon for the Underwriters by Tucker Ellis LLP.

MUNICIPAL ADVISOR

The Commission has retained PFM Financial Advisors LLC, Cleveland, Ohio as Municipal Advisor with respect to the authorization and issuance of the 2021 Senior Lien Bonds. The Municipal Advisor is not obligated to undertake or assume responsibility for, nor has it undertaken or assumed responsibility for, an independent verification of the accuracy, completeness or fairness of the information contained in this Official Statement. The Municipal Advisor is an independent advisory firm and is not engaged in the business of underwriting, trading, or distributing municipal securities or other public securities.

EXPERTS

The Commission has retained Stantec Consulting Services, Inc. as traffic consultant to assist the Commission with traffic and revenue projections. Stantec Consulting Services, Inc. prepared the Traffic and Revenue Study dated January 13, 2021 included herein as Exhibit D, including impacts related to the COVID-19 pandemic. Stantec Consulting Services, Inc. has reviewed the excerpts therefrom under the caption "PROJECTED OPERATING RESULTS AND DEBT SERVICE COVERAGE" and "LONG-TERM PRO-FORMA COVERAGE" above. AECOM Technical Services, Inc. is currently acting as General Engineering Consultants for the Commission and completed the study upon which the 10 year projections in the Capital Improvement Program are based. The financial statements of the Commission for the fiscal year ended December 31, 2019 included in Exhibit C of this Official Statement have been audited by Plante & Moran, PLLC, independent auditors, as stated in their report appearing in Exhibit C.

CONTINUING DISCLOSURE

The Commission will execute a Continuing Disclosure Certificate dated February 16, 2021 to provide certain financial and operating information (the "Annual Report") not later than July 1 following the end of the preceding fiscal year, and to provide notices of certain events enumerated in Rule 15c2-12 promulgated by the Securities and Exchange Commission ("SEC"). Specifically, the Commission agrees to provide the Annual Report to the Municipal Securities Rulemaking Board ("MSRB") through its Electronic Municipal Market Access System ("EMMA") and to provide notice of the occurrence of the enumerated events to EMMA, all pursuant to Rule 15c2-12, as amended from time to time. See "EXHIBIT G – FORM OF CONTINUING DISCLOSURE CERTIFICATE" for detailed provisions of the Continuing Disclosure Certificate.

The Annual Report will consist generally of the audited financial statements of the Commission and the current operating data of the type included under the captions "Comparative Traffic Statistics," "Vehicles by Class," "Toll Revenue by Class", and "Toll Rates Per Mile" and "Approved Toll Rate Schedule for Years 2021-2023" under the caption "TOLLS and TOLL COLLECTION" and the table titled "Revenue Bond Coverage" under the caption "RESULTS OF OPERATIONS." Any of the forgoing information may be supplied by including any specific reference information previously supplied to the MSRB or to the SEC. Information will not be included by reference from any final official statement unless such final official statement is available from the MSRB. See "EXHIBIT G – FORM OF CONTINUING DISCLOSURE CERTIFICATE" for detailed provisions of the Continuing Disclosure Certificate.

The Continuing Disclosure Certificate was executed by the Commission to assist the Underwriters in complying with Rule 15c2-12. The Commission has agreed to give notice in a timely manner to the MSRB of any failure to supply the information required to be provided in the Continuing Disclosure Certificate; however, any such failure will not constitute a default under the terms of the 2021 Senior Lien Bonds. See "EXHIBIT G – FORM OF CONTINUING DISCLOSURE CERTIFICATE" for detailed provisions of the Continuing Disclosure Certificate.

The Commission has complied in all material respects with its prior continuing disclosure agreements under Rule 15c2-12 during the past five fiscal years, but the Commission notes that certain filings made by the Commission were not properly matched with all required CUSIP numbers. Procedures are in place to ensure that all subsequent filings are properly made and notices are given in a timely manner.

The Commission reserves the right to amend the Continuing Disclosure Certificate, and noncompliance with any provision of that Continuing Disclosure Certificate may be waived, as may be necessary or appropriate to (a) achieve its compliance with any applicable federal securities law or rule, (b) cure any ambiguity, inconsistency or formal defect or omission, and (c) address any change in circumstances arising from a change in legal requirements, change in law or change in the identity, nature or status of the Commission or type of business conducted by the Commission. See "EXHIBIT G – FORM OF CONTINUING DISCLOSURE CERTIFICATE" for detailed provisions of the Continuing Disclosure Certificate.

TAX MATTERS

In the opinion of Squire Patton Boggs (US) LLP, Bond Counsel, under existing law: (i) interest on the 2021 Senior Lien 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, and any profit made on the sale, exchange or other disposition of, the 2021 Senior Lien Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. Bond Counsel expresses no opinion as to any other tax consequences regarding the 2021 Senior Lien 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 2021 Senior Lien Bonds are and will remain obligations the interest on which is excluded from gross income for federal income tax purposes. Bond Counsel will not independently verify the accuracy of the Commission's certifications and representations or the continuing compliance with the Commission's covenants.

The opinion of Bond Counsel is based on current legal authority and covers certain matters not directly addressed by such authority. It represents Bond Counsel's legal judgment as to exclusion of interest on the

2021 Senior Lien 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 (IRS) or any court. 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 2021 Senior Lien Bonds being included in gross income for federal income tax purposes retroactively to the date of issuance of the 2021 Senior Lien Bonds. The Commission has covenanted to take the actions required of it for the interest on the 2021 Senior Lien 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 2021 Senior Lien Bonds, 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 Bond Counsel's attention, may adversely affect the exclusion from gross income for federal income tax purposes of interest on the 2021 Senior Lien Bonds or the market value of the 2021 Senior Lien Bonds.

Interest on the 2021 Senior Lien Bonds may be subject to a federal branch profits tax imposed on certain foreign corporations doing business in the United States and to a federal tax imposed on excess net passive income of certain S corporations. 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 2021 Senior Lien Bonds. Bond Counsel will express no opinion regarding those consequences.

Payments of interest on tax-exempt obligations, including the 2021 Senior Lien Bonds, are generally subject to IRS Form 1099-INT information reporting requirements. If a 2021 Senior Lien 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.

Bond Counsel's engagement with respect to the 2021 Senior Lien Bonds ends with the issuance of the 2021 Senior Lien Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend the Commission or the owners of the 2021 Senior Lien 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 2021 Senior Lien Bonds, under current IRS procedures, the IRS will treat the Commission as the taxpayer and the beneficial owners of the 2021 Senior Lien 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 2021 Senior Lien 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 2021 Senior Lien Bonds.

Prospective purchasers of the 2021 Senior Lien Bonds upon their original issuance at prices other than the respective prices indicated on the Cover, and prospective purchasers of the 2021 Senior Lien 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 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 2021 Senior Lien Bonds. There can be no assurance that legislation enacted or proposed, or actions by a court, after the date of issuance of the 2021 Senior Lien Bonds will not have an adverse effect on the tax status of interest or other income on the 2021 Senior Lien Bonds or the market value or marketability of the 2021 Senior Lien 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 2021 Senior Lien 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 bonds and tax-advantaged bonds, among other things. Additionally, investors in the 2021 Senior Lien 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 2021 Senior Lien Bonds for federal income tax purposes for all or certain taxpayers. In all such events, the market value of the 2021 Senior Lien Bonds may be affected and the ability of holders to sell their 2021 Senior Lien 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 Premium

All of the 2021 Senior Lien Bonds ("2021 Senior Lien Premium Bonds") were 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 2021 Senior Lien Premium Bond, based on the yield to maturity of that 2021 Senior Lien Premium Bond (or, in the case of a 2021 Senior Lien Premium 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 2021 Senior Lien Premium Bond), compounded semiannually. No portion of that bond premium is deductible by the owner of a 2021 Senior Lien Premium Bond. For purposes of determining the owner's gain or loss on the sale, redemption (including redemption at maturity) or other disposition of a 2021 Senior Lien Premium Bond, the owner's tax basis in the 2021 Senior Lien Premium 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 2021 Senior Lien Premium Bond for an amount equal to or less than the amount paid by the owner for that 2021 Senior Lien Premium Bond. A purchaser of a 2021 Senior Lien Premium Bond in the initial public offering who holds that 2021 Senior Lien Premium Bond to maturity (or, in the case of a callable 2021 Senior Lien Premium Bond, to its earlier call date that results in the lowest yield on that 2021 Senior Lien Premium Bond) will realize no gain or loss upon the retirement of that 2021 Senior Lien Premium Bond.

Owners of 2021 Senior Lien Premium Bonds should consult their own tax advisors as to the determination for federal income tax purposes of the existence of bond premium, the determination for federal income tax purposes of the amount of bond premium properly amortizable in any period with respect to the 2021 Senior Lien Premium Bonds, other federal tax consequences in respect of bond premium, and the treatment of bond premium for purposes of state and local taxes on, or based on, income.

CONCLUDING STATEMENT

Quotations in this Official Statement from, and summaries and explanations of the Code, the Ohio Revised Code, the Senior Lien Trust Agreement, and the Continuing Disclosure Certificate, do not purport to be complete. Reference is made to the pertinent provisions of the Code, the Ohio Revised Code and those documents for complete statements of their provisions. Copies of the Senior Lien Trust Agreement and the Continuing Disclosure Certificate are available upon request from the Comptroller of the Commission, 682 Prospect Street, Berea, Ohio 44017, telephone (440) 234-2081.

To the extent that any statement made in this Official Statement involve matters of opinion or estimates, whether or not expressly stated to be such, they are made as such and not as representations of fact or certainty, and no representation is made that any such statements will be realized. Information in this Official Statement has been derived by the Commission from official and other sources and is believed by the Commission to be reliable, but information other than that obtained from official records of the Commission has not been independently confirmed or verified by the Commission and its accuracy is not guaranteed.

Neither this Official Statement nor any statement which may have been made orally or in writing is to be construed as or as part of a contract with the original purchasers or subsequent holders of the 2021 Senior Lien Bonds or the owners of any interest therein.

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This Official Statement has been duly prepared and delivered by the Commission, and executed for and on behalf of the Commission by its Executive Director.

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

January 26, 2021

/s/ *Ferzan M. Ahmed, P.E.*

Ferzan M. Ahmed, P.E., Executive Director

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EXHIBIT A

GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT

The following terms shall have the following meanings in this Official Statement unless the context otherwise requires:

"Act" shall mean Chapter 5537 of the Ohio Revised Code, as amended and supplemented from time to time.

"Additional System Payments" shall constitute a "Special Fund" under Section 5537.01(Q) of the Ohio Revised Code, as amended from time to time, and shall specifically mean:

(1) payments payable to the Commission pursuant to any agreement or arrangement between the Commission and the United States of America, any state, county, municipality, political subdivision, public body or other governmental entity, or under any law, statute, ordinance, resolution or other authorizing instrument of such an entity, which payments by their terms are available and expressly pledged by the Commission for the payment of debt service on all Bonds issued and Outstanding under the Trust Agreement for so long as any Bonds are Outstanding or until such earlier time as all conditions for the release of such payments provided in the applicable Supplemental Trust Agreement are met;

(2) Additional System Payments shall not include Series Payments, Supplemental Payments, payments that constitute Gross Revenues, or payments pursuant to a Bond Credit Facility or a Qualified Swap Agreement;

(3) payments described in paragraph (1) above shall not constitute Additional System Payments in any Fiscal Year unless:

(a) the source of such payment is a sales tax, gas or fuel tax, franchise fee, ad valorem tax, real estate tax, utility or other public service tax, excise tax, income tax or use tax; or

(b) for each Series of Bonds, amounts derived from sources described in paragraph (1) above allocable to such Series of Bonds pro rata on the basis of Annual Debt Service for such Fiscal Year, together with the Series Payments for such Series of Bonds (other than those described in paragraph (3)(a) of the definition of Series Payments), do not constitute in excess of twenty percent (20%) of Annual Debt Service.

"Additional System Payments Account" shall mean the account of that name in the Revenue Fund.

"Ambac" means Ambac Assurance Corporation, a Wisconsin domiciled stock insurance company, or any successor thereto.

"Annual Budget" shall mean the budget required, pursuant to the Trust Agreement, to be adopted by the Commission each Fiscal Year, as such budget may be amended from time to time.

"Annual Debt Service" shall mean the regularly scheduled principal and interest payments coming due on the Bonds Outstanding in each Fiscal Year, whether at maturity or pursuant to mandatory sinking fund redemption, provided, however, that amounts due on January 1 of any year shall be included in the Annual Debt Service for the preceding Fiscal Year. The assumptions set forth in paragraphs (4), (5), (6), (7) and (8) of the definition of Annual Debt Service Requirement shall be applied in calculating Annual Debt Service.

"Annual Debt Service Requirement" shall mean:

(1) at any time, the sum of the amounts required to be deposited in the applicable Fiscal Year into the:

(a) Interest Account,

(b) Principal Account, and

(c) Bond Redemption Account,

in accordance with the Trust Agreement;

(2) in determining the amount of such required deposits, a credit shall be allowed for amounts already on deposit in any of the foregoing accounts, including, without limitation,

(a) interest earnings on the:

(i) Interest Account,

(ii) Principal Account,

(iii) Bond Redemption Account, and

(iv) Debt Service Reserve Account;

(b) capitalized interest; and

(c) deposits of Series Payments, but only with respect to debt service payments for the Series of Bonds secured by Series Payments, such credit not to exceed the total amounts at any time required to be deposited into the accounts set forth in paragraph (1) above, after taking into consideration the credits provided for in paragraph (2) (a) and (b) above;

(3) for purposes of calculating the requirements for the collection of Tolls (see "EXHIBIT A - GLOSSARY OF TERMS and SUMMARY OF THE TRUST AGREEMENT - Tolls"), and the requirements for the issuance of Bonds (see "EXHIBIT A - GLOSSARY OF TERMS and SUMMARY OF THE TRUST AGREEMENT - Issuance of Bonds"):

(a) the amount of interest earnings on the accounts as provided in paragraph 2(a) above for the applicable Fiscal Year shall be calculated using the lower of (i) the current interest rate in effect for such investments, or (ii) the average interest rate in effect for such investments during any 12 consecutive calendar months of the 15 consecutive calendar months immediately preceding the date of calculation; and

(b) the amount of credit allowed in paragraph (2)(c) above for Series Payments for the applicable Fiscal Year for each Series of Bonds secured by Series Payments shall not exceed 100% of the Series Payments expected to be available for deposit into the accounts set forth in paragraph (1) above, as determined by the Supplemental Trust Agreement providing for the payment of such Series Payments, or to the extent the Series Payments are not determined by the Supplemental Trust Agreement, the amount that would have been available for such deposits, as estimated by an Independent Consultant, had such Series Payments been in effect for the immediately preceding Fiscal Year;

(4) except for purposes of calculating the requirements for the issuance of Bonds, unless the interest rate for a Series of Variable Rate Bonds is fixed for the duration of the applicable Fiscal Year(s), in which case the actual rate shall be used, the interest rate on such Series of Variable Rate Bonds Outstanding shall be assumed to be a rate equal to 100% of the 30 Year Bond Buyer Revenue Bond Index, and with respect to a Series of Variable Rate Bonds which are Taxable Bonds, the interest rate shall be assumed to be a rate equal to 115% of the 30 Year Bond Buyer Revenue Bond Index;

(5) for purposes of calculating the requirements for the issuance of Bonds, the Annual Debt Service Requirement shall be calculated with respect to a Series of Variable Rate Bonds assuming the interest rate equals the maximum rate payable thereon in accordance with the applicable Supplemental Trust Agreement;

(6) for purposes of calculating the requirements for the issuance of Bonds, the Annual Debt Service Requirement with respect to a Series of Notes shall be calculated assuming that the interest rate equals 100% of the 30 Year Bond Buyer Revenue Bond Index and assuming substantially level debt service payments in each year over the maximum number of years (not exceeding 30 years) over which the principal of the Notes may be paid as determined by the Commission;

(7) if a Series of Variable Rate Bonds is subject to purchase by the Commission pursuant to a mandatory or optional tender by the owner thereof, the "tender" date or dates shall be ignored and the stated maturity dates thereof shall be used for purposes of calculating the Annual Debt Service Requirement with respect to such Bonds. If, with respect to any Series of Bonds, the Commission enters into a Qualified Swap Agreement, providing for payments to the Commission which are associated with the payment of interest on such Bonds, in an amount equal to interest on a notional amount equal to the aggregate principal amount of such Bonds Outstanding, based upon a fixed rate, or a variable index or formula different from that used to calculated interest on such Bonds, and if payments under such Qualified Swap Agreement will continue until the final maturity of such Bonds, then the effective rate of interest to the Commission with respect to such Bonds taking into account (a) the actual interest rate borne by such Bonds, (b) payments to be received by the Commission pursuant to such agreement and (c) payment obligations of the Commission to such counterparty pursuant to such agreement, all based upon interest on such notional amount as determined by reference to a fixed rate or variable index or formula, shall be used for purposes of calculating the Annual Debt Service Requirement with respect to such Bonds; and

(8) if two Series of Variable Rate Bonds, or one or more maturities within a Series, of equal par amounts, are issued simultaneously with inverse floating interest rates providing a composite fixed interest rate for such Bonds taken as a whole, such composite fixed rate shall be used in determining the Annual Debt Service Requirement with respect to such Bonds.

"Authenticating Agent" shall mean the Trustee and the Registrar for the Series of Bonds and any bank, trust company or other entity designated as an Authenticating Agent for such Series of Bonds by or in accordance with the Trust Agreement, each of which shall be a transfer agent registered in accordance with Section 17(c) of the Securities Exchange Act of 1934, as amended.

"Authorized Officer of the Commission" shall mean the Executive Director, the Chairman, the Vice Chairman, the Secretary-Treasurer, or any other officer or employee of the Commission, authorized by resolution duly adopted by the Commission to perform specific acts or duties.

"Bond" or "Bonds" shall mean all Bonds issued and outstanding under the Existing Master Trust Agreement and the bonds or notes issued under the provisions and within the limitations of the Trust Agreement, payable from the System Pledged Revenues, which Bonds shall be pari passu with all Bonds issued pursuant to the Trust Agreement. Except as expressly provided in the Trust Agreement, "Bonds" shall include Notes.

"Bond Credit Facility" shall mean a Bond Insurance Policy or a Bond Letter of Credit.

"Bond Insurance Policy" shall mean an insurance policy issued for the benefit of the Holders of any Bonds, pursuant to which the issuer of such insurance policy is obligated to pay when due the principal of and interest on such Bonds to the extent of any deficiency in the amounts in the funds and accounts held under the Trust Agreement, in the manner and in accordance with the terms provided in such insurance policy. The issuer of such insurance policy shall be an institution whose insurance policy results in the Bonds which are secured by such insurance policy being rated in one of the two highest rating categories by each Rating Agency which has a rating outstanding on such Bonds.

"Bond Letter of Credit" shall mean an irrevocable, transferable letter of credit issued for the benefit of the Holders of any Bonds, pursuant to which the issuer of such letter of credit is obligated to pay when due the principal of and interest on such Bonds to the extent of any deficiency in the amounts in the funds and accounts held under the Trust Agreement, in the manner and in accordance with the terms provided in such letter of credit. The issuer of such letter of credit shall be a banking association, bank or trust company or branch thereof whose letter of credit results in the Bonds which are secured by such letter of credit being rated in one of the two highest rating categories by each Rating Agency which has a rating outstanding on such Bonds.

"Bond Redemption Account" shall mean the account of that name in the Debt Service Fund created in the Trust Agreement.

"Bond Register" shall mean the books kept by the Registrar for the registration of the Bonds.

"Capital Appreciation Bonds" or "CABs" shall mean Bonds the interest on which is compounded periodically and is payable only at maturity or upon redemption prior to maturity.

"Capital Appreciation and Income Bonds" shall mean Bonds the interest on which is not paid prior to a specified Interest Commencement Date and is compounded periodically on certain designated dates prior to the Interest Commencement Date.

"Code" shall mean the Internal Revenue Code of 1986, as amended, and applicable temporary, proposed or permanent regulations promulgated thereunder.

"Commission" shall mean the Ohio Turnpike and Infrastructure Commission as created and established by the Act.

"Composite Annual Debt Service Requirement" shall mean in each Fiscal Year the sum of the Annual Debt Service Requirement and the annual debt service requirement with respect to Junior Lien Bonds issued under the Junior Lien Bond Master Trust Agreement.

"Consulting Engineers" shall mean the engineer or engineering firm or corporation retained by the Commission to perform the acts and carry out the duties provided for such Consulting Engineers in the Trust Agreement.

"Cost of Issuance" shall mean all charges, costs and expenses of the Commission incurred in connection with the authorization, issuance, sale and delivery of the Bonds including, but not limited to, legal fees, accounting fees, Municipal Advisory fees, Bond Credit Facility premiums, fiscal or escrow agent fees, printing fees, travel expenses and Rating Agency fees.

"Cost of Operation, Maintenance and Administration" shall mean all costs and expenses paid from the Expense Fund which are the obligation of the Commission in keeping the System open to public travel or attributable to the System and includes, without limitation, reasonable expenses of administration of the Commission, costs of collecting and accounting for Tolls, insurance, employee bond premiums, fees of the Consulting Engineers, Independent Consultant, accountants and legal fees, and, with respect to Toll facilities, all other expenses which would not be incurred if such facilities were being operated as free facilities. Cost of Operation, Maintenance and Administration does not include costs with respect to Non-System Projects, depreciation expense or any amounts paid from the Renewal and Replacement Fund, System Projects Fund or from any source other than Gross Revenues.

"Debt Service Fund" shall mean the fund of that name created in the Trust Agreement.

"Debt Service Reserve Account" shall mean the account of that name in the Debt Service Fund created in the Trust Agreement.

"Debt Service Reserve Requirement" shall mean the lower of (1) the Maximum Annual Debt Service Requirement, without credit for Series Payments otherwise permitted by paragraphs (2)(c) and (3)(b) of the definition of Annual Debt Service Requirement, or (2) the maximum amount permitted by the Code to be funded from Bond proceeds without requiring yield restriction.

"Defeasance Obligation" shall mean to the extent permitted by law:

(a) Direct obligations of or obligations which are unconditionally guaranteed by the United States of America, including obligations issued or held in book entry form on the books of the Department of the Treasury of the United States of America and including advance refunded tax-exempt bonds secured by direct obligations of the United States of America or obligations unconditionally guaranteed by the United States of America which are rated in the highest rating category by a Rating Agency currently rating the Bonds (without regard to gradations such as (+) or (-) or other similar notation);

(b) Evidences of indebtedness issued by the Bank for Cooperatives, Federal Home Loan Banks, Federal Home Loan Mortgage Corporation (including participate certificates), Federal Land Banks, Federal Financing Banks, or any other agency or instrumentality of the United States of America created by an act of Congress which is substantially similar to the foregoing in its legal relationship to the United States of America; provided that the obligations of such agency or instrumentality are unconditionally guaranteed by the United States of America;

(c) Evidences of ownership of proportionate interests in future interest and principal payments on specified obligations described in paragraph (a) above held by a bank or trust company as custodian, under which the owner of the investment is the real party in interest and has the right to proceed directly and individually against the obligor on the underlying obligations described in paragraph (a) above, such as CATS, TIGRS and STRIPS, and which underlying obligations are not available to satisfy any claim of the custodian or any person claiming through the custodian or to whom the custodian may be obligated; or

(d) stripped interest obligations of the Resolution Funding Corporation.

All obligations shall be non-callable prior to their stated maturity or redemption date.

"Event of Default" shall have the meaning ascribed thereto under the caption "THE TRUST AGREEMENT - Events of Default and Remedies."

"Expense Fund" shall mean the fund of that name created in the Trust Agreement.

"Expense Reserve Account" shall mean the account of that name in the Expense Fund created in the Trust Agreement.

"FGIC" means Financial Guaranty Insurance Company, a New York stock insurance company, or any successor thereto.

"Financial Institutions" shall mean the financial institution or institutions providing a Bond Credit Facility in connection with one or more Series of Bonds then Outstanding.

"Financial Security" means Financial Security Assurance Inc., a New York stock insurance company, or any successor thereto, including Assured Guaranty Municipal Corp.

"Fiscal Year" shall mean the period commencing with January 1 of each year and ending with December 31 of that same year or such other twelve (12) consecutive month period designated by the Commission.

"General Reserve Fund" shall mean the fund of that name created in the Trust Agreement.

"Gross Revenue Account" shall mean the account of that name created in the Trust Agreement.

"Gross Revenues" shall mean (1) all Tolls, (2) investment income received on any amounts held in the Revenue Fund, the General Reserve Fund, the System Projects Fund, the Expense Fund and the Renewal and Replacement Fund, (3) the proceeds of any use and occupancy insurance on any portion of the System, (4) moneys received from the Ohio Department of Transportation and designated by the Commission for use as System Pledged Revenues and (5) commencing January 1, 2004, all concession revenues derived from the operation of the service plazas (other than funds contractually committed to the Service Plaza Capital Improvements Reserve and other than any allocation of the State Fuel Tax revenues) and all revenues derived from leases, licenses, royalties, advertising and miscellaneous sales, fees and charges together with all investment earnings thereon. "Gross Revenues" shall not include Supplemental Payments, Series Payments, Additional System Payments, revenues derived from the operation of Non-System Projects, amounts received pursuant to a Bond Credit Facility, amounts received pursuant to a Qualified Swap Agreement, or the proceeds of any gifts, grants, or other payments to the Commission from the United States of America, any state or any public or private instrumentality, individual or entity that are not in the nature of a Toll.

"Holder of Bonds" or "Bondholder" or "Holders" or any similar term shall mean any person who shall be the owner of any Bond or Bonds as shown on the Bond Register.

"Independent Consultant" shall mean an independent licensed professional engineer (or firm of independent licensed professional engineers) of recognized national standing in the field of estimating and projecting traffic on, or revenues of, toll facilities which engineer has been selected by the Commission. Said engineer (or firm of engineers) may be retained by the Commission for other purposes. In connection with matters not related to traffic and revenue projection of tolled facilities, the Commission may select members of another professional discipline to deliver any Independent Consultant's certificate required by the terms of the Trust Agreement, provided further that any members of such discipline thereafter selected by the Commission shall be independent and shall be of recognized national standing in such discipline.

"Interest Account" shall mean the account of that name in the Debt Service Fund created in the Trust Agreement.

"Interest Commencement Date" shall mean, with respect to any particular Capital Appreciation and Income Bonds, the date specified in the Supplemental Trust Agreement providing for the issuance of such Capital Appreciation and Income Bonds (which date must be prior to the maturity date for such Capital Appreciation and Income Bonds) after which interest accruing on such Capital Appreciation and Income Bonds shall be payable periodically, with the first payment date being the applicable Interest Payment Date immediately succeeding such Interest Commencement Date.

"Interest Payment Date" shall mean for each Series of Bonds such dates of each Fiscal Year on which interest on Outstanding Bonds of such Series is payable, as set forth in the Supplemental Trust Agreement providing for the issuance of such Series of Bonds.

"Junior Lien Master Trust Agreement" shall mean the Junior Lien Master Trust Agreement dated as of August 1, 2013 between the Commission and the Junior Lien Trustee.

"Junior Lien Bonds" shall mean bonds of the Commission issued pursuant to the Junior Lien Bond Master Trust Agreement and which are subordinate to the Bonds.

"Junior Lien Trustee" shall mean the Trustee at the time serving under the Junior Lien Master Trust Agreement, initially The Huntington National Bank, Columbus, Ohio, and any successor Junior Lien Trustee as determined under or pursuant to the Junior Lien Master Trust Agreement.

"Major Bridge" shall mean any one or all of the following bridges: the Cuyahoga River bridge, the Huron River bridge, the Sandusky River bridge, the Maumee River bridge, the CSX Railroad bridge, the Norfolk Southern Railroad bridge, Vermillion River bridge, and Tinkers Creek bridge.

"Master Trust Agreement" shall mean the Master Trust Agreement, dated as of February 15, 1994, between the Commission and the Trustee, as amended by the First through Seventeenth Supplemental Trust Agreements, and as amended and restated by the Amended and Restated Master Trust Agreement (Eighteenth Supplemental Trust Agreement), dated as of April 8, 2013, between the Commission and the Trustee, as further amended from time to time.

"Maximum Annual Debt Service Requirement" shall mean, at any time, the highest Annual Debt Service Requirement occurring in the current or any succeeding Fiscal Year.

"Net Revenues" shall mean the amount remaining after the deduction from Gross Revenues of the required deposits to the Expense Fund.

"Non-System Project" shall mean any transportation-related project authorized by the Act and designated as a Non-System Project by a resolution of the Commission. Non-System Projects shall not be part of the System, unless designated as such pursuant to the Master Trust Agreement.

"Non-System Project Operating Expenses" means the expenses incurred by the Commission for operation, maintenance and repair, ordinary replacement and ordinary reconstruction of a Non-System Project or any part thereof and shall include, without limiting the generality of the foregoing, administrative expenses, premiums and reserves for insurance and self-insurance, fees or premiums for a Bond Credit Facility, Reserve Credit Facility, legal and engineering expenses, payments into pension, retirement, health and hospitalization funds, and any other expenses required to be paid by the Commission in connection with the operation of such Non-System Project, all to the extent properly and directly attributable to the operation of such Non-System Project, and rental payments in connection with operating leases entered in the ordinary course of business, all to the extent properly and directly attributable to a Non-System Project, and the expenses and compensation of the fiduciaries required to be paid under agreements applicable to such Non-System Projects, but does not include (1) any costs or expenses for new construction or for major reconstruction or (2) any provision for interest, depreciation, amortization or similar charges.

"Notes" means notes issued by the Commission in anticipation of the issuance of Bonds pursuant to the Act, or to pay costs of refunding or retiring Notes or Bonds previously issued pursuant to the Act, which Notes shall be on a parity with the Bonds.

"Operation, Maintenance and Administrative Expenses Account" shall mean the account of that name in the Expense Fund.

"Outstanding" or "outstanding" when used with reference to the Bonds, shall mean, as of any date of determination, all Bonds theretofore authenticated and delivered except:

(1) Bonds theretofore cancelled by the Registrar or delivered to the Registrar for cancellation;

(2) Bonds which are deemed paid in accordance with Article IX of the Trust Agreement;

(3) Bonds in lieu of which other Bonds have been issued pursuant to the provisions of the Trust Agreement relating to Bonds destroyed, stolen or lost, unless evidence satisfactory to the Registrar has been received that any such Bond is held by a bond fide purchaser; and

(4) for purposes of any consent or other action to be taken under the Trust Agreement by the Holders of a specified percentage of principal amount of Bonds, Bonds held by or for the account of the Commission.

"Paying Agent" shall mean the Trustee or, with respect to any Series of Bonds, the paying agent designated by the Supplemental Trust Agreement authorizing the issuance of such Series of Bonds, or any successor thereto.

"Permitted Investments", unless varied by the terms of a Supplemental Trust Agreement as to a particular Series of Bonds, (i) shall mean any investments in which the Commission is authorized to invest pursuant to the laws of the State, and (ii) with respect to moneys held by the Trustee, shall mean any of the following securities:

(a) Defeasance Obligations;

(b) obligations issued by any agency of the United States of America, including, without limitation, the Government National Mortgage Association, or by any instrumentality of the United States of America, including, without limitation, the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation;

(c) general obligations of any state of the United States of America, including the State, or any political subdivision of a state; provided that such general obligations carry one of the two highest ratings of one of the Rating Agencies;

(d) certificates of deposit or banker's acceptances, whether negotiable or nonnegotiable, issued by a bank, trust company or savings association organized under the laws of any state of the United States of America or any national banking association (including the Trustee), which institution has a combined capital and surplus of at least $100,000,000 in dollars of the United States of America, provided, that such certificates of deposit or banker's acceptances do not exceed in the aggregate ten percent (10%) of the combined capital, surplus and undivided profits of the institution issuing the same and provided further that such certificates of deposit or banker's acceptances shall be in the possession of the Trustee or its agents and shall be either (A) continuously and fully insured by the Federal Deposit Insurance Corporation, or (B) continuously and fully secured by such securities as are described in clauses (a) through (c), inclusive, above ("Pledged Securities") which shall have a market value (exclusive of accrued interest) at all times at least equal to the principal amount of such certificates of deposit or banker's acceptances, and that the institution issuing each such certificate of deposit or banker's acceptance required to be so secured shall furnish the Trustee with a covenant satisfactory to it that the aggregate market value of all such obligations securing each such certificate of deposit or banker's acceptance will at all times be an amount at least equal to the principal amount of each such certificate of deposit or banker's acceptance and that the Trustee shall be entitled to rely on each such covenant;

(e) any repurchase agreement with an institution described in clause (d) above, which repurchase agreement is fully collateralized at all times by Pledged Securities based upon the market value of such obligations;

(f) any money market fund invested solely in obligations described in clauses (a), (b) or (c) above or invested in repurchase agreements fully collateralized by obligations described in clauses (a) or (b) above;

(g) the investment pool created and administered by the Treasurer of the State of Ohio under Section 135.45 of the Ohio Revised Code; and

(h) investment agreements with institutions whose long-term unsecured debt is rated in one of the two highest rating categories of one of the Rating Agencies;

provided that for purposes of clauses (d) and (e) above the respective Pledged Securities shall be in the possession of the Trustee or its agent and shall be free and clear of all liens or rights of any third party, and in which obligations the Trustee shall have a first perfected security interest.

"Principal Account" shall mean the account of that name in the Debt Service Fund created in the Trust Agreement.

"Project" shall mean any System Project or Non-System Project.

"Project Cost" with respect to any Project, shall mean (1) the costs incurred or to be incurred by the Commission in connection with or incidental to the acquisition, design, construction, improvement, reconstruction or rehabilitation of such Project, including legal, administrative, engineering, planning, design studies, insurance costs and financing costs of such Project, (except to the extent such costs are funded from the proceeds of any indebtedness of the Commission, the payment of which is included as a Project Cost under clause (3) below), (2) amounts, if any, required by the Trust Agreement to be paid into any fund or account upon the issuance of any Series of Bonds, (3) payments when due (whether at the maturity of principal or the due date of interest or upon redemption) on Notes, (4) costs of equipment, supplies and reserves required by the Commission for the commencement of operation of such Project, (5) costs of acquisition by the Commission of real or personal property or any interest therein, including land and improvements required for relocation and relocation costs and land required for right of way, environmental mitigation or other Commission purposes, (6) any other costs properly attributable to the acquisition, design, construction, improvement, reconstruction or rehabilitation of such Project as permitted by Section 5537.01(B) of the Ohio Revised Code, as amended from time to time, and (7) interest on Bonds during the estimated period of construction and for a reasonable period thereafter.

"Qualified Swap Agreement" shall mean an agreement between the Commission and a counterparty creating Qualified Swap Payments.

"Qualified Swap Payments" shall mean a payment required to be made pursuant to a Qualified Swap Agreement, such as an interest rate swap, collar, cap or other functionally similar agreement, such payment being equal to interest on a notional amount, based upon a fixed rate or a variable index or formula, provided that the long-term unsecured debt of such counterparty, or the entity that has unconditionally guaranteed such counterparty's obligations is at the time rated in one of the two highest rating categories (without regard to gradations such as pluses (+) or minuses (-) or other similar notations) by each Rating Agency then maintaining a rating on the Series of Bonds to which such agreement pertains; or, the payment obligations of the counterparty, or the entity that has unconditionally guaranteed such counterparty's obligations, are rated in one of the three (3) highest rating categories (without regard to gradations) and are collateralized by direct obligations of, or obligations the principal and interest on which are guaranteed by, the United States of America, that (a) are deposited with the Commission or an agent of the Commission; and (b) maintain a market value of not less than one hundred five percent (105%) of the net market value of the payment agreement to the Commission, as such net market value may be defined and determined from time to time under the terms of the payment agreement.

"Rating Agency" shall mean Moody's Investors Service, or S&P Global Ratings, or Fitch Ratings, and their successors, or any other nationally recognized bond rating agency.

"Rebate Account" shall mean an account of that name in the Rebate Fund established for a Series of Bonds into which the funds constituting the Rebate Amount shall be deposited; each such account shall be termed the "[Series of Bonds] Rebate Account."

"Rebate Amount" shall mean a rebate amount required to be paid by the Commission to the United States of America pursuant to the Code.

"Rebate Fund" shall mean the fund of that name created in the Trust Agreement.

"Registrar" shall mean, with respect to any Series of Bonds, the Trustee or registrar designated by the Supplemental Trust Agreement with respect to such Series of Bonds, or any successor thereto.

"Renewal and Replacement Fund" shall mean the fund of that name created in the Trust Agreement.

"Renewal and Replacement Requirement" shall mean the amount, if any, for the then current Fiscal Year in the Annual Budget.

"Reserve Account Credit Facility" shall mean a Reserve Account Insurance Policy or a Reserve Account Letter of Credit.

"Reserve Account Credit Facility Rating Requirement" shall mean, for purposes of the provisions of the Trust Agreement relating to a rating downgrade of a Reserve Account Credit Facility subsequent to its deposit in the Debt Service Reserve Account, the requirement that the provider of a Reserve Account Credit Facility be rated in one of the two highest rating categories (without giving effect to modifiers or qualifiers within a rating category) by at least two Rating Agencies.

"Reserve Account Insurance Policy" shall mean an insurance policy, surety bond or other acceptable evidence of insurance deposited in the Debt Service Reserve Account in lieu of or in partial substitution for cash or securities required to be deposited therein. The issuer providing such Reserve Account Insurance Policy shall be an insurer which has been assigned one of the two highest ratings by any Rating Agency which has a rating outstanding on the Bonds.

"Reserve Account Letter of Credit" shall mean an irrevocable, transferable letter of credit deposited in the Debt Service Reserve Account in lieu of or in partial substitution for cash or securities on deposit therein. The issuer providing such letter of credit shall be a banking association, bank or trust company or branch thereof whose letter of credit results in the Bonds which are secured by such letter of credit being rated in one of the two highest rating categories by each Rating Agency which has a rating outstanding on such Bonds.

"Revenue Fund" shall mean the fund of that name created in the Trust Agreement (the full name of this fund is the "General Revenue Fund").

"Series" shall mean such Bonds designated as a separate Series of Bonds in accordance with a Supplemental Trust Agreement.

"Series Payments" shall mean (1) payments which are:

(a) payable to the Commission pursuant to any agreement between the Commission and any private, nongovernmental corporation, organization, association, individual or other entity, which payments by their terms automatically recur without approval that is discretionary to the entity providing such payments for so long as any Bonds secured thereby are Outstanding or until such earlier time as all conditions for the release of such payments, if any, provided in the applicable Supplemental Trust Agreement are met, or

(b) payable to the Commission pursuant to any agreement between the Commission and the United States of America, any state, county, municipality, political subdivision, public body or other governmental entity, or under any law, statute, ordinance, resolution or other authorizing instrument of such an entity, providing such payments for so long as any Bonds secured thereby are Outstanding or until such earlier time as all conditions for the release of such payments, if any, provided in the applicable Supplemental Trust Agreement are met; and

in each case above, available and expressly pledged by the Commission for the payment of debt service on one or more, but less than all, Series of Bonds issued and Outstanding under the Trust Agreement;

(2) Series Payments shall not include Supplemental Payments or payments pursuant to a Bond Credit Facility or a Qualified Swap Agreement;

(3) payments described in paragraph (1) above shall not constitute Series Payments in any Fiscal Year unless:

(a) the source of such payments is a sales tax, gas or fuel tax, franchise fee, ad valorem tax, real estate tax, utility or other public service tax, excise tax, income tax or use tax; or

(b) amounts derived from sources described in paragraph (1) above together with the Additional System Payments (other than those described in paragraph (3)(a) of the definition of Additional System Payments) allocable to such Series of Bonds pro rata on the basis of Annual Debt Service for such Fiscal Year do not constitute in excess of twenty percent (20%) of Annual Debt Service.

"Series Payments Fund" shall mean the fund of that name created in the Trust Agreement.

"State" shall mean the State of Ohio.

"Supplemental Authorizing Resolution" shall mean, as to any Series of Bonds, the resolution or resolutions authorizing and providing for the sale and issuance of such Series of Bonds.

"Supplemental Payments" shall mean:

(1) payments payable to the Commission pursuant to any agreement between the Commission and any private or governmental entity, or under any law, statute, ordinance, resolution or other authorizing instrument of such an entity, which payments are available and expressly pledged by the Commission for the payment of debt service with respect to one or more Series, or all Series, of Bonds Outstanding hereunder, but which are restricted to use only in the event System Pledged Revenues or, if applicable, Series Payments, are insufficient to make payments required hereunder with respect to such Series of Bonds. Such payments must:

(a) by their terms automatically recur without appropriation, approval or similar action that is discretionary to the entity providing such payments for so long as any Bonds secured thereby are Outstanding or until such earlier time as all conditions for the release of such payments, if any, provided in the applicable Supplemental Trust Agreement are met; and

(b) be available and expressly pledged by the Commission for the payment of debt Service on one or more Series of Bonds issued and Outstanding under the Trust Agreement.

(2) Supplemental Payments shall not include Series Payments or payments pursuant to a Bond Credit Facility or a Qualified Swap Agreement.

"Supplemental Payments Fund" shall mean the fund of that name created in the Trust Agreement.

"Supplemental Trust Agreement" shall mean one or more Supplemental Trust Agreements, as the same may be amended and supplemented from time to time, authorized by Supplemental Authorizing Resolutions.

"System" shall mean (a) the highway extending approximately 241 miles across the State from a point on the Ohio-Pennsylvania line near Petersburg, Ohio (being also the western terminus of the Pennsylvania Turnpike), in a northwesterly and westerly direction to a point on the Ohio-Indiana line in Williams County, Ohio (being the easterly terminus of the Indiana Toll Road), under the operating jurisdiction of the Commission, and popularly called "the Ohio Turnpike", and including all bridges, tunnels, overpasses, underpasses, interchanges, entrance plazas, approaches, toll facilities, service facilities, administration, and storage and other buildings and facilities necessary for the operation or utilization thereof, all with such modifications or alterations thereof as permitted by the Act and the Trust Agreement, and all property, rights, easements and interests owned or acquired for the operation or utilization thereof or for use in connection therewith, as well as those additions, extensions and improvements thereto as contemplated by the Trust Agreement or the Junior Lien Bond Master Trust Agreement, and (b) System Projects.

"System Pledged Revenues" shall mean Net Revenues plus Additional System Payments.

"System Project" shall mean any project authorized by the Act as of February 15, 1994 and designated as a System Project by official action of the Commission.

"System Projects Fund" shall mean the fund of that name created in the Trust Agreement.

"Taxable Bonds" shall mean Bonds issued on the basis that the interest thereon shall not, in any manner, be exempt from federal income taxation or excludible from gross income for federal income tax purposes.

"30 Year Bond Buyer Revenue Bond Index" shall mean the weekly index compiled by *The Bond Buyer* consisting of twenty-five (25) tax-exempt revenue bonds rated "AA" or "A" which have maturities of thirty (30) years, published immediately preceding the first day of the calendar month in which any calculation utilizing such index is made; if such index, or an equivalent successor index is no longer published, the 30 Year Bond Buyer Revenue Bond Index shall be determined in such manner as the Commission shall determine will provide substantially the same rate that would have been provided by the 30 Year Bond Buyer Revenue Bond Index and with respect to which the Commission receives confirmation from each Rating Agency then maintaining ratings on Bonds Outstanding that calculation of the 30 Year Bond Buyer Revenue Bond index in such manner will not result in a reduction or withdrawal of the then applicable ratings on the Bonds.

"Tolls or tolls" shall mean Tolls, special fees or permit fees, or other charges by the Commission to the owners, lessors, lessees or operators of motor vehicles for the operation of or the right to operate those vehicles on the System, and any other fees and charges authorized by the Act in connection with any System Project.

"Trust Agreement" shall mean collectively the Master Trust Agreement and all Supplemental Trust Agreements supplemental thereto.

"Trustee" shall mean the Trustee at the time serving under the Trust Agreement, initially The Huntington National Bank, Cleveland, Ohio, and any successor Trustee as determined under or pursuant to the Trust Agreement.

"Variable Rate Bonds" shall mean Bonds with a variable, adjustable, convertible or other similar rate which is not fixed in percentage for the entire remaining term thereof.

"Verification Agent" shall mean an independent public accounting firm, or other firm that employs one or more certified public accountants for the purpose, engaged by the Commission to perform the acts and carry out the duties provided for a Verification Agent in the Trust Agreement.

Any reference to the Commission or to its members, officers or to other public officers, boards, commissions, departments, institutions, agencies, bodies or entities shall include those which succeed to its functions, duties or responsibilities by operation of law, and also those who at the time may legally act in its place.

References to the Act, to any act or resolution of the General Assembly, or to a section, chapter, division, paragraph or other provision of the Ohio Revised Code or the Constitution of Ohio, or the laws of Ohio, shall include the Act, that act or resolution, and that section, chapter, division, paragraph or other provision and those laws as from time to time amended, modified, supplemented, revised or superseded, unless expressly stated to the contrary, provided that no such amendment, modification, supplementation, revision or supersession shall alter the obligation to pay the Annual Debt Service on Bonds Outstanding, or on Bonds in anticipation of which Notes are Outstanding, or to pay any obligations of the Commission to Financial

Institutions relating to any Series of Bonds Outstanding, at the time of any such action, in the amount and manner, at the times and from the sources provided in the Trust Agreement, except as otherwise therein permitted.

SUMMARY OF THE TRUST AGREEMENT

The following, in addition to information contained under the captions "DESCRIPTION OF THE 2021 SENIOR LIEN BONDS" and "SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS", summarizes certain provisions of the Trust Agreement, to which document in its entirety reference is made for the detailed provisions thereof.

So long as the 2021 Senior Lien Bonds are immobilized in a Book Entry System with DTC or another depository, that depository or its nominee is for all purposes of the Trust Agreement considered by the Commission and the Trustee to be the Holder of the 2021 Senior Lien Bonds, and Beneficial Owners will not be considered Holders and will have no rights as Holders under the Trust Agreement. See "EXHIBIT E - BOOK ENTRY ONLY SYSTEM"."

Security

The Trust Agreement provides for a pledge of the System Pledged Revenues by the Commission to the Trustee for the benefit of the Holders and the Financial Institutions. See "SECURITY FOR AND SOURCES OF PAYMENT OF THE 2021 SENIOR LIEN BONDS."

Funds and Accounts

The Trust Agreement establishes the following funds and accounts: the Revenue Fund, and within such fund the Gross Revenue Account and the Additional System Payments Account; the Expense Fund, and within such fund the Operation, Maintenance and Administrative Expenses Account and the Expense Reserve Account; the Debt Service Fund, and within such fund the Interest Account, the Principal Account, the Bond Redemption Account and the Debt Service Reserve Account; the Series Payments Fund, and within such fund, to the extent necessary to segregate and separately account for Series Payments, one or more separate accounts; the Renewal and Replacement Fund; the System Projects Fund, and within such fund, to the extent necessary, one or more separate Construction Accounts; the General Reserve Fund; the Supplemental Payments Fund, and within such fund, to the extent necessary to segregate and separately account for Supplemental Payments, one or more separate accounts; and the Rebate Fund, and within such fund a separate Rebate Account for each Series of Bonds, to the extent required by applicable law.

The funds and accounts created by the Trust Agreement constitute trust funds for the purposes provided in the Trust Agreement and are for purposes of accounting, kept separate and distinct from all other funds of the Commission and are be used only for the purposes and in the manner provided in the Trust Agreement.

The Debt Service Fund and the accounts therein (the Interest Account, the Principal Account, the Bond Redemption Account and the Debt Service Reserve Account) are held by the Trustee. The Revenue Fund, the Series Payments Fund, the Expense Fund, the Renewal and Replacement Fund, the System Projects Fund, the General Reserve Fund and the Rebate Fund have been established and are maintained by the Commission in a bank or trust company which is eligible under the laws of the State to receive deposits of public funds. The Supplemental Payments Fund and the accounts therein have been established and are held in compliance with the document or agreement providing for such Supplemental Payments.

Revenue Fund: The Commission covenants that Gross Revenues will be collected by the Commission, or its agents, and deposited into the Gross Revenue Account in the Revenue Fund. All Additional

System Payments will be deposited by the Commission into the Additional System Payments Account in the Revenue Fund immediately upon receipt. All Series Payments shall be deposited by the Commission into the Series Payments Fund (or if established, the applicable subaccount therein) immediately upon receipt thereof.

Expense Fund: Amounts on deposit in the Operation, Maintenance and Administrative Expenses Account will be applied by the Commission from time to time to pay the Cost of Operation, Maintenance and Administration. Amounts on deposit in the Expense Reserve Account will be applied by the Commission from time to time to pay Cost of Operation, Maintenance and Administration to the extent amounts on deposit in the Operation, Maintenance and Administrative Expenses Account are insufficient for such purpose.

Debt Service Fund: Amounts on deposit in the Principal Account, Bond Redemption Account and Interest Account will be transferred by the Trustee to the Paying Agent at the times as are necessary to make payments of principal and interest on the Bonds or Qualified Swap Payments, as the case may be.

Amounts on deposit in the Bond Redemption Account will be applied solely to the purchase or redemption of Bonds. Moneys in the Bond Redemption Account will first be applied to the payment of the mandatory sinking fund installments coming due on the next semiannual and annual redemption dates, if any, of Bonds subject to mandatory sinking fund redemption. The Commission may at any time purchase any of such Bonds at prices not greater than the applicable redemption price of such Bonds as of such date. If the Bonds are not then redeemable prior to maturity, the Commission may purchase such Bonds at prices not greater than the redemption price of such Bonds on the next ensuing redemption date. The Trustee is required to use all moneys in the Bond Redemption Account for the redemption prior to maturity of such Bonds in such manner and at such times as shall be determined by a Supplemental Trust Agreement; provided, that the Commission will not be obligated to redeem, in advance of the mandatory sinking fund installment next coming due, such Bonds prior to maturity unless and until there are sufficient moneys on deposit in the Bond Redemption Account to provide for the redemption of at least Twenty-five Thousand Dollars ($25,000) principal amount of Bonds at any one time. If by the application of moneys in the Bond Redemption Account, the Commission purchases or calls for redemption in any year Bonds in excess of the installment requirement for such year, such excess of Bonds so purchased or redeemed will be credited in such manner and at such times over the remaining installment payment dates as the Commission shall determine.

Moneys in the Debt Service Reserve Account will be used only for deposit into the Interest Account, the Principal Account or the Bond Redemption Account when the moneys in the Revenue Fund or any other fund or account held pursuant to the Trust Agreement and available for such purpose are insufficient therefor. In the event that any moneys are withdrawn from the Debt Service Reserve Account for deposit into the Interest Account, the Principal Account or the Bond Redemption Account, such withdrawals are required to be subsequently restored from the first System Pledged Revenues (and, to the extent available therefor, Series Payments) available to the Commission after all required payments have been made into the Interest Account, the Principal Account and the Bond Redemption Account, including any deficiencies for prior payments, unless restored by provision or reinstatement of a Reserve Account Credit Facility.

Any moneys in the Debt Service Reserve Account in excess of the Debt Service Reserve Requirement for the Bonds or, if the Commission has exercised its option to fund the Debt Service Reserve Account in installments, the amount then required to be on deposit in the Debt Service Reserve Account in accordance with such election, will be transferred by the Trustee to the Commission and deposited by the Commission in the General Reserve Fund.

The Commission may elect, by resolution adopted prior to the issuance of any Series of Bonds, to fully fund the Debt Service Reserve Account over a period specified in such resolution not to exceed the period during which capitalized debt service in an amount sufficient to pay all principal and interest due on such Series of Bonds has been deposited with the Trustee, during which period the Commission will be required to make substantially equal monthly installments in order that the amounts on deposit therein and available amounts under any Reserve Account Credit Facility at the end of such period will equal the Debt Service Reserve Requirement.

In lieu of the amounts required to be on deposit in the Debt Service Reserve Account, the Commission may at any time cause to be deposited into the Debt Service Reserve Account a Reserve Account Credit Facility for the benefit of the Holders in an amount, which together with other amounts on deposit therein equals the Debt Service Reserve Requirement or, if the Commission has exercised its option to fund the Debt Service Reserve Account in installments, the amount then required to be on deposit in the Debt Service Reserve Account in accordance with such election, which Reserve Account Credit Facility shall be payable or available to be drawn upon, as the case may be (upon the giving of notice as required thereunder) on any interest or principal payment date on which a deficiency exists in the Interest Account, the Principal Account or the Bond Redemption Account which cannot be cured by moneys in any other fund or account held pursuant to the Trust Agreement and available for such purpose. If a disbursement is made under the Reserve Account Credit Facility, the Commission will be obligated either to reinstate the amount available under such Reserve Account Credit Facility or to deposit into the Debt Service Reserve Account from the System Pledged Revenues (and, to the extent available therefor, Series Payments), funds in the amount sufficient to cause the amount on deposit in the Debt Service Reserve Account to equal the Debt Service Reserve Requirement or, if the Commission has exercised its option to fund the Debt Service Reserve Account in installments, the amount then required to be on deposit in the Debt Service Reserve Account in accordance with such election, or a combination of such alternatives.

In the event that any Reserve Account Credit Facility is not rated in one of the two highest rating categories (without giving effect to modifiers or qualifiers within a rating category) by at least two Rating Agencies (the “Reserve Account Credit Facility Rating Requirement”), the Commission shall deposit an amount into the Debt Service Reserve Account so that such funds, together with any other amounts on deposit as well as any Reserve Account Credit Facilities that do meet the Reserve Account Credit Facility Rating Requirement, equal the Debt Service Reserve Requirement.

In the alternative, in lieu of the deposit set forth in the preceding paragraph, the Commission may deposit another Reserve Account Credit Facility that meets the Reserve Account Credit Facility Rating Requirement to insure over the Reserve Account Credit Facility that does not meet the Reserve Account Credit Facility Rating Requirement.

In the event that the Commission deposits cash or a Reserve Account Credit Facility to insure over an existing Reserve Account Credit Facility that does not satisfy the Reserve Account Credit Facility Rating Requirement, the Trustee shall note on its books that such cash or Reserve Account Credit Facility is for purpose of insuring over the existing Reserve Account Credit Facility.

In the event that the Trustee is required to draw upon the Debt Service Reserve Account in order to make payments due into the Debt Service Fund, the Trustee shall draw on such moneys and Reserve Account Credit Facilities in the following order of priority:

FIRST, from moneys deposited into the Debt Service Reserve Account, other than moneys deposited due to a Reserve Account Credit Facility not meeting the Reserve Account Credit Facility Rating Requirement;

SECOND, on all Reserve Account Credit Facilities (other than those Reserve Account Credit Facilities deposited as a result of another Reserve Account Credit Facility not meeting the Reserve Account Credit Facility Rating Requirement) on a pro-rata basis (including those Reserve Account Credit Facilities not meeting the Reserve Account Credit Facility Rating Requirement); and

THIRD, on Reserve Account Credit Facilities and cash that have been deposited as a result of another Reserve Account Credit Facility not meeting the Reserve Account Credit Facility Rating Requirement, on a pro-rata basis, but only to the extent that the provider of the Reserve Account Credit Facility not meeting the Reserve Account Credit Facility Rating Requirement fails to pay amounts as due.

Reserve Account Credit Facilities drawn on in "SECOND" above shall be drawn on a pro-rata basis only, regardless of whether the providers of the Reserve Account Credit Facilities not meeting the Reserve Account Credit Facility Rating Requirement fail to pay, unless and until Reserve Account Credit Facilities or cash in "THIRD" above have been drawn to pay amounts as due.

In the event that the Commission deposits cash as a result of an existing Reserve Account Credit Facility not meeting the Reserve Account Credit Facility Rating Requirement and that existing Reserve Account Credit Facility subsequently meets the Reserve Account Credit Facility Rating Requirement, upon the written request of the CFO/Comptroller of the Commission, the Trustee shall transfer the amount of that previous deposit to the Commission.

See "SECURITY AND SOURCE OF PAYMENT OF THE 2021 SENIOR LIEN BONDS – Debt Service Reserve Requirements - Senior Lien Bond Reserve" and "Debt Service Reserve Account Credit Facility – Senior Lien Bonds").

If the Commission fails to pay any unreimbursed draws and related expenses with respect to the Reserve Account Credit Facility issued by Financial Security, Financial Security is entitled to exercise any and all legal and equitable remedies available to it, including those provided under the default provisions of the Trust Agreement, other than (i) acceleration of the maturity of the Bonds, or (ii) any remedies which, in the opinion of the Trustee, would adversely affect owners of the Bonds. See "GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT – Events of Default and Remedies."

Renewal and Replacement Fund: The moneys in the Renewal and Replacement Fund will be used, when necessary, for the purpose of paying the cost of replacement or renewal of capital assets or facilities of the System, or extraordinary repairs of the System. The moneys in the Renewal and Replacement Fund will be used for payment into the Interest Account, the Principal Account and the Bond Redemption Account when the moneys in the Revenue Fund and, to the extent available therefor, in the Series Payments Fund are insufficient therefor. Moneys in the Renewal and Replacement Fund will also be used for the benefit of the Junior Lien Bonds to the extent and in the manner provided by the Junior Lien Bond Master Trust Agreement. If the Commission determines that the amount on deposit in the Renewal and Replacement Fund is excessive for the purposes of the Renewal and Replacement Fund, the excess amount may be withdrawn from the Renewal and Replacement Fund by the Commission and transferred to and deposited in the System Projects Fund.

System Projects Fund: The moneys in the System Projects Fund will be used, when necessary, for the purpose of paying all or part of the Project Costs of System Projects. Prior to the expenditure of such moneys from the Systems Project Fund, however, there shall be delivered to the Trustee a Certificate of the Commission, signed by the Executive Director, stating that prior to and in connection with expenditure, (i) no default exists under the Trust Agreement and (ii) no event exists which, with the giving of notice or the passage of time, would constitute an Event of Default. The moneys in the System Projects Fund will be used for payment into the Interest Account, the Principal Account and the Bond Redemption Account when the money in the Revenue Fund, the Renewal and Replacement Fund and, to the extent available therefor, the Series Payments Fund are insufficient therefor. Moneys in the System Projects Fund will also be used for the benefit of the Junior Lien Bonds to the extent and in the manner provided by the Junior Lien Bond Master Trust Agreement. In the event the Commission shall certify that the amount on deposit in the System Projects Fund is excessive for the purposes of the System Projects Fund, such excess amount may be withdrawn from the System Projects Fund by the Commission and deposited in the General Reserve Fund.

Series Payments Fund: Amounts on deposit in the respective accounts within the Series Payments Fund will be applied to make the deposits to the Interest Account, the Principal Account, the Bond Redemption Account and the Debt Service Reserve Account with respect to the respective Series of Bonds secured thereby to the extent and in the manner provided or permitted in the governing document providing for the payment of such Series Payments, or, if the governing document does not so provide, then as directed by the Commission. Funds derived from Series Payments will secure and only be used to make payments with respect to the particular Series of Bonds to which such payments are pledged and such amounts will not be available or used to make payments with respect to any other Series of Bonds.

Supplemental Payments Fund: If in any month the System Pledged Revenues and Series Payments are not sufficient to make the required deposits into the Interest Account, the Principal Account, the Bond Redemption Account or the Debt Service Reserve Account, moneys in the Supplemental Payments Fund will be applied to pay the portion of such deficiency allocable to the Bonds secured by the Supplemental Payments. Funds derived from Supplemental Payments will secure and only be used to make payments with respect to the Series of Bonds for which such Supplemental Payments are available in accordance with the terms of the governing document providing for such Supplemental Payments and such amount will not be available or used to make payments with respect to other Series of Bonds.

Rebate Fund: The Commission will deposit or cause to be deposited into the appropriate Rebate Account in the Rebate Fund, from investment earnings or moneys deposited in the other funds and accounts created under the Trust Agreement, or from any other legally available funds of the Commission, an amount equal to the Rebate Amount. The moneys deposited in the Rebate Fund shall be used only for the payment of the Rebate Amount to the United States of America.

To the extent moneys on deposit in the appropriate Rebate Account in the Rebate Fund are insufficient for the purpose of paying the Rebate Amount, and other funds of the Commission are not available to pay the Rebate Amount, then the Rebate Amount is required to be paid first from System Pledged Revenues and, to the extent the System Pledged Revenues are insufficient to pay the Rebate Amount, then from moneys on deposit in any of the funds and accounts created under the Trust Agreement.

After making the required determination or calculation of the Rebate Amount or causing the same to be made, and upon verification of such determination or calculation by the Commission, if required, the Commission may, to the extent permitted by the Code, withdraw funds which may be on deposit in the appropriate Rebate Account in an amount not to exceed an amount which would maintain a balance in such account sufficient to pay the then-current cumulative Rebate Amount, and use such funds for any other purpose authorized by law.

General Reserve Fund: The monies in the General Reserve Fund will be used in such manner, in such priority, and at such times as the Commission determines (a) to purchase or redeem Bonds (at redemption prices not exceeding the redemption prices of such Bonds on the next ensuing redemption date), (b) for any transportation-related lawful purpose of the Commission, including, without limitation, to reimburse the provider of any Supplemental Payments in accordance with the document providing for such Supplemental Payments, payment of Project Costs with respect to Non-System Projects or payment of Non-System Project Operating Expenses, or (c) for payments by the Commission under any reimbursement agreement with respect to any Bond Credit Facility or any other financial agreement entered into with respect to the Bonds, or any Series thereof; provided, however, that none of such monies may be used for the purposes described in this paragraph unless all payments required to be made to other funds (see "EXHIBIT A - GLOSSARY OF TERMS and SUMMARY OF THE TRUST AGREEMENT - Application of Monies in Revenue Fund"),

including any deficiencies for prior payments, have been made in full to the date of such use, and the Commission has fully complied with all covenants and agreements contained in the Trust Agreement.

Investment and Valuation of Funds

The Revenue Fund, the Debt Service Fund, the Renewal and Replacement Fund, the Expense Fund, the System Projects Fund, the General Reserve Fund, the Series Payments Fund and all other special funds created and established by the Trust Agreement constitute trust funds under the Trust Agreement. All moneys held in such funds and accounts will be invested at the direction of the Commission in Permitted Investments. Moneys on deposit in the Debt Service Reserve Account may be invested in any Permitted Investments. Moneys on deposit in the Principal Account, the Interest Account or the Bond Redemption Account will be invested only in Permitted Investments described in clauses (a), (b), (f) or (g) of the definition of Permitted Investments (See "EXHIBIT A - GLOSSARY OF TERMS and THE TRUST AGREEMENT"). Permitted Investments must mature not later than the earliest of (a) the final maturity of the Bonds, (b) the time such moneys are reasonably required for the purposes set forth for such fund or account in accordance with the Trust Agreement, (c) the time permitted by the Act and applicable law, and (d) with respect to Permitted Investments described in clauses (a) through (d) of the definition of Permitted Investments held in the Debt Service Reserve Account, ten (10) years from the date of investment.

Unless otherwise provided by a Supplemental Trust Agreement, all income and earnings received from the investment and reinvestment of moneys on deposit in the Debt Service Reserve Account will be transferred as soon as practicable to the Interest Account, the Principal Account or the Bond Redemption Account for use for the next payment due from such accounts. All income and earnings received from the investment and reinvestment of moneys on deposit in the Interest Account, the Principal Account and the Bond Redemption Account will remain in such accounts for use for the next payment due from such account. All income and earnings received by the investment and reinvestment of moneys on deposit in any construction fund will remain in such fund for use in the expenditures required from such fund. All income and earnings on the Supplemental Payments Fund and the Series Payments Fund will be applied in the manner provided in the document governing such payments. All income and earnings received from the investment of moneys on deposit in the Rebate Fund shall be retained in such fund. All income and earnings received from the investment and reinvestment of moneys on deposit in any other fund created by the Trust Agreement will be transferred as soon as practicable to the Revenue Fund. Earnings in all funds and accounts will be available for payments of the Rebate Amount.

In computing the amount in any fund or account created under the Trust Agreement, Permitted Investments will be valued at the "cost" thereof, exclusive of accrued interest. A valuation of amounts on deposit in the Debt Service Reserve Account must be conducted by the Trustee on March 1 of each Fiscal Year to determine if the amount on deposit therein is equal to the Debt Service Reserve Requirement or, if the Commission has exercised its option to fund the Debt Service Reserve Account in installments, the amount then required to be on deposit in the Debt Service Reserve Account in accordance with such election. If a deficiency exists, the Commission must make up such deficiency from a deposit of System Pledged Revenues. If a surplus exists, such surplus shall be transferred into the Revenue Fund.

Application of Monies in Revenue Fund

On or before the tenth (10^{th}) day of each month, amounts on deposit in the Revenue Fund as of the close of business on the last day of the preceding month will be disposed of in the following manner and priority and in an amount sufficient to make the required payment and deposit and all past due payments and deposits within such priority (provided that (a) the selection of the Gross Revenue Account or the Additional System Payments Account as the source of distribution will be determined as provided in the agreements relating to the Additional System Payments; and (b) monies in the Additional System Payments Account will not be used to make payments into the Expense Fund):

(a) for deposit into the Operation, Maintenance and Administrative Expenses Account in an amount equal to one-twelfth (1/12) of the Cost of Operation, Maintenance and Administration, as set forth in the Annual Budget of the Commission for such Fiscal Year; provided that the payment due for the last month of each Fiscal Year shall equal the difference between budgeted and actual expenses so that the total deposits to the Operation, Maintenance and Administration Expense Account shall equal the actual expenses for such Fiscal Year. The monthly payments shall be increased or decreased, as necessary, to reflect amendments to the Annual Budget. Amounts on deposit in the Operation, Maintenance and Administrative Expenses Account shall be applied by the Commission from time to time to pay the Cost of Operation, Maintenance and Administration;

(b) for deposit into the Expense Reserve Account, the amount necessary to cause the amount on deposit therein to equal at the election of the Commission (i) the greater of one-twelfth (1/12) of the Cost of Operation, Maintenance and Administration set forth in the Annual Budget of the Commission for such Fiscal Year or the highest monthly Cost of Operation, Maintenance and Administration during the previous Fiscal Year, or (ii) such other amount as is recommended in a report of the Consulting Engineer to be necessary;

(c) (i) for deposit into the Interest Account, an amount equal to the sum of (1) one-sixth (1/6) of the interest becoming due on the next semiannual Interest Payment Date with respect to Bonds that bear interest payable semiannually, (2) the amount of interest next becoming due or maturing on the Bonds that bear interest payable monthly, (3) the amount of interest accruing in such month on Bonds that bear interest payable on other than a monthly or semiannual basis (other than Capital Appreciation Bonds and Capital Appreciation and Income Bonds), and (4) the amount of any Qualified Swap Payment payable by the Commission accruing in such month;

(ii) for deposit in the Principal Account, an amount equal to one-sixth (1/6) of the principal amount of the Bonds which will mature and become due on the next semiannual maturity date and one-twelfth (1/12) of the principal amount of the Bonds which will mature and become due on the next annual maturity date in such Fiscal Year; and

(iii) for deposit into the Bond Redemption Account, an amount sufficient to pay one-sixth (1/6) of the principal amount of Bonds subject to mandatory sinking fund redemption on the next semiannual redemption date and one-twelfth (1/12) of the principal amount of Bonds subject to mandatory sinking fund redemption on the next annual redemption date;

In making such deposits, the Trustee will reduce the amounts of the required deposits by any investment earnings which have accrued in such accounts during the preceding period;

(d) for deposit into the Debt Service Reserve Account, an amount which, together with the funds on deposit therein and the available amounts under any Reserve Account Credit Facility as provided below, will be sufficient to make the amount on deposit therein equal to the Debt Service Reserve Requirement or if the Commission has exercised its option to fund the Debt Service Reserve Account in installments, the amount then required to be on deposit in the Debt Service Reserve Account in accordance with such election;

(e) for deposits and payments required pursuant to the Junior Lien Bond Master Trust Agreement;

(f) for deposits and payments with respect to obligations secured by the System Pledged Revenues junior and subordinate to the Junior Lien Bonds as required pursuant to the resolution, indenture or the other instrument pursuant to which such obligations are issued;

(g) for deposit into the Renewal and Replacement Fund of an amount equal to one-twelfth (1/12) of the Renewal and Replacement Requirement for such Fiscal Year;

(h) for deposit into the System Projects Fund, such sums as shall be certified by the Commission as necessary to be deposited therein in such Fiscal Year to finance all or part of System Projects as the Commission may determine, provided, however, that such required amounts for deposit may be increased or decreased as the Commission shall certify if necessary for the purposes of the System Projects Fund;

(i) thereafter, the balance of any amounts remaining in the Revenue Fund may be transferred to the General Reserve Fund.

Calculation of System Pledged Revenues

The Commission shall, during the final month of each Fiscal Year, calculate the System Pledged Revenues. In the event that System Pledged Revenues exceed 200% of the Annual Debt Service Requirement, the Commission shall release the excess amount of concession revenues and lease, license, royalty, advertising and miscellaneous sales, fees and charges revenues from System Pledged Revenues.

Issuance of Bonds

The Commission may issue Bonds for the purpose of:

(a) financing System Projects, either alone or jointly with other persons, public bodies or private bodies;

(b) financing Non-System Projects, either alone or jointly with other persons, public bodies or private bodies;

(c) refunding Outstanding Bonds or Notes issued pursuant to the Trust Agreement;

(d) completing any System Project for which Bonds have been previously issued; or

(e) refunding Junior Lien Bonds or other subordinated indebtedness.

Each Series of Bonds (including the 2021 Senior Lien Bonds) must be authorized by a Supplemental Authorizing Resolution adopted by the Commission and must be issued pursuant to a Supplemental Trust Agreement.

No Bonds shall be issued unless all conditions described in paragraphs (a) through (e) below are met.

(a) The Commission must be current in all deposits into the various funds and accounts and all payments theretofore required to have been deposited or made by it under the provisions of the Trust Agreement and the Commission must be in compliance with the covenants and provisions of the Trust Agreement unless, upon the issuance of such Bonds, the Commission will be in compliance with all such covenants, all as certified to the Trustee by the Commission.

(b) (i) The amount of the System Pledged Revenues and any Supplemental Payments during the immediately preceding Fiscal Year or any twelve (12) consecutive calendar months selected by the Commission out of the fifteen (15) consecutive calendar months immediately preceding the issuance of said Bonds, adjusted as hereinafter described, as verified in writing to the Trustee by the Verification Agent, shall have been at least 150% of the Maximum Annual Debt Service Requirement on the Bonds then Outstanding and the Bonds then proposed to be issued. The System Pledged Revenues calculated pursuant to the condition described in this paragraph may be adjusted, at the option of the Commission, if the Commission, prior to the issuance of the proposed Bonds, has increased the Tolls for transit over the toll facilities of the System. If the Commission elects to adjust Systems Pledged Revenues, the Net Revenues for the immediately preceding Fiscal Year or the twelve (12) consecutive calendar months will be adjusted, based upon a certificate of the Independent Consultant, to reflect the Net Revenues which would have been derived from the System during such period if such increased Tolls of the System had been in effect during all of such period; and

(ii) if the Commission shall be constructing or shall be acquiring a System Project from the proceeds of such Bonds and assuming, except as provided below, that the Tolls in effect at the time of issuance of such Bonds will be the Tolls to be charged and collected when such System Project is completed and open for transit, the average annual System Pledged Revenues estimated by an Independent Consultant, and certified to the Trustee, to be derived during the first three (3) full Fiscal Years of operation after completion of the construction or acquisition of said System Project, plus an amount equal to the Supplemental Payments (not to exceed the portion of the Maximum Annual Debt Service Requirement attributable to the Series of Bonds secured by such Supplemental Payments) available (or, as provided by a projection of an Independent Consultant, that would have been available had the pledge of such Supplemental Payments been in effect) during any twelve (12) consecutive calendar months out of the fifteen (15) consecutive calendar months preceding the date of calculation, will be equal to at least 120% of the Maximum Annual Debt Service Requirement on the Bonds then Outstanding and the Bonds then proposed to be issued, and the Commission shall be projected to be in compliance with the requirements of the Section 4.04(a) of the Senior Lien Bond Master Trust Agreement for the first three (3) full Fiscal Years of operation after completion as certified by the Independent Consultant. Any adjustment (including any increase or decrease) to the Toll rate structure scheduled to be put in place during such first three (3) full Fiscal Years of operation may only be incorporated into the System Pledged Revenues estimate by the Independent Consultant pursuant to this paragraph if the Commission shall have established a forecast of Tolls to be charged and collected when such System Project is completed and open for transit. For purposes of calculating the System Pledged Revenues, the amount of Additional System Payments to be included shall be equal to the amount of such Additional System Payments received (or, as provided by a projection of an Independent Consultant, that would have been received had the agreement providing for such Additional System Payments been in effect) in any twelve (12) consecutive calendar months out of the fifteen (15) consecutive calendar months preceding the date of calculation.

(c) There shall be delivered to the Trustee certain documents, opinions and certificates, including evidence of authorization by the Commission of the issuance and delivery of the Bonds, and a certification of an Authorized Officer of the Commission that it is not in default in the performance of any of the covenants, conditions, agreements or provisions contained in the Bonds or the Trust Agreement.

(d) Unless the Supplemental Trust Agreement for any Series of Bonds provides for the funding of the Debt Service Reserve Account in installments, the Debt Service Reserve Account must be fully funded immediately upon the issuance of such Series of Bonds.

(e) A Series of Bonds may be issued for purposes of financing one or more Non-System Projects only if the System Pledged Revenues, plus an amount equal to the Supplemental Payments (not to exceed the portion of the Maximum Annual Debt Service Requirement attributable to the Series of Bonds secured by such Supplemental Payment) for any twelve (12) consecutive calendar months of the fifteen (15) consecutive calendar months immediately preceding the issuance of such Bonds shall have been at least one hundred twenty percent (120%) of the Maximum Annual Debt Service Requirement on the Bonds then Outstanding and the Bonds proposed to be issued. For purposes of calculating the System Pledged Revenues and Supplemental Payments to be pledged to the Bonds proposed to be issued, the amount to be included for purposes of satisfying the condition described in this paragraph is required to be the amount received or projected by an Independent Consultant in writing to the Trustee that would have been received or available, had the pledge of such Additional System Payments or Supplemental Payments been in effect during such period.

The Commission need not comply with the provisions described in clause (b) of the preceding paragraph if and to the extent the Bonds to be issued qualify as either "Refunding Bonds" or "Completion Bonds," as described below.

(a) "Refunding Bonds," that is, Bonds delivered in lieu of, or in substitution for, or to provide for the payment of, Bonds or Notes Outstanding under the Trust Agreement, if the Commission causes to be delivered to the Trustee a certificate of a Verification Agent setting forth:

(1) the Annual Debt Service Requirements for the then current and each future Fiscal Year to and including the latest maturity of any Bonds of any Series then Outstanding:

(A) with respect to the Bonds of all Series Outstanding immediately prior to the date of authentication and delivery of such Refunding Bonds, and

(B) with respect to the Bonds of all Series to be Outstanding immediately thereafter, and

(2) that the Annual Debt Service Requirement set forth for each Fiscal Year pursuant to (1)(B) above is no greater than that set forth for each such Fiscal Year pursuant to (1)(A) above, or

(b) "Completion Bonds," that is, Bonds delivered to provide for the payment of the cost of a System Project subsequent to the original issuance of Bonds for such System Project, provided that the conditions described in subparagraphs (1) and (2) below are met.

(1) The net amount of such Completion Bonds available for deposit into the System Projects Fund will be equal to or less than (A) ten percent (10%) of the original estimated cost of such System Project at the time of the original issuance of Bonds, or (B) such a greater amount, provided that an Independent Consultant certifies that such greater amount is necessary for completion of the System Project and that issuance of such Completion Bonds in such amount will not reduce projected Net Revenues after the payment of Annual Debt Service on the Bonds for the first full Fiscal Year following completion of the System Project and each future Fiscal Year to and including the latest maturity of any Bonds Outstanding assuming the issuance of the Completion Bonds as compared with the

projected Net Revenues after the payment of Annual Debt Service for the same periods assuming that the Completion Bonds were not issued; and

(2) The Commission causes to be delivered to the Trustee a certificate of the Consulting Engineer stating:

(A) the cost of completing such System Project, and

(B) that other funds available or reasonably expected to become available for such cost, together with the proceeds of such Completion Bonds, will be sufficient to pay such cost.

Tolls

The Commission will at all times charge and collect or cause to be charged and collected Tolls for the use of the System at rates not less than those set forth in the schedule of such Tolls then in effect and as shall be required in order to satisfy the requirements described in subparagraphs (a), (b) and (c) below.

(a) Gross Revenues in each Fiscal Year will equal at least one hundred percent (100%) of the aggregate of:

(i) the Cost of Operation, Maintenance and Administration for such Fiscal Year as provided in the Annual Budget; and

(ii) any amounts required to be deposited into the Expense Reserve Account in such Fiscal Year.

(b) System Pledged Revenues in each Fiscal Year will equal at least one hundred percent (100%) of the aggregate in such Fiscal Year of (i) the Annual Debt Service Requirement, (ii) required deposits to the Debt Service Reserve Fund, (iii) deposits and payments required pursuant to the Junior Lien Bond Master Trust Agreement, (iv) deposits and payments required pursuant to any resolution, indenture or other authorizing instrument under which any obligations of the Commission secured by a pledge of the System Pledged Revenues junior and subordinate to the Junior Lien Bonds are issued, and (v) the Renewal and Replacement Requirement.

(c) System Pledged Revenues (plus Supplemental Payments, if any, in an amount not to exceed the aggregate Annual Debt Service Requirement for such Fiscal Year for all Series of Bonds to which such Supplemental Payments are pledged in each Fiscal Year) will equal at least one hundred twenty percent (120%) of the Annual Debt Service Requirement in such Fiscal Year.

The collection of System Pledged Revenues in any Fiscal Year in an amount in excess of the amounts required as described above for any Fiscal Year will not be taken into account as a credit against the requirements described above for any subsequent Fiscal Year.

On or before July 31 in each year, the Commission is required to complete a review of the financial condition of the Commission for the purpose of estimating whether the Gross Revenues for such Fiscal Year will be sufficient to provide, together with Series Payments, Additional System Payments and Supplemental Payments, the amounts described in clauses (a), (b) and (c) above (the "Revenue Requirement"). If the Commission determines that such amounts may not be sufficient to satisfy the Revenue Requirement for the then current Fiscal Year, it will forthwith cause the Independent Consultant to make a study for the purpose of recommending a schedule of Tolls which, in the opinion of the Independent Consultant, will cause amounts to be received in the following Fiscal Year equal to the amounts necessary to satisfy the Revenue Requirement for such Fiscal Year. No later than February 1 of the following year, the Commission will establish and place in effect a schedule of Tolls which will cause amounts to be received in such following and each subsequent Fiscal Year to be sufficient to restore the amount of any deficiency at the earliest practicable time. If, in any Fiscal Year, the amounts received are not sufficient to satisfy the Revenue Requirement, the Commission is required to (a) cause the Independent Consultant to make a study for the purpose stated in the immediately preceding sentence unless it has already obtained a revenue study and recommendation in compliance with such sentence, and (b) as promptly as practicable and in any case no later than the next July 1, establish and place in effect a schedule of Tolls as recommended by the Independent Consultant.

Except as specifically provided in the Trust Agreement, the Commission will not effect any reduction in any rate of Toll fixed for transit over the System or eliminate any Toll charged for use of the System unless it first provides thirty (30) days' notice to the Trustee and then only if, accompanying said notice, all of the documents described in subparagraphs (a), (b) and (c) below are filed with the Trustee:

(a) A certificate of an Independent Consultant setting forth estimates of the Gross Revenues, System Pledged Revenues, Supplemental Payments and Series Payments for the then current and each future Fiscal Year during which any Bonds are scheduled to be Outstanding, which may take into consideration, among other things, the additional use of the System projected to result from such reduction in the rate of Toll, and a favorable recommendation from the Independent Consultant that such proposed reduction be placed in effect.

(b) A certificate of the Commission setting forth for the Fiscal Years set forth in the certificate of the Independent Consultant and based on the same assumptions as used in the certificate described in paragraph (a) above, estimates of the Cost of Operation, Maintenance and Administration and deposits to the Expense Reserve Account for the System prepared in accordance with the Trust Agreement.

(c) a certificate of an Authorized Officer of the Commission:

(i) setting forth the Composite Annual Debt Service Requirement for the then current and each future Fiscal Year during which any Bonds are scheduled to be Outstanding;

(ii) certifying that the estimated System Pledged Revenues and Supplemental Payments for the then current and each future Fiscal Year during which any Bonds are scheduled to be Outstanding are not less than 1.50 times the Composite Annual Debt Service Requirement for such respective current or future Fiscal Year;

(iii) certifying that the Commission is not in default in the performance of any of the covenants, conditions, agreements or provisions contained in the Trust Agreement; and

(iv) certifying that immediately prior to such proposed reduction the amount on deposit in the Debt Service Reserve Account was equal to the Debt Service Reserve Requirement or if the Commission has exercised its option to fund the Debt Service Reserve Account in installments, the amount then required to be on deposit in the Debt Service Reserve Account in accordance with such election.

Except as specifically provided in the Trust Agreement, the Commission will not construct any System Project for which a Toll, consistent with Tolls charged on other portions of the System, is not charged unless there is filed with the Trustee:

(a) a certificate of an Independent Consultant setting forth estimates of the Gross Revenues, System Pledged Revenues, Supplemental Payments and Series Payments for the then current and each future Fiscal Year during which any Bonds are scheduled to be Outstanding;

(b) a certificate of the Commission setting forth for the Fiscal Years set forth in the certificate of the Independent Consultant and based on the same assumptions as used in the certificate required by paragraph (a) above, estimates of the Cost of Operation, Maintenance and Administration and deposits to the Expense Reserve Account prepared in accordance with the Trust Agreement;

(c) a certificate of an Authorized Officer of the Commission:

(i) setting forth the Composite Annual Debt Service Requirement for the then current and each future Fiscal Year during which any Bonds are scheduled to be Outstanding;

(ii) certifying that the estimated System Pledged Revenues and Supplemental Payments (as derived from the certificates pursuant to paragraph (a) above) for the then current and each future Fiscal Year during which any Bonds are scheduled to be Outstanding are not less than 1.20 times the Composite Annual Debt Service Requirement for such respective current or future Fiscal Year;

(iii) certifying that the Commission is not in default in the performance of any of the covenants, conditions, agreements or provisions contained in the Trust Agreement; and

(iv) certifying that the amount on deposit in the Debt Service Reserve Account is equal to the Debt Service Reserve Requirement or if the Commission has exercised its option to fund the Debt Service Reserve Account in installments, the amount then required to be on deposit in the Debt Service Reserve Account in accordance with such election.

With respect to each System Project, the Commission is required to classify Tolls for use of that System Project in a reasonable way to cover all traffic, so that the Tolls will be uniform in application to all traffic on that System Project falling within any reasonable class regardless of the status or character of any person, firm or corporation participating in the traffic, except by reason of privileges based upon frequency, volume, type of vehicle, time of such traffic, distance traveled, weight or method of payment.

The Commission may increase Tolls from time to time. The Commission may make any other adjustment or reclassification of Tolls or establish special Tolls, introductory Tolls or temporary Tolls, provided such adjustments or reclassification will not cause the Commission to fail to satisfy the Revenue Requirement.

The failure in any Fiscal Year to satisfy the Revenue Requirement will not constitute an Event of Default under the Trust Agreement if the Commission complies with the requirements described in the third paragraph under "THE TRUST AGREEMENT - Tolls"; provided that if the Independent Consultant is of the opinion, as shown by its certificate filed with the Commission, that a schedule of Tolls and other rates and charges for the System which would provide funds to meet the Revenue Requirement is impracticable at that time, then the Commission is required to fix and establish such schedule of Tolls as is recommended by the Independent Consultant to satisfy as nearly as practicable the Revenue Requirement, and in such event the failure of the Commission to satisfy the Revenue Requirement and the other requirements described in the third paragraph under "THE TRUST AGREEMENT - Tolls" shall not constitute an Event of Default under the provisions of the Trust Agreement.

The Commission covenants that it will not allow or permit any free use of the toll facilities of the System except to officials, employees, agents, vendors or contractors of the Commission while engaged in official business of the Commission or law enforcement officers or emergency vehicles or clearly marked federal or state military vehicles while in the discharge of their official duties, or in the event of an emergency in which temporary free passage is required in order to assure the safety and security of patrons on the System.

Insurance

The Commission is required to maintain (a) property risk insurance during the construction, reconstruction or improvement of any part of the System, as shall be determined by the Commission; (b) property insurance with respect to System Major Bridges in a commercially reasonable amount as determined by the Commission; (c) use and occupancy insurance covering a period of suspension of not less than 12 months and such longer period as the Commission may approve, which insurance may exclude loss sustained by the Commission during the first 7 days of any total or partial interruption of use; and public liability and property damage insurance in at least the amount, and covering at least the risks, as the Commission may determine. All insurance policies related to the above-described coverages are open to inspection of the Bondholders and their representatives at all reasonable times.

Disposition of Property

The Commission shall not, except as in the Trust Agreement otherwise permitted, sell, lease or otherwise dispose of or encumber the System or any part thereof and will not create or permit to be created any charge or lien on the revenues derived therefrom. However, the Commission may:

(a) Lease or contract with respect to the operation of Service Facilities, as defined in the Act, to the extent Service Facilities are part of the System.

(b) Sell, exchange or otherwise dispose of any machinery, fixtures, apparatus, tools, instruments or other moveable property acquired by it from whatever source of moneys, if the Executive Director determines that they are no longer needed or useful in connection with the operation and maintenance of the System.

(c) Sell, exchange or otherwise dispose of any real property or release, relinquish or extinguish any interest therein as the Commission by resolution declares is not needed or serves no useful purpose in connection with the maintenance and operation of the System, if the Consulting Engineers in writing approve that resolution.

The Commission is required to notify the Trustee of any disposition of any property constituting a portion of the System with a fair market value in excess of $500,000 and the amount and application of the proceeds of that disposition.

Other Covenants

The Commission covenants that (a) it will operate and maintain the System in conformity with all applicable legal requirements; it will not make any modifications or alterations of the System which substantially increase the cost of operating the System or substantially affect adversely the volume or character of the traffic using the System; (b) it will establish and enforce reasonable rules and regulations governing the use and operation of the System, (c) all compensation, salaries, fees and wages paid by it in connection with the maintenance, repair and operation of the System will be reasonable, (d) no more persons will be employed by it than are necessary, (e) it will maintain and operate the System in an efficient and economical manner, (f) from the revenues of the System it will at all times maintain the System in good repair and in sound operating condition and will make all necessary repairs, renewals, improvements and replacements, and (g) it will comply with all valid applicable acts, rules, regulations, orders and directions of any legislative, executive, administration or judicial body applicable to the System or the Commission.

The Commission covenants that it will cause the Consulting Engineers to make an inspection of the System at least once each calendar year, and on or before October 1 in that year, submit to the Commission a report setting forth (a) their findings whether the System has been maintained in good repair, working order and condition, (b) their advice and recommendations as to the proper maintenance, repair and operation of the System during the ensuing Fiscal Year and an estimate of the amount of money necessary for those purposes and (c) their advice and recommendations as to the insurance to be carried by the Commission.

The Commission covenants that it will (a) observe and comply with all valid requirements of any governmental authority relative to the System or any part of the System, (b) not create or suffer to be created any lien or charge upon the System or any part of it or upon the System Pledged Revenues except the lien and charge of the Bonds, and (c) from the System Pledged Revenues or other available moneys, it will pay or cause to be discharged, or will make adequate provision to satisfy and discharge, within 60 days after the same shall accrue, all lawful claims and demands for labor, materials, supplies or other objects which, if unpaid, might by law become a lien upon the System or any part of System Pledged Revenues or other revenue from the System. However, the Commission is not required to pay or cause to be discharged, or make provision for, any such lien or charge so long as the validity thereof is contested in good faith and by appropriate legal proceedings.

The Commission will cause an audit of financial statements as of December 31 of each year, prepared in accordance with GAAP, to be made of its books and accounts relating to the System and the Debt Service Fund by an independent certified public accountant approved by the Auditor of the State. Reports of each such audit shall be filed by July 1 following the date of the financial statements with the Commission and the Trustee, and copies shall be mailed by the Commission to the Consulting Engineers. Each audit report shall set forth such matters as are required by GAAP.

The Commission covenants that it will cause written notice to be given to the Rating Agencies at least thirty (30) days prior to the making of any multi-year pledge or assignment of any revenues received by the Commission and not pledged or assigned pursuant to the Trust Agreement.

Addition of Non-System Projects to the System

A Non-System Project owned and controlled by the Commission may, by resolution of the Commission, be designated and become part of the System for purposes of the Trust Agreement if there shall first have been obtained and filed with the Commission a certificate of an Independent Consultant to the effect that for any period of twelve (12) consecutive calendar months out of the fifteen (15) consecutive calendar months immediately preceding such designation, the revenues received by the Commission with respect to such Non-System Project (that is, those payments received by the Commission with respect to such Non-System Project that would have constituted Gross Revenues had such Non-System Project been part of the System) equaled or exceeded the aggregate for such period of (i) the Non-System Project Operating Expenses of such Non-System Project (plus any additional Cost of Operation, Maintenance and Administration that would have been incurred by the Commission had such Non-System Project been part of the System, as estimated by such Independent Consultant) and (ii) a reasonable renewal and replacement reserve deposit with respect to such Non-System Project, as determined by such Independent Consultant.

Events of Default and Remedies

The following events constitute Events of Default under the Trust Agreement:

(a) Default in the payment of any interest on any Bond when and as the same shall have become due and payable;

(b) Default in the payment of the principal of or any redemption premium on any Bond when and as the same becomes due and payable, whether at stated maturity or by mandatory redemption or mandatory purchase;

(c) Any other default, and the continuance thereof for a period of 60 days after written notice thereof to the Commission given by the Trustee or the Holders of not less than 25 percent in aggregate amount of affected Bonds then Outstanding.

The term "default" as used in the Trust Agreement shall mean default by the Commission in the performance or observance of any of the covenants, agreements or conditions on its part contained in the Trust Agreement or in the Bonds, exclusive of any period of grace required to constitute a default an Event of Default as provided above.

Except as modified or supplemented by a Supplemental Trust Agreement with respect to a particular series of Bonds, the Trustee is not required to take notice, and shall not be deemed to have notice or knowledge, of any default or Event of Default under the Trust Agreement, except Events of Default described in clauses (a) and (b) above, unless the Trustee shall be notified specifically of the default or Event of Default in a written instrument delivered to it by the Commission or by the Holders of not less than 10 percent in aggregate principal amount of Bonds then Outstanding or a Financial Institution. In the absence of delivery of a notice satisfying those requirements, the Trustee may assume conclusively that there is no default or Events of Default, except as to Events of Default described in clauses (a) and (b) above.

Upon the occurrence of any Event of Default as described in clauses (a) or (b) above, the Trustee must, and upon the occurrence of any Event of Default as described in clause (c) above, the Trustee may and upon the written request of the Holders of not less than 25 percent in aggregate principal amount of the affected Bonds then Outstanding or a Financial Institution providing a letter of credit in connection with the affected Bonds must (subject to the Trustee's right to be indemnified for its expenses) proceed in its own name to protect and enforce its rights and the rights of the Holders under the Trust Agreement by such of the remedies described in subparagraphs (a) through (d) below as the Trustee, being advised by counsel, considers most effective to protect and enforce those rights:

(a) By mandamus or other suit, action or proceeding at law or in equity enforce all the rights of Holders, including the compelling of the performance of all duties of the Commission or State agencies under the Bond Proceedings and the enforcement of the payment of the Annual Debt Service Requirement on the Bonds then Outstanding.

(b) Bring suit upon the Bonds.

(c) Enjoin unlawful activities or activities in violation of the rights of the Holders or Financial Institutions under the Trust Agreement.

(d) In the event of the occurrence of an Event of Default as described in clauses (a) or (b) of the preceding paragraph:

(i) Apply to a court having jurisdiction of the cause to appoint a receiver, who may be the Trustee, to receive and administer the System Pledged Revenues with full power to pay and to provide for payment of the Annual Debt Service Requirement, and with such powers, subject to the discretion of the court, as are accorded receivers in general equity cases, excluding any power to pledge additional revenues or receipts or other income or moneys of the Commission or the State or State agencies to the payment of the Annual Debt Service Requirement, and excluding the power to take possession of, mortgage or cause the sale or otherwise dispose of any Project, or

(ii) By notice in writing delivered to the Commission and to each member of the Commission, declare the principal of all Bonds then Outstanding and the interest accrued on those Bonds immediately due and payable and thereupon that principal and interest shall become and be immediately due and payable. If at any time after that declaration and prior to the entry of judgment in a court of law or equity for enforcement or the appointment of a receiver hereunder, all sums payable under the Trust Agreement (except the principal and interest on Bonds which have not reached their stated maturity dates and which are due and payable solely by reason of that declaration of acceleration), plus interest (to the extent permitted by law) on any overdue installments of interest at the rate borne by the Bonds in respect of which such Event of Default shall have occurred, shall have been duly paid or provided for by deposit with the Trustee or Paying Agents and all existing defaults shall have been made good, then and in every such case the Trustee must waive that Event of Default and its consequences and must rescind and annul that declaration, but no such waiver and rescission shall extend to or affect or impair any rights consequent on any subsequent Event of Default.

Holders of not less than a majority in aggregate principal amount of Bonds then Outstanding have the right with the consent of each Financial Institution not then in default on its obligations with respect to the Bonds, at any time, by instruments in writing executed and delivered to the Trustee, to direct the method and place of conducting all proceedings to be taken in connection with the enforcement of the terms and conditions of the Trust Agreement, or for the appointment of a receiver or any other proceedings under the Trust Agreement; provided that (a) such direction shall not be otherwise than in accordance with the provisions of law and of the Trust Agreement, (b) the Trustee shall be indemnified as provided in the Trust Agreement, (c) a Financial Institution will have no rights with respect to the enforcement of remedies against itself.

After payment of the costs and expenses of the proceedings resulting in the collection of such moneys and of the fees, expenses, liabilities and advances incurred or made by the Trustee or receiver, all moneys received by the Commission, Trustee or receiver pursuant to any right given or action taken under the provisions of the Trust Agreement shall be applied as described in subparagraphs (a) through (c) below.

(a) Unless the principal of all the Bonds has become or has been declared due and payable pursuant to the Trust Agreement, all such moneys shall be applied as follows:

First: To the payment, to the persons entitled thereto, of all installments of interest then due on the Bonds (or reimbursement of Financial Institutions for interest payments made pursuant to a Bond Credit Facility), in the order of the dates of maturity of the installments of that interest and beginning with the earliest such date, and if the amount available is not sufficient to pay in full any particular installment, then to the payment thereof ratably according to the amounts due on that installment, without any discrimination or privilege except as to any difference in the respective rates of interest specified in the Bonds;

Second: To the payment, to the persons entitled thereto, of the unpaid principal of any of the Bonds (or reimbursement of Financial Institutions for principal payments made pursuant to a Bond Credit Facility) which has become due (other than Bonds previously called for redemption for the payment of which moneys are held pursuant to the provisions of the Trust Agreement), whether at stated maturity, by redemption or pursuant to any mandatory sinking fund requirements, in the order of their due dates and beginning with the earliest due date, with interest on those Bonds from the respective dates upon which they become due, and if the amount available shall not be sufficient to pay in full all Bonds (and reimburse in full Financial Institutions for principal payments made pursuant to a Bond Credit Facility) due on any particular date, together with such interest, then to the payment thereof ratably according to the amount of principal due on that date, without discrimination or privilege; and

Third: To the payment of all other obligations of the Commission to Financial Institutions.

(b) If the principal of all the Bonds has become due or has been declared due and payable pursuant to the Trust Agreement, all such moneys will be applied to the payment of the principal and interest then due and unpaid upon the Bonds (and reimbursement of Financial Institutions for principal and interest payments made pursuant to a Bond Credit Facility), without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any Bond over any other Bond, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto without any discrimination or privilege except as to any difference in the respective rates of interest specified in the Bonds and then to the payment of all other obligations of the Commission to Financial Institutions.

(c) If the principal of all the Bonds has been declared due and payable pursuant to the Trust Agreement, and if that declaration thereafter has been rescinded and annulled under the provisions of the Trust Agreement, then, subject to the provisions described in clause (b) in the event that the principal of all the Bonds shall later become due and payable, the moneys will be deposited in the Debt Service Fund and applied in accordance with the provisions of the Trust Agreement.

No Holder has any right to institute any suit, action or proceeding for the enforcement of the Trust Agreement or for the execution of any trust thereof or for the appointment of a receiver or any other remedy hereunder unless (a) an Event of Default has occurred and is continuing, (b) that Holder shall previously have given to the Trustee written notice of that Event of Default, (c) the Holders of at least 25 percent in aggregate principal amount of Bonds then Outstanding made written request to the Trustee and afforded the Trustee reasonable opportunity either to proceed to exercise the powers granted herein or to institute such action, suit or proceeding in its own name and shall have also offered to the Trustee indemnity as provided in the Trust Agreement and (d) the Trustee thereafter fails or refuses to exercise the powers granted in the Trust Agreement or to institute such action, suit or proceeding in its own name.

The Trustee may at any time in its discretion, but only with the consent of any Financial Institution providing a Bond Credit Facility in connection with affected Bonds and not then in default of its obligations with reference to such Bonds, waive any Event of Default and its consequences, and rescind any declaration of maturity of principal, and must do so, with the consent of any Financial Institution providing a Bond Credit Facility in connection with affected Bonds, upon the written request of the Holders of not less than a majority in aggregate principal amount of all the Bonds then Outstanding in respect of which the Event of Default exists. However, there shall not be so waived any Event of Default described in clauses (a) or (b) of the first paragraph under the caption "EXHIBIT A - GLOSSARY OF TERMS AND SUMMARY OF THE SENIOR LIEN TRUST AGREEMENT - Events of Default and Remedies," or such declaration in connection therewith rescinded, unless at the time of that waiver or rescission payments of all sums payable under the Trust Agreement (except the principal and interest on Bonds which have not reached their stated maturity dates and which are due and payable solely by reason of that declaration of acceleration), plus interest, to the extent permitted by law, on any overdue installments of interest at the rate borne by the Bonds in respect of which such Event of Default shall have occurred, have been made or provided for. In case of any such waiver or rescission, or in case any proceeding taken by the Trustee on account of any such Event of Default is discontinued or abandoned or determined adversely, then and in every such case the Commission, the Trustee, any Financial Institution and the Holders shall be restored to their respective positions and rights hereunder. No such waiver or rescission will extend to any subsequent or other default or Event of Default, or impair any right consequent thereon.

<u>Supplemental Trust Agreements</u>

The Commission and the Trustee, without the consent of or notice to any of the Holders, may enter into agreements supplemental to the Trust Agreement for any one or more of the following purposes: (a) to cure any ambiguity, inconsistency or formal defect or omission in the Trust Agreement; (b) to grant to or confer upon the Trustee for the benefit of the Holders or any Financial Institution any additional rights, remedies, powers or authority that may lawfully be granted to or conferred upon the Holders or any Financial Institution (to the extent not contrary to the interests of Holders) or the Trustee; (c) to subject additional revenues or receipts to the pledge of the Trust Agreement; (d) to add to the covenants and agreements of the Commission contained in the Trust Agreement other covenants and agreements thereafter to be observed for the protection of the Holders or Financial Institutions (to the extent not contrary to the interests of Holders), or to surrender or limit any right, power or authority reserved to or conferred upon the Commission in the Trust Agreement, including without limitation the limitation of rights of redemption so that in certain instances Bonds of different series will be redeemed in some prescribed relation to one another; (e) to evidence any succession to the Commission and the assumption by that successor of the covenants and agreements of the Commission contained in the Trust Agreement and the Bonds; (f) in connection with the issuance of a Series of Bonds in forms other than fully registered Bonds and for amendments of the Trust Agreement relating to Bonds and the rights of the Holders of Bonds issued in those forms not inconsistent with the provisions of the Trust Agreement applying to the rights of owners of fully registered Bonds and Financial Institutions, if in the opinion of bond counsel selected by the Commission those provisions would not result in the interest on any of the Bonds Outstanding becoming subject to federal income taxation; (g) to permit the exchange of Bonds, at the option of the Holder, for coupon Bonds of the same series payable to bearer, in an aggregate principal amount not exceeding the unmatured and unredeemed principal amount of the predecessor Bonds, bearing interest at the same rate or rates (or determined in the same manner) and maturing on the same date or dates, with coupons attached representing all unpaid interest due or to become due thereon if, in the opinion of bond counsel selected by the Commission, that exchange would not result in the interest on any of the Bonds Outstanding becoming subject to federal income taxation; (h) to permit the use of a book entry system to identify the owner of an interest in a Bond, whether that Bond was formerly, or could be, evidenced by a physical security; (i) to permit the Trustee to comply with any obligations imposed upon it by law; (j) to specify further the duties and responsibilities of, and to define further the relationship among, the Trustee, the Registrar and any Authenticating Agents or Paying Agents; (k) to achieve compliance of the Trust Agreement with any applicable federal securities or tax law; (l) to permit any other amendment which, in the judgment of the Trustee, is not to the prejudice of the Trustee or the Holders; and (m) to authorize the issuance of a Series of Bonds in accordance with the provisions of the Master Trust Agreement.

The Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding (exclusive of Bonds then held or owned by the Commission) to be affected thereby have the right, from time to time, to consent to and approve the execution by the Commission and the Trustee of such other Supplemental Trust Agreements for the purpose of modifying, altering, amending, adding to or rescinding, in any particular, any of the terms or provisions contained in the Trust Agreement, but only with the prior written consent of the providers of any Bond Insurance Policies insuring Outstanding Bonds. However, the Trust Agreement does not permit: (a) without the consent of the Holder of each Bond so affected, an extension of the maturity of the principal of or the interest on any Bond, or a reduction in the principal amount of any Bond or the rate of interest or redemption premium thereon, or a reduction in the amount or extension of the time of any payment required by any mandatory sinking fund requirements or mandatory redemption requirements, or (b) without the consent of the Holders of all of the Bonds then Outstanding, a reduction in the aggregate principal amount of the Bonds required for consent to that Supplemental Trust Agreement.

Where consent of the Holders is required, the Trust Agreement contains procedures for notice to the Holders and for the execution and filing of the requisite consents. Any consent is to be binding upon the Holders of the Bonds giving that consent and upon any subsequent Holders of those Bonds and of any Bonds issued in exchange therefor (whether or not the subsequent Holders have notice thereof). However, the consent may be revoked by the Holder of such Bonds who gave consent or by subsequent Holders thereof by filing with the Trustee, prior to the execution by the Trustee of the Supplemental Trust Agreement, a written revocation. If the Holders of the required percentage in aggregate principal amount of the Bonds Outstanding have consented to and approved the execution thereof, no Holder of any Bond shall have any right to object to the execution of that Supplemental Trust Agreement or to any of the terms and provisions contained in or to the operation of that Supplemental Trust Agreement, or in any manner to question the propriety of the execution of, or to enjoin or restrain the Trustee or the Commission from executing, or from taking any action pursuant to the provisions of, that Supplemental Trust Agreement.

The terms of the Trust Agreement or any Supplemental Trust Agreement may be modified or altered in any respect with the consent of the Commission, any Financial Institutions and the Holders of all the Outstanding Bonds.

Defeasance

If the Commission pays or causes to be paid to the Holders of the Outstanding Bonds all principal, premium, if any, and interest due or to become due thereon and all obligations of the Commission to Financial Institutions, and provision is made for paying all other sums payable under the Trust Agreement by the Commission, then and in that event the Trust Agreement will cease, determine and become null and void, and the covenants, agreements and other obligations of the Commission under the Trust Agreement will be discharged, released and satisfied.

Bonds will be deemed to have been paid or caused to be paid if the Trustee holds, in trust for and irrevocably committed thereto, sufficient moneys, or moneys and Defeasance Obligations certified by a Verification Agent to be of such maturities and interest payment dates and to bear such interest as will, without further investment or reinvestment of either the principal amount thereof or the interest earnings therefrom, be sufficient for the payment, at their maturity or redemption date, of all principal, premium, if any, and interest thereon to the date of maturity or redemption, as the case may be; provided that if any Bonds are to be redeemed prior to their maturity, notice of that redemption must be duly given or provision satisfactory to the Trustee must be duly made for the giving of that notice.

Trustee

The Trustee, The Huntington National Bank, Columbus, Ohio, is a national banking association organized and existing under the laws of the United States of America and is authorized to exercise corporate trust power in the State. The Trustee has undertaking to perform such duties as are specifically set forth in the Trust Agreement. The Trustee has agreed to exercise the rights and powers vested in it by the Trust Agreement and use the same degree of care and skill in their exercise as would an ordinarily prudent corporate trustee under a trust agreement securing securities of a public agency. The Trustee is not required to take any action under the Trust Agreement (except with respect to giving certain notices of the occurrence of an Event of Default) until it has received a satisfactory indemnity bond for its expenses and to protect it against liability, other than liability resulting from its negligence or willful misconduct. The permissive rights of the Trustee to do things under the Trust Agreement will not be construed as a duty.

The Huntington National Bank is among the banks that serve as depositories for Commission and State monies.

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EXHIBIT B

FORM OF BOND COUNSEL OPINION FOR 2021 SENIOR LIEN BONDS

_____________, 20__

To: Ohio Turnpike and Infrastructure Commission
Berea, Ohio

Citigroup Global Markets Inc.
New York, New York,
as Representative of the Underwriters named
in the Bond Purchase Agreement dated January 26, 2021
with the Ohio Turnpike and Infrastructure Commission

We have served as bond counsel to our client the Ohio Turnpike and Infrastructure Commission (the "Commission") in connection with the issuance by the Commission of $135,010,000 State of Ohio Turnpike Revenue Bonds, 2021 Series A (the "2021 Series A Bonds"), dated the date of this letter.

The 2021 Series A Bonds are issued pursuant to Chapter 5537 of the Ohio Revised Code and the Amended and Restated Master Trust Agreement (Eighteenth Supplemental Trust Agreement) dated as of April 8, 2013, between the Commission and The Huntington National Bank, as Trustee, as amended and supplemented by various supplemental trust agreements, including the Twenty-Fourth Supplemental Trust Agreement dated as of February 15, 2021 (collectively, the "Trust Agreement"). Capitalized terms not otherwise defined in this letter are used as defined in the Trust Agreement.

In our capacity as bond counsel, we have examined the transcript of proceedings relating to the issuance of the 2021 Series A Bonds, a copy of the signed and authenticated 2021 Series A Bond of the first maturity, the Trust Agreement 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 stated below, we are of the opinion that under existing law:

1. The Trust Agreement is a valid and binding obligation of the Commission, enforceable in accordance with its terms, and the 2021 Series A Bonds are valid and binding obligations of the State of Ohio (the "State"), enforceable in accordance with their terms.

2. The 2021 Series A Bonds constitute special obligations of the State, and the principal of and interest on (collectively, "debt service") the 2021 Series A Bonds, together with debt service on any other obligations issued and outstanding on a parity with the 2021 Series A Bonds as provided in the Trust Agreement, are payable solely from and secured by the System Pledged Revenues and certain funds established under the Trust Agreement, as provided in the Trust Agreement. The payment of debt service on the 2021 Series A Bonds is not secured by an obligation or pledge of any money raised by taxation, and the 2021 Series A Bonds do not represent or constitute a general obligation or a pledge of the faith and credit of the Commission, the State or any of its political subdivisions.

3. Interest on the 2021 Series A 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. Interest on, and any profit made on the sale, exchange or other disposition of, the 2021 Series A Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. We express no opinion as to any other tax consequences regarding the 2021 Series A 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 the lien on System Pledged Revenues or other funds created by the Trust Agreement.

In rendering those opinions with respect to treatment of the interest on the 2021 Series A 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 2021 Series A Bonds may cause interest on the 2021 Series A 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 2021 Series A Bonds and the enforceability of the 2021 Series A Bonds and the Trust Agreement 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 bond counsel in connection with the original issuance and delivery of the 2021 Series A Bonds is concluded upon delivery of this letter.

Respectfully submitted,

EXHIBIT C

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION BASIC FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019 AND INDEPENDENT AUDITORS' REPORT FOR PLANTE & MORAN, PLLC

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Plante & Moran, PLLC
Suite 100
250 S. High Street
Columbus, OH 43215
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plantemoran.com

Independent Auditor's Report

To the Commission Members
Ohio Turnpike and Infrastructure Commission

Report on the Financial Statements

We have audited the accompanying basic financial statements of the Ohio Turnpike and Infrastructure Commission (the "Commission"), a component unit of the State of Ohio, as of and for the years ended December 31, 2019 and 2018 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

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 an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits 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.

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

Opinion

In our opinion, the basic financial statements referred to above present fairly, in all material respects, the financial position of the Ohio Turnpike and Infrastructure Commission as of December 31, 2019 and 2018 and the changes in its financial position and its cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

To the Commission Members
Ohio Turnpike and Infrastructure Commission

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 net pension/OPEB liability, and the schedule of employer contributions, as outlined in the table of contents, 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, which 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.

Plante & Moran, PLLC

April 30, 2020, except for the subsequent events disclosure included in Note 11, which is dated January 13, 2021.

MANAGEMENT'S DISCUSSION AND ANALYSIS

This section of the annual financial report presents the Ohio Turnpike and Infrastructure Commission's ("Commission", "Ohio Turnpike" or "Turnpike") unaudited discussion and analysis of its financial position and the results of operations for the year ended December 31, 2019 and 2018. Please read it in conjunction with the Chairman's Letter, Executive Director's Year in Review, Letter of Transmittal, and History and General Information at the front of this report, and the Commission's financial statements and notes, which follow this section.

Financial Highlights

2019

◊ The total number of vehicles that traveled the Ohio Turnpike in 2019 decreased 3.4 percent and vehicle miles traveled decreased 1.7 percent from the levels reached in 2018. Commercial vehicle miles traveled and passenger car vehicle miles traveled both decreased in 2019. The percentage of commercial vehicle miles traveled to total vehicle miles traveled increased from 35.1 percent in 2018 to 35.4 percent in 2019. The decrease in vehicle miles traveled, combined with a 2.7 percent toll rate increase implemented on January 1, 2019, resulted in an increase in toll revenue of approximately $1.6 million or 0.5 percent.

◊ Operating expenses increased by $13.8 million or 6.7 percent from 2018. Excluding non-cash GASB 68 pension expense and GASB 75 other post-employment benefit expense, operating expenses increased by $0.5 million or 0.4 percent from 2018.

◊ The Commission incurred $99.6 million in Infrastructure Project reimbursement expenses in 2019 for previously approved Infrastructure Project costs that were expended by the Ohio Department of Transportation ("ODOT").

◊ In 2019, the Commission made capital improvements totaling approximately $153.6 million.

2018

◊ The total number of vehicles that traveled the Ohio Turnpike in 2018 decreased 1.6 percent and vehicle miles traveled decreased 0.1 percent from the levels reached in 2017. Commercial vehicle miles traveled increased while passenger car vehicle miles traveled decreased in 2018. This caused the percentage of commercial vehicle miles traveled to total vehicle miles traveled to increase from 33.6 percent in 2017 to 35.1 percent in 2018. The increase in commercial vehicle miles traveled, combined with a 2.7 percent toll rate increase implemented on January 1, 2018, resulted in an increase in toll revenue of approximately $10.2 million or 3.5 percent.

◊ Operating expenses increased by $300,000 or 0.1 percent from 2017. Excluding non-cash GASB 68 pension expense and GASB 75 other post-employment benefit expense, operating expenses increased by $5.1 million or 2.6 percent from 2017.

◊ The Commission incurred $48.1 million in Infrastructure Project reimbursement expenses in 2018 for previously approved Infrastructure Project costs that were expended by the Ohio Department of Transportation ("ODOT").

◊ In 2018, the Commission made capital improvements totaling approximately $112.9 million.

Condensed Statement of Net Position Information *(Dollars in Thousands)*

	12/31/19	12/31/18	12/31/17
Assets and Deferred Outflows of Resources			
Cash and Investments	$ 828,114	$ 977,094	$ 439,493
Other Noncapital Assets	28,349	28,121	25,260
Capital Assets, Net	1,580,165	1,511,324	1,479,446
Total Assets	**2,436,628**	**2,516,539**	**1,944,199**
Deferred Outflows of Resources	45,475	33,560	53,540
Total Assets and Deferred Outflows of Resources	**$ 2,482,103**	**$ 2,550,099**	**$ 1,997,739**
Liabilities, Deferred Inflows of Resources, and Net Position			
Liabilities			
Current Liabilities	$ 132,019	$ 157,042	$ 111,569
Long-Term Liabilities	2,233,369	2,199,200	1,673,089
Total Liabilities	**2,365,388**	**2,356,242**	**1,784,658**
Deferred Inflows of Resources	3,979	19,720	896
Total Liabilities and Deferred Inflows of Resources	**2,369,367**	**2,375,962**	**1,785,554**
Net Position			
Net Investment in Capital Assets	1,093,939	965,814	981,297
Restricted	198,570	218,803	172,358
Unrestricted	(1,179,773)	(1,010,480)	(941,470)
Total Net Position	112,736	174,137	212,185
Total Liabilities, Deferred Inflows of Resources, and Net Position	**$ 2,482,103**	**$ 2,550,099**	**$ 1,997,739**

Assets

The condensed statements of net position information above show that cash and investments decreased by $149.0 million in 2019. This decrease was primarily due to $99.6 million in payments to ODOT for reimbursement of funds spent on Infrastructure Projects and the expenditure of bond proceeds from the 2018 bond issuance on capital projects. See Note 9 of the financial statements for more detailed information on Infrastructure Project payments. The $0.2 million increase in other noncapital assets was due to a $0.2 million decrease in prepaid expenses, a $0.5 million increase in inventories, and a $0.1 million decrease in net pension asset.

Cash and investments increased by $537.6 million in 2018. This increase was primarily due to the receipt of $566.6 million in bond proceeds from the issuance of Junior and Senior Lien bonds offset by $48.1 million in payments to ODOT for reimbursement of funds spent on Infrastructure Projects. See Note 9 of the financial statements for more detailed information on Infrastructure Project payments. The $2.9 million increase in other noncapital assets was due to a $2.0 million increase in receivables, a $0.6 million increase in inventories, and a $0.3 million increase in net pension asset. The increase in accounts receivable was primarily due to an increase in investment income receivable due to an increase in cash and investments. Inventories of ice melting materials increased due to mild winter weather in December 2018.

Capital assets increased by $68.9 million in 2019 as the result of capital improvements of approximately $153.6 million, property disposals of $1.3 million and depreciation expense of $83.4 million. The 2019 capital improvements were primarily for the resurfacing of 50.9 lane miles of roadway, the full depth pavement replacement of 26.5 lane miles and the rehabilitation of 9 bridges. In addition, two bridges were replaced, one bridge was removed, nine bridges were widened, and another nine bridges were repainted. Capital assets increased by $31.9 million in 2018 as the result of capital improvements of approximately $112.9 million, property disposals of $0.4 million and depreciation expense of $80.6 million. The 2018 capital improvements were primarily for the resurfacing of 151.0 lane miles of roadway, the full depth replacement of 22.9 lane miles and the rehabilitation of 4 bridges. See Note 4 of the financial statements for more detailed information on the Commission's capital assets.

Deferred outflows of resources increased by $11.9 million in 2019 as a result of a $4.4 million decrease in unamortized refunding gains / losses, a $0.8 million increase in deferred OPEB outflows of resources, a $15.2 million increase in deferred pension outflows of resources, and a $0.3 million increase in deferred asset retirement costs. Deferred outflows of resources decreased by $20.0 million in 2018 as a result of a $2.0 million decrease in unamortized refunding gains / losses, a $3.0 million increase in deferred OPEB outflows of resources, and a $21.0 million decrease in deferred pension outflows of resources.

Liabilities

Current liabilities decreased by $25.0 million in 2019 primarily as a result of a $34.9 million decrease in bond interest and principal payable and a $2.3 million decrease in contamination remediation costs payable. These decreases were partially offset by a $5.4 million increase in accounts payable, a $4.2 million increase in infrastructure funds payable to ODOT, a $1.2 million increase in contractor retainage payable, a $0.9 million increase in other liabilities, and a $0.7 million increase in amounts payable to other toll agencies. The 2018 bond interest and principal payable included $20.7 million in 2009A Senior Lien bonds that were redeemed on February 15, 2019. Current liabilities increased by $45.5 million in 2018 primarily as a result of a $39.7 million increase in bond interest and principal payable, a $2.1 million increase in contamination remediation costs payable, a $1.3 million increase in unearned revenue, a $1.1 million increase in contractor retainage payable, a $0.7 million increase in accounts payable, and a $0.5 million increase in amounts payable to other toll agencies. The increase in bond interest and principal payable includes $20.7 million in 2009A Senior Lien bonds that were redeemed on February 15, 2019.

An increase in long-term liabilities of $34.2 million in 2019 was primarily the result of a $42.8 million increase in net pension liability, an increase in net OPEB liability of $7.4 million, the recording of $0.5 million in asset retirement obligations, and an increase in other non-current liabilities of $0.3 million offset by a decrease in bond principal of $8.3 million and a decrease in unamortized bond premiums of $8.6 million. An increase in long-term liabilities of $526.1 million in 2018 was primarily the result of an increase in bond principal of $456.5 million, an increase in unamortized bond premiums of $61.0 million, and the recording of the net OPEB liability of $41.1 million offset by a $32.0 million decrease in net pension liability and a $0.5 million decrease in other non-current liabilities. The increase in bond principal was due to the issuance of $499.8 million principal amount of 2018 Series A Turnpike revenue bonds and an increase in principal on capital appreciation bonds of $22.4 million offset by principal payments on the existing bonds. See Note 6, Long-term Obligations, for more information on the bonds.

As described in Note 7 of the financial statements, the Commission has commitments for capital projects and major repairs and replacements of $51.4 million as of December 31, 2019. It is anticipated that these commitments will be financed from the Commission's cash balances. However, at the discretion of the Commission, additional bonds may be issued in the future to finance a portion of these costs.

The Ohio Turnpike and Infrastructure Commission's credit rating is among the highest of all the toll roads in the world. The agency ratings as of December 31, 2019 are as follows:

Agency	Senior Lien Bond Rating	Junior Lien Bond Rating
Standard & Poor's	AA-	A+
Fitch Ratings	AA	A+
Moody's Investors Service	Aa2	Aa3

Net Position

Net investment in capital assets increased by $128.1 million during 2019 as a result of a $68.8 million increase in capital assets combined with $57.6 million of senior lien bond principal payments. The net position restricted for debt service of $198.6 million is restricted for debt service in accordance with provisions of the Commission's Master Trust Agreement. The $11.5 million decrease in net position restricted for debt service during 2019 is the result of a reduction in amounts required to be deposited into the debt service accounts for future debt service payments. The $8.7 million reduction in net position restricted for capital projects is the result of the expenditure of the remaining amount of senior lien bond proceeds which were required to be spent on Turnpike capital projects. Unrestricted net position decreased $169.3 million from 2018, of which $0.2 million of the decrease was the result of a cumulative effect restatement of beginning net position due to the implementation of GASB Statement No. 83. Please refer to Note 1, Summary of Significant Accounting Policies, for additional information regarding the GASB Statement No. 83 implementation and the impact on the financial statements. The remaining decrease in unrestricted net position is due to a $61.2 million decrease in net position as a result of 2019 expenses that exceeded revenues, combined with the transfer of unrestricted net position to net investment in capital assets and restricted net position. It is anticipated that expenses will continue to exceed revenues for the next few years as the Commission funds the remaining state infrastructure projects. See Note 9 for a description of State Infrastructure Payments.

Net investment in capital assets decreased by $15.5 million during 2018 as a result of an increase in debt related to capital assets of $82.2 million less $34.8 million of bond principal payments combined with the $31.9 million increase in capital assets. The net position restricted for debt service of $210.0 million is restricted for debt service in accordance with provisions of the Commission's Master Trust Agreement. The $37.7 million increase in net position restricted for debt service during 2018 is the result of an additional $31.2 million deposited into the debt service reserve fund accounts in conjunction with the 2018 bond issuance and additional amounts required to be deposited into the debt service accounts for future debt service payments. The $8.7 million in net position restricted for capital projects represents the remaining amount of senior lien bond proceeds which are required to be spent on Turnpike capital projects. Unrestricted net position decreased $69.0 million from 2017, of which $37.7 million of the decrease was the result of a cumulative effect restatement of beginning net position due to the implementation of GASB Statement No. 75. Please refer to Note 1, Summary of Significant Accounting Policies, for additional information regarding the GASB Statement No. 75 implementation and the impact on the financial statements. The remaining decrease in unrestricted net position is due to a $0.4 million decrease in net position as a result of 2018 expenses that exceeded revenues, combined with the transfer of unrestricted net position to net investment in capital assets and restricted net position. It is anticipated that expenses will continue to exceed revenues for the next few years as the Commission funds the remaining state infrastructure projects. See Note 9 for a description of State Infrastructure Payments.

Changes in Net Position Information *(Dollars in Thousands)*

	Years Ended		
	12/31/19	**12/31/18**	**12/31/17**
Revenues:			
Operating Revenues:			
Tolls	$ 307,608	$ 306,040	$ 295,799
Special Toll Permits	3,529	3,529	3,423
Concessions	17,140	17,314	17,104
Other	6,662	6,166	5,581
Nonoperating Revenues:			
State Fuel Tax Allocation	3,451	3,459	3,023
Investment Earnings	22,027	16,709	4,657
Total Revenues	**360,417**	**353,217**	**329,587**
Expenses:			
Operating Expenses:			
Administration and Insurance	14,764	12,462	12,596
Maintenance of Roadway and Structures	46,830	42,791	43,872
Services and Toll Operations	61,953	58,451	61,433
Traffic Control, Safety, Patrol, and Communications	14,863	13,634	13,718
Depreciation	83,422	80,650	76,095
Nonoperating Expenses:			
Payments to the Ohio Department of Transportation	99,570	48,074	106,408
Interest Expense	99,162	97,675	78,848
Loss (Gain) on Disposals / Write-Offs of Capital Assets	1,038	(123)	3,413
Total Expenses	**421,602**	**353,614**	**396,383**
Change in Net Position	**(61,185)**	**(397)**	**(66,796)**
Net Position - Beginning of Year	174,137	212,185	278,981
Cumulative effect of change in accounting principle	(216)	(37,651)	-
Net position at beginning of year, as restated	**173,921**	**174,534**	**278,981**
Net Position - End of Year	**$ 112,736**	**$ 174,137**	**$ 212,185**

Toll revenues are the major source of funding for the Ohio Turnpike and Infrastructure Commission. Passenger car traffic volume decreased by 3.9 percent and commercial traffic volume decreased by 1.8 percent during 2019. Passenger car traffic volume decreased by 2.9 percent and commercial traffic volume increased by 3.2 percent during 2018.

	2019	**2018**	**2017**
Traffic Volume (vehicles in thousands):			
Passenger Cars	40,684	42,322	43,598
Commercial Vehicles	11,767	11,987	11,615
Total	**52,451**	**54,309**	**55,213**

The number of miles traveled by passenger cars decreased by 2.2 percent while the miles traveled by commercial vehicles decreased by 0.8 percent during 2019. Toll rates were increased for all classes of vehicles by 2.7 percent on January 1, 2019. The toll rate increase was offset by the decrease in passenger car vehicle miles traveled and the effect of increased *E-ZPass* use, which resulted in a decrease in toll revenue from passenger cars of approximately $0.7 million or 0.7 percent. Revenues from commercial vehicles increased $2.5 million or 1.4 percent in 2019 as a result of the toll rate increase and the decrease in commercial vehicle miles traveled.

The number of miles traveled by passenger cars decreased by 2.3 percent while the miles traveled by commercial vehicles increased by 4.3 percent during 2018. Toll rates were increased for all classes of vehicles by 2.7 percent on January 1, 2018. The toll rate increase was offset by the decrease in passenger car vehicle miles traveled and the effect of increased *E-ZPass* use, which resulted in a decrease in toll revenue from passenger cars of approximately $1.2 million or 0.9 percent. Revenues from commercial vehicles increased $11.4 million or 6.8 percent in 2018 as a result of the toll rate increase and the increase in commercial vehicle miles traveled.

	2019	2018	2017
Toll Revenues (dollars in thousands):			
Passenger Cars	$ 125,422	$ 126,365	$ 127,537
Commercial Vehicles	182,186	179,675	168,262
Total	**$ 307,608**	**$ 306,040**	**$ 295,799**

Total expenses increased by $68.0 million or 19.2 percent in 2019 compared to the prior year. Fringe benefit expenses, which are allocated to each area based on wages, increased $10.5 million from 2018 due primarily to a $9.7 million increase in pension expenses and a $0.7 million increase in OPEB expense. See Note 8, Pension Plan and Other Postemployment Benefits (OPEB) Plans, for more information on pension and OPEB costs. The 18.5 percent increase in Administration and Insurance expense was primarily due to the increase in fringe benefit costs and an increase in legal and professional fees. The 9.4 percent increase in Maintenance of Roadway and Structures expense was primarily due to the increase in fringe benefit costs partially offset by lower contamination remediation costs. The 6.0 percent increase in Services and Toll Operations expense is due primarily to the increase in fringe benefit costs and higher credit card fees partially offset by lower wages due to a reduction in personnel and lower utility costs. The 9.0 percent increase in Traffic Control, Safety and Patrol was due to a $0.7 million increase in costs from the Ohio Highway Patrol and the increase in fringe benefit costs. The Commission made $99.6 million in payments to ODOT in 2019 to pay for Infrastructure Projects, an increase of $51.5 million from 2018. See Note 9, Payments for State Infrastructure Projects, for more information on these payments. Interest expense increased $1.5 million in 2019 primarily due to the issuance of the 2018 Series A bonds in February of 2018. See Note 6, Long-Term Obligations for more information on the outstanding debt.

Total expenses decreased by $42.8 million or 10.8 percent in 2018 compared to the prior year. Fringe benefit expenses, which are allocated to each area based on wages, decreased $6.7 million from 2017 due primarily to a $8.3 million decrease in pension expenses and a $1.3 million decrease in employee health benefit costs offset by a $3.4 million increase in OPEB expense. See Note 8, Pension and Other Postemployment Benefits (OPEB) Plans, for more information on pension and OPEB costs. The 1.1 percent decrease in Administration and Insurance expense was primarily due to the decrease in fringe benefit costs. The 2.5 percent decrease in Maintenance of Roadway and Structures expense is the result of lower fringe benefit costs and lower salt costs due to a decrease in the price of salt partially offset by higher contamination remediation costs. The 4.9 percent decrease in Services and Toll Operations expense is due primarily to the decrease in fringe benefit costs, lower wages due to a reduction in personnel and lower utility costs partially offset by higher credit card fees. The Commission made $48.1 million in payments to ODOT in 2018 to pay for Infrastructure Projects, a decrease of $58.3 million from 2017. See Note 9, Payments for State Infrastructure Projects, for more information on these payments. Interest expense increased $18.8 million in 2018 primarily due to the issuance of the 2018 Series A bonds. See Note 6, Long-Term Obligations for more information on the outstanding debt.

Statements of Net Position *(In Thousands)*

	12/31/19	12/31/18
Assets and Deferred Outflows of Resources		
Current Assets:		
Unrestricted Current Assets:		
Cash and Cash Equivalents	$ 44,409	$ 44,247
Investments, at Fair Value	186,563	213,801
Accounts Receivable	19,072	18,994
Inventories	5,593	5,082
Other	1,406	1,622
Total Unrestricted Current Assets	257,043	283,746
Restricted Current Assets:		
Cash and Cash Equivalents	15,583	16,621
Investments, at Fair Value	66,518	94,833
Other	1,892	1,955
Total Restricted Current Assets	83,993	113,409
Total Current Assets	341,036	397,155
Noncurrent Assets:		
Restricted Investments, at Fair Value	515,041	607,592
Net Pension Asset	386	468
Capital Assets, Net	1,580,165	1,511,324
Total Noncurrent Assets	2,095,592	2,119,384
Total Assets	2,436,628	2,516,539
Deferred Outflows of Resources	45,475	33,560
Total Assets and Deferred Outflows of Resources	$ 2,482,103	$ 2,550,099
Liabilities, Deferred Inflows of Resources, and Net Position		
Current Liabilities:		
Current Liabilities Payable from Unrestricted Assets:		
Accounts Payable	$ 20,979	$ 15,553
Accrued Wages and Benefits	3,467	3,783
Compensated Absences	4,771	4,805
Claims and Judgments	1,474	1,390
Contamination Remediation Costs Payable	616	2,914
Other Liabilities	14,997	14,061
Toll Agency Payable	5,705	5,019
Total Current Liabilities Payable from Unrestricted Assets	52,009	47,525
Current Liabilities Payable from Restricted Assets:		
Contract Retainage Payable	5,294	4,122
Infrastructure Funds Payable to Ohio Department of Transportation	12,961	8,721
Interest Payable	29,710	30,974
Bonds Payable	32,045	65,700
Total Current Liabilities Payable from Restricted Assets	80,010	109,517
Total Current Liabilities	132,019	157,042
Noncurrent Liabilities:		
Net Pension Liability	102,484	59,687
Net OPEB Liability	48,498	41,058
Compensated Absences	5,994	5,786
Claims and Judgments	657	468
Contamination Remediation Costs Payable	20	81
Asset Retirement Obligations	516	–
Bonds Payable	2,075,200	2,092,120
Total Noncurrent Liabilities	2,233,369	2,199,200
Total Liabilities	2,365,388	2,356,242
Deferred Inflows of Resources	3,979	19,720
Total Liabilities and Deferred Inflows of Resources	2,369,367	2,375,962
Net Position:		
Net Investment in Capital Assets	1,093,939	965,814
Restricted For Debt Service	198,554	210,083
Restricted For Capital Projects	16	8,720
Unrestricted	(1,179,773)	(1,010,480)
Total Net Position	112,736	174,137
Total Liabilities, Deferred Inflows of Resources, and Net Position	$ 2,482,103	$ 2,550,099

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

Statements of Revenues, Expenses and Changes in Net Position *(In Thousands)*

	For the Years Ended 12/31/19	12/31/18
OPERATING REVENUES:		
Pledged as Security for Revenue Bonds:		
Tolls	$ 307,608	$ 306,040
Special Toll Permits	3,529	3,529
Concessions	16,476	16,637
Leases and Licenses	1,226	1,282
Other Revenues	5,436	4,879
Unpledged Revenues:		
Concessions	664	677
Other Revenues	–	5
Total Operating Revenues	334,939	333,049
OPERATING EXPENSES:		
Administration and Insurance	14,764	12,462
Maintenance of Roadway and Structures	46,830	42,791
Services and Toll Operations	61,953	58,451
Traffic Control, Safety, Patrol, and Communications	14,863	13,634
Depreciation	83,422	80,650
Total Operating Expenses	221,832	207,988
Operating Income	113,107	125,061
NONOPERATING REVENUES / (EXPENSES):		
State Fuel Tax Allocation	3,451	3,459
Investment Earnings Pledged as Security for Revenue Bonds	10,126	7,924
Investment Earnings - Unpledged	11,901	8,785
Gain / (Loss) on Disposals of Capital Assets	(1,038)	123
Ohio Department of Transportation Infrastructure Project Expense	(99,570)	(48,074)
Interest Expense	(99,162)	(97,675)
Total Nonoperating Revenues / (Expenses)	(174,292)	(125,458)
Decrease in Net Position	(61,185)	(397)
Net Position -- Beginning of Year	174,137	212,185
Cumulative effect of change in accounting principle	(216)	(37,651)
Net Position -- Beginning of Year, as Restated	173,921	174,534
Net Position -- End of Year	$ 112,736	$ 174,137

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

Statements of Cash Flows *(In Thousands)*

	For the Years Ended	
	12/31/19	**12/31/18**
Cash Flows from Operating Activities:		
Cash Received from Customers	$ 328,421	$ 326,197
Cash Received from Other Operating Revenues	8,348	7,971
Cash Payments for Employee Salaries, Wages and Fringe Benefits	(74,241)	(75,472)
Cash Payments for Goods and Services	(42,982)	(42,208)
Net Cash Provided by Operating Activities	219,546	216,488
Cash Flows from Noncapital Financing Activities:		
Payments to the Ohio Department of Transportation	(95,330)	(47,707)
Proceeds from Sale of Bonds - Par Amount	–	425,965
Proceeds from Sale of Bonds - Premium / (Discount)	–	56,980
Bond Issuance Costs	–	(1,716)
State Fuel Tax Allocation	3,451	3,459
Net Cash (Used in) / Provided by Noncapital Financing Activities	(91,879)	436,981
Cash Flows from Capital and Related Financing Activities:		
Proceeds from Sale of Assets	297	504
Proceeds from Sale of Bonds - Par Amount	–	73,880
Proceeds from Sale of Bonds - Premium / (Discount)	–	9,777
Acquisition and Construction of Capital Assets	(152,425)	(109,001)
Bond Issuance Costs	–	(319)
Principal Paid on Bonds	(65,700)	(34,775)
Interest Paid on Bonds	(80,911)	(71,127)
Net Cash Used in Capital and Related Financing Activities	(298,739)	(131,061)
Cash Flows from Investing Activities:		
Interest Received on Investments	16,864	13,791
Proceeds from Sale and Maturity of Investments	592,457	345,225
Purchase of Investments	(439,125)	(936,463)
Net Cash Provided by / (Used in) Investing Activities	170,196	(577,447)
Net Decrease in Cash and Cash Equivalents	(876)	(55,039)
Cash and Cash Equivalents -- Beginning of Year	60,868	115,907
Cash and Cash Equivalents -- End of Year	$ 59,992	$ 60,868
Reconciliation of Operating Income to Net Cash Provided by Operating Activities:		
Operating Income	$ 113,107	$ 125,061
Adjustments to Reconcile Operating Income to Net Cash Provided by Operating Activities:		
Depreciation	83,422	80,650
Change in Assets, Deferred Outflows of Resources, Liabilities and Deferred Inflows of Resources:		
Accounts Receivable	(78)	(447)
Inventories	(511)	(654)
Other Assets	213	20
Net Pension Asset	82	(264)
Deferred Pension, OPEB and Other Outflows of Resources	(16,004)	17,992
Accounts Payable	5,426	781
Accrued Wages and Benefits	(316)	(75)
Net Pension Liability	42,797	(31,961)
Net OPEB Liability	7,440	3,407
Compensated Absences	173	27
Claims and Judgments	273	(383)
Contamination Remediation Costs Payable	(2,359)	1,770
Other Liabilities	1,622	1,740
Deferred Pension and OPEB Inflows of Resources	(15,741)	18,824
Net Cash Provided by Operating Activities	$ 219,546	$ 216,488
Noncash Investing and Capital Activities:		
Increase / (Decrease) in Fair Value of Investments	$ 2,968	$ (317)
Disposals / Write-Offs of Capital Assets	(1,334)	(381)
Increase in Capital Assets due to Capitalized Interest Costs	–	(2,807)
(Increase) / Decrease in Capital Assets due to Change in Contracts Payable	(1,172)	(1,101)
Amortization of Bond Premiums and Refunding Losses Classified as Interest Expense	4,204	3,818
Accretion in Capital Appreciation Bonds	23,718	22,364

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

NOTES TO FINANCIAL STATEMENTS

For the Years ended December 31, 2019 and 2018

(1) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

In accordance with the provisions of Governmental Accounting Standards Board ("GASB") Statements, the accompanying financial statements include only the accounts and transactions of the Ohio Turnpike and Infrastructure Commission ("Commission", "Ohio Turnpike" or "Turnpike"). Under the criteria specified in these GASB Statements, the Commission is considered a component unit of the State of Ohio because the Governor appoints the voting members of the Commission and the State is financially accountable for the Commission since the State has the potential to receive a financial benefit from the Commission. The Commission has no component units.

Basis of Accounting

The accompanying financial statements were prepared in accordance with accounting principles generally accepted in the United States of America, as prescribed by GASB. The statements were prepared using the economic resources measurement focus and the accrual basis of accounting. All transactions are accounted for in a single proprietary (enterprise) fund.

Adoption of New Accounting Pronouncements

The GASB issued GASB Statement No. 83, *Certain Asset Retirement Obligations*, which requires governments to recognize their asset retirement obligations as a liability for the first time, In accordance with the statement, the Commission has reported a change in accounting principle adjustment to unrestricted net position of $216,000, which is the net of the asset retirement obligation liability and related deferred outflows of resources as of January 1, 2019.

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities.* The requirements of this Statement are effective for financial statements for periods beginning after December 15, 2018. The implementation of this Statement had no impact on the Commission's financial statements or disclosures.

In March 2018, GASB issued Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements.* The requirements of this Statement are effective for financial statements for periods beginning after June 15, 2018. The implementation of this Statement had no impact on the Commission's financial statements or disclosures.

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period.* The requirements of this Statement are effective for financial statements for periods beginning after December 15, 2019. The Commission adopted this Statement for 2019 and as a result discontinued capitalizing interest on construction projects in 2019.

In August 2018, GASB issued Statement No. 90, *Majority Equity Interests.* The requirements of this Statement are effective for financial statements for periods beginning after December 15, 2018. The implementation of this Statement had no impact on the Commission's financial statements or disclosures.

New Accounting Pronouncements

In June 2017, GASB issued Statement No. 87, *Leases.* The requirements of this Statement are effective for financial statements for periods beginning after December 15, 2019. The Commission has not determined the impact, if any, that this Statement will have on its financial statements or disclosures.

In May 2019, GASB issued Statement No. 91, *Conduit Debt Obligations.* The requirements of this Statement are effective for financial statements for periods beginning after December 15, 2020. The Commission has not determined the impact, if any, that this Statement will have on its financial statements or disclosures.

Net Position Classifications

GASB Statement No. 34, *Basic Financial Statements - and Management's Discussion and Analysis - for State and Local Governments*, require the classification of net position into the following three components:

- ♦ Net Investment in Capital Assets – consisting of capital assets, net of accumulated depreciation and reduced by the outstanding balance of borrowings that are attributable to the acquisition, construction, or improvement of those assets.
- ♦ Restricted – consisting of net position, the use of which is limited by external constraints imposed by creditors (such as through debt covenants), grantors, contributors, laws or regulations of other governments, constitutional provisions or enabling legislation.

- Unrestricted – consisting of net position that does not meet the definition of “net investment in capital assets” or “restricted”.

Cash Equivalents

Cash equivalents are defined as highly liquid investments, including overnight repurchase agreements, demand deposits, negotiated order of withdrawal accounts, money market funds and certificates of deposit maturing within 90 days of purchase. Commission investments in overnight repurchase agreements, demand deposits and money market mutual funds, which have remaining maturities of one year or less, are carried at amortized cost, which approximates fair value.

Investments

In the accompanying Statements of Net Position, investments are comprised of certificates of deposit maturing beyond 90 days of purchase, U.S. instrumentality securities and shares in the State Treasury Asset Reserve of Ohio (“STAR Ohio”) investment pool. Commission investments in STAR Ohio are carried at amortized cost, which approximates fair value. All other Commission investments are recorded at fair value based on quoted market prices with all related investment income, including the change in the fair value of investments and realized gains and losses, reflected in the Commission’s net income.

STAR Ohio is an investment pool created pursuant to Ohio statutes and is managed by the Treasurer of the State of Ohio. The Commission does not own identifiable securities of the pool; rather, it participates as a shareholder of the pool. STAR Ohio is not registered with the Securities and Exchange Commission as an investment company, but does operate in a manner consistent with the provisions of GASB Statement No. 79, *Certain Investment Pools and Pool Participants*. The fair value of the Commission’s position in the pool is the same as the value of the pool shares. For the years ended December 31, 2019 and 2018, there were no limitations on any participant withdrawals due to redemption notice periods, liquidity fees, or redemption gates.

Accounts Receivable

Accounts receivable consist of various tolls, charges and amounts due from individuals, commercial companies and other agencies and concession revenues receivable from operators of food and fuel concessions at the Commission’s service plazas. Reserves for uncollectible accounts receivable are established based on specific identification and historical experience.

Inventories

Inventories consist of materials and supplies that are valued at cost (first-in, first-out). The cost of inventory items is recognized as an expense when used.

Property and Depreciation

Property, roadway, and equipment with an original cost of $1,000 or more are capitalized and reported at cost, net of accumulated depreciation. The costs of normal maintenance and repairs are charged to operations as incurred.

Depreciation is computed using the straight-line method over the estimated useful lives of the assets as follows:

Description	Years
Buildings, roadway and structures	40
Bridge painting and guardrail	20
Roadway resurfacing	8-12
Building improvements	10
Machinery, equipment and vehicles	5-10

Depreciation expense is included in the Statements of Revenues, Expenses and Changes in Net Position.

Capitalization of Interest

Capitalized interest was included in the cost of constructed assets through December 31, 2018 and is depreciated on the straight-line basis over the estimated useful lives of such assets. The amount of interest capitalized was based on the cost of assets under construction and the interest cost of eligible borrowings, less investment earnings, if any, on the related bond proceeds. Interest of $2,807,000 was capitalized for the year ended December 31, 2018.

Deferred Outflows of Resources

In addition to assets, the statements of net position report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to future periods and so will not be recognized as an outflow of resources (expense/expenditure) until then. The Commission’s deferred outflows of resources are related to the net pension liability, net OPEB liability, unamortized refunding gains/losses on debt and asset retirement costs. See Notes 5 and 8 for more information.

Bond Issuance Costs, Discounts / Premiums, and Advance Debt Refundings

Bond issuance costs are expensed as incurred. Unamortized bond discounts and premiums are netted against long-term debt. Bond discounts and premiums are amortized to interest expense over the lives of the applicable bonds. Unamortized advance debt refunding losses are classified as deferred outflows of resources and are amortized to interest expense over the shorter of the life of the new debt or the defeased debt.

Compensated Absences

Vacation leave accumulates for all full-time employees of the Commission, ranging from 10 to 25 days per year, and any unused amounts are paid upon retirement or termination. The Commission records a liability for all vacation leave earned.

Sick leave accumulates for all full-time employees of the Commission, at the rate of 15 days per year with additional amounts for overtime worked. A portion of unused sick leave may be payable at the request of an employee or upon termination or retirement. The Commission uses the vesting method to calculate its liability for unused sick leave, to the extent that it is probable that benefits will be paid in cash.

Pensions

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 Ohio Public Employees Retirement System (OPERS) Pension Plan, and additions to/deductions from OPERS' fiduciary net position, have been determined on the same basis as they are reported by OPERS. OPERS uses the economic resources measurement focus and the full-accrual basis of accounting. Contribution revenue is recorded as contributions are due, pursuant to legal requirements. Benefit payments (including refunds of employee contributions) are recognized as an expense when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Other Postemployment Benefit Costs

For purposes of measuring the net other postemployment benefit (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 OPERS pension plan and additions to/deductions from OPERS' fiduciary net position have been determined on the same basis as they are reported by OPERS. OPERS uses the economic resources measurement focus and the full accrual basis of accounting. For this purpose, OPERS recognizes benefit payments when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Deferred Inflows of Resources

In addition to liabilities, the statements of net position report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time. The Commission reports deferred inflows of resources for certain pension-related and OPEB-related amounts, such as the difference between projected and actual earnings of the plan's investments. More detailed information can be found in Note 5 and 8.

Operating / Nonoperating Activities

Operating revenues and expenses, as reported on the Statements of Revenues, Expenses and Changes in Net Position, are those that result from exchange transactions such as payments received for providing services and payments made for goods and services received.

Tolls, the principal source of Commission operating revenues, are recognized as vehicles use the Turnpike. Tolls are assessed based on the vehicle classification and the distance traveled. On October 1, 2009, the Commission implemented its current toll collection system that includes electronic toll collection in the form of *E-ZPass®*, which is interoperable among a network of 38 northeastern U.S. toll agencies. The current toll collection system uses a methodology that classifies vehicles based upon the number of axles and the height over the first two axles. As an incentive to utilize electronic tolling, toll rates are lower for customers who use *E-ZPass* than for those who pay at the toll booths.

In addition to tolls, the other major source of operating revenue is concessions from the operation of the Commission's service plazas. Concession revenues arise from contracts entered into for the operation of the restaurants and service stations on the Turnpike. The operators pay fees based in part on percentages of gross sales (as defined in the respective contracts). As provided by Ohio law, the Commission also receives nonoperating revenue of five cents in Ohio fuel taxes for each gallon of fuel sold at the Commission's service plazas. The Commission's revenues are recognized when the operators make the sales. All other revenues are recognized when earned.

Operating expenses include the costs of operating and maintaining the Commission's roadway, bridges, toll plazas, maintenance buildings, service plazas and other facilities, as well as administrative expenses and depreciation on capital assets. The Commission's practice is to first apply restricted resources when expenditures are made for purposes for which both unrestricted and restricted resources are available.

Nonoperating revenue includes revenue from activities that have the characteristics of nonexchange transactions, such as the allocation of Ohio fuel tax revenues, investment earnings, payments to the Ohio Department of Transportation ("ODOT"), interest expense and gains/losses on disposals/write-offs of capital assets. The implication is that such activities are derived from more passive efforts related to the acquisition of the revenue, rather than the earning of it.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results may differ from those estimates.

(2) DEPOSITS AND INVESTMENTS

Deposits

The Commission had $364,000 and $398,000 in undeposited cash on hand at December 31, 2019 and December 31, 2018, respectively. The carrying amount of the Commission's deposits as of December 31, 2019 was $1,264,000 as compared to bank balances of $5,295,000. The carrying amount of the Commission's deposits as of December 31, 2018 was $2,950,000 as compared to bank balances of $4,126,000. All of the bank balances were covered by federal depository insurance or collateralized in the Ohio Pooled Collateral System.

Investments

The Commission categorizes its fair value measurements at fair value within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted market prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

As of December 31, 2019, the Commission's investments had the following recurring fair value measurements (in thousands):

Investment Type	2019	Level 1	Level 2
Federal Home Loan Bank	$ 164,417	$ –	$ 164,417
Farmer Mac	92,415	–	92,415
Federal Home Loan Mortgage Corporation	81,382	–	81,382
United State Treasury Notes	38,921	–	38,921
Federal National Mortgage Association	25,061	–	25,061
United State Treasury Bills	17,488	–	17,488
Total Investments	**$ 419,684**	$ –	**$ 419,684**

As of December 31, 2018, the Commission's investments had the following recurring fair value measurements (in thousands):

Investment Type	2018	Level 1	Level 2
Federal National Mortgage Association	$ 106,014	$ –	$ 106,014
Farmer Mac	99,726	–	99,726
Federal Home Loan Bank	98,993	–	98,993
Federal Home Loan Mortgage Corporation	81,174	–	81,174
Federal Farm Credit Bureau	78,185	–	78,185
United State Treasury Notes	75,885	–	75,885
United State Treasury Bills	10,828	–	10,828
Total Investments	**$ 550,805**	**$ –**	**$ 550,805**

Investments in STAR Ohio of $348,438,000 in 2019 and $365,421,000 in 2018 are valued at amortized cost, which approximates fair value.

The U.S. Instrumentalities of $419,684,000 in 2019 and $550,805,000 in 2018 are valued using a matrix pricing model technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

None of the securities with maturities between one and five years are callable within one year from December 31, 2019. None of the securities with maturities between one and five years are callable within one year from December 31, 2018.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. As a means of limiting exposure to fair value losses arising from rising interest rates, the Commission's Investment Policy provides that selection of investment maturities be consistent with projected cash requirements and the objective of avoiding the forced sale of securities prior to maturity. In addition, the Commission's Investment Policy and Ohio law prescribe that all Commission investments mature within five years of purchase, unless the investment is matched to a specific obligation or debt of the Commission.

As of December 31, 2019, the Commission's investment balances (in thousands) and maturities, excluding call provisions, were as follows:

Investment Type	Fair Value	Maturities (in Years) Less than 1	1-5
STAR Ohio*	$ 348,438	$ 348,438	$ –
Federal Home Loan Bank	164,417	135,031	29,386
Farmer Mac	92,415	76,432	15,983
Federal Home Loan Mortgage Corporation	81,382	81,382	–
Demand Deposit Accounts*	57,422	57,422	–
United States Treasury Notes	38,921	38,921	–
Federal National Mortgage Association	25,061	25,061	–
United States Treasury Bills	17,488	17,488	–
Money Market Mutual Funds*	941	941	–
Total Investments	**$ 826,485**	**$ 781,116**	**$ 45,369**

* Valued at amortized cost

As of December 31, 2018, the Commission's investment balances (in thousands) and maturities, excluding call provisions, were as follows:

Investment Type	Fair Value	Maturities (in Years) Less than 1	1-5
STAR Ohio*	$ 365,421	$ 365,421	$ –
Federal National Mortgage Association	106,014	81,334	24,680
Farmer Mac	99,726	49,831	49,895
Federal Home Loan Bank	98,993	50,004	48,989
Federal Home Loan Mortgage Corporation	81,174	31,420	49,754
Federal Farm Credit Bureau	78,185	78,185	–
United States Treasury Notes	75,885	75,885	–
Demand Deposit Accounts*	56,289	56,289	–
United States Treasury Bills	10,828	10,828	–
Money Market Mutual Funds*	1,314	1,314	–
Total Investments	**$ 973,829**	**$ 800,511**	**$ 173,318**

*Valued at amortized cost

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Commission's Investment Policy authorizes investments in obligations of the U.S. Treasury, U.S. agencies and instrumentalities, certificates of deposit, STAR Ohio, money market mutual funds, repurchase agreements and General Obligations of the State of Ohio rated AA or higher by a rating service. As of the Statements of Net Position dates, the Commission's investments in U.S. instrumentalities (Federal Home Loan Bank, Farmer Mac, Federal Home Loan Mortgage Corporation, and Federal National Mortgage Corporation) were all rated AA+ by Standard & Poor's and Aaa by Moody's Investor Service. STAR Ohio, as well as the money market mutual funds in which the Commission had investments, were rated AAAm by Standard & Poor's.

Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of a counterparty to a transaction, 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. The Commission's Investment Policy requires that all deposits be secured by collateral held in safekeeping for the benefit of the Commission by a Federal Reserve Bank. The Commission's Investment Policy also requires that, excluding Debt Service Fund investments, all U.S. Treasury Obligations, U.S. Agency Obligations, U.S. Instrumentality Obligations, and General Obligations of the State of Ohio purchased by the Commission be held in third-party safekeeping for the benefit of the Commission at a bank or savings and loan association that is eligible to be a depository of public moneys under Section 135.04 of the Ohio Revised Code and that is also authorized under Ohio law to act as trustee for the safekeeping of securities.

On December 31, 2019 and December 31, 2018, all Commission deposits and investments in demand deposit accounts were secured in the Ohio Pooled Collateral System. Excluding Debt Service Fund investments, all U.S. Instrumentality Obligations held by the Commission were held in safekeeping for the benefit of the Commission by the Trust Department at Key Bank, Cleveland, Ohio. As of December 31, 2019 and December 31, 2018, Debt Service Fund investments in U.S. instrumentality securities with fair values totaling $224,503,000 and $238,460,000, respectively, were held by The Huntington National Bank ("Trustee") for the payment of interest and principal on the Commission's outstanding bonds as required by the Commission's Master Trust Agreement as amended and supplemented, see Note 6. Assets held by the Trustee as a custodial agent are considered legally separate from the other assets of The Huntington National Bank.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of investment in a single issuer. The Commission's Investment Policy provides that 100 percent of its average monthly portfolio may be invested in U.S. Treasury Obligations, fixed-rate non-callable U.S. Agency or Instrumentality Obligations, or collateralized overnight repurchase agreements. The Investment Policy further provides that a maximum of 50 percent of its average monthly portfolio may be invested in callable U.S. Agency or Instrumentality Obligations, STAR Ohio or certificates of deposit. The Investment Policy also provides that a maximum of 25 percent of its average monthly portfolio may be invested in variable-rate U.S. Agency or Instrumentality Obligations, uncollateralized repurchase agreements, general obligations of the State of Ohio and money market mutual funds. As of December 31, 2019, more than five percent of the Commission's portfolio was invested in demand deposit accounts and STAR Ohio as well as each of the following U.S. instrumentalities: Federal Home Loan Bank, Farmer Mac, and Federal Home Loan Mortgage Corporation. As of December 31, 2018, more than five percent of the Commission's portfolio was invested in demand deposit accounts and STAR Ohio as well as each of the following U.S. instrumentalities: Federal National Mortgage Association, Farmer Mac, Federal Farm Credit Bureau, Federal Home Loan Mortgage Corporation, Federal Home Loan Bank, and United States Treasury Notes.

(3) ACCOUNTS RECEIVABLE

The composition of unrestricted accounts receivable (in thousands) as of December 31, is summarized as follows:

	2019	2018
Tolls	$ 15,874	$ 16,051
Concessions	1,637	1,603
Fuel Tax Receivable	502	571
Other	1,155	911
Less: Allowance for Doubtful Accounts	(96)	(142)
Total Accounts Receivable	**$ 19,072**	**$ 18,994**

4) CAPITAL ASSETS

Capital asset activity (in thousands) for the years ended December 31, 2019 and 2018 was as follows:

	12/31/18	Increases	Decreases	12/31/19
Capital Assets Not Being Depreciated:				
Land	$ 38,211	$ 34	$ –	$ 38,245
Construction In Progress	30,457	149,765	(161,915)	18,307
Total Capital Assets Not Being Depreciated	68,668	149,799	(161,915)	56,552
Other Capital Assets:				
Roadway and Structures	1,944,300	156,006	(14,209)	2,086,097
Buildings and Improvements	519,691	5,942	(199)	525,434
Machinery and Equipment	93,365	3,765	(2,650)	94,480
Total Other Capital Assets at Historical Cost	2,557,356	165,713	(17,058)	2,706,011
Less Accumulated Depreciation for:				
Roadway and Structures	(819,574)	(60,268)	13,002	(866,840)
Buildings and Improvements	(222,249)	(16,376)	163	(238,462)
Machinery and Equipment	(72,877)	(6,778)	2,559	(77,096)
Total Accumulated Depreciation	(1,114,700)	(83,422)	15,724	(1,182,398)
Other Capital Assets, Net	1,442,656	82,291	(1,334)	1,523,613
Total Capital Assets, Net	**$ 1,511,324**	**$ 232,090**	**$ (163,249)**	**$ 1,580,165**

	Balance 12/31/17	Increases	Decreases	Balance 12/31/18
Capital Assets Not Being Depreciated:				
Land	$ 38,211	$ –	$ –	$ 38,211
Construction In Progress	23,464	109,542	(102,549)	30,457
Total Capital Assets Not Being Depreciated	61,675	109,542	(102,549)	68,668
Other Capital Assets:				
Roadway and Structures	1,884,643	96,995	(37,338)	1,944,300
Buildings and Improvements	516,982	3,007	(298)	519,691
Machinery and Equipment	91,901	5,917	(4,453)	93,365
Total Other Capital Assets at Historical Cost	2,493,526	105,919	(42,089)	2,557,356
Less Accumulated Depreciation for:				
Roadway and Structures	(799,071)	(57,723)	37,220	(819,574)
Buildings and Improvements	(206,392)	(15,985)	128	(222,249)
Machinery and Equipment	(70,292)	(6,942)	4,357	(72,877)
Total Accumulated Depreciation	(1,075,755)	(80,650)	41,705	(1,114,700)
Other Capital Assets, Net	1,417,771	25,269	(384)	1,442,656
Total Capital Assets, Net	**$ 1,479,446**	**$ 134,811**	**$ (102,933)**	**$ 1,511,324**

(5) DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The composition of deferred outflows of resources (in thousands) as of December 31, is summarized as follows:

	2019	2018
Unamortized Refunding Gains/Losses	$ 10,808	$ 15,198
Deferred Pension Outflows of Resources	30,576	15,341
Deferred OPEB Outflows of Resources	3,804	3,021
Deferred Asset Retirement Costs	287	–
Total Deferred Outflows of Resources	**$ 45,475**	**$ 33,560**

The composition of deferred inflows of resources (in thousands) as of December 31, is summarized as follows:

	2019	2018
Deferred Pension Inflows of Resources	$ 3,403	$ 16,661
Deferred OPEB Inflows of Resources	576	3,059
Total Deferred Inflows of Resources	**$ 3,979**	**$ 19,720**

(6) LONG-TERM OBLIGATIONS

In accordance with Ohio law and the Commission's Amended and Restated Master Trust Agreement ("Senior Lien Trust Agreement"), dated April 8, 2013, as amended by the Nineteenth through Twenty-second Supplemental Trust Agreements, and the Junior Lien Master Trust Agreement ("Junior Lien Trust Agreement"), dated August 1, 2013, as amended by the First and Second supplemental Junior Lien Trust Agreements (collectively, the "Trust Agreements") the Commission has issued revenue bonds payable solely from the Commission's System Pledged Revenues, as defined by the Trust Agreements. The bond proceeds have been used to either help fund the purchase or construction of capital assets, to refund other Turnpike revenue bonds or to fund infrastructure projects constructed by ODOT. Gross Pledged Revenues include tolls, special toll permits, certain realized investment earnings, appropriations from ODOT (if any), and revenue derived from leases, licenses, royalties, advertising, miscellaneous sales, fees, charges and certain concession revenues. The Commission's outstanding bonds do not constitute general obligations of the Commission or the State of Ohio. Neither the general credit of the Commission nor the State of Ohio is pledged for the payment of the bonds.

Under the terms of the Trust Agreements, the Commission covenants to charge and collect sufficient tolls in order that annual Gross Pledged Revenues equal at least the sum of the following: 1) annual operating, maintenance and administrative costs paid from Pledged Revenues; 2) required deposits to maintain an expense reserve account equal to one-twelfth of budgeted annual operating, maintenance and administrative costs paid from Pledged Revenues; 3) budgeted annual amounts for renewal and replacement costs; and 4) composite annual debt service on its outstanding bonds.

The Commission also covenants that its System Pledged Revenues (annual Gross Pledged Revenues less annual operating, maintenance and administrative costs paid from Pledged Revenues and the required annual deposit to the expense reserve account) will equal at least 120 percent of the composite annual net debt service on its outstanding bonds. The Commission also covenants that its System Pledged Revenues during the fiscal year immediately preceding the issuance of additional senior lien bonds, or during any 12 consecutive calendar months selected by the Commission out of the 15 consecutive calendar months immediately preceding such issuance, will equal at least 150 percent of the maximum annual debt service on its senior lien bonds then outstanding and the senior lien bonds proposed to be issued. The Commission also covenants that, based on reasonable assumptions, its System Pledged Revenues are projected to be at least 150 percent of composite annual debt service for the then current year and each successive year during which the junior lien bonds then outstanding, the senior lien bonds then outstanding, the junior lien bonds proposed to be issued and any senior lien bonds then proposed to be issued will be outstanding.

The Commission also covenants that prior to reducing any toll rates on other than a temporary basis, it will engage the services of an independent consultant to estimate the Commission's Gross Pledged Revenues for each year during which Commission bonds are scheduled to be outstanding and, based on these estimated revenues, the Commission covenants that its System Pledged Revenues will equal at least 150 percent of its net composite annual debt service for each year during which Commission bonds are scheduled to be outstanding. The Commission has reviewed its bond covenants and determined that it is in compliance for 2019 and 2018.

In addition, the Commission has, by resolution, declared its intention as a matter of policy to use its best efforts to maintain a ratio of System Pledged Revenues to net senior lien debt service of at least 200 percent. Other than in connection with the issuance of additional bonds or the implementation of a toll reduction on other than a temporary basis, the Commission has no obligation to meet such coverage levels or to maintain a policy of doing so, and the Commission may rescind that policy at any time.

The Senior Lien Trust Agreement requires the Commission to establish and maintain a Debt Service Reserve Account ("DSRA") equal to the maximum annual debt service on its outstanding senior lien bonds. The senior lien DSRA may be funded either with cash or one or more Reserve Account Credit Facilities obtained from an issuer that has been assigned one of the two highest ratings by at least two rating agencies. Due to the downgrade in the credit rating of the issuers of the Commission's Reserve Account Credit Facilities, the Commission has fully funded its DSRA with cash. Those funds were invested and are included in Investments, at Fair Value in restricted current assets.

The Junior Lien Trust Agreement requires the Commission to establish and maintain a DSRA equal to the average annual debt service on its outstanding junior lien bonds. The junior lien DSRA may be funded either with cash or one or more Reserve Account Credit Facilities obtained from an issuer that has been assigned one of the two highest ratings by at least two rating agencies. In connection with the issuance of its junior lien bonds, the Commission has deposited $110,294,000 of junior lien bond proceeds into its junior lien DSRA, which is restricted for debt service. Those funds were invested and are included in Investments, at Fair Value in restricted current assets.

On February 15, 2018, the Commission issued $73,880,000 par amount of State of Ohio Turnpike Revenue Bonds, 2018 Series A, pursuant to the Commission's Master Trust Agreement, as amended and supplemented, and the Twenty-Second Supplemental Trust Agreement dated February 15, 2018, for the purpose of funding Turnpike capital projects. On February 15, 2018, the Commission also issued $425,965,000 par amount of State of Ohio Turnpike Junior Lien Revenue Bonds, 2018 Series A, pursuant to the Commission's Junior Lien Master Trust Agreement, as amended and supplemented, and the Second Supplemental Junior Lien Trust Agreement dated February 15, 2018, for the purpose of funding Infrastructure Projects.

Subsequent to the end of the reporting period, on February 13, 2020, the Commission issued $81,465,000 par amount of State of Ohio Turnpike Revenue Refunding Bonds, 2020 Series A and $376,850,000 par amount of State of Ohio Turnpike Junior Lien Revenue Refunding Bonds, Series A for the purpose of advance refunding all of the Ohio Turnpike Revenue Bonds, 2013 Series A and $340,000,000 of the State of Ohio Turnpike Junior Lien Revenue Bonds, 2013 Series A Term Bonds due 2048.

The Commission decreased its total future debt service payments by $139,844,000 as a result of the advance refunding which is a net present value savings of $87,325,000.

None of the Commission's long-term obligations are direct borrowings or direct placements.

Changes in long-term obligations (in thousands) for 2019 and 2018 are as follows:

	Balance 12/31/18	Increases	Decreases	Balance 12/31/19	Amounts Due Within One Year
Revenue Bonds Payable:					
Principal Payable	$ 2,046,246	$ 23,718	$ (65,700)	$ 2,004,264	$ 32,045
Unamortized Premiums - Net	111,574	–	(8,593)	102,981	–
Total Revenue Bonds Payable	2,157,820	23,718	(74,293)	2,107,245	32,045
Net Pension Liability	59,687	42,797	–	102,484	–
Net OPEB Liability	41,058	7,440	–	48,498	–
Compensated Absences	10,591	5,729	(5,555)	10,765	4,771
Claims and Judgments	1,858	11,701	(11,428)	2,131	1,474
Contamination Remediation	2,995	–	(2,359)	636	616
Totals	**$ 2,274,009**	**$ 91,385**	**$ (93,635)**	**$ 2,271,759**	**$ 38,906**

	Balance 12/31/17	Increases	Decreases	Balance 12/31/18	Amounts Due Within One Year
Revenue Bonds Payable:					
Principal Payable	$ 1,558,812	$ 522,209	$ (34,775)	$ 2,046,246	$ 65,700
Unamortized Premiums - Net	50,622	66,757	(5,805)	111,574	–
Total Revenue Bonds Payable	1,609,434	588,966	(40,580)	2,157,820	65,700
Net Pension Liability	91,648	–	(31,961)	59,687	–
Net OPEB Liability	–	41,058	–	41,058	–
Compensated Absences	10,564	5,739	(5,712)	10,591	4,805
Claims and Judgments	2,241	11,641	(12,024)	1,858	1,390
Contamination Remediation	1,225	1,902	(132)	2,995	2,914
Totals	**$ 1,715,112**	**$ 649,306**	**$ (90,409)**	**$ 2,274,009**	**$ 74,809**

Revenue bonds, payable (in thousands) as of December 31, 2019, are summarized as follows:

	Original Amount	Average Yield	Bonds Payable
Senior Lien Debt			
1998 Series A:			
Serial Bonds maturing through 2021	$ 168,180		$ 49,025
Term Bonds due 2024 and 2026	130,395		130,395
Total 1998 Series A	298,575	4.84%	179,420
2010 Series A:			
Serial Bonds maturing 2021	93,920		2,295
Term Bonds due 2031	37,370		19,355
	131,290	4.08%	21,650
2013 Series A:			
Term Bonds due 2048	73,495	4.96%	73,495
2017 Series A:			
Serial Bonds maturing through 2031	114,670	1.89%	113,265
2018 Series A:			
Serial Bonds maturing through 2046	73,880	3.97%	73,880
Total Senior Lien Principal Issued/Outstanding	$ 691,910	4.09%	$ 461,710

	Original Amount	Average Yield	Bonds Payable
Junior Lien Debt			
2013 Series A:			
Serial Bonds maturing 2019 through 2033	256,195		248,125
Term Bonds due 2039	113,075		113,075
Term Bonds due 2048	340,000		340,000
Capital Appreciation Bonds maturing 2036 through 2043	140,543		207,404
Convertible Capital Appreciation Bonds maturing 2034 through 2036	145,000		207,985
	994,813	5.50%	1,116,589
2018 Series A:			
Serial Bonds maturing through 2046	425,965	3.61%	425,965
Total Junior Lien Principal Issued/Outstanding	1,420,778	5.07%	1,542,554
Total Principal Issued/Outstanding	$ 2,112,688	4.93%	$ 2,004,264
Add:			
Unamortized bond premiums - net			102,981
Total Revenue Bonds Payable			**$ 2,107,245**

Minimum principal and interest payments (in thousands) on revenue bonds payable are as follows:

Year	Principal	Interest	Total
2020	$ 32,045	$ 78,386	$ 110,431
2021	34,380	76,623	111,003
2022	41,545	74,745	116,290
2023	47,655	79,650	127,305
2024	53,705	84,092	137,797
2025 - 2029	286,370	378,406	664,776
2030 - 2034	443,660	303,640	747,300
2035 - 2039	408,768	359,935	768,703
2040 - 2044	272,326	451,727	724,053
2045 - 2048	383,810	37,104	420,914
Totals	**$ 2,004,264**	**$ 1,924,308**	**$ 3,928,572**

Pollution Remediation Obligation

The Commission has recorded a liability for pollution (including contamination) remediation obligations, which are obligations to address current or potential detrimental effects of existing pollution by participating in remediation activities such as site assessments and cleanups. The liability includes estimated contamination remediation costs to collect and dispose of slag leachate as required by the Ohio Environmental Protection Agency estimated at $621,000 and $1,942,000 as of December 31, 2019 and 2018, respectively and estimated contamination remediation costs to remediate soil and underground water contamination from underground petroleum storage tanks as required by the Ohio Bureau of Underground Storage Tank Regulations of $15,000 and $1,053,000 as of December 31, 2019 and 2018, respectively. The liability was estimated using the expected cash flow technique. The pollution remediation obligation is an estimate and is subject to changes resulting from price increases or decreases, technology, or changes in applicable laws or regulations.

(7) COMMITMENTS AND CONTINGENCIES

Commitments

The Commission has commitments as of December 31, 2019 and 2018 of approximately $51,381,000 and $93,845,000, respectively for capital projects as well as major repairs and replacements. It is anticipated that these commitments will be financed from the Commission's cash balances. However, at the discretion of the Commission, additional bonds may be issued in the future to finance a portion of these costs.

In addition, the Commission has issued purchase orders for goods and services not received amounting to approximately $10,793,000 and $8,364,000 as of December 31, 2019 and 2018, respectively.

Litigation

The nature of the Commission's operations sometimes subjects the Commission to litigation, typically from daily operations of vehicles, equipment and from customer incidents. The management and the General Counsel for the Commission are of the opinion that any unfavorable outcome of such claims in excess of insurance coverage will not result in a material adverse effect on the Commission's financial position or results of operations.

Environmental Matters

Due to the nature of operations at the Commission's service plazas and maintenance buildings, which include vehicle fueling facilities, the Commission may encounter fuel leaks or spills. The Commission, however, participates in the Petroleum Underground Storage Tank Release Compensation Board, which limits the Commission's financial liability to $55,000 per incident, up to a maximum reimbursement of $1,000,000 per incident or $2,000,000 per calendar year. The Commission is unaware of any incidents that will exceed these limits.

Collective Bargaining

Approximately 420 full-time, nonsupervisory, field employees in the Commission's Toll Operations and Maintenance Departments, approximately 183 part-time, nonsupervisory, field employees in the Toll Operations Department and approximately nine full-time radio operators are represented by the Teamsters Local Union No. 436, affiliated with the International Brotherhood of Teamsters.

In May 2017, the Commission ratified a three-year collective bargaining agreement with the full-time employees that is effective for the period January 1, 2017 through December 31, 2019. The agreement includes annual wage increases of 2 percent effective January 1, 2017, January 14, 2018 and January 13, 2019 for full-time employees. The Commission's agreement with the part-time employees for the same time period of January 1, 2017 through December 31, 2019 also includes annual wage increases of 2 percent effective January 1, 2017, January 14, 2018 and January 13, 2019. The Commission's agreement with the radio operator employees for the same time period of January 1, 2017 through December 31, 2019 includes annual wage increases of 3 percent effective January 1, 2017, December 17, 2017 and January 13, 2019. As of December 31, 2019, the Commission was in negotiations with the Union on a new three-year collective bargaining agreement.

(8) PENSION PLAN AND OTHER POSTEMPLOYMENT BENEFITS (OPEB) PLANS

Plan Description

The Commission participates in the Ohio Public Employees Retirement System (OPERS), statewide, cost-sharing, multiple-employer defined benefit public employee retirement system governed by the Ohio Revised Code (ORC) that covers substantially all employees of the Commission. The system provides retirement, survivor, and disability benefits to plan members and their beneficiaries. The system also provides post-employment health care benefits (including Medicare B premiums) to retirees and beneficiaries who elect to receive those benefits.

OPERS administers three separate pension plans as follows:

A) The Traditional Pension Plan ("TP") – a cost-sharing, multiple-employer defined benefit pension plan.

B) The Member-Directed Plan ("MD") – a defined contribution plan in which the member invests both member and employer contributions (employer contributions vest over five years at 20 percent per year). Under the MD Plan, members accumulate retirement assets equal to the value of member and (vested) employer contributions plus any investment earnings.

C) The Combined Plan ("CO") – a cost-sharing, multiple-employer defined benefit pension plan. Under the CO Plan, OPERS invests employer contributions to provide a formula retirement benefit similar in nature to, but less than, the TP Plan benefit. Member contributions, the investment of which are self-directed by the members, accumulate retirement assets in a manner similar to the MD Plan.

The OPERS provides retirement, disability, survivor and death benefits and annual cost-of-living adjustments to members of the TP and CO Plans. Members of the MD Plan do not qualify for ancillary benefits.

Authority to establish and amend benefits is provided in Chapter 145 of the Ohio Revised Code ("ORC"). The OPERS issues a stand-alone financial report. Interested parties may obtain a copy by visiting https://www.opers.org/financial/reports.shtm, making a written request to the OPERS, 277 East Town Street, Columbus, Ohio 43215-4642 or by calling (800) 222-7377.

Pension Benefits

Plan benefits are established under Chapter 145 of the ORC, as amended by Substitute Senate Bill 343 in 2012. In the legislation, members were categorized into three groups with varying provisions of the law applicable to each group. Members eligible to retire under the law in effect prior to Senate Bill 343 or who will be eligible to retire no later than five years after January 7, 2013, comprise Transition Group A. Members with 20 years of service credit prior to January 7, 2013, or who will be eligible to retire no later than 10 years after January 7, 2013, are included in Transition Group B. Those members who are not in Group A or B or were hired after January 7, 2013, are in Transition Group C. The following table provides age and service requirements for retirement and the retirement formula applied to final average salary (FAS) for the three member groups under the traditional plan as per the reduced benefits adopted by Senate Bill 343.

Group A	Group B	Group C
Age and Service Requirements:		
Age 60 with 60 months of service credit or Age 55 with 25 years of service	Age 60 with 60 months of service credit or Age 55 with 25 years of service	Age 57 with 25 years of service credit or Age 62 with 5 years of service
Formula:		
2.2% of FAS multiplied by years of service for the first 30 years and 2.5% for service years in excess of 30	2.2% of FAS multiplied by years of service for the first 30 years and 2.5% for service years in excess of 30	2.2% of FAS multiplied by years of service for the first 35 years and 2.5% for service years in excess of 35

A plan member who becomes disabled before age 60 or at any age, depending on when the member entered the plan, and has completed 60 contributing months is eligible for a disability benefit.

A death benefit of $500 to $2,500 is determined by the number of years of service credit of the retiree. Benefits may transfer to a beneficiary upon death with 1.5 years of service credits with the plan obtained within the last 2.5 years, except for law enforcement and public safety personnel who are eligible immediately upon employment.

Benefit terms provide for annual cost of living adjustments to each employee's retirement allowance after the employee's retirement date. Retirement benefits for the defined benefit portion of the plan increase three percent annually of the original base amount regardless of changes in the Consumer Price Index, for those who retired prior to January 7, 2013. For those retiring after January 7, 2013, beginning in calendar year 2019, the increase will be based on the average increase in the Consumer Price Index.

OPEB Benefits

OPERS maintains a cost-sharing, multiple-employer defined benefit postemployment health plan, which includes medical, prescription drug program, and Medicare Part B premium reimbursement, for qualifying members of both the traditional pension and the combined plans. Members of the member directed plan do not qualify for ancillary benefits, including postemployment healthcare coverage.

To qualify for postemployment health care coverage, age-and-service retirees under the Traditional and Combined plans must have 20 years of qualifying Ohio service credit with a minimum age of 60, or 30 or more years of qualifying service at any age. Healthcare coverage for disability recipients and qualified survivor benefit recipients is available. The healthcare coverage provided by OPERS meets the definition of an OPEB as described in GASB Statement No. 75.

The Ohio Revised Code permits, but does not mandate, OPERS to provide OPEB benefits to its eligible members and beneficiaries. Authority to establish and amend benefits is provided in Chapter 145 of the Ohio Revised Code.

Contributions

State retirement law requires contributions by covered employees and their employers, and Chapter 3307 of the ORC limits the maximum rate of contributions. The retirement boards of the systems individually set contributions rates within the allowable limits. The adequacy of employer contribution rates is determined annually by actuarial valuation using the entry age normal cost method. Under these provisions, each employer's contribution is expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance a portion of the unfunded accrued liability.

Member contributions are 10 percent of gross wages for all plans, set at the maximums authorized by the ORC. The plans' 2019 and 2018 employer contribution rates on covered payroll are as follows:

	Pension	Post-retirement Health Care	Total
2019	14.00%	– %	14.00%
2018	14.00%	– %	14.00%

The Commission's contributions to the OPERS for the traditional and combined plans for the years ended December 31, 2019 and 2018 were $7,209,000 and $7,300,000, respectively, equal to 100 percent of the required contributions for each year. Contributions to the member-directed plan for 2019 were $273,000 made by the Commission and $195,000 made by plan members. The Commission's contributions to OPERS for the OPEB plan for the years ended December 31, 2019, 2018 and 2017 were $0, $0, and $537,000, respectively, equal to 100 percent of the required contributions for each year. At December 31, 2019, there was $490,000 in amounts due to OPERS for employee and employer contributions included in Accrued Wages and Benefits on the Statement of Net Position.

Net Pension Liability and Pension Expense

The net pension asset/liability was measured as of December 31, 2018. The total pension asset/liability used to calculate the net pension asset/liability was determined by an actuarial valuation as of December 31, 2018. The Commission's proportion of the net asset/liability is based on the Commission's share of contributions to the plan as compared to the total contributions of employers and all non-employer contributing entities. Total pension expense for the years ended December 31, 2019 and 2018 were $21,607,000 and $11,887,000, respectively.

At December 31, 2019, the Commission reported the following information related to the proportionate share of the net pension liability and pension expense:

	Traditional Plan	Combined Plan
Proportionate Share of the Net Pension Liability	0.374194%	0.338199%
Proportion of the Net Liability (Asset)	$102,484,000	$ (386,000)
Pension Expense	$ 21,502,000	$ 105,000

At December 31, 2018, the Commission reported the following information related to the proportionate share of the net pension liability and pension expense:

	Traditional Plan	Combined Plan
Proportionate Share of the Net Pension Liability	0.380459%	0.334825%
Proportion of the Net Liability (Asset)	$ 59,687,000	$ (468,000)
Pension Expense	$ 11,811,000	$ 76,000

Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At December 31, 2019, the Commission reports deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

Deferred Outflows of Resources	Traditional Plan	Combined Plan	Total
Difference between Expected and Actual Experience	$ 5,000	$ 32,000	$ 37,000
Change in Assumptions	8,922,000	87,000	9,009,000
Net Difference between Projected and Actual Earnings on Pension Plan Investments	13,910,000	84,000	13,994,000
Change in Employer's Proportionate Share	39,000	15,000	54,000
Contributions subsequent to the Measurement Date	7,009,000	473,000	7,482,000
Total	**$ 29,885,000**	**$ 691,000**	**$ 30,576,000**

Deferred Inflows of Resources	Traditional Plan	Combined Plan	Total
Difference between Expected and Actual Experience	$ 1,346,000	$ 154,000	$ 1,500,000
Change in Employer's Proportionate Share	1,899,000	4,000	1,903,000
	$ 3,245,000	**$ 158,000**	**$ 3,403,000**

At December 31, 2018, the Commission reports deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

Deferred Outflows of Resources	Traditional Plan	Combined Plan	Total
Difference between Expected and Actual Experience	$ 61,000	$ 24,000	$ 85,000
Change in Assumptions	7,133,000	41,000	7,174,000
Change in Employer's Proportionate Share	498,000	16,000	514,000
Contributions subsequent to the Measurement Date	7,106,000	462,000	7,568,000
Total	**$ 14,798,000**	**$ 543,000**	**$ 15,341,000**

Deferred Inflows of Resources	Traditional Plan	Combined Plan	Total
Difference between Expected and Actual Experience	$ 1,176,000	$ 136,000	$ 1,312,000
Net Difference between Projected and Actual Earnings on Pension Plan Investments	12,814,000	75,000	12,889,000
Change in Employer's Proportionate Share	2,459,000	1,000	2,460,000
	$ 16,449,000	**$ 212,000**	**$ 16,661,000**

Deferred Outflows of Resources of $7,482,000 related to pensions resulting from contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended December 31, 2020. Other amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in pension expense as follows:

Year Ended December 31:	Traditional Plan	Combined Plan
2020	$ 7,722,000	$ 20,000
2021	4,149,000	3,000
2022	1,291,000	5,000
2023	6,469,000	31,000
2024	–	(4,000)
Thereafter	–	5,000
	$ 19,631,000	$ 60,000

Net OPEB Liability, Deferrals, and OPEB Expense

The net OPEB liability was measured as of December 31, 2018. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of December 31, 2017. The Commission's proportion of the net OPEB liability was based on a projection of its long-term share of contributions to the OPEB plan relative to the projected contributions of all participating reporting units, actuarially determined.

At December 31, the Commission reported the following information related to the proportionate share of the net OPEB liability:

	2019	2018
Proportionate Share of the Net OPEB Liability	0.371987%	0.378091%
Net OPEB Liability	$ 48,498,000	$ 41,058,000

For the year ended December 31, 2019, the Commission recognized OPEB expense of $4,176,000. At December 31, 2019, 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
Difference between Expected and Actual Experience	$ 17,000	$ 132,000
Change in Assumptions	1,564,000	–
Net Difference between Projected and Actual Earnings on OPEB Plan Investments	2,223,000	–
Changes in Employer's Proportionate Share	–	444,000
Total	**$ 3,804,000**	**$ 576,000**

For the year ended December 31, 2018, the Commission recognized OPEB expense of $3,444,000. At December 31, 2018, 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
Difference between Expected and Actual Experience	$ 32,000	$ –
Change in Assumptions	2,989,000	–
Net Difference between Projected and Actual Earnings on OPEB Plan Investments	–	3,059,000
Total	**$ 3,021,000**	**$ 3,059,000**

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ended December 31:	Traditional Plan
2020	$ 1,520,000
2021	228,000
2022	360,000
2023	1,120,000
2024	–
Thereafter	–
	$ 3,228,000

Actuarial Assumptions

The total pension liability and OPEB liability is based on the results of an actuarial valuation determined using the following actuarial assumptions for 2018, applied to all periods included in the measurement on December 31, 2019:

	Traditional Plan	Combined Plan
Wage Inflation	3.25%	3.25%
Salary Increases (includes Wage Inflation)	3.25% - 10.75%	3.25% - 8.25%
Investment Rate of Return-Pension	7.20%	7.20%
Investment Rate of Return-OPEB	6.00%	6.00%
COLA	Pre-1/7/2013 Retirees: 3.00% Simple Post-1/7/2013 Retirees: 3.00% Simple through 2018, then 2.15% Simple	Pre-1/7/2013 Retirees: 3.00% Simple Post-1/7/2013 Retirees: 3.00% Simple through 2018, then 2.15% Simple
Health Care Cost Trend Rates	10.00% initial, 3.25% ultimate in 2029	10.00% initial, 3.25% ultimate in 2029
Actuarial Cost Method	Individual Entry Age	Individual Entry Age
Valuation Date-Pension	December 31, 2018	December 31, 2018
Valuation Date-OPEB	December 31, 2017	December 31, 2017

The following are the actuarial assumptions for 2017, applied to all periods included in the measurement on December 31, 2018:

	Traditional Plan	Combined Plan
Wage Inflation	3.25%	3.25%
Salary Increases (includes Wage Inflation)	3.25% - 10.75%	3.25% - 8.25%
Investment Rate of Return-Pension	7.50%	7.50%
Investment Rate of Return-OPEB	6.50%	6.50%
COLA	Pre-1/7/2013 Retirees: 3.00% Simple Post-1/7/2013 Retirees: 3.00% Simple through 2018, then 2.15% Simple	Pre-1/7/2013 Retirees: 3.00% Simple Post-1/7/2013 Retirees: 3.00% Simple through 2018, then 2.15% Simple
Health Care Cost Trend Rates	7.50% initial, 3.25% ultimate in 2028	7.50% initial, 3.25% ultimate in 2028
Actuarial Cost Method	Individual Entry Age	Individual Entry Age
Valuation Date-Pension	December 31, 2017	December 31, 2017
Valuation Date-OPEB	December 31, 2016	December 31, 2016

For both tables, mortality rates are based on the RP-2014 Healthy Annuitant mortality table. For disabled retirees, mortality rates are based on the PR-2014 Disabled mortality table. The Healthy Annuitant Mortality tables were adjusted for mortality improvements back to the observation period base year of 2006, and then established the base year as 2010 for females, and 2015 for males.

The actuarial assumptions used in the December 31, 2018 valuation were based on the results of an actuarial experience study conducted in 2016, for the five-year period 2011 through 2015.

Discount Rate

The discount rates used to measure the total pension liabilities at December 31, 2019 and 2018 were 7.20 percent and 7.50 percent, respectively. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that employer contributions will be made at contractually required rates for all plans. Based on those assumptions, the OPEB plan's fiduciary net position were projected to be available to make all projected future benefit payments for current active and inactive employees. 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.

The discount rate used to measure the total OPEB liabilities/(assets) were 3.96 percent and 3.85 percent for the years ended December 31, 2019 and 2018, respectively. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that employer contributions will be made at contractually required rates for all plans. At December 31, 2019 and 2018, the plan's fiduciary net position was projected to become insufficient to make all projected future benefit payments for current active and inactive employees. Therefore, a blended rate was used, which consisted of the long-term expected rate of return on OPEB plan investments for the funded benefit payments of 6.00 and 6.50 percent and the Fidelity 20-year Municipal General Obligation AA Index rate of 3.71 percent and 3.31 percent at December 31, 2019 and December 31, 2018, respectively. At December 31, 2019, the long-term expected rate of return on health care investments was applied to projected costs through the year 2031, and the municipal bond rate was applied to all health care costs after that date. At December 31, 2018, the long-term expected rate of return on health care investments was applied to projected costs through the year 2034, and the municipal bond rate was applied to all health care costs after that date.

Projected Cash Flows

The long term expected rate of return on pension plan and OPEB plan investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized for the year ended December 31, 2019 in the following table:

	Defined Benefit Portfolio		Health Care Portfolio	
	Target Allocation	Long-term Expected Real Rate of Return	Target Allocation	Long-term Expected Real Rate of Return
Fixed Income	23.00%	2.79%	34.00%	2.42%
Domestic Equity	19.00%	6.21%	21.00%	6.21%
Real Estate	10.00%	4.90%	0.00%	0.00%
Private Equity	10.00%	10.81%	0.00%	0.00%
International Equities	20.00%	7.83%	22.00%	7.83%
REIT's	0.00%	0.00%	6.00%	5.98%
Other Investments	18.00%	5.50%	17.00%	5.57%
Total	**100.00%**	**5.95%**	**100.00%**	**5.16%**

The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized for the year ended December 31, 2018 in the following table:

	Defined Benefit Portfolio		Health Care Portfolio	
	Target Allocation	Long-term Expected Real Rate of Return	Target Allocation	Long-term Expected Real Rate of Return
Fixed Income	23.00%	2.20%	34.00%	1.88%
Domestic Equity	20.70%	6.37%	21.00%	6.37%
Real Estate	10.00%	5.26%	0.00%	0.00%
Private Equity	10.00%	8.97%	0.00%	0.00%
International Equities	18.30%	7.88%	22.00%	7.88%
REIT's	0.00%	0.00%	6.00%	5.91%
Other Investments	18.00%	5.26%	17.00%	5.39%
Total	**100.00%**	**5.66%**	**100.00%**	**4.98%**

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the Commission, calculated using the discount rate listed below, as well as what the Commission's net pension liability would be if it were calculated using a discount rate that is 1.00 percentage point lower or 1.00 percentage point higher than the current rate:

2019	**1 Percentage-Point Decrease (6.2%)**	**Current Discount Rate (7.2%)**	**1 Percentage-Point Increase (8.2%)**
Net Pension Liability Traditional	$ 151,399,000	$ 102,484,000	$ 61,836,000
Net Pension (Asset) Combined	$ (129,000)	$ (386,000)	$ (575,000)

2018	**1 Percentage-Point Decrease (6.5%)**	**Current Discount Rate (7.5%)**	**1 Percentage-Point Increase (8.5%)**
Net Pension Liability Traditional	$ 105,988,000	$ 59,687,000	$ 21,085,000
Net Pension (Asset) Combined	$ (255,000)	$ (468,000)	$ (617,000)

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability of the Commission, calculated using the discount rate listed below, as well as what the Commission's net OPEB liability would be if it were calculated using a discount rate that is 1.00 percentage point lower or 1.00 percentage point higher than the current rate:

2019	**1 Percentage-Point Decrease (2.96%)**	**Current Discount Rate (3.96%)**	**1 Percentage-Point Increase (4.96%)**
Net OPEB Liability	$ 62,047,000	$ 48,498,000	$ 37,723,000

2018	**1 Percentage-Point Decrease (2.85%)**	**Current Discount Rate (3.85%)**	**1 Percentage-Point Increase (4.85%)**
Net OPEB Liability	$ 54,547,000	$ 41,058,000	$ 30,145,000

Sensitivity of the Net OPEB Liability to Changes in the Health Care Cost Trend Rate

The following presents the net OPEB liability of the Commission, calculated using the healthcare cost trend rate listed below, as well as what the Commission's net OPEB liability would be if it were calculated using a health care cost trend rate that is 1.00 percentage point lower or 1.00 percentage point higher than the current rate:

2019	1 Percentage-Point Decrease	Current Trend Rate	1 Percentage-Point Increase
Net OPEB Liability	$ 46,617,000	$ 48,498,000	$ 50,665,000

2018	1 Percentage-Point Decrease	Current Trend Rate	1 Percentage-Point Increase
Net OPEB Liability	$ 39,284,000	$ 41,058,000	$ 42,891,000

Pension Plan and OPEB Plan Fiduciary Net Position

Detailed information about the plan's fiduciary net position is available in the separately issued OPERS financial report. You may obtain a copy of their report by visiting the OPERS Web site at https://www.opers.org/financial/report.shtml.

(9) PAYMENTS FOR STATE INFRASTRUCTURE PROJECTS

On April 1, 2013, Ohio Governor John Kasich signed Am. Sub. H.B. 51 (H.B. 51) into law, creating a "public-public" partnership between the Commission and the Ohio Department of Transportation ("ODOT"). Effective July 1, 2013, H.B. 51 authorized the Commission to issue Turnpike Revenue Bonds as a means of funding certain transportation infrastructure projects ("Infrastructure Projects") as defined under Chapter 5537 of the Ohio Revised Code. H.B. 51 was enacted by the Ohio General Assembly to implement the Ohio Jobs and Transportation Plan proposed by Governor Kasich to address a significant funding shortfall announced by ODOT in January 2012 that would have required postponement of significant Ohio transportation projects. The plan contemplates the issuance of a total of $1.5 billion of Turnpike revenue bonds for transportation projects between 2013 and 2018. Under H.B. 51, the Director of ODOT can apply to the Commission for funding for Infrastructure Projects provided those projects: 1) have been approved by the Transportation Review Advisory Council ("TRAC") that oversees a project selection process for major new transportation projects and; 2) have a "nexus" to the Turnpike System.

On July 15, 2013, the Commission's Board approved the issuance of the 2013 Junior Lien Bonds in order to fund $930 million in Infrastructure Projects. In August 2013, the Director of ODOT submitted funding requests for Infrastructure Projects to the Commission for consideration and, on September 16, 2013, the Commission's Board approved the funding of a list of Infrastructure Projects totaling $930 million. Through December 31, 2019, ODOT has expended $922,518,000 on Infrastructure Projects and the Commission has reimbursed ODOT $922,104,000 for ODOT's expenditures on these projects. It is anticipated that the entire $930 million in 2013 Junior Lien Bond Proceeds will be paid to ODOT by the end of 2020. The status of the funding (in thousands) of each infrastructure project as of December 31, 2019 is as follows:

County	Project	Approved Amount	Amount Expended by ODOT	Infrastructure Funds Paid to ODOT
Cuyahoga	I-90 Innerbelt Bridge	$ 275,020	$ 274,373	$ 273,959
Cuyahoga	Opportunity Corridor	14,000	13,609	13,609
Erie	US 250 Widening	14,000	14,000	14,000
Hancock/Wood	I-75 Widening	283,280	280,104	280,104
Lorain	SR 57	16,500	16,500	16,500
Lucas	I-75 and I-475 Interchange	122,200	122,200	122,200
Lucas	I-475 and Rt 20 Interchange	27,500	25,478	25,478
Lucas	I-75 Widening	63,000	63,000	63,000
Mahoning/Trumbull	I-80 Widening	65,500	65,500	65,500
Summit	I-271 Widening	49,000	47,754	47,754
		$ 930,000	**$ 922,518**	**$ 922,104**

In late 2017, ODOT submitted funding requests for two additional projects on I-75 in Lucas and Wood Counties, which, on December 18, 2017, the Commission determined have the proper nexus for funding with Infrastructure funds. On February 15, 2018, the Commission issued 2018 Junior Lien Bonds that generated proceeds of $450 million in order to fund these two projects along with the Opportunity Corridor project in Cuyahoga County. The status of the funding (in thousands) of each of these infrastructure projects as of December 31, 2019 is as follows:

County	Project	Approved Amount	Amount Expended by ODOT	Infrastructure Funds Paid to ODOT
Wood/Lucas	I-75 Reconstruction	$ 90,000	$ 23,553	$ 18,611
Lucas	I-75 Reconstruction	160,000	56,496	52,270
Cuyahoga	Opportunity Corridor	200,000	35,902	32,524
		$ 450,000	**$ 115,951**	**$ 103,405**

10) RISK MANAGEMENT

The Commission is self-insured for workers' compensation and vehicle damage claims. The Commission is also self-insured for employee health claims, up to a maximum of $250,000 per covered person per contract year. Employee health benefits are not subject to any lifetime maximum benefit payments.

Liabilities are reported when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. Claim liabilities are based upon the estimated ultimate cost of settling the claims, net of any subrogation recoveries from third parties, including specific incremental claim adjustment expenses.

“Claims and Judgments” as of December 31 of each year in the accompanying Statements of Net Position are comprised of the estimated liability for workers' compensation claims, the estimated liability for employee health claims, and the estimated liability for miscellaneous claims and judgments. The Commission is unaware of any unaccrued vehicle damage or unasserted workers' compensation claims as of December 31, 2019.

Claims and Judgments (in thousands) for the years ended December 31, are as follows:

	2019	2018
Workers' compensation claims	$ 859	$ 816
Employee health claims	998	1,002
Miscellaneous claims and judgments	274	40
Total	**$ 2,131**	**$ 1,858**

Changes in the liability for estimated workers’ compensation claims, employee health claims and miscellaneous claims and judgments (in thousands) for the years ended December 31, were as follows:

	Claims Payable-Beginning of Year	Current Claims	Claims Payments	Claims Payable-End of Year
2019	$ 1,858	$ 11,701	$ 11,428	$ 2,131
2018	$ 2,241	$ 11,773	$ 12,156	$ 1,858
2017	$ 1,798	$ 13,571	$ 13,128	$ 2,241

The Commission purchases commercial insurance policies in varying amounts for general liability, vehicle liability, bridges, use and occupancy, damage to capital assets other than vehicles, and public officials and employee liability coverage. Paid claims have not exceeded the limits of the Commission’s commercial insurance policies for each of the last three fiscal years. The Commission also pays unemployment claims to the State of Ohio as incurred.

11) SUBSEQUENT EVENT

The United States and the State of Ohio declared a state of emergency in early March 2020 due to the global Coronavirus Disease 2019 (COVID-19) pandemic. The COVID-19 pandemic had an initial dramatic adverse impact on travel on the Turnpike. Due to the impact of COVID-19 passenger car vehicle miles traveled were 26.3% lower and commercial vehicle miles traveled were 1.1% lower for the first eleven months of 2020 compared to the same time period in 2019. Total toll revenues were down $25,905,000 or 9.1% in the first eleven months of 2020 compared to the same time period in 2019. The financial impact of COVID-19 will impact subsequent periods of the Commission. The impact on the Commission's future operating costs, revenues, and any recovery from emergency funding, either federal or state, cannot be estimated.

Required Supplementary Information

Schedule of Net Pension Liability *Last Five Fiscal Years* *

Ohio Public Employees Retirement System As of the Current Measurement Date (Dollars in Thousands)

	2018	2017	2016	2015	2014
Employer's Proportion of the Collective Net Pension Asset / Liability					
Traditional Plan	0.374194%	0.380459%	0.403586%	0.392329%	0.398393%
Combined Plan	0.338199%	0.334825%	0.364018%	0.365870%	0.373154%
Employer's Proportionate Share of the Collective Net Pension Asset / (Liability)					
Traditional Plan	$ (102,484)	$ (59,687)	$ (91,648)	$ (67,956)	$ (48,051)
Combined Plan	$ 386	$ 468	$ 204	$ 178	$ 143
Employer's Covered Payroll					
Traditional Plan	$ 50,023	$ 50,288	$ 52,172	$ 48,829	$ 48,843
Combined Plan	$ 1,475	$ 1,371	$ 1,417	$ 1,332	$ 1,242
Employer's Proportionate Share of the Collective Net Pension Liability / (Asset) as a percentage of the Employer's Covered Payroll					
Traditional Plan	204.87%	118.69%	175.67%	139.17%	98.38%
Combined Plan	(26.17%)	(34.14%)	(14.40%)	(13.36%)	(11.51%)
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability					
Traditional Plan	74.70%	84.66%	77.25%	81.08%	86.45%
Combined Plan	126.64%	137.28%	116.55%	116.90%	114.83%

* *The amounts presented for the current calendar year were determined as of the previous calendar year-end. Information prior to 2014 is not available.*

Schedule of Net OPEB Liability *Last Two Fiscal Years* *

Ohio Public Employees Retirement System As of the Current Measurement Date (Dollars in Thousands)

	2018	2017
Employer's Proportion of the Collective Net OPEB Liability	0.371987%	0.378091%
Employer's Proportionate Share of the Collective Net OPEB Liability	$ 48,498	$ 41,058
Employer's Covered Payroll	$ 51,498	$ 51,987
Employer's Proportionate Share of the Collective Net OPEB Liability as a percentage of the Employer's Covered Payroll	94.17%	78.98%
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	46.33%	54.14%

* *The amounts presented for the current calendar year were determined as of the previous calendar year-end. Information prior to 2017 is not available.*

Required Supplementary Information

Schedule of Employer Pension Contributions *Last Five Fiscal Years* *

Ohio Public Employees Retirement System *(Dollars in Thousands)*

Traditional Plan	**2019**	**2018**	**2017**	**2016**	**2015**
Statutory Required Employer Contribution	$ 7,003	$ 7,076	$ 6,538	$ 6,261	$ 5,859
Actual Employer Contributions Received	7,003	7,076	6,538	6,261	5,859
Difference	$ -	$ -	$ -	$ -	$ -
Employer's Covered Payroll	$ 50,023	$ 50,541	$ 50,288	$ 52,172	$ 48,829
Actual Employer Contributions Received as a Percentage of Covered Payroll	14.00%	14.00%	13.00%	12.00%	12.00%

Combined Plan	**2019**	**2018**	**2017**	**2016**	**2015**
Statutory Required Employer Contribution	$ 207	$ 202	$ 178	$ 170	$ 160
Actual Employer Contributions Received	207	202	178	170	160
Difference	$ -	$ -	$ -	$ -	$ -
Employer's Covered Payroll	$ 1,475	$ 1,446	$ 1,371	$ 1,417	$ 1,332
Actual Employer Contributions Received as a Percentage of Covered Payroll	14.00%	14.00%	13.00%	12.00%	12.00%

* *Information prior to 2015 is not available.*

Schedule of Employer OPEB Contributions *Last Two Fiscal Years* *

Ohio Public Employees Retirement System *(Dollars in Thousands)*

	2019	**2018**
Statutory Required Employer Contribution	$ -	$ -
Actual Employer Contributions Received	-	-
Difference	$ -	$ -
Employer's Covered Payroll	$ 51,498	$ 51,987
Actual Employer Contributions Received as a Percentage of Covered Payroll	0.00%	0.00%

* *Information prior to 2018 is not available.*

Notes to required supplementary information:

Changes of benefit terms.
There w ere no changes in benefit terms affecting the OPERS plans for the plan years ended December 31, 2018 or December 31, 2017.

Changes of assumptions.
During the plan year ended December 31, 2016, there w ere changes to several assumptions for OPERS. The w age inflation dropped from 3.75 percent to 3.25 percent. The projected salary increase range changed from 4.25-10.05 percent to 3.25-10.75 percent. The mortality tables used changed from RP-2000 to RP-2014.

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EXHIBIT D

TRAFFIC AND REVENUE STUDY
PREPARED BY STANTEC CONSULTING SERVICES, INC.

Ohio Turnpike Investment Grade Traffic and Revenue Study

January 13, 2021

Prepared for:

Ohio Turnpike and Infrastructure Commission

Prepared by:

Stantec Consulting Services Inc.

Table of Contents

LIST OF TABLES

LIST OF FIGURES

1.0 EXECUTIVE SUMMARY

Stantec Consulting Services, Inc. (“Stantec”) was retained by the Ohio Turnpike and Infrastructure Commission (the “Commission” or “OTIC”) to conduct this traffic and revenue study for the James W. Shocknessy Ohio Turnpike (the “Turnpike”) in preparation for the upcoming sale of Turnpike Revenue Bonds, 2021 Series A. The Stantec team analyzed historical traffic, vehicle miles traveled (“VMT”) and toll revenue data for the Turnpike to determine historical trends that have affected recent traffic patterns and that will affect future traffic behavior, including the ongoing COVID-19 pandemic. This effort included analysis of traffic data in the context of key economic indicators, demographic data, and other factors that drive revenue. The study also examined feeder and competitive roads and their impact on traffic on the Turnpike. In addition, the Stantec team reviewed the historical expenditures for the Turnpike related to operations and maintenance (O&M), as well as other revenues realized by the Commission, and reviewed the future O&M costs and other revenues prepared by the Commission.

1.1 DESCRIPTION OF THE EXISTING OHIO TURNPIKE SYSTEM

Fully open since October 1, 1955, The James W. Shocknessy Ohio Turnpike (“Turnpike”) is a 241-mile limited-access highway facility that runs across the northern part of the State of Ohio from its western border to its eastern border. Connecting the principal cities in the northern part of Ohio, including Toledo, Cleveland, and Youngstown, the Turnpike provides three eastbound and three westbound highway travel lanes between Interchanges 59 and 218 and two eastbound and two westbound highway travel lanes in all other sections. The Turnpike connects to the Indiana Toll Road at its western end and to the Pennsylvania Turnpike at its eastern end, serving both the long distance, east-west traffic corridor that includes New York City, Pittsburgh, Chicago, along with more local travel movements within Ohio. As illustrated in Figure 1, the Turnpike is designated as Interstate Routes 80 and 90 between the Ohio-Indiana State Line and Interchange 142 in Lorain; Interstate Route 80 between Interchange 142 in Lorain and Interchange 218 in Youngstown; and Interstate 76 between Interchange 218 in Youngstown and the Ohio-Pennsylvania State Line.

Figure 1: Ohio Turnpike System

1.2 TRANSPORTATION INFRASTRUCTURE ASSUMPTIONS

The Turnpike Commission adopted the recommendation by the OTIC's Advisory Team to modernize the Ohio Turnpike by replacing the Toll Collection System (TCS) and Customer Service Center (CSC) with new state of the practice technology and contracting for Unpaid Toll Processing Services to enforce the collection of unpaid tolls. The plan is to complete the toll system modernization in 2023. Other that these plans to modernize the Turnpike, there are no other planned or funded projects on the Turnpike or nearby roadways that would have a noticeable impact on Turnpike traffic during the forecast period.

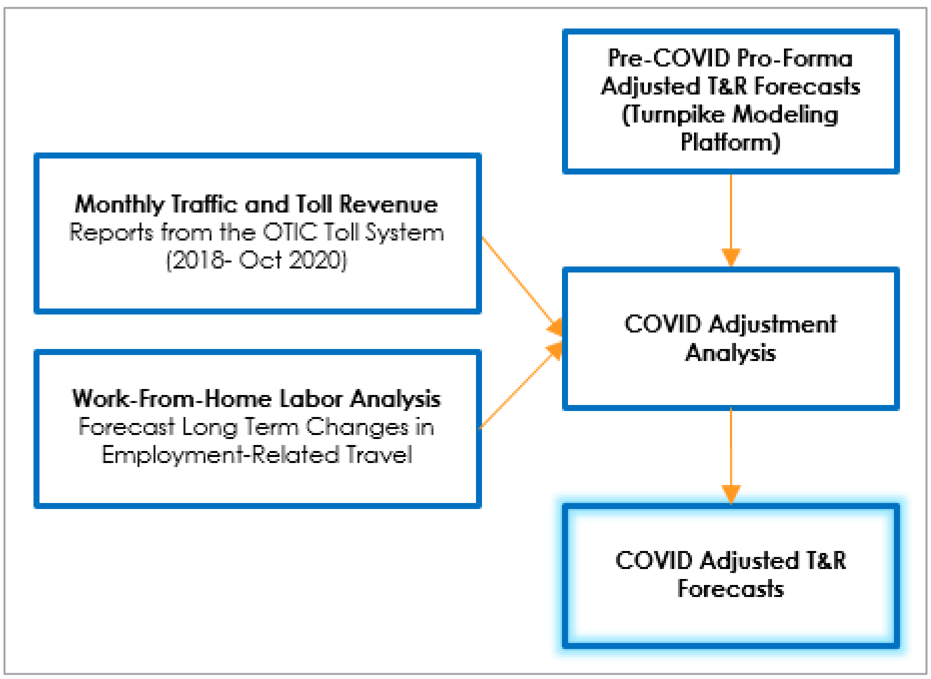
1.3 FORECAST METHODOLOGY

Forecasts of traffic and revenue were prepared using a detailed spreadsheet model with the ability to assess toll traffic behavior by exit-entry pair on an annual basis. The modeling process considers background growth, toll increases and toll diversion, as well as toll system modifications. Using this model, a pro-forma pre-COVID-19 forecast was prepared using transaction data through 2019, and then estimated impacts of COVID-19 were layered on top of this pro-forma forecast to estimate potential recovery paths from the lows in traffic and revenue observed in late spring 2020.

1.3.1 Traffic and Revenue Model Development

To capture the effects of toll rate and toll system modifications and the short- and long-term potential impacts of the COVID-19 pandemic, the preparation of long-term estimates was a multi-step process. Figure 2 details the general analysis methodology applied to generate these estimates. A baseline "pro-forma" estimate considered historical Turnpike traffic and socioeconomic trends and is comparable to previously prepared long-term forecasts. This baseline "pro-forma" estimate was then reasonably adjusted to include COVID-19 impacts, which consider three alternative scenarios of potential outcomes based on specific assumptions that vary by the extent and duration ("less severe / shorter duration," "more severe / longer duration," and "mid-range") of the COVID-19 impacts on OTIC toll traffic and revenue. These estimates have been prepared using data available through November 15, 2020, as well as the latest recommendations, policies, and projections by federal and state entities.

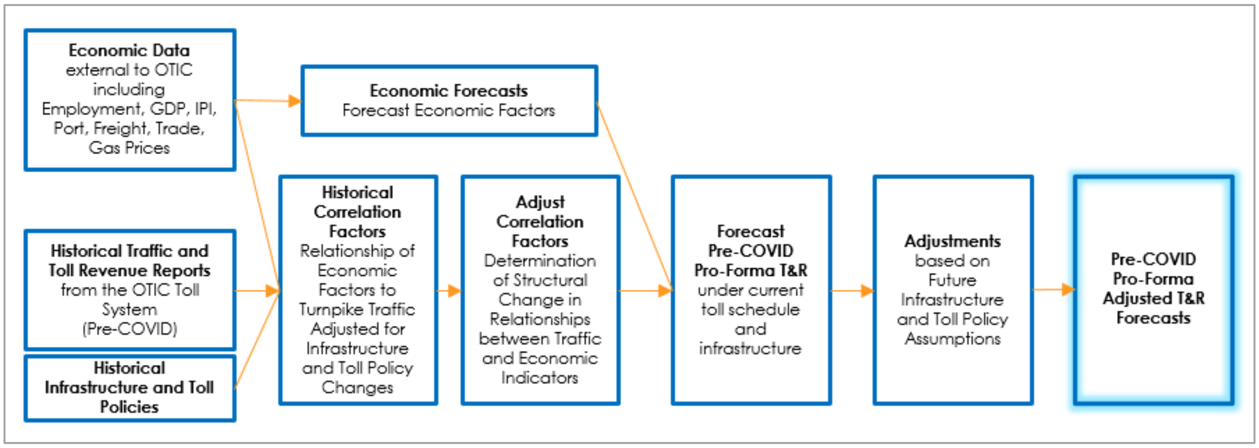
Figure 2: 2020 Traffic and Revenue Analysis Methodology



1.3.2 Modeling Platform

Traffic and toll revenue forecasts were developed with the aid of a computerized modeling platform created specifically for the Turnpike. The base function of this model is to take current traffic volumes by class and payment type for each Turnpike movement (origin-destination pair) and adjust them in the future years for various factors such as underlying socio-economic/demographic growth in the corridor, both historical and projected, as well as overall inflationary pressures and applicable customer reactions to anticipated toll adjustments. These adjustments result in forecasted traffic volumes being developed for each year of the forecast period. Gross toll revenues are then calculated based on these new adjusted traffic volumes by applying the appropriate toll rates to the volume of each origin-destination pair by payment type and vehicle class, and total vehicle miles traveled are calculated by multiplying the forecasted trips for each movement by the applicable distance traveled. Figure 3 shows the flow of the forecasting process.

Figure 3: Ohio Turnpike Model Methodology



These forecasts were then fed into a secondary model that adjusted the toll rates by origin-destination pair for the proposed modified toll system, accounting for additional traffic shifts and providing the modified system traffic and revenues.

In the creation of a base model, a logical consistency between historical and future drivers of traffic and revenue were established. The following assumptions were used in the creation of the forecasting framework:

- Traffic Growth Trends: Correlations between historical traffic and socioeconomic indices such as employment and manufacturing are one source of data used to forecast growth. Gross Domestic Product (GDP) and the Industrial Production Index (IPI) are two factors utilized.

- E-ZPass Market Share Trends: In the past, on both the Turnpike and other facilities offering electronic payment, the proportion of trips paid by E-ZPass has slowly increased over time until it approaches some level of market saturation, regardless of toll increases. It was assumed that this behavior will hold true in the future.

- Regional Divisions: Turnpike movements were segmented regionally and by trip length to develop forecasting units that show similar behaviors. The origin-destination matrix was analyzed and O/D pairs were split into four categories: Western Region (Toledo), Central Region (Cleveland), Eastern Region (Youngstown) and Long distance (trip lengths greater than 60 miles).

- Inflation and Toll Schedules: Toll schedules for each class and payment type through 2023 were provided to Stantec by the Commission. The rates are calculated off an assumed 2.7 percent annual inflation. Stantec calculated toll schedules for the years 2024 through 2056, adjusting for the expiration of a toll increase exemption for Class 1 E-ZPass trips under 30 miles in length in 2024. In this analysis, toll increases for the year 2023 were modified to be 7.7

percent in place of the previously approved 2.7 percent, with another 7.7 percent increase in 2024. This analysis assumes that toll rates will increase at a rate of 2.7 percent annually (in line with inflation) 2025 through 2028, and annual toll increases of 2.0 percent beginning in 2029.

- Toll System Modification: For some customers, tolls would be collected in different or multiple locations, but efforts were made to keep tolls for through travelers the same as if there were no modification. For some shorter trips, tolls will increase due to the nature of the modification, while for other trips, tolls will decrease and some shorter trips may become untolled. It was assumed that for E-ZPass trips under 30 miles, a rebate would be put in place beginning with the implementation of the new system in late 2021 through 2023 to maintain the current E-ZPass trip toll rates. Additionally, the modified system would adjust the minimum toll rate for cash vehicles from $0.50 to $1.00.
- Customer Reaction to Toll Adjustments: In the face of a toll adjustment, some customers opt to change their travel behavior. Stantec applied customer reaction curves based on region, payment type, and experience from previous toll increases on the Turnpike (and on similar projects elsewhere) to estimate the number of customers that might modify their travel behavior if or when a toll increase occurs. These curves are used to estimate the number of customers reacting to a given toll increase, based on the relative adjustment of the toll increase.

1.3.3 COVID-19 Recovery Assumptions

Stantec's COVID-19 impact scenarios were built upon Turnpike and other available national data through October 2020 and consider a range of potential outcomes based on specific assumptions that vary by the extent and duration of the COVID-19 impacts on Turnpike toll revenue.

Figure 4 presents a summary of monthly near-term actual and estimated COVID-19 Impacts on traffic defined as year over year percent change for the same month, while Table 1 presents a summary of estimated annual impacts on traffic through 2026.

Figure 4: Monthly COVID-19 Impacts on Traffic, Actual January 2020 to September 2020 and Estimated October 2020 to December 2021

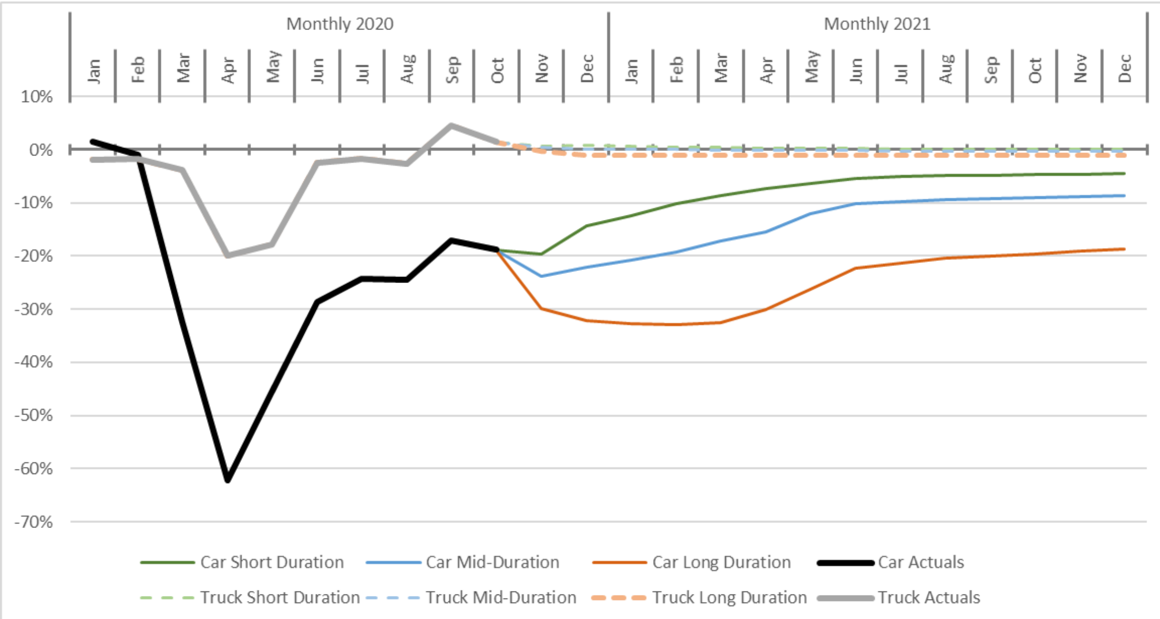


Table 1: Estimated Annual COVID-19 Impacts on Traffic, 2020 through 2026

COVID Recovery Scenarios		Percent Below Pro-Forma Pre-COVID Impact Estimate						
		2020	2021	2022	2023	2024	2025	2026
Cars	Short-Duration Recovery Estimate	-25%	-6%	-3%	-1%	-1%	-1%	-1%
	Mid-Duration Recovery Estimate	-26%	-12%	-8%	-6%	-3%	-2%	-2%
	Long-Duration Recovery Estimate	-27%	-24%	-15%	-11%	-8%	-5%	-4%
Trucks	Short-Duration Recovery Estimate	-4%	0%	0%	0%	0%	0%	0%
	Mid-Duration Recovery Estimate	-4%	0%	0%	0%	0%	0%	0%
	Long-Duration Recovery Estimate	-4%	-1%	-1%	-1%	-1%	-1%	-1%

1.3.3.1 Long Term Impacts of the On-Going COVID-19 Pandemic

As a general benchmark for estimating long term-traffic impacts due to changes in travel behavior related to more employees working-from-home (WFH) long term, employment sector data was analyzed for potential shifts in the portion of employment that might work from home and no longer commute. Data for the respective metropolitan statistical areas of Cleveland, Toledo, and Youngstown were used as a guide, and both pre-and post-COVID WFH share of employment were estimated. The results of this analysis of WFH impacts on future traffic were used as a guide to develop a range of long-term impacts for regional traffic. The values assumed for each duration, region, and vehicle type are shown in Table 2.

Table 2: Applied Impacts on Overall Traffic by Class and Region, by Duration of COVID-19 Scenario

Applied Region		Short-Duration	Mid-Duration	Long-Duration
Cars	Western	-1.0%	-2.0%	-4.0%
	Central	-1.5%	-2.5%	-5.0%
	Eastern	-1.0%	-2.0%	-3.5%
	Long Distance	0.0%	-0.5%	-2.0%
Trucks	Western	0.0%	-0.3%	-1.0%
	Central	0.0%	-0.3%	-1.0%
	Eastern	0.0%	-0.3%	-1.0%
	Long Distance	0.0%	-0.3%	-1.0%

1.4 TRANSACTIONS, VMT, AND GROSS REVENUE ESTIMATES

Table 3 shows the Transactions, VMT, and Gross Revenue Estimates for the Mid-Duration Scenario. A noticeable jump in transactions is evident in 2023 estimates; this jump results from consideration of the toll system modification timeline as Toll System Modifications are intended to be fully implemented by April 1, 2023.

Table 3: Actual (through October 2020) and Estimated Transactions, VMT, AND Revenue, Mid-Duration

Year	Transactions		VMT		Revenue		
	Car	Truck	Car	Truck	Car	Truck	Total
2015*	42.1	11.3	1,998.2	1,003.1	$122.3	$157.9	$280.3
2016*	43.4	11.4	2,029.9	1,007.7	$126.2	$162.3	$288.6
2017*	43.6	11.6	2,017.0	1,020.9	$127.5	$168.3	$295.8
2018*	42.3	12.0	1,969.7	1,064.8	$126.4	$179.7	$306.1
2019*	40.7	11.8	1,925.7	1,056.2	$126.1	$183.1	$309.2
2020	30.2	11.4	1,438.1	1,040.2	$95.5	$186.1	$281.6
2021	35.8	11.9	1,730.6	1,056.8	$117.7	$194.2	$311.9
2022	37.6	12.0	1,792.7	1,060.8	$124.5	$199.8	$324.3
2023	43.2	16.0	1,810.4	1,065.4	$132.6	$216.0	$348.6
2024	45.2	17.3	1,831.6	1,069.0	$143.9	$233.5	$377.4
2025	45.6	17.4	1,849.0	1,074.8	$148.2	$241.0	$389.2
2026	45.6	17.5	1,858.4	1,080.6	$153.2	$248.8	$402.0
2027	45.7	17.6	1,850.0	1,086.4	$156.8	$256.9	$413.7
2028	45.7	17.7	1,850.7	1,092.2	$160.2	$265.2	$425.4
2029	45.2	17.8	1,845.0	1,098.4	$165.8	$272.0	$437.8
2030	45.2	17.9	1,850.9	1,104.6	$168.7	$279.0	$447.7
2031	45.3	18.0	1,853.2	1,110.9	$171.8	$286.2	$458.0
2032	45.3	18.1	1,853.6	1,117.4	$177.5	$293.5	$471.0
2033	45.3	18.2	1,856.1	1,123.5	$180.3	$301.1	$481.4
2034	45.4	18.3	1,859.1	1,129.8	$182.9	$308.8	$491.7
2035	45.4	18.4	1,859.6	1,129.5	$188.9	$316.8	$505.7
2036	45.5	18.5	1,862.5	1,142.6	$191.8	$324.9	$516.7
2037	45.6	18.6	1,865.1	1,149.1	$195.8	$333.3	$529.1
2038	45.7	18.7	1,868.0	1,155.5	$198.9	$341.8	$540.7
2039	45.7	18.8	1,870.7	1,162.1	$203.3	$350.6	$553.9
2040	45.8	18.9	1,873.1	1,168.7	$206.7	$359.6	$566.3
2041	45.9	19.0	1,875.9	1,175.3	$210.5	$368.9	$579.4
2042	45.9	19.1	1,878.6	1,182.0	$214.5	$378.4	$592.9
2043	46.0	19.3	1,881.4	1,188.8	$218.4	$388.1	$606.5
2044	46.1	19.4	1,884.3	1,195.5	$222.5	$398.1	$620.6
2045	46.1	19.5	1,887.2	1,202.4	$226.7	$408.4	$635.1
2046	46.2	19.6	1,890.1	1,209.2	$230.9	$418.9	$649.8
2047	46.3	19.7	1,893.2	1,216.1	$235.2	$429.7	$664.9
2048	46.4	19.8	1,896.3	1,223.1	$239.6	$440.7	$680.3
2049	46.4	19.9	1,899.4	1,230.1	$244.0	$452.1	$696.1
2050	46.5	20.0	1,902.6	1,237.1	$248.6	$463.8	$712.4
2051	46.6	20.2	1,905.9	1,244.2	$253.3	$475.7	$729.0

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll increases are planned each year.
(3) Toll System Modernization will be fully implemented in 2023.
(4) Numbers may not add due to rounding.

1.5 NET REVENUES

Table 4 presents the net revenues, calculated from the total Turnpike gross revenues (mid-duration toll revenues plus other revenues) less Operating and Maintenance costs. The estimates of gross and net toll revenue are in nominal dollars. Over the 31-year forecast period from 2020 through 2051, Toll, Fee and Other revenues total some $18.1 Billion, while Operating and Maintenance costs total roughly $5.4 Billion. Net revenues for the 31-year period are estimated at $12.7 Billion.

Table 4: Historical and Projected Net Revenues (in Millions)

Year	Toll Revenues		Fee Revenues		Other Revenues		Total Revenues		O&M Expenses		Net Revenues	
2015*	$280.3				$23.8		$304.1		$111.9		$192.1	
2016*	$288.6	3.0%			$24.7	4.0%	$313.3	3.0%	$118.0	5.4%	$195.3	1.7%
2017*	$295.8	2.5%			$26.1	5.6%	$321.9	2.8%	$118.8	0.7%	$203.1	4.0%
2018*	$306.1	3.5%			$27.0	3.5%	$333.1	3.5%	$119.3	0.5%	$213.8	5.2%
2019*	$309.2	1.0%			$32.6	20.8%	$341.8	2.6%	$119.8	0.4%	$222.0	3.8%
2020	$281.6	-8.9%			$27.5	-15.6%	$309.1	-9.6%	$118.2	-1.4%	$190.9	-14.0%
2021	$311.9	10.8%			$24.9	-9.5%	$336.8	9.0%	$123.0	4.1%	$213.8	12.0%
2022	$324.3	4.0%			$30.2	21.4%	$354.5	5.3%	$124.9	1.5%	$229.6	7.4%
2023	$348.6	7.5%	$1.3		$31.7	4.7%	$381.6	7.6%	$127.6	2.2%	$254.0	10.6%
2024	$377.4	8.3%	$2.7	107.8%	$33.4	5.5%	$413.5	8.4%	$129.6	1.6%	$283.9	11.8%
2025	$389.2	3.1%	$2.7	0.0%	$35.1	5.0%	$427.0	3.3%	$131.8	1.7%	$295.2	4.0%
2026	$402.0	3.3%	$2.7	-0.4%	$37.1	5.6%	$441.7	3.5%	$134.1	1.7%	$307.7	4.2%
2027	$413.7	2.9%	$2.7	-0.7%	$38.9	4.8%	$455.2	3.0%	$136.5	1.8%	$318.7	3.6%
2028	$425.4	2.8%	$2.7	0.0%	$40.0	2.8%	$468.0	2.8%	$138.9	1.8%	$329.1	3.3%
2029	$437.8	2.9%	$2.6	-0.8%	$41.8	4.6%	$482.2	3.0%	$141.5	1.8%	$340.7	3.5%
2030	$447.7	2.3%	$2.6	-0.4%	$43.8	4.9%	$494.1	2.5%	$144.1	1.9%	$350.0	2.7%
2031	$458.0	2.3%	$2.6	0.0%	$45.6	4.0%	$506.2	2.4%	$147.0	2.0%	$359.2	2.6%
2032	$471.0	2.8%	$2.6	-0.4%	$46.4	1.9%	$520.1	2.7%	$150.0	2.0%	$370.1	3.0%
2033	$481.4	2.2%	$2.6	0.0%	$47.7	2.8%	$531.7	2.2%	$153.0	2.0%	$378.7	2.3%
2034	$491.7	2.1%	$2.6	0.0%	$48.6	1.9%	$542.9	2.1%	$156.2	2.1%	$386.7	2.1%
2035	$505.7	2.8%	$2.6	-0.4%	$50.0	2.7%	$558.3	2.8%	$160.1	2.5%	$398.2	3.0%
2036	$516.7	2.2%	$2.6	0.0%	$51.3	2.7%	$570.6	2.2%	$164.0	2.4%	$406.6	2.1%
2037	$529.1	2.4%	$2.6	0.0%	$52.7	2.6%	$584.4	2.4%	$168.2	2.6%	$416.2	2.4%
2038	$540.7	2.2%	$2.6	0.0%	$54.0	2.6%	$597.3	2.2%	$172.4	2.5%	$424.9	2.1%
2039	$553.9	2.4%	$2.6	0.0%	$55.4	2.6%	$611.9	2.4%	$176.8	2.6%	$435.1	2.4%
2040	$566.3	2.2%	$2.6	-0.4%	$56.8	2.6%	$625.7	2.3%	$181.2	2.5%	$444.5	2.2%
2041	$579.4	2.3%	$2.6	0.4%	$58.3	2.5%	$640.3	2.3%	$185.7	2.5%	$454.6	2.3%
2042	$592.9	2.3%	$2.6	0.0%	$59.7	2.5%	$655.2	2.3%	$190.4	2.5%	$464.8	2.3%
2043	$606.5	2.3%	$2.6	0.4%	$61.2	2.5%	$670.3	2.3%	$195.1	2.5%	$475.2	2.2%
2044	$620.6	2.3%	$2.6	0.4%	$62.7	2.5%	$685.9	2.3%	$200.0	2.5%	$485.9	2.3%
2045	$635.1	2.3%	$2.6	0.0%	$64.2	2.4%	$702.0	2.3%	$205.0	2.5%	$497.0	2.3%
2046	$649.8	2.3%	$2.6	0.4%	$65.8	2.4%	$718.2	2.3%	$210.2	2.5%	$508.0	2.2%
2047	$664.9	2.3%	$2.6	0.4%	$67.4	2.4%	$734.9	2.3%	$215.5	2.5%	$519.4	2.2%
2048	$680.3	2.3%	$2.6	0.0%	$68.9	2.4%	$751.9	2.3%	$220.9	2.5%	$531.0	2.2%
2049	$696.1	2.3%	$2.7	0.4%	$70.6	2.3%	$769.3	2.3%	$226.4	2.5%	$542.9	2.2%
2050	$712.4	2.3%	$2.7	0.4%	$72.2	2.3%	$787.3	2.3%	$232.0	2.5%	$555.3	2.3%
2051	$729.0	2.3%	$2.7	0.0%	$73.9	2.3%	$805.5	2.3%	$237.7	2.5%	$567.8	2.3%

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll increases are planned each year.
(3) Toll System Modernization will be fully implemented in 2023.
(4) Numbers may not add due to rounding.

2.0 INTRODUCTION

Stantec Consulting Services, Inc. (“Stantec”) was retained by the Ohio Turnpike and Infrastructure Commission (the “Commission” or “OTIC”) to conduct this traffic and revenue study for the James W. Shocknessy Ohio Turnpike (the “Turnpike”) in preparation for the upcoming sale of Turnpike Revenue Bonds, 2021 Series A. The Stantec team analyzed historical traffic, vehicle miles traveled (“VMT”) and toll revenue data for the Turnpike to determine historical trends that have affected recent traffic patterns and that will affect future traffic behavior, including the ongoing COVID-19 pandemic. This effort included analysis of traffic data in the context of key economic indicators, demographic data, and other factors that drive revenue. The study also examined feeder and competitive roads and their impact on traffic on the Turnpike. In addition, the Stantec team reviewed the historical expenditures for the Turnpike related to operations and maintenance (O&M), as well as other revenues realized by the Commission, and reviewed the future O&M costs and other revenues prepared by the Commission.

In, 2017, the Commission adopted a Strategic Plan to modernize toll collection on the Turnpike. The current Toll Collection System (“TCS”) and Customer Service Center (“CSC”), installed in 2009, are approaching the end of their useful life. The toll system modernization includes the introduction of highway speed E-ZPass travel lanes, conversion of Eastgate and Westgate to fixed-rate barriers, the compression of the closed ticket system with the construction of new mainline plazas at milepost 49 and milepost 211, the removal of 9 toll plazas while maintaining interchange access, the removal of all entry toll lane gates and E-ZPass Only exit toll lane gates, and the installation of license plate image capture cameras. The plan will improve technology and customer improvements with limited revenue risk while providing nonstop travel for E-ZPass customers of the Ohio Turnpike. There will also be toll collection staff reductions due to the removal of plazas and gates and the increased E-ZPass penetration. The toll system modernization is scheduled for completion in 2023.

Estimates of annual trips, VMT and toll revenue for the years 2020 through 2051 were developed as part of this study. During the work effort, a complete set of available traffic and economic data sets were compiled, including OTIC transaction data through mid-November 2020. Historical trips, VMT and toll revenue data were compiled from the OTIC for all the Turnpike toll trips by month, detailed to travel movement, payment type and vehicle class. Relevant traffic data from neighboring toll authorities were also reviewed to gain understanding of the most recent tolled traffic trends in the region.

A detailed traffic and revenue model is used to project trips, VMT, and toll revenue on the Turnpike’s tolled facilities, based on detailed traffic and toll revenue data from recent years. As the foundation of this analysis, a static trendline-based model traffic and toll revenue model has the ability to adjust projections based on various economic parameters, and is segmented by vehicle type, payment type, and the specific entry-exit movements. Additionally, the model was augmented to provide forecasts based upon adjustments to the toll schedules by entry and exit point. The model includes the changes detailed as part of the modernization program adopted by the Commission; the assumptions of future toll schedules are described in Section 4.1. The work, analyses, and results for this Ohio Turnpike traffic and revenue study are of investment grade quality and are suitable for financing.

The remainder of this report is structured as follows:

- Chapter 3 provides an overview of the Ohio Turnpike System, its history, and its place in the regional roadway network.
- Chapter 4 discusses the future of the Ohio Turnpike System, including the Toll System Modification Plan and future transportation projects both on the Turnpike and on alternate and “feeder” roads.
- Chapter 5 discusses historical traffic and toll revenue trends for the Turnpike.
- Chapter 6 discusses the Turnpike’s historical operating & maintenance costs.
- Chapter 7 discusses the socioeconomic context of the Turnpike as well as the impact that COVID-19 has had on it.
- Chapter 8 presents the development of the traffic and toll revenue forecasting models, as well as the revenue forecasts.
- Chapter 9 presents the long-term operating cost estimates.
- Chapter 10 presents net revenues.
- Chapter 11 presents the limits and disclaimers of the analysis.

3.0 OHIO TURNPIKE SYSTEM

This section of the report provides a description of the Ohio Turnpike System, its history, details of the toll rate schedule, and the roadway network that feeds and competes with the System.

3.1 DESCRIPTION OF EXISTING OHIO TURNPIKE SYSTEM

Fully open since October 1, 1955, The James W. Shocknessy Ohio Turnpike ("Turnpike") is a 241-mile limited-access highway facility that runs across the northern part of the State of Ohio from its western border to its eastern border. Connecting the principal cities in the northern part of Ohio, including Toledo, Cleveland, and Youngstown, the Turnpike provides three eastbound and three westbound highway travel lanes between Interchanges 59 and 218 and two eastbound and two westbound highway travel lanes in all other sections. The Turnpike connects to the Indiana Toll Road at its western end and to the Pennsylvania Turnpike at its eastern end, serving both the long distance, east-west traffic corridor that includes New York City, Pittsburgh, Chicago, along with more local travel movements within Ohio. As illustrated in Figure 5, the Turnpike is designated as Interstate Routes 80 and 90 between the Ohio-Indiana State Line and Interchange 142 in Lorain; Interstate Route 80 between Interchange 142 in Lorain and Interchange 218 in Youngstown; and Interstate 76 between Interchange 218 in Youngstown and the Ohio-Pennsylvania State Line.

There are 31 interchanges on the Turnpike, 26 of which provide access to and from various U.S., Ohio, and Interstate Routes. The two terminal interchanges connect directly with the Indiana Toll Road (Interstate 80/90) on the western end and with the Pennsylvania Turnpike (Interstate 76) on the eastern end. Three interchanges connect with county or local roads. In the Youngstown area, the Turnpike connects directly with Interstate Route 80 leading to/from Pennsylvania at Interchange 218, and it also connects directly with Interstate Route 680 at Interchange 234. In the Cleveland area, the Turnpike connects directly with Interstate Routes 71, 77, 480 and 90, and provides access to Interstate Route 271. In the Toledo area, the Turnpike connects directly with Interstate Route 75 and 280, and provides access to Interstate Route 475, thus providing access to and from Michigan to the north and to and from Cincinnati to the south.

Most of the interchanges on the Turnpike are "trumpet" interchanges, designed so that all traffic entering and exiting the Turnpike at a particular interchange passes through a single physical toll plaza, regardless of travel direction. Tolls are assessed based on the classification of each vehicle, the payment type, and the distance it travels between interchanges along the Turnpike.

Along the Turnpike, there are seven pairs of service plazas that provide a variety of services to travelers. The Turnpike does not receive any federal funding and is financed and operated primarily through revenues collected by tolls and service area concessionaire rentals.

Figure 5: Ohio Turnpike System

3.2 OHIO TURNPIKE HISTORICAL CONTEXT

Collecting tolls since 1955, the Ohio Turnpike saw relatively few changes in operations until the first modernization effort in the mid-2000's. In 2009, the Turnpike implemented changes to the toll collection system with the introduction of E-ZPass and modified the way it classified vehicles. From the Turnpike's inception through September 30, 2009, toll charges were determined based on gross vehicle weight classification and distance traveled on the Turnpike. Vehicles were weighed as they entered the Turnpike by weigh-in-motion scales located in the entry lanes at each toll plaza. There were 11 vehicle classifications prior to September 30, 2009. Passenger vehicles weighing less than 7,000 pounds were classified as Class 1 and heavier vehicles were classified according to their weight as Classes 2 through 9. Classes 10 and 11 were reserved for triple-trailer combinations and long combination vehicles, respectively, which required (and still do require) special permits to travel on the Turnpike.

Until 2009, all customers were issued a ticket from Dual Height Automated Ticket Issuing Machines (DATIMs), which they surrendered on exit, and the toll charge was calculated based on the classification of their vehicle, the payment type, and the distance they traveled between interchanges along the Turnpike. Tolls were collected through three payment methods: cash, Ready Toll cards (the Turnpike's pre-paid card program for passenger vehicles) and Commercial Charge cards (the Turnpike's post-paid card program for commercial vehicles). Commercial Charge customers were offered a volume discount of 15 percent if their tolls exceeded $1,000 each month. The Turnpike had implemented Automated Toll Payment Machines (ATPMs) at two locations, which accepted both cash and credit cards.

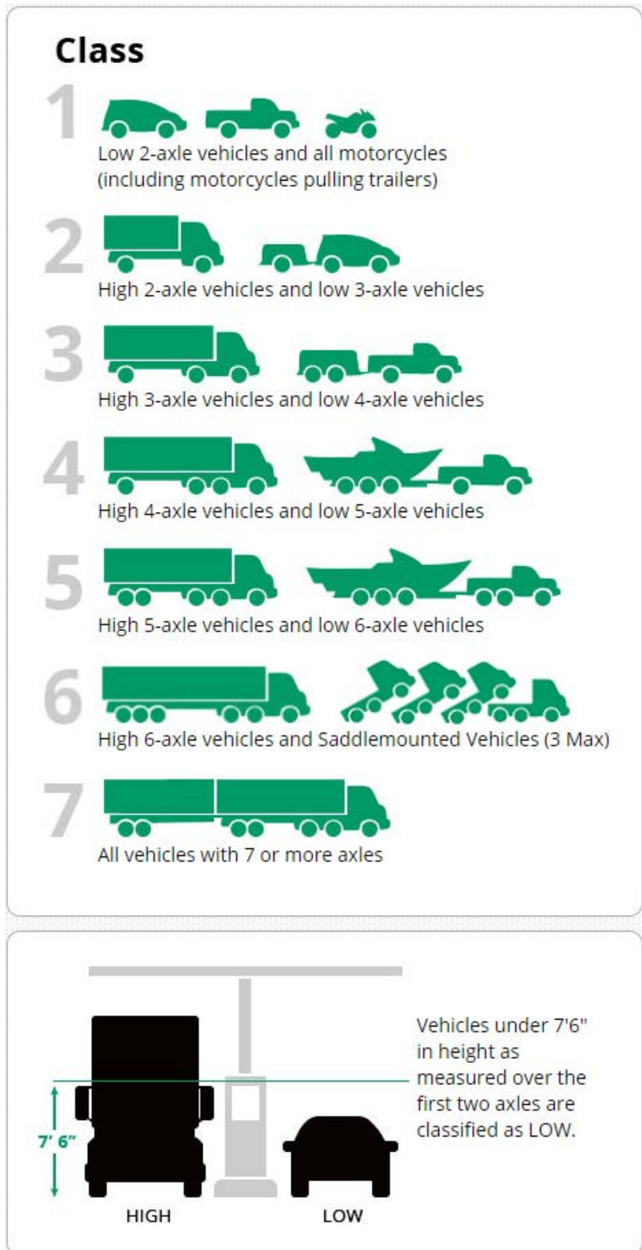
Beginning on October 1, 2009, the Turnpike implemented a new toll collection system to replace the old system that had then reached the end of its useful life. Following an assessment study of the old toll collection system and by surveying customers and evaluating various alternatives, a Strategic Plan was developed that called for a comprehensive replacement of the toll collection system hardware and software. The new system consisted of:

- incorporation of transponder based electronic toll collection known as E-ZPass,
- the subsequent phasing out of the Ready Toll and Commercial Charge card programs,
- changing the vehicle classification system from gross vehicle weight to the number of axles and the height over the first two axles measured at the time of entry to the Turnpike,
- the implementation of break-away gates in all entry and exit lanes to enforce toll collection,
- the implementation of credit card readers in each staffed exit lane, and
- new ATPMs at low volume locations along the Turnpike to facilitate unstaffed exit lane operation.

All vehicles are still weighed in motion in all entry lanes to screen for overweight axles and gross overweight vehicles.

The new vehicle classification system compressed the previous 11class system into seven vehicle classes. The 7class vehicle classification system is shown in Figure 6.

Figure 6: Ohio Turnpike Existing Vehicle Classifications



Source: Ohio Turnpike and Infrastructure Commission

The toll collection system is still essentially a closed ticket system where each vehicle is classified on entry and their entry transaction details are recorded by issuing a paper ticket (vehicles without a valid E-ZPass transponder) or by creating an entry electronic transaction record (vehicles with a valid E-ZPass transponder). Paper tickets are surrendered at exit, whereas the E-ZPass system creates an exit electronic transaction record that is matched with the corresponding entry record to create an “electronic ticket”. The E-ZPass technology allows customers to travel seamlessly on toll facilities operated by 39 toll agencies in

17 states, including some of the major highways that connect to the Turnpike such as the Pennsylvania Turnpike, the Indiana Toll Road, and the New York State Thruway, which connects to Interstate Route 90.

In 2017, the Commission adopted a new Strategic Plan to modernize the Ohio Turnpike system, approving a plan to replace the Toll Collection System (TCS) and customer service center software with new technology and contract with a vendor to process and collect unpaid tolls. The plan is to complete the toll system modernization in early 2023 with all toll plaza construction completed by the end of the year. More detail is provided in Section 4.2 of this report.

3.2.1 Historical Toll Rates

Table 5 summarizes the various toll rate and other changes that have occurred on the Ohio Turnpike since inception.

Table 5: Toll Rate and other Major Changes on the Ohio Turnpike System

Date	Activity
Dec. 1, 1954	First 22 miles opened from Interchange 239 (the Pennsylvania Turnpike) to Interchange 218 (Interstate 80, Mahoning County Road 18)
Sep. 1, 1955	Implemented Class 1 per mile toll rate of 1.2 cents/mile. Full length Class 1 toll is $3.00
Oct. 1, 1955	Remaining 219 miles opened from Interchange 218 to Interchange 2 (the Indiana Toll Road)
May 28, 1957	25% toll rate increase, Class 1 per mile toll rate of 1.5 cents/mile. Full length Class 1 toll is $3.50
Feb. 1, 1982	33% toll rate increase, Class 1 per mile toll rate of 2.0 cents/mile. Full length Class 1 toll is $4.90
Jul. 1, 1995	10% toll rate increase, Class 1 per mile toll rate of 2.2 cents/mile. Full length Class 1 toll is $5.40
Jan. 1, 1996	15% toll rate increase, Class 1 per mile toll rate of 2.6 cents/mile. Full length Class 1 toll is $6.20
1996	Beginning of construction project to add a third travel lane between interchange 59 and Interchange 218
Jan. 1, 1997	20% toll rate increase
Jan. 1, 1998	10% toll rate increase
Jan. 1, 1999	9% toll rate increase
Feb. 1, 2004	Class 8 upper weight limit and Class 9 lower weight limit changed from 78,000 pounds to 80,000 pounds
Sep. 8, 2004	Increased truck speed limit from 55 mph to 65 mph
Jan. 1, 2005	Temporary toll rate reduction for Classes 4 through 9: Class 4 - 2%, Class 5 - 17%, Class 6 - 11%, Class 7 - 26%, Class 8 - 27% and Class 9 - 57%
Jan. 1, 2007	Toll rate increase of 0.5 cents per mile for Class 1-3, toll rate increase of 1 cent per mile over temporary toll rates for Class 4-9
Oct. 1, 2009	E-ZPass implemented, classification changed from weight to number of axles and height over first two axles. New toll rate structure implemented where E-ZPass toll rates are discounted from cash toll rates and previous 11 vehicle classes were compressed down to 7 classes. Commercial volume discount program is discontinued. No toll rate change for passenger cars using E-ZPass (4.6 cents per mile or $10.25 for full-length trip). Non-E-ZPass passenger car toll rate is adjusted 6.2 cents per mile or $15 for full-length trip.
Apr. 1, 2011	Increased speed limits for all vehicles from 65 mph to 70 mph
Jan. 1, 2012	10% toll rate increase; Class 1 E-ZPass rate is 4.7 cents/mile or $11.25 for full-length trip, Class 1 cash rate is 6.8 cents/mile or $16.50 for full-length trip.
Jul. 15, 2013	The Commission implemented a toll increase plan that increases rates by an average of 2.7% each year for 10 years beginning January 1, 2014 and continuing through 2023, except for cars with E-ZPass traveling less than 30 miles. Toll rates for these vehicles will be frozen at 2013 rates until January 1, 2024 when they will have a one-time increase equivalent to the 10 years of increases, to the same per mile rate as other E-ZPass trips.

3.3 CURRENT TOLL RATES

The current per mile rate for Class 1 vehicles is 5.6 cents for E-ZPass patrons and 8.3 cents patrons without E-ZPass. Class 1 consists of 2axle passenger vehicles. Table 6 shows the current toll rates for all vehicle classes and the relationship between vehicle classes and payment types. For a full length trip, Class 1 customers receive a discount of approximately 32.5 percent if they pay with E-ZPass instead of cash or credit card, while Class 5 customers using E-ZPass receive a 20.3 percent discount for that same trip.

Table 6: 2020 OTIC Toll Rates

	E-ZPass			Cash/Credit Card			
Class	Full-Length Trip	Per Mile Rate	Multiplier over Class 1	Full-Length Trip	Per Mile Rate	Multiplier over Class 1	Full Length Trip Discount
1	$13.50	$0.056		$20.00	$0.083		32.5%
2	$24.00	$0.100	1.78	$33.75	$0.140	1.69	28.9%
3	$29.00	$0.120	2.15	$39.75	$0.165	1.99	27.0%
4	$36.25	$0.150	2.69	$47.00	$0.195	2.35	22.9%
5	$42.25	$0.175	3.13	$53.00	$0.220	2.65	20.3%
6	$60.25	$0.250	4.46	$73.50	$0.305	3.68	18.0%
7	$86.75	$0.360	6.43	$100.00	$0.415	5.00	13.3%

There are nuances to the full toll schedule, as all toll rates are rounded to the nearest twenty-five cents (nearest quarter) and there is a minimum toll rate of $0.50. This results in the E-ZPass discounts for shorter trips varying significantly from the discounts realized by full-length trips. For very short trips, there is no E-ZPass discount due to the minimum toll restrictions and toll rate rounding.

3.4 REASONABLENESS OF TOLL RATES /COMPARISON TO OTHER FACILITIES

Figure 7 compares the passenger car toll rates in cents per mile on the Ohio Turnpike to toll rates on toll roads in the Midwest and throughout the northeastern United States. Standard peak period rates are shown for each facility. There are thirteen major E-ZPass toll facilities that have higher toll rates per mile than the Ohio Turnpike. Therefore, the Ohio Turnpike passenger car toll rates are reasonable compared to rates at other E-ZPass toll facilities.

Figure 7: Passenger Car Toll Rates per Mile on Select E-ZPass Toll Facilities as of September 2020

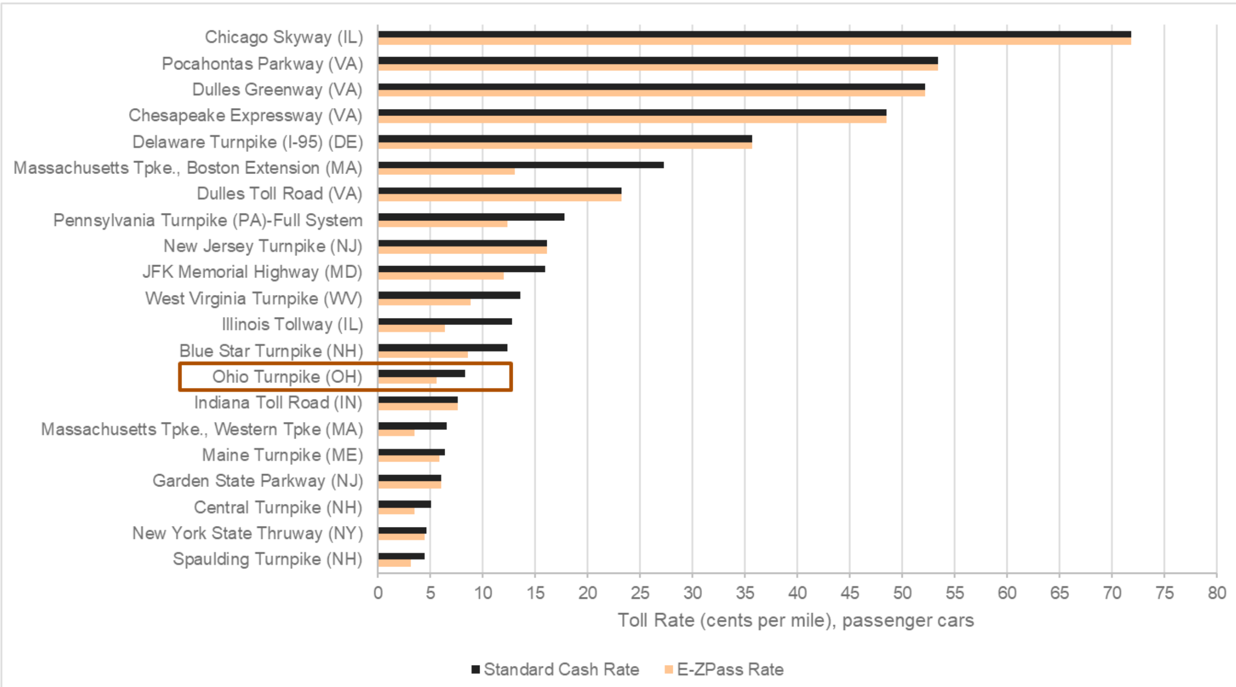
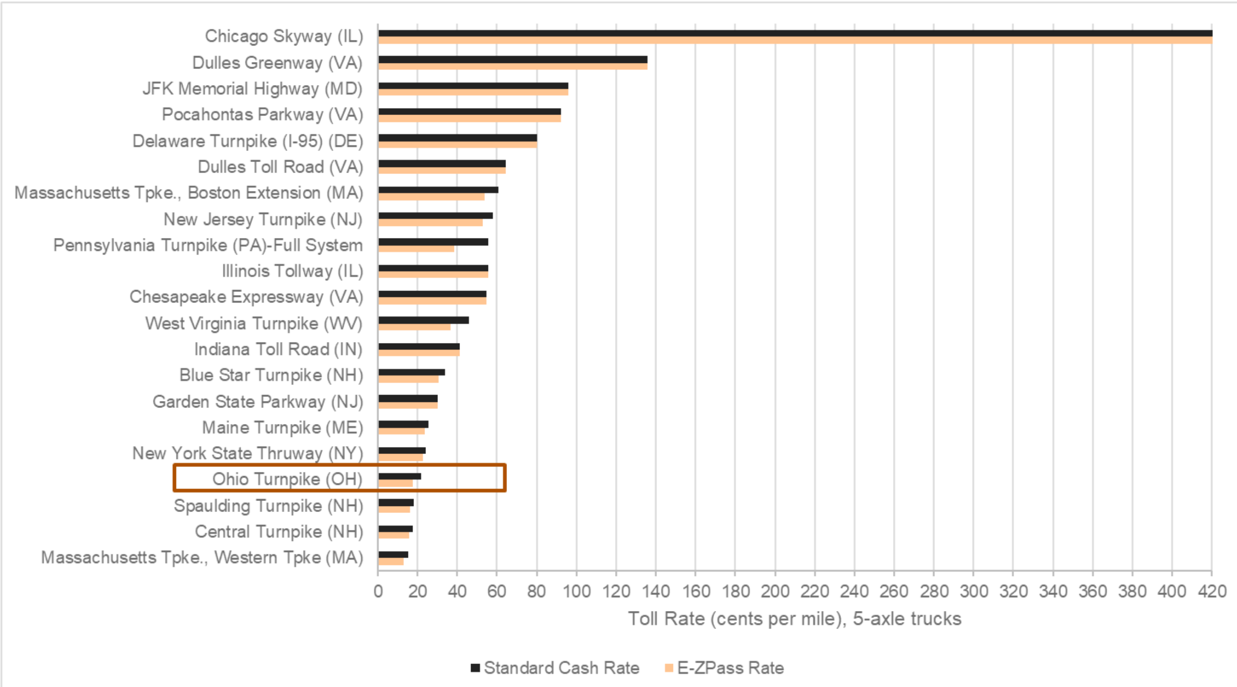


Figure 8 shows a similar comparison for 5-axle vehicles. Seventeen major E-ZPass toll facilities have higher 5-axle truck E-ZPass toll rates per mile than the Ohio Turnpike's current tolls, while only three have lower rates. It can be said that the Ohio Turnpike commercial vehicle toll rates are reasonable compared to other E-ZPass toll facilities.

Figure 8: Commercial Vehicle Toll Rates per Mile on Select E-ZPass Toll Facilities as of September 2020



3.5 CONNECTING ROADS

Several roadways connect traffic, or “feed” traffic, to and from the Turnpike. The classification of these roadways varies from interstate highways to arterials and collectors. The major feeder roads to the Turnpike, from west to east, are shown in Table 7.

Table 7: Major Feeder Roads to the Ohio Turnpike

Interchange Number	Roadway
2	Indiana Toll Road
64	Interstate Route 75
71	Interstate Route 280
142	Interstate Route 90 and Ohio State Route 2
145	Ohio State Route 57
151	Interstate Route 480
152	Ohio State Route 10
161	Interstate Route 71
173	Interstate Route 77
180	Ohio State Route 8
187	Interstate Route 480
218	Interstate Route 80
232	Ohio State Route 7
234	Interstate Route 680
239	Pennsylvania Turnpike

3.6 COMPETING ROADS

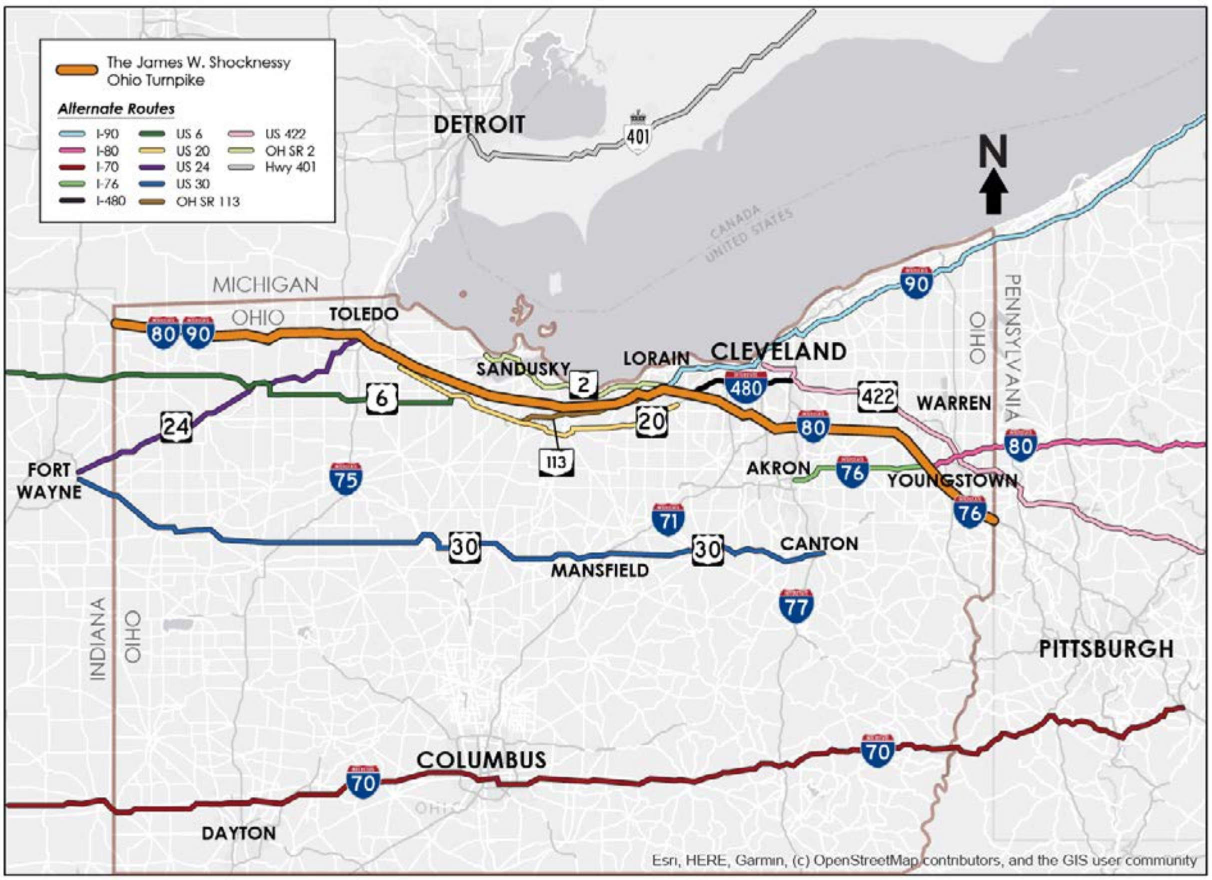
The Turnpike provides a fast, efficient east-west highway traversing the northern part of Ohio and ultimately connecting with the Indiana Toll Road and the Pennsylvania Turnpike. The Turnpike serves as an alternate route to several roadways, varying from arterials to collectors and highways. The following parallel routes are among the most likely alternatives to the Turnpike for specific geographic segments, shown in Figure 9:

- US Route 20 for trips between Montpelier and Cleveland,
- US Route 30 for trips between Ft. Wayne and Canton,
- US Route 24 for trips between Ft. Wayne and Toledo,
- Ohio State Route 2 for trips between Sandusky and Cleveland,
- US Route 6 for trips between Indiana and Fremont,
- Ohio State Route 113 for trips between Bellevue and Elyria,
- Interstate Route 480 for trips between North Ridgeville and Streetsboro,
- US Route 422 for trips between Bedford and Youngstown,

- Interstate Route 76 for trips between Akron and North Jackson,
- Interstate Route 80 for trips between North Jackson and Pennsylvania,
- Interstate Route 90 for trips between Elyria and Cleveland,
- Interstate Route 70 for trips between Indiana and Pennsylvania, and
- Highway 401 in Canada for trips between Upstate New York or New England and Michigan

Many of the routes between these cities can be considered as alternate route choices for Turnpike travelers. For many trips within and across the state, these alternate routes may provide shorter, faster, and more efficient routes when compared to making the same trip using the Turnpike.

Figure 9: Alternate Routes to the Ohio Turnpike



3.7 FUTURE TRANSPORTATION PROJECTS

Stantec reviewed highway projects scheduled for the near future to determine their potential impact on Ohio Turnpike traffic volumes and toll revenues. These projects were listed in the Turnpike's Capital Program or Ohio's Statewide Transportation Improvement Program (STIP) for the 2021-2024 period. Stantec's traffic and revenue forecasts assume the projects discussed herein will be completed.

3.7.1 Ohio Turnpike Projects

The Ohio Turnpike projects that were reviewed for their traffic impact are either programmed for funding or already underway. Stantec determined that these projects will not have a noticeable impact on the Turnpike's traffic and toll revenue. The projects on the Turnpike that were reviewed include:

1. Replacement of the original concrete base under the full 241-mile Ohio Turnpike mainline. This major construction project is scheduled to occur in 5-mile segments over the next 21 years; two lanes of traffic flow will be maintained in each direction during construction.
2. Pavement resurfacing at selected interchanges along the Turnpike.
3. Bridge deck replacement rehabilitation at selected locations along the Turnpike.

3.7.2 Projects on Other Roadways

Stantec reviewed the major projects on feeder and alternate routes to the Ohio Turnpike that are programmed for funding to determine their potential impact on Turnpike traffic and toll revenue. A project's impact on the Turnpike's traffic and toll revenue depends on whether it occurs on a road that is a connecting or competing road to the Turnpike and whether traffic travel times on that road will change either during project work or after project completion. Stantec determined that while the following projects are the most likely to have an impact on the Turnpike's traffic and toll revenue, these impacts are expected to negligible individually and in the aggregate.

1. Deck replacement of the I-480 bridges over the Cuyahoga River Valley in Valley View and Independence. (PID: 95091)
2. Major rehabilitation of I-90, including pavement replacement along I-90 from the Hilliard Boulevard Exit ramp bridge in Rocky River to I-71 in Cleveland. (PID: 76779)
3. Reconstruction of I-76, including the pavement replacement and widening from Medina/Summit County Line to State Route 21 and pavement replacement and widening to six lanes from State Route 21 to Central Avenue in Akron. (PID: 93501)
4. Major rehabilitation of I-90 from its divergence from the Ohio Turnpike to Colorado Avenue in Avon (PID: 107714)
5. Widening of State Route 18 from the city of Medina east to I-71. (PID: 92953)
6. Widening of I-76 to three lanes and an interchange reconfiguration at Wooster Road, East Avenue, and State Street in Akron (PID: 96670)
7. Resurfacing of I-480 in the City of Twinsburg (PID: 110698)
8. Bridge replacement of I-90 over Murray Ridge Road in Lorain County (PID: 102708)
9. Resurfacing of I-280 between Curtice Road and Starr Avenue in Oregon, Ohio (PID: 108584)
10. Resurfacing of I-75 from Louisiana Avenue in Perrysburg to the Lucas/Wood County Line (PID: 110698)
11. A reconfiguration of the I-480 westbound lane assignments through the I-71/SR-237/Grayton Road interchanges in Cleveland (PID: 108482)
12. Resurfacing State Route 795 in Wood County (PID: 101289)
13. Major reconstruction and widening projects along I-70, especially in Columbus. (PIDs: 96053, 81828, 88035, and 105322).

3.8 TOLL CHANGES ON CONNECTING ROADS

Stantec reviewed the anticipated toll updates on four roadways connecting directly or indirectly to the Ohio Turnpike: the Indiana Toll Road, the Pennsylvania Turnpike, the Illinois Tollway, and the New York State Thruway. The toll increases on these roadways have been accommodated in the forecasting models.

4.0 THE FUTURE OHIO TURNPIKE SYSTEM AND SYSTEM MODIFICATION PLAN

This chapter discusses the future of the Ohio Turnpike system, including planned toll rate increases and modifications to the Toll System.

4.1 FUTURE TOLL RATE INCREASES

In 2013, the Commission implemented a toll increase plan that increases rates by an average of 2.7 percent each year for 10 years beginning January 1, 2014 and continuing through 2023, except for cars with E-ZPass traveling less than 30 miles. Toll rates for these vehicles will be frozen at 2013 rates until January 1, 2024 when they will have a one-time increase equivalent to the 10 years of annual increases, to the same per mile rate as other E-ZPass trips.

Recent conditions have resulted in the need for an additional toll adjustment in 2023 and 2024 above the 2.7 percent, bringing the toll increase for each of these two years to 7.7 percent across all classes. Assumed toll increases and their effective dates are shown in Table 8.

Table 8: Future Toll Rate Increases

Date Effective	Assumed Base Toll Increase (Unrounded)
January 1, 2021	2.7%
January 1, 2022	2.7%
January 1, 2023	7.7%
January 1, 2024	7.7%
January 1, 2025	2.7%
January 1, 2026	2.7%
January 1, 2027	2.7%
January 1, 2028	2.7%
January 1, 2029 - 2051	2.0%

For most of the years between now and 2028, toll rates are assumed to increase 2.7 percent, a growth rate that coincides with the rate of inflation. While the average increase for these years is approximately 2.7 percent annually, the projected toll increases are subject to modest variation depending on rounding and the E-ZPass toll rate “lock”, which ensures that E-ZPass customers driving Class 1 vehicles locally (i.e., less than 30 miles) will pay the same fixed toll rates throughout the 10-year period. This toll rate “lock” will expire in 2024.

4.2 TOLL SYSTEM MODERNIZATION PLAN

The Turnpike Commission adopted the recommendation by the OTIC's Advisory Team to modernize the Ohio Turnpike by replacing the Toll Collection System (TCS) and Customer Service Center (CSC) with new state of the practice technology and contracting for Unpaid Toll Processing Services to enforce the collection of unpaid tolls. The plan is to complete the toll system modernization in 2023.

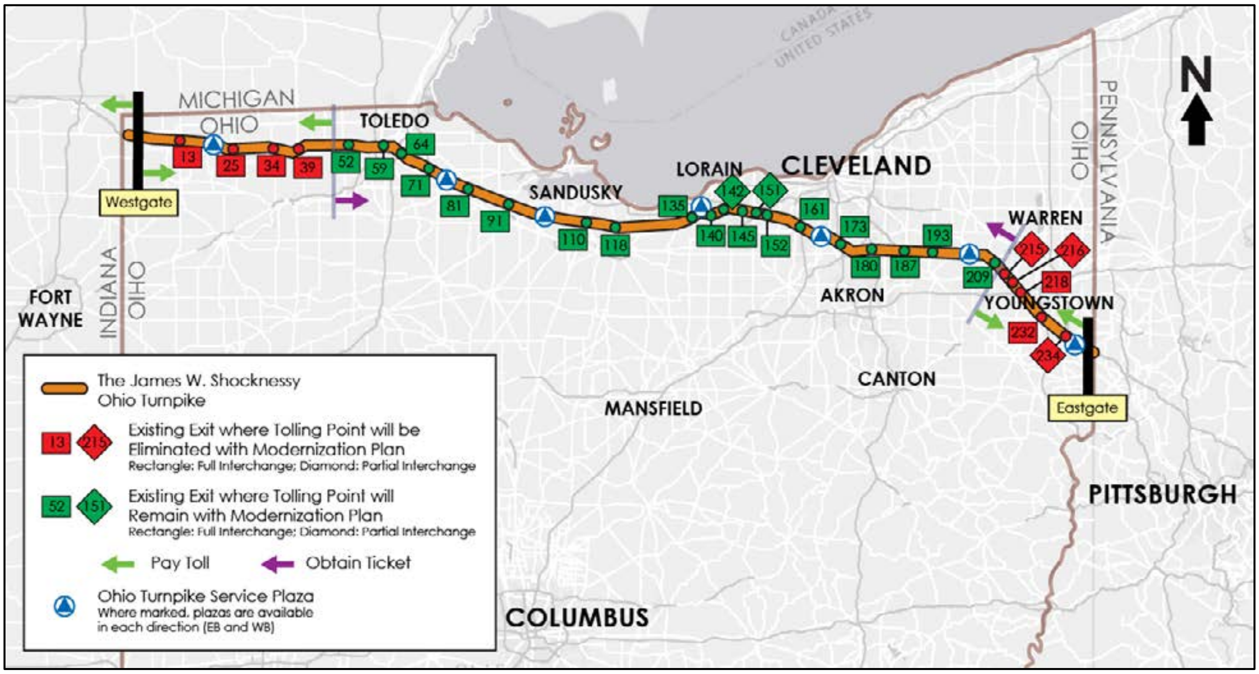
4.2.1 Toll Collection System

The current TCS, installed in 2009, is approaching the end of its useful life. Replacement inventories for installed components are becoming scarce. While the TCS continues to perform as designed, the potential for future equipment failures will lead to lost revenue and will negatively affect OTIC toll collection operations.

To prevent those future concerns from occurring, the proposed TCS modernization consists of the following elements, a map of which is shown in Figure 10:

1. Implement highway speed E-ZPass lanes at Eastgate and Westgate and convert them to barrier plazas where flat tolls are assessed for each vehicle class regardless of distance traveled.
2. Convert Eastgate toll collection to one-way only in the westbound direction (into Ohio and opposite to the Pennsylvania Turnpike's Gateway Plaza which is tolled one-way eastbound into Pennsylvania).
3. Construct two new mainline plazas with highway speed E-ZPass lanes at MP 49 and MP 211 to become the new ends of a closed ticket system where all movements within MP 49 and MP 211 are tolled by vehicle class and distance traveled between entry and exit tolling points.
4. Remove nine (9) selected Toll Plazas but maintain interchange access to Ohio Turnpike (TP 13, 25, 34, 39, 215, 216, 218, 232, 234).
5. Remove all entry toll lane gates as well as exit gates in low speed E-ZPass Only lanes within the ticket system.
6. Install new license plate image capture cameras in all gateless E-ZPass Only exit lanes.
7. Retain toll lane gates in non-E-ZPass Only exit lanes.
8. Add automated toll payment machines (ATPMs) throughout the Turnpike system so that all toll plazas are equipped with them and can be operated without toll collectors on the night shift.
9. Continue to build trips for all Class 1 E-ZPass customers based upon Turnpike entry and exit points and apply rebates for trips under 30 miles through 2023. This includes trips that pass through Eastgate, Westgate, and the new mainline plazas at MP 49 and MP 211.

Figure 10: Modernizing the Ohio Turnpike System



Note: Under the Modernization Plan, Tolling Points from Exit 52 through Exit 209 will have entry gates removed and at least one dedicated E-ZPass exit lane with gate removed.

The proposed modernized TCS will provide the following benefits and impacts:

1. Technology and customer service improvements with limited revenue risk.
2. Non-stop travel at highway speeds (70 mph) for E-ZPass customers traveling the full length of the Ohio Turnpike.
3. Non-stop travel at slow speeds (10-15 mph) for E-ZPass customers at all interchange plazas (TP 52 through TP 209).
4. Non-tolled trips for local travelers within TP 13 and TP 39 and within TP 216 and TP 232.
5. Cash-paying customers that travel the full length of the Turnpike will stop three times (eastbound) or four times (westbound) instead of twice as they currently do.
6. Toll collection staff reductions due to removal of plazas and gates, the addition of ATPMs, increased E-ZPass penetration, and faster collection rates at Eastgate and Westgate.

The OTIC will continue to classify vehicles by number of axles and height over the first two axles. Vehicle pre-classification as well as automatic heigh and weight screening will be conducted on entry to the Turnpike in low-speed lanes. While height detection can be performed in highway speed lanes, weight enforcement may have to be conducted in some other manner, such as roving enforcement by Ohio State

Highway Patrol personnel or by implementing weigh station operations. The feasibility to determine vehicle weight via highway speed weigh-in-motion techniques will require further investigation. Full service ATPMs that accept both cash and credit cards will operate across the Turnpike at all toll plazas. New multiprotocol E-ZPass readers will be installed at all OTIC tolling points that will enhance the potential for interoperability with tolling agencies outside of the E-ZPass Network. The modernized TCS with highway speed E-ZPass lanes at mainline toll plazas will meet the Project goals of providing OTIC customers with quality service and value and allow the OTIC to implement innovative, adaptable, and sustainable technology and operational programs while being financially responsible. In addition to the TCS modernization described above, the OTIC is also making toll plaza improvements at TP 64 (one new exit lane and conversion of one existing entry lane to a reversible lane), TP 152 (one new exit lane), and TP 180 (two new exit lanes and conversion of one existing exit lane to a reversible lane).

4.2.2 Customer Service Center Modification

There will be a new, state-of-the-art CSC with significant advancements in improved customer experience, communication methods, data availability, and security that will continue to be operated by OTIC staff to service the customer service needs of the almost 450,000 OTIC E-ZPass customers. E-ZPass usage is currently growing at approximately 2 percent per year (growth from 2018 to 2019 in terms of both trips and revenue E-ZPass market share), and a bump in E-ZPass usage is anticipated when higher speed gateless E-ZPass lanes are implemented as part of the modernization plan. E-ZPass adoption over time is discussed further in Section 5.7 of this report.

The new CSC will include a new E-ZPass Ohio website (www.ezpassoh.com). The CSC System will facilitate functions related to administering and managing the E-ZPass Ohio program as well as unpaid toll transaction processing functions (e.g., license plate identification, registered vehicle address lookup, generation and mailing of unpaid toll notices, customer service related to unpaid tolls, etc.). Manual license plate image review services and collections services related to unpaid tolls that are expected to arise from gateless E-ZPass lane operations will be outsourced to third party vendors.

A modernized CSC will meet the goal of providing OTIC customers with service and value and allow the OTIC to implement innovative, adaptable, and sustainable technology and operational programs while being financially responsible.

4.2.3 Proposed Schedule/Key Milestones

The Commission is conducting public and external stakeholder outreach efforts throughout the toll system modernization program and will complete the development of gateless tolling business rules, policies, legislative, and administrative rule changes to accommodate the proposed new TCS and the enforcement of unpaid tolls before the end of 2021. The design and construction phase to design, develop and test the TCS, CSC, and Unpaid Toll Processing systems under observation of the toll consultants and the OTIC's TCS/CSC Advisory Team is currently underway. The CSC design, development and testing efforts began in the 1st quarter of 2019 and is estimated to be completed in the 1st quarter of 2021. Similar efforts for the TCS began in the 3rd quarter of 2020 and be completed in the 1st quarter of 2023. Unpaid Toll Processing design, development and testing efforts are expected to begin in the 3rd quarter of 2021 and be completed in the 4th quarter of 2022. Construction of the new and modernized mainline toll facilities began in the 3rd quarter of 2020 and is estimated to conclude in the 4th quarter of 2022.

It is estimated that the Commission will begin to operate the new CSC in the 1st quarter of 2021. Operations of the new TCS, as well as commencement of Unpaid Toll Processing Services, are anticipated for deployment in the 1st quarter of 2023.

4.2.4 Capital Cost Estimates Related to Modernization Plan

In 2017, a consultant study prepared budgetary estimates of the capital costs of modernizing the Ohio Turnpike. These costs were estimated to be approximately $204 to $232 million in 2020 dollars with some $65 to $72 million for the TCS, CSC, and Unpaid Toll Processing capital costs (this assumes the full replacement of all existing TCS and CSC technology) and some $139 to $160 million for toll plaza and mainline infrastructure improvements.

4.2.5 Operating and Maintenance Cost Impacts of Modernization

Also, as part of the 2017 consultant study, prepared budgetary estimates of the costs to operate and maintain the modernized Ohio Turnpike estimated that the modernized TCS and CSC would result in approximately $257 million of operating cost savings over 30 years. In the opening year of the modernized TCS, it was estimated that there would be approximately $2.7 million less in operating costs and approximately $2.4 million more net revenue. The net revenue increase is expected to be due to higher E-ZPass market shares and lower toll collection operating costs following the implementation of the modernized TCS and CSC.

4.3 CAPITAL PROGRAM FOR THE OHIO TURNPIKE

The Commission has succeeded in providing a Turnpike that is safe and efficient for drivers traveling to, from, within, or through the State of Ohio. To maintain this success for years to come, the Commission's Capital Program provides a budget of over $10.7 billion for capital improvements to the Turnpike between 2021 and 2062. These capital improvements include numerous types of upgrades, with roughly 85 percent of the 2021 Capital Program budget designated for pavement replacement, bridgework, toll plaza enhancements, and the TCS. Stantec reviewed the Capital Program and determined that it demonstrates the Commission's commitment to ensure that the Turnpike is safe and efficient to drive on through 2062.

5.0 HISTORICAL TRAFFIC AND REVENUE TRENDS

This section discusses historical Turnpike toll trips, VMT, and toll revenue trends. Traffic and toll revenue data is compiled and analyzed by exit as well as by entry/exit movement to determine traffic and revenue growth patterns, prevalent travel movements, and which exit and entry/exit movement pairs generate the most toll revenue.

5.1 HISTORICAL TOLL TRIPS AND VMT

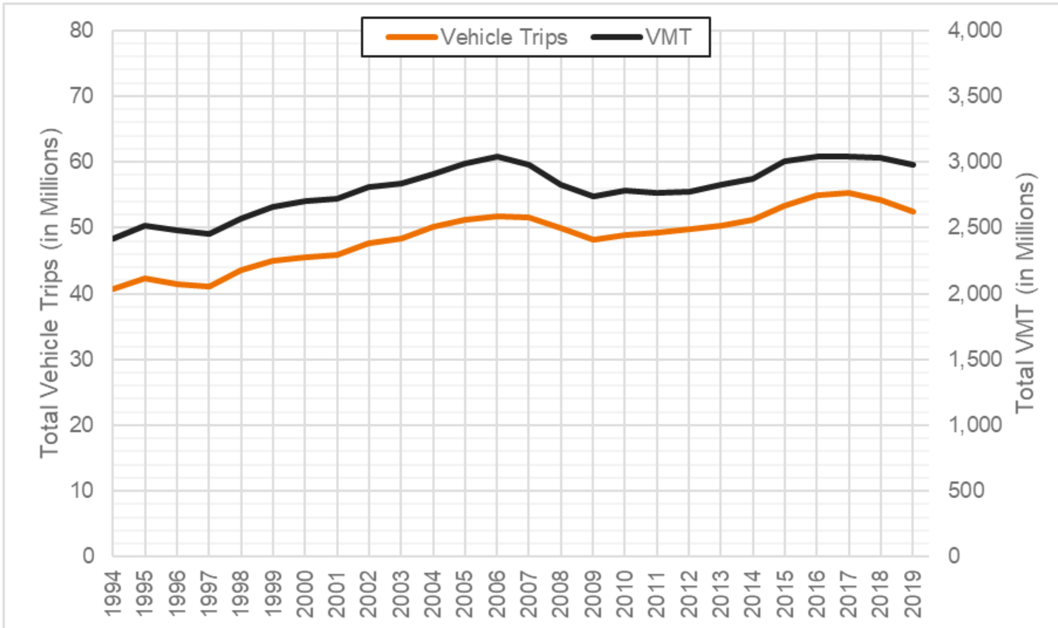
Table 9 illustrates annual toll trips, VMT, and the growth of each from 1994 through 2019. From 1994 through 2000, the Turnpike experienced an average annual growth in vehicle trips of approximately 1.9 percent, with a corresponding VMT average annual growth rate of about 1.9 percent. From 2001 through 2010, trips grew at a slower average annual rate of 0.7 percent, with a corresponding VMT average annual growth rate of about 0.2 percent. It is important to note that a substantial decline in vehicle trips and VMT occurred between 2007 and 2009 due to the economic recession that occurred over this period. From 2011 through 2019, vehicle travel recovered somewhat with an average annual growth in trips of about 0.8 percent and an average annual growth in VMT of about 1.0 percent. Data for 2020 suggests that a similar growth trend continued through January, as is evident in Table 10 and Table 11 which displays monthly data from January 2018 through October 2020. However, trips and VMT declined significantly in March and April at the onset of the COVID-19 pandemic in Ohio and across the nation. Since April, vehicle travel has been recovering, but October 2020 trips and VMT are still below October 2019 levels by approximately 14 percent and 7.9 percent, respectively. Data for 2020 through the month of October indicate that trips and VMT are 21.3 percent and 17.8 percent below same 10-month period in 2019, respectively. Historical annual toll trips and VMT are represented graphically in Figure 11.

Table 9: Historical Toll Trips and VMT (in Millions), 1994 through 2019

Year	Vehicle Trips		VMT	
	Total Trips	Growth	Total VMT	Growth
1994	40.8		2,416.9	
1995*	42.3	3.8%	2,513.2	4.0%
1996*	41.3	-2.3%	2,483.2	-1.2%
1997*	41.0	-0.8%	2,455.6	-1.1%
1998*	43.6	6.2%	2,569.5	4.6%
1999*	45.1	3.4%	2,657.4	3.4%
2000	45.6	1.1%	2,702.3	1.7%
2001	45.9	0.7%	2,717.7	0.6%
2002	47.7	3.9%	2,809.6	3.4%
2003	48.3	1.2%	2,833.8	0.9%
2004	50.2	3.9%	2,911.5	2.7%
2005	51.1	2.0%	2,990.5	2.7%
2006	51.8	1.2%	3,040.3	1.7%
2007*	51.5	-0.5%	2,978.4	-2.0%
2008	50.0	-2.9%	2,830.9	-5.0%
2009*	48.2	-3.6%	2,734.6	-3.4%
2010	48.9	1.4%	2,778.8	1.6%
2011	49.2	0.8%	2,762.5	-0.6%
2012*	49.8	1.1%	2,777.9	0.6%
2013	50.3	1.0%	2,827.7	1.8%
2014*	51.3	1.9%	2,875.2	1.7%
2015*	53.4	4.1%	3,001.3	4.4%
2016*	54.9	2.8%	3,037.6	1.2%
2017*	55.2	0.6%	3,037.9	0.0%
2018*	54.3	-1.6%	3,034.5	-0.1%
2019*	52.5	-3.4%	2,981.9	-1.7%

Notes: (1) An asterisk (*) denotes a toll increase year.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

Figure 11: Historical Annual Toll Trips and VMT for All Vehicles, 1994 through 2019



Notes: (1) Toll increases occurred: each January from 1995 through 1999, January 2007, October 2009, January 2012, and each January from 2014 through 2019.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

Table 10: Monthly Vehicle Trips (in Thousands), January 2018 through October 2020

Month	2018	% Change	2019	% Change	2020
Jan	3,835	-4.0%	3,680	0.8%	3,711
Feb	3,671	-1.8%	3,606	-1.0%	3,571
Mar	4,420	-4.1%	4,240	-25.8%	3,147
Apr	4,413	-3.4%	4,264	-52.3%	2,036
May	4,935	-4.7%	4,705	-39.2%	2,860
Jun	5,065	-5.6%	4,784	-23.0%	3,682
Jul	5,221	-3.2%	5,055	-19.6%	4,066
Aug	5,288	-3.4%	5,107	-19.7%	4,099
Sep	4,499	-2.9%	4,370	-12.1%	3,843
Oct	4,616	-1.8%	4,535	-14.0%	3,900
Nov	4,244	-5.1%	4,026		
Dec	4,101	-0.5%	4,079		
Total	**54,309**	**-3.4%**	**52,451**	**-21.3%**	**34,914**

Note: Total Percent Change in 2020 compares January through October 2020 to January through October 2019

Table 11: Monthly VMT (in Thousands), January 2018 through October 2020

Month	2018	% Change	2019	% Change	2020
Jan	197,431	-2.1%	193,246	2.1%	197,228
Feb	185,248	-0.4%	184,574	1.8%	187,890
Mar	236,533	-3.1%	229,162	-19.9%	183,511
Apr	238,662	-0.5%	237,473	-49.3%	120,442
May	271,844	-1.4%	268,140	-35.9%	171,760
Jun	290,730	-2.7%	282,880	-21.7%	221,523
Jul	311,887	-1.7%	306,433	-16.6%	255,551
Aug	314,515	-2.0%	308,301	-15.1%	261,600
Sep	256,527	-2.4%	250,410	-6.9%	233,132
Oct	258,619	-1.1%	255,802	-7.9%	235,493
Nov	243,284	-5.4%	230,063		
Dec	229,199	2.7%	235,387		
Total	**3,034,480**	**-1.7%**	**2,981,872**	**-17.8%**	**2,068,129**

Note: Total Percent Change in 2020 compares January through October 2020 to January through October 2019

Table 12 illustrates the relative growth in toll trips and VMT for the periods of 1994 through 2000, 2001 through 2010, 2008 through 2012, 2011 through 2019, and the first 10 months of 2020. The periods were chosen based on the timing of recessions beginning in 2001 and late 2007. Total trip growth and total VMT growth are provided in addition to growth of car trips and VMT and truck trips and VMT.

Table 12: Average Annual Growth in Vehicle Trips and VMT; 1994-2000, 2001-2010, 2008-2012, 2011-2019, and 2020 through the Month of October

Year	Growth in Vehicle Trips			Growth in VMT		
	Cars	Trucks	Total	Cars	Trucks	Total
1994-2000	1.9%	1.7%	1.9%	2.0%	1.5%	1.9%
2001-2010	0.5%	1.3%	0.7%	-0.2%	1.2%	0.2%
2008-2012	0.2%	-1.4%	-0.1%	0.4%	-2.1%	-0.5%
2011-2019	0.5%	1.8%	0.8%	0.5%	1.9%	1.0%
2020*	-26.2%	-4.3%	-21.3%	-26.6%	-1.9%	-17.8%

Notes: (1) Asterisk (*) denotes that January through October 2020 is compared to January through October 2019.
(2) Economic recessions occurred in 2001 and between December 2007 and June 2009.
(3) The current economic recession – brought on by the COVID-19 pandemic – began in February 2020. The recession and pandemic are ongoing as of the publication of this report.

5.2 HISTORICAL TRIPS AND VMT BY VEHICLE CLASS

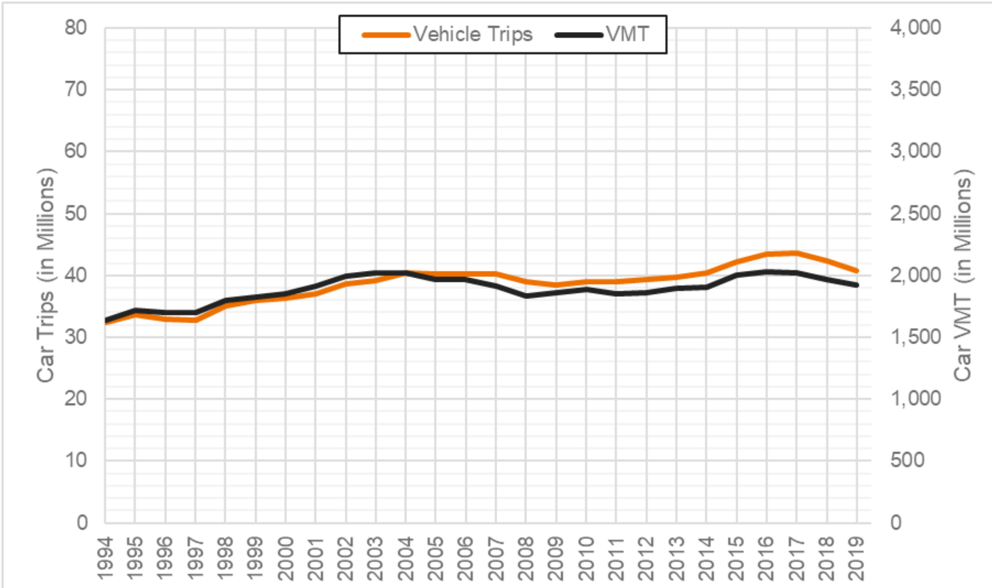
Table 13 illustrates annual toll trips and VMT by vehicle class from 1994 through 2019. From 1994 to 2000, the Turnpike experienced an average annual growth of about 1.9 percent in passenger car trips and a corresponding average annual passenger car VMT growth of approximately 2.0 percent. During the same period, the average annual growth in commercial truck trips was approximately 1.7 percent, with a corresponding average annual growth of approximately 1.5 percent in commercial truck VMT. From 2001 to 2010, passenger car trips grew at an annual rate of 0.5 percent, with a decline of 0.2 percent in passenger car VMT. Commercial trucks experienced an average annual trip growth of 1.3 percent, with a corresponding annual growth rate in VMT of 1.2 percent. Between 2011 and 2019, vehicle trips for cars increased at an annual rate of 0.5 percent, with a corresponding annual growth rate in car VMT of 0.5 percent. During the same period, commercial truck trips increased by an average annual rate of about 1.8 percent, with a corresponding increase in truck VMT of 1.9 percent. Historical annual car toll trips and VMT and truck toll trips and VMT are represented graphically in Figure 12 and Figure 13, respectively.

Table 13: Historical Toll Trips and VMT (in Millions) by Vehicle Class, 1994 through 2019

Year	Vehicle Trips				VMT			
	Cars	Growth	Trucks	Growth	Cars	Growth	Trucks	Growth
1994	32.4		8.4		1,639.7		777.3	
1995*	33.7	4.1%	8.6	2.6%	1,715.4	4.6%	797.8	2.6%
1996*	32.9	-2.5%	8.5	-1.4%	1,701.5	-0.8%	781.7	-2.0%
1997*	32.8	-0.3%	8.2	-2.7%	1,703.8	0.1%	751.8	-3.8%
1998*	35.1	6.9%	8.5	3.5%	1,797.1	5.5%	772.4	2.7%
1999*	35.9	2.4%	9.2	7.4%	1,820.8	1.3%	836.6	8.3%
2000	36.3	1.1%	9.3	1.4%	1,851.8	1.7%	850.5	1.7%
2001	37.0	2.1%	8.9	-4.5%	1,913.9	3.4%	803.9	-5.5%
2002	38.6	4.3%	9.1	2.6%	1,994.6	4.2%	815.0	1.4%
2003	39.2	1.5%	9.1	-0.1%	2,019.4	1.2%	814.4	-0.1%
2004	40.4	3.0%	9.8	7.8%	2,021.5	0.1%	890.0	9.3%
2005	40.1	-0.5%	11.0	12.3%	1,964.0	-2.8%	1,026.5	15.3%
2006	40.3	0.3%	11.5	4.7%	1,963.0	0.0%	1,077.3	4.9%
2007*	40.1	-0.3%	11.4	-1.1%	1,915.1	-2.4%	1,063.3	-1.3%
2008	39.0	-2.7%	11.0	-3.7%	1,831.5	-4.4%	999.4	-6.0%
2009*	38.5	-1.4%	9.7	-11.4%	1,863.1	1.7%	871.6	-12.8%
2010	38.9	1.1%	10.0	2.4%	1,885.4	1.2%	893.4	2.5%
2011	39.0	0.3%	10.2	2.7%	1,851.7	-1.8%	910.8	1.9%
2012*	39.4	1.0%	10.4	1.6%	1,859.1	0.4%	918.8	0.9%
2013	39.7	0.8%	10.6	1.8%	1,891.7	1.8%	936.0	1.9%
2014*	40.3	1.5%	10.9	3.3%	1,906.6	0.8%	968.5	3.5%
2015*	42.1	4.4%	11.3	3.3%	1,998.2	4.8%	1,003.1	3.6%
2016*	43.5	3.2%	11.4	1.2%	2,029.9	1.6%	1,007.7	0.5%
2017*	43.6	0.3%	11.6	1.7%	2,017.0	-0.6%	1,020.9	1.3%
2018*	42.3	-2.9%	12.0	3.2%	1,969.7	-2.3%	1,064.8	4.3%
2019*	40.7	-3.9%	11.8	-1.8%	1,925.7	-2.2%	1,056.2	-0.8%

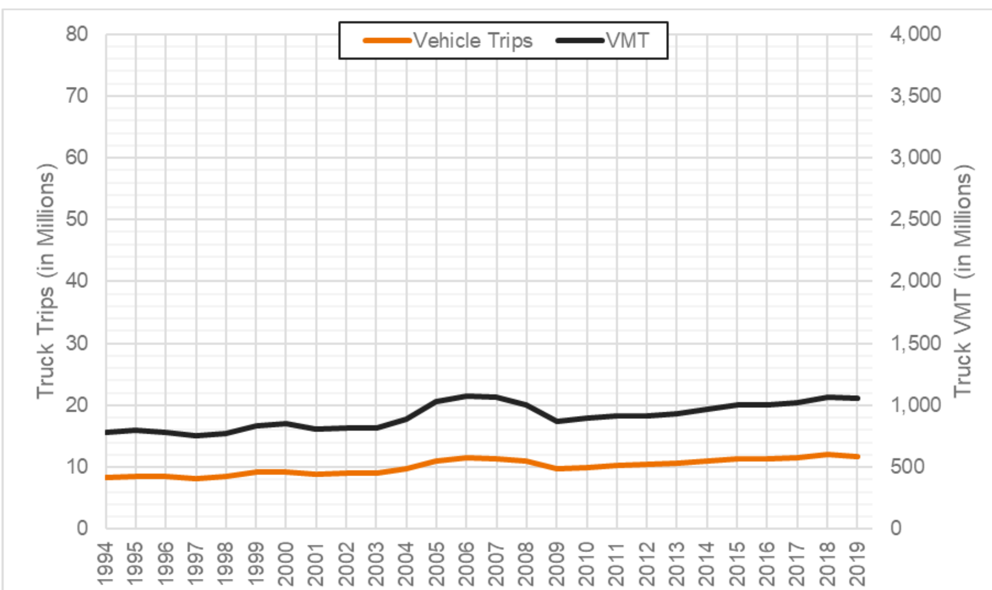
Notes: (1) An asterisk (*) denotes a toll increase year.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

Figure 12: Historical Annual Car Toll Trips and VMT, 1994 through 2019



Notes: (1) Toll increases occurred: each January from 1995 through 1999, January 2007, October 2009, January 2012, and each January from 2014 through 2019.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented

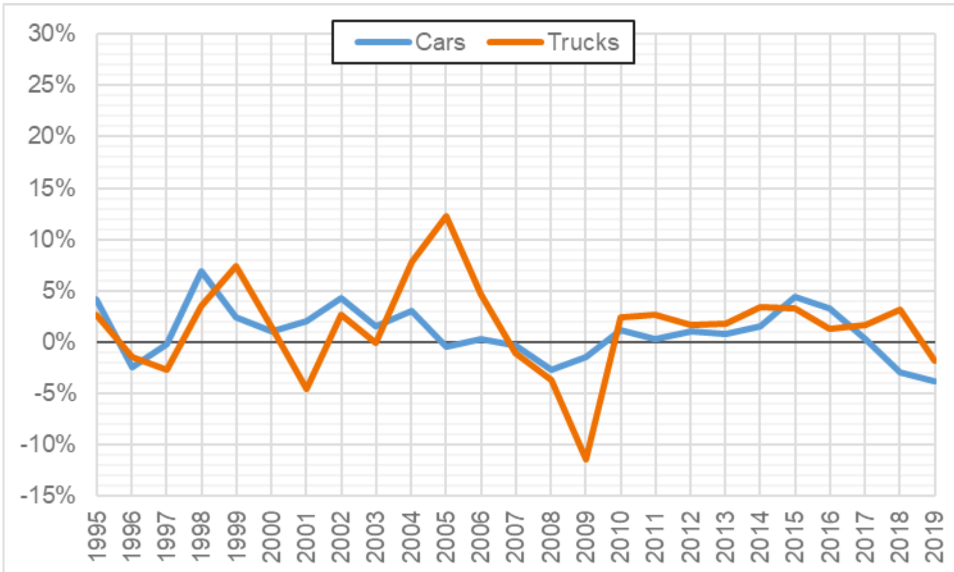
Figure 13: Historical Annual Truck Toll Trips and VMT, 1994 through 2019



Notes: (1) Toll increases occurred: each January from 1995 through 1999, January 2007, October 2009, January 2012, and each January from 2014 through 2019.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

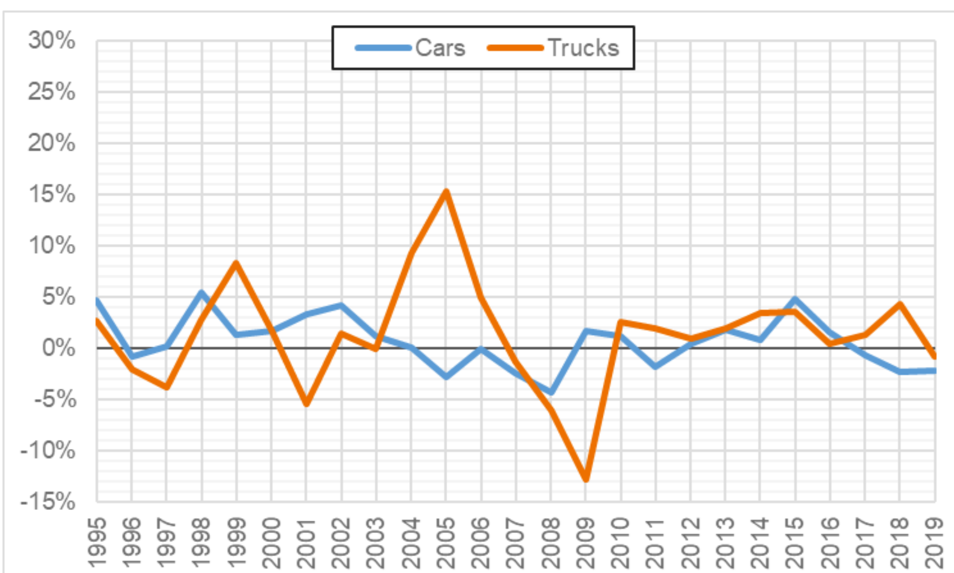
Annual growth in toll trips and VMT between 1994 and 2019 are illustrated in Figure 14 and Figure 15, respectively. Both cars and trucks are represented in each graphic.

Figure 14: Annual Trip Growth by Vehicle Class, 1995 through 2019



Notes: (1) Toll increases occurred: each January from 1995 through 1999, January 2007, October 2009, January 2012, and each January from 2014 through 2019.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

Figure 15: Annual VMT Growth by Vehicle Class, 1995 through 2019



Notes: (1) Toll increases occurred: each January from 1995 through 1999, January 2007, October 2009, January 2012, and each January from 2014 through 2019.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

5.3 HISTORICAL TOLL REVENUE

Table 14 illustrates annual toll revenue and corresponding revenue growth from 1994 through 2019. From 1994 through 2000, the Turnpike experienced an average annual growth in total toll revenue of approximately 11 percent. From 1995 to 1999, tolls were increased each year, with an average toll rate increase of 69.9 percent for cars and 60.8 percent (on average) for trucks; therefore, this was the period with the most substantial toll revenue growth, with an average annual growth rate of about 14.7 percent and total revenue growth of 73 percent. From 2001 through 2010, total revenue grew at a slower average annual rate of 3.2 percent; it is important to note that in addition to the decline in vehicle travel between 2007 and 2009 due to the economic recession, there were no toll rate increases between 2000 and 2006, which contributed to the relatively flat revenue growth. Further, a temporary truck toll rate reduction of some two percent to 57 percent – depending on the truck vehicle class – was implemented in 2005 which also impacted revenue. With the implementation of electronic tolling (E-ZPass) in October 2009 and toll rate increases for non-E-ZPass customers, toll revenue in 2010 grew substantially compared to the prior year at approximately 24 percent. With toll rate increases for both cash and E-ZPass customers in January 2012, toll revenue grew 9.3 percent in 2012 compared to 2011. Since 2014, toll rates have increased each year and total toll revenue increased at an average annual rate of 3.6 percent from 2011 through 2019, with the most substantial single-year toll revenue growth during that period of 5.9 percent occurring in 2015. As Table 15 illustrates, revenues for January through October 2020 are down 9.7 percent compared to the same months in 2019. Compared to 2019, 2020 revenue was at its lowest in a single month in April, when the total monthly revenue was 34.9 percent below April 2019 monthly revenue. This corresponds with the initial onset of the COVID-19 pandemic and the release of statewide stay-at-home orders on March 22 which required Ohioans to stay at home except in the event they must leave for essential activities. These orders remained in place throughout the month of April.

Table 14: Historical Toll Revenue (in Millions), 1994 through 2019

Year	Toll Revenue	Growth
1994	$94.4	
1995*	$102.0	8.0%
1996*	$118.8	16.5%
1997*	$138.6	16.7%
1998*	$156.2	12.7%
1999*	$176.4	13.0%
2000	$176.8	0.2%
2001	$174.3	-1.4%
2002	$179.2	2.8%
2003	$180.0	0.4%
2004	$189.7	5.4%
2005	$179.1	-5.6%
2006	$183.9	2.7%
2007*	$198.2	7.7%
2008	$187.5	-5.4%
2009*	$187.3	-0.1%
2010	$232.2	24.0%
2011	$231.0	-0.5%
2012*	$252.5	9.3%
2013	$254.6	0.8%
2014*	$264.6	3.9%
2015*	$280.2	5.9%
2016*	$288.4	2.9%
2017*	$295.8	2.6%
2018*	$306.0	3.5%
2019*	$306.6	0.2%

Notes: (1) An asterisk (*) denotes a toll increase year.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

Table 15: Potential Monthly Revenue (in Thousands), January 2018 through October 2020

Month	2018	% Change	2019	% Change	2020
Jan	$21,455	0.7%	$21,610	3.8%	$22,425
Feb	$20,169	2.0%	$20,565	4.2%	$21,419
Mar	$24,693	-0.4%	$24,584	-10.6%	$21,988
Apr	$24,621	1.9%	$25,098	-34.9%	$16,329
May	$27,443	0.4%	$27,548	-26.0%	$20,392
Jun	$28,606	-0.7%	$28,412	-12.7%	$24,802
Jul	$29,766	1.0%	$30,054	-8.6%	$27,471
Aug	$30,667	-0.2%	$30,621	-7.9%	$28,196
Sep	$25,904	0.2%	$25,963	1.0%	$26,210
Oct	$26,732	1.1%	$27,021	-0.6%	$26,865
Nov	$24,483	-2.5%	$23,883		
Dec	$22,991	3.8%	$23,866		
Total	**$307,531**	**0.6%**	**$309,224**	**-9.7%**	**$236,098**

Note: Total Percent Change in 2020 compares January through October 2020 to January through October 2019

Table 16 illustrates the relative growth in toll revenue for the periods of 1994 through 2000, 2001 through 2010, 2008 through 2012, 2011 through 2019, and the first 10 months of 2020. Total toll revenue growth is provided in addition to car revenue and truck revenue growth.

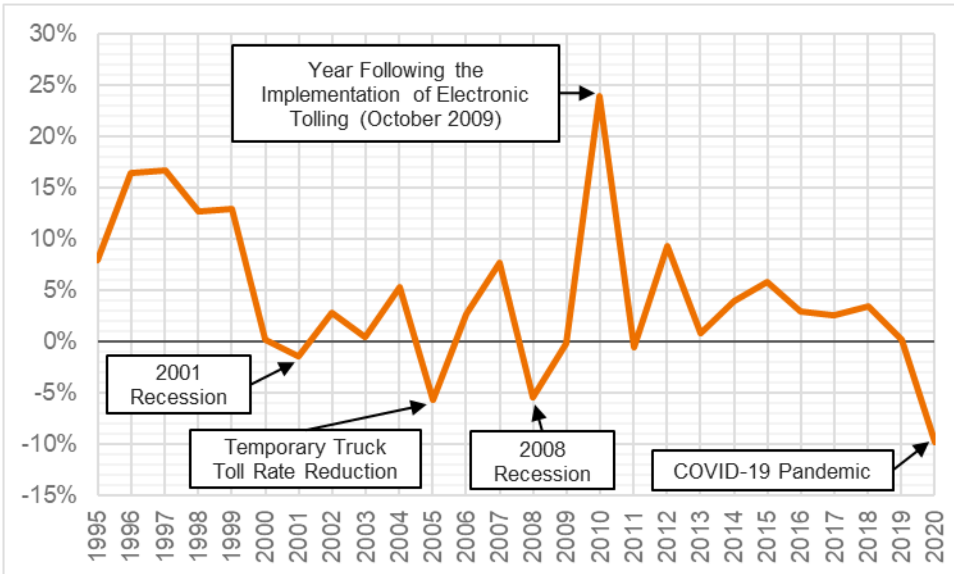
Table 16: Average Annual Growth in Toll Revenue; 1994-2000, 2001-2010, 2008-2012, 2011-2019, and 2020 through the Month of October

Year	Growth in Toll Revenue		
	Cars	Trucks	Total
1994-2000	12.5%	10.1%	11.0%
2001-2010	4.1%	2.6%	3.2%
2008-2012	9.3%	6.5%	7.7%
2011-2019	2.5%	4.5%	3.6%
2020*	-25.6%	1.2%	-9.7%

Notes: (1) Asterisk (*) denotes that January through October 2020 is compared to January through October 2019.
(2) Economic recessions occurred in 2001 and between December 2007 and June 2009.
(3) The current economic recession – brought on by the COVID-19 pandemic – began in February 2020. The recession and pandemic are ongoing as of the publication of this report.

Total annual growth in revenue between 1994 and 2019 is illustrated in Figure 16.

Figure 16: Annual Total Toll Revenue Growth Over Previous Year, 1995-2020



5.4 HISTORICAL REVENUE BY VEHICLE CLASS

Table 17 illustrates annual revenue by vehicle class from 1994 through 2019. From 1994 to 2000, the Turnpike experienced an average annual growth of about 12.5 percent in passenger car toll revenue. During the same period, the average annual growth in commercial truck revenue was approximately 10.1 percent. From 2001 to 2010, passenger car revenue grew at an annual rate of 4.1 percent, and commercial trucks experienced an average annual revenue growth of 2.6 percent. Between 2011 and 2019, revenue from passenger cars increased at an annual rate of 2.5 percent. During the same period, commercial truck revenue increased by an average annual rate of about 4.5 percent.

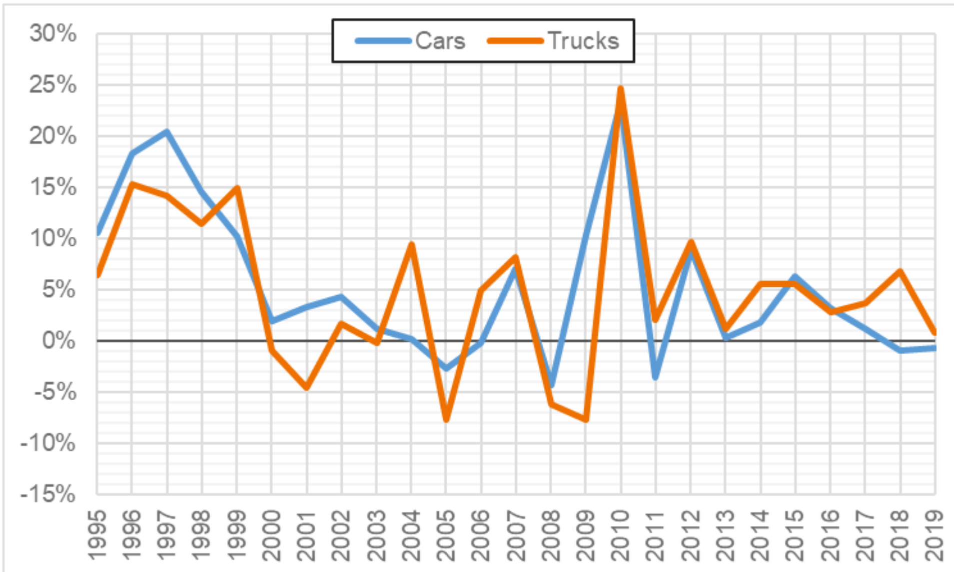
Table 17: Historical Revenue (in Millions) by Vehicle Class, 1994 through 2019

Year	Revenue			
	Cars	Growth	Trucks	Growth
1994	$35.7		$58.7	
1995*	$39.5	10.6%	$62.5	6.4%
1996*	$46.7	18.3%	$72.1	15.3%
1997*	$56.3	20.4%	$82.3	14.2%
1998*	$64.5	14.6%	$91.7	11.4%
1999*	$71.0	10.1%	$105.4	15.0%
2000	$72.4	1.9%	$104.4	-0.9%
2001	$74.7	3.3%	$99.6	-4.6%
2002	$77.9	4.3%	$101.3	1.7%
2003	$78.8	1.2%	$101.2	-0.1%
2004	$79.0	0.2%	$110.7	9.5%
2005	$76.9	-2.6%	$102.2	-7.7%
2006	$76.8	-0.2%	$107.2	4.9%
2007*	$82.2	7.1%	$116.0	8.2%
2008	$78.7	-4.3%	$108.9	-6.1%
2009*	$86.8	10.3%	$100.5	-7.7%
2010	$107.0	23.2%	$125.2	24.6%
2011	$103.2	-3.5%	$127.8	2.1%
2012*	$112.4	8.9%	$140.1	9.6%
2013	$112.8	0.3%	$141.8	1.2%
2014*	$114.9	1.8%	$149.8	5.6%
2015*	$122.2	6.4%	$158.0	5.5%
2016*	$126.1	3.2%	$162.4	2.8%
2017*	$127.5	1.2%	$168.3	3.6%
2018*	$126.4	-0.9%	$179.7	6.8%
2019*	$125.4	-0.7%	$181.2	0.8%

Notes: (1) An asterisk (*) denotes a toll increase year.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

Annual growth in car and truck revenue between 1994 and 2019 are illustrated in Figure 17.

Figure 17: Annual Toll Revenue Growth by Vehicle Class, 1995 through 2019



Notes: (1) Toll increases occurred: each January from 1995 through 1999, January 2007, October 2009, January 2012, and each January from 2014 through 2019.
(2) In 2005, a truck toll reduction was implemented.
(3) In October 2009, E-ZPass was implemented.

5.5 DISTRIBUTION OF CURRENT TRAFFIC AND REVENUE BY EXIT POINT AND BY ENTRY/EXIT PAIR

The Turnpike currently has 31 tolling points over its 241-mile length where drivers may enter or exit. Upon exit, a toll is paid based on the distance traveled, vehicle class, and payment type (E-ZPass or non-E-ZPass). Annual 2019 traffic and revenue by entry and exit point was compiled and sorted into the top ten toll locations (i.e., exit points) in terms of total vehicle trips, VMT, and toll revenues; these are shown in Table 18, Table 19, and Table 20, respectively. The eastern terminus (Exit 239) and the Niles-Youngstown exit at Route 80 (Exit 218) are the two most popular tolling points in terms of total traffic (trips), with over four million toll-paying vehicles at each location in 2019. Further, the top ten most popular exit points are used by almost two-thirds of all Turnpike trips. In terms of VMT, the two Turnpike endpoints (the western terminus Exit 2 and the eastern terminus Exit 239) account for over 29 percent of total Turnpike VMT, indicating that there are a large number of vehicles making statewide trips on the Turnpike. In terms of toll revenue, the western end of the Turnpike (Exit 2) collects over 20 percent of total toll revenue – significantly more than any other location – indicating that there is a relatively high proportion of long-distance and truck trips exiting at this location compared to the other 30 Turnpike tolling points. The top ten toll locations in terms of toll revenue collect more than 79 percent of total toll revenue on the Turnpike.

Table 18: Top Ten Exit Points in Terms of Total Trips, 2019

Rank	Exit Name	Exit Milepost	2019 Existing Trips (Millions)	% of Total Trips	% Cars	% Trucks
1	Eastgate	239	4.4	8.4%	7.9%	10.2%
2	Niles-Youngstown	218	4.2	7.9%	6.6%	12.6%
3	Westgate	2	3.7	7.1%	4.6%	15.7%
4	Streetsboro	187	3.6	6.9%	7.4%	4.9%
5	Strongsville-Cleveland	161	3.6	6.8%	8.0%	2.9%
6	Cleveland	173	3.3	6.2%	6.8%	4.4%
7	Akron	180	3.2	6.0%	7.0%	2.8%
8	Stony Ridge-Toledo	71	3.1	5.9%	4.5%	10.8%
9	Lorain-Elyria	145	3.0	5.8%	6.8%	2.3%
10	Perrysburg-Toledo	64	3.0	5.7%	5.7%	5.8%
Other			17.4	33.2%	34.8%	27.6%

Note: All trips/traffic volumes shown herein are two-way trips between the entry and exit points.

Table 19: Top Ten Exit Points in Terms of Total VMT, 2019

Rank	Exit Name	Exit Milepost	2019 Existing VMT (Millions)	% of Total VMT	% Cars	% Trucks
1	Westgate	2	524.9	17.6%	13.3%	25.4%
2	Eastgate	239	351.6	11.8%	12.5%	10.6%
3	Niles-Youngstown	218	330.7	11.1%	8.3%	16.2%
4	Stony Ridge-Toledo	71	276.6	9.3%	7.8%	11.9%
5	Perrysburg-Toledo	64	204.7	6.9%	7.7%	5.4%
6	N. Ridgeville-Cleveland	151	133.3	4.5%	4.7%	4.1%
7	Lorain Co. West	142	126.7	4.2%	4.6%	3.7%
8	Strongsville-Cleveland	161	118.7	4.0%	5.2%	1.7%
9	Cleveland	173	117.6	3.9%	4.4%	3.1%
10	Streetsboro	187	116.9	3.9%	4.8%	2.3%
Other			680.2	22.8%	26.6%	15.8%

Note: All VMT volumes shown herein are two-way VMT volumes between the entry and exit points.

Table 20: Top Ten Exit Points in Terms of Total Revenue, 2019

Rank	Exit Name	Exit Milepost	2019 Existing Revenue (Millions)	% of Total Revenue	% Cars	% Trucks
1	Westgate	2	$63.9	20.7%	12.9%	26.0%
2	Niles-Youngstown	218	$39.9	12.9%	8.3%	16.1%
3	Eastgate	239	$34.2	11.1%	12.3%	10.2%
4	Stony Ridge-Toledo	71	$32.0	10.4%	8.3%	11.8%
5	Perrysburg-Toledo	64	$19.7	6.4%	7.9%	5.3%
6	N. Ridgeville-Cleveland	151	$13.4	4.3%	4.8%	4.0%
7	Lorain Co. West	142	$12.5	4.0%	4.8%	3.5%
8	Cleveland	173	$11.2	3.6%	4.4%	3.1%
9	Streetsboro	187	$9.9	3.2%	4.7%	2.1%
10	Strongsville-Cleveland	161	$9.3	3.0%	4.9%	1.7%
Other			$63.2	20.5%	26.5%	16.3%

Note: All revenues shown herein are total potential revenues from two-way trips between the entry and exit points.

Table 21 shows the ten most popular entry/exit movements by traffic volume (trips). The most popular entry/exit movements in terms of trips are typically shorter trips in more suburban areas. Table 22 presents the entry/exit movements that produce the most VMT, and Table 23 shows the entry/exit movements that produce the most toll revenue. It is clear that trips between Indiana and I-80 (i.e., between Exit 2 and Exit 218) and full-length Turnpike trips (i.e., traveling between Exit 2 and Exit 239) produce the most VMT and, consequently, the most revenue. Note that in each table, all values shown represent two-way values of either trips, VMT, or revenue *between* entry and exit points.

Table 21: Top Ten Entry/Exit Movements in Terms of Total Trips, 2019

Rank	Entry/Exit Movement	Approx. Distance (Miles)	2019 Existing Trips (Millions)	% of Total Trips	% Cars	% Trucks
1	Lorain-Elyria<>N. Ridgeville-Cleveland (145 - 151)	6	2.6	5.0%	6.1%	1.2%
2	Streetsboro<>Niles-Youngstown (187 - 218)	31	1.8	3.4%	3.6%	2.8%
3	Strongsville-Cleveland<>Akron (161 - 180)	19	1.6	3.1%	3.7%	0.8%
4	Niles-Youngstown<>Eastgate (218 - 239)	21	1.6	3.0%	2.7%	4.1%
5	Cleveland<>Akron (173 - 180)	7	1.5	2.9%	3.5%	0.7%
6	Youngstown-Poland<>Eastgate (234 - 239)	5	1.4	2.6%	2.9%	1.9%
7	Lorain-Elyria<>Strongsville-Cleveland (145 - 161)	16	1.3	2.5%	3.0%	0.7%
8	Westgate<>Niles-Youngstown (2 - 218)	216	1.2	2.3%	0.9%	6.8%
9	Streetsboro<>Eastgate (187 - 239)	52	1.2	2.2%	2.3%	2.2%
10	Youngstown<>Eastgate (232 - 239)	7	1.0	1.9%	1.7%	2.7%
Other			37.3	71.1%	69.6%	76.1%

Note: All trips/traffic volumes shown herein are two-way trips between the entry and exit points.

Table 22: Top Ten Entry/Exit Movements in Terms of Total VMT, 2019

Rank	Entry/Exit Movement	Approx. Distance (Miles)	2019 Existing VMT (Millions)	% of Total VMT	% Cars	% Trucks
1	Westgate<>Niles-Youngstown (2 - 218)	216	258.5	8.7%	4.3%	16.6%
2	Westgate<>Eastgate (2 - 239)	237	227.9	7.6%	6.8%	9.1%
3	Stony Ridge-Toledo<>Eastgate (71 - 239)	168	137.2	4.6%	4.3%	5.2%
4	Westgate<>Lorain Co. West (2 - 142)	140	118.5	4.0%	3.8%	4.4%
5	Stony Ridge-Toledo<>Niles-Youngstown (71 - 218)	147	102.3	3.4%	2.1%	5.9%
6	Westgate<>N. Ridgeville-Cleveland (2 - 151)	149	97.2	3.3%	2.7%	4.3%
7	Perrysburg-Toledo<>Eastgate (64 - 239)	175	71.3	2.4%	2.8%	1.6%
8	Streetsboro<>Eastgate (187 - 239)	52	63.5	2.1%	2.6%	1.3%
9	Stony Ridge-Toledo<>N. Ridgeville-Cleveland (71 - 151)	80	57.6	1.9%	1.9%	1.9%
10	Streetsboro<>Niles-Youngstown (187 - 218)	31	56.3	1.9%	2.4%	1.0%
Other			1791.6	60.1%	66.3%	48.7%

Note: All VMT volumes shown herein are two-way VMT volumes between the entry and exit points.

Table 23: Top Ten Entry/Exit Movements in Terms of Total Revenue, 2019

Rank	Entry/Exit Movement	Approx. Distance (Miles)	2019 Existing Revenue (Millions)	% of Total Revenue	% Cars	% Trucks
1	Westgate<>Niles-Youngstown (2 - 218)	216	$35.5	11.5%	4.2%	16.5%
2	Westgate<>Eastgate (2 - 239)	237	$24.3	7.9%	6.4%	8.9%
3	Stony Ridge-Toledo<>Eastgate (71 - 239)	168	$14.8	4.8%	4.4%	5.0%
4	Stony Ridge-Toledo<>Niles-Youngstown (71 - 218)	147	$13.6	4.4%	2.1%	5.9%
5	Westgate<>Lorain Co. West (2 - 142)	140	$12.4	4.0%	3.7%	4.2%
6	Westgate<>N. Ridgeville-Cleveland (2 - 151)	149	$10.9	3.5%	2.6%	4.2%
7	Perrysburg-Toledo<>Eastgate (64 - 239)	175	$6.4	2.1%	2.9%	1.5%
8	Westgate<>Stony Ridge-Toledo (2 - 71)	69	$6.4	2.1%	0.3%	3.3%
9	Stony Ridge-Toledo<>N. Ridgeville-Cleveland (71 - 151)	80	$6.1	2.0%	2.1%	1.9%
10	Perrysburg-Toledo<>Niles-Youngstown (64 - 218)	154	$5.7	1.8%	1.4%	2.2%
Other			$173.2	56.0%	69.9%	46.5%

Note: All revenues shown herein are total potential revenues from two-way trips between the entry and exit points.

5.6 DISTRIBUTION OF TRAFFIC AND REVENUE BY REGION

This section describes annual trip, VMT, and toll revenue growth by geographic region. The Turnpike is split into three distinct Regions, with a separate fourth category specifically for “long-distance” trips, described as follows from west to east:

1) The **Western Region** ranges for approximately 92 miles from the Indiana State Line to Fremont – Port Clinton, spanning Interchanges 2 through 91.

2) The **Central Region** ranges for 96 miles from Sandusky – Bellevue to Streetsboro, spanning Interchanges 110 through 187.

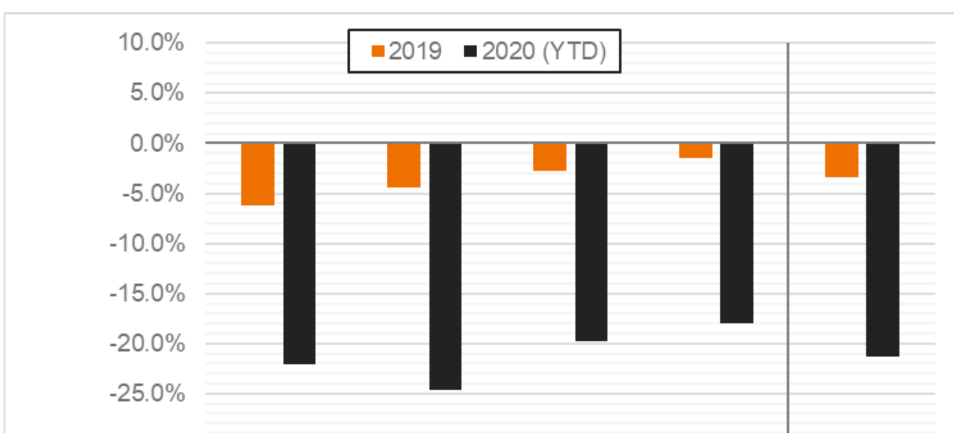
3) The **Eastern Region** ranges for approximately 53 miles from Ravenna to the Pennsylvania State Line, spanning Interchanges 193 through 239.

4) **Long-distance** trips on the Turnpike are any trips with a distance greater than 60 miles.

This section illustrates annual trip, VMT, and toll revenue year-over-year growth for each geographic Region (and for long-distance trips) by fiscal year with data from January 2018 through October 2020 (most recent data available).

Figure 18 illustrates annual total trip growth by Region for all vehicle classes. Total trips declined between 2018 and 2019 across all Regions and declined even more drastically in 2020 as a direct result of the COVID-19 pandemic.

Figure 18: Trip Growth by Region for All Vehicle Classes, 2019 and January through October 2020

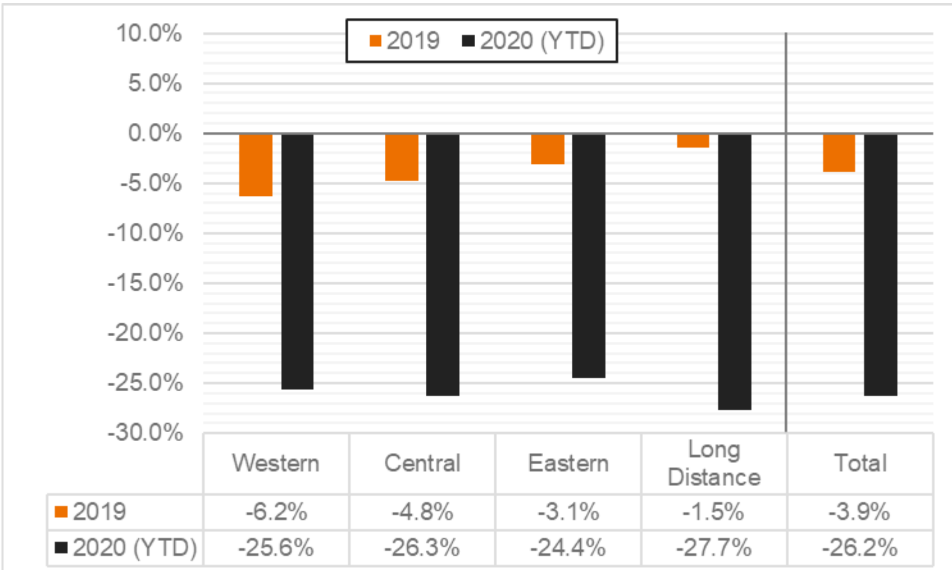


	Western	Central	Eastern	Long Distance	Total
2019	-6.1%	-4.4%	-2.7%	-1.5%	-3.4%
2020 (YTD)	-22.1%	-24.7%	-19.8%	-18.0%	-21.3%

Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

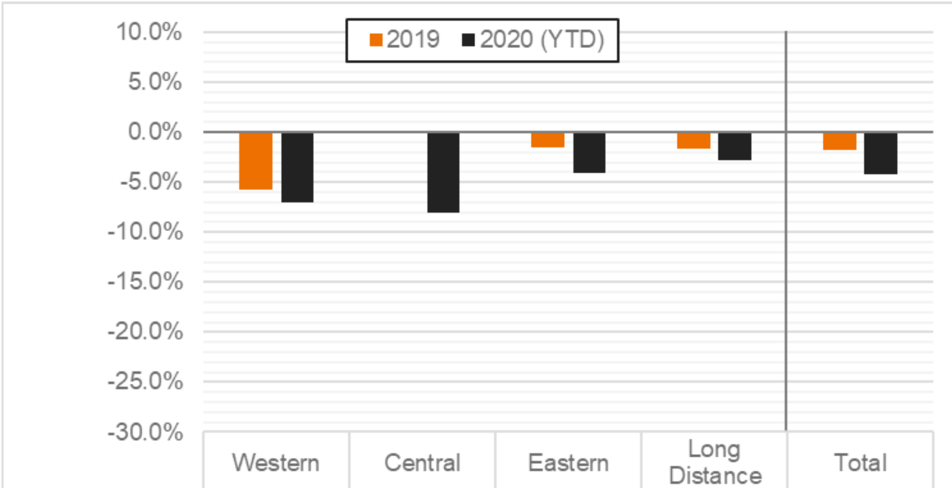
Figure 19 and Figure 20 illustrate annual car and truck trip growth by Region, respectively. Car trips declined between 2018 and 2019 across all Regions, with the largest deficit occurring in the Western Region. Truck trips declined between 2018 and 2019 across all Regions except the Central Region, where truck trips grew by 0.2 percent in 2019 compared to the prior year. Car and truck trips declined even more drastically in 2020 as a direct result of the COVID-19 pandemic, though car traffic was impacted more than truck traffic.

Figure 19: Trip Growth by Region for Cars, 2019 and January through October 2020



Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

Figure 20: Trip Growth by Region for Trucks, 2019 and January through October 2020

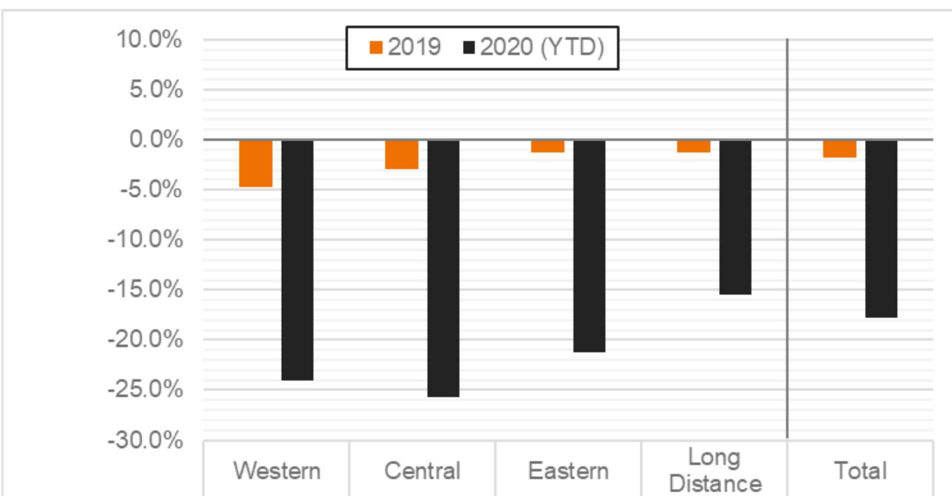


	Western	Central	Eastern	Long Distance	Total
2019	-5.7%	0.2%	-1.5%	-1.6%	-1.8%
2020 (YTD)	-7.0%	-8.1%	-4.0%	-2.9%	-4.3%

Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

Figure 21 illustrates annual total VMT growth by Region for all vehicle classes. Total VMT declined between 2018 and 2019 across all Regions and declined even more drastically in 2020 as a direct result of the COVID-19 pandemic.

Figure 21: VMT Growth by Region for All Vehicle Classes, 2019 and January through October 2020

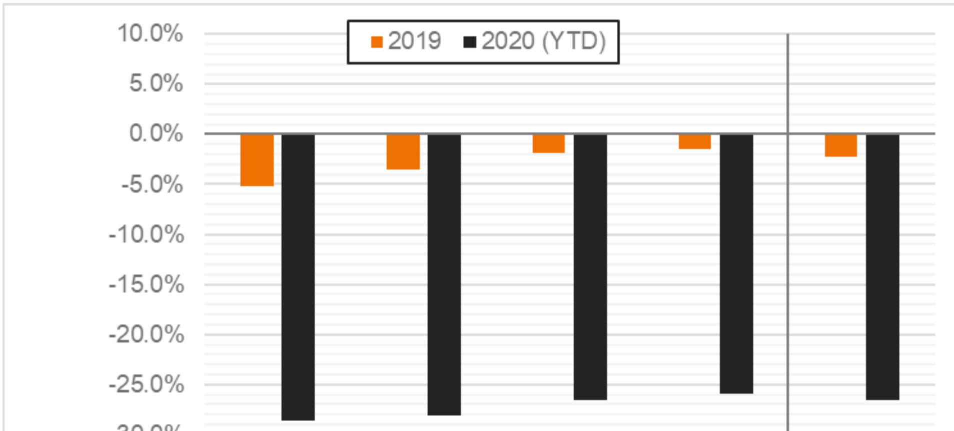


	Western	Central	Eastern	Long Distance	Total
2019	-4.8%	-3.0%	-1.3%	-1.3%	-1.7%
2020 (YTD)	-24.0%	-25.7%	-21.2%	-15.5%	-17.8%

Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

Figure 22 and Figure 23 illustrate annual car and truck VMT growth by Region, respectively. Car VMT declined between 2018 and 2019 across all Regions, with the largest decrease occurring in the Western Region. Truck VMT declined between 2018 and 2019 in the Western and “Long Distance” Regions and increased in the Central and Eastern Regions. Car and truck VMT declined drastically across all Regions in 2020 as a direct result of the COVID-19 pandemic, though car traffic was more impacted than truck traffic.

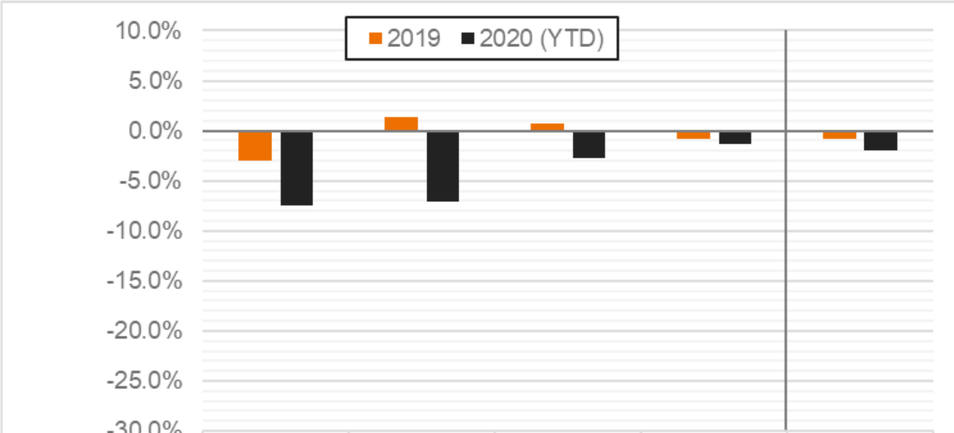
Figure 22: VMT Growth by Region for Cars, 2019 and January through October 2020



	Western	Central	Eastern	Long Distance	Total
2019	-5.2%	-3.5%	-1.9%	-1.5%	-2.2%
2020 (YTD)	-28.6%	-28.2%	-26.5%	-25.9%	-26.6%

Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

Figure 23: VMT Growth by Region for Trucks, 2019 and January through October 2020

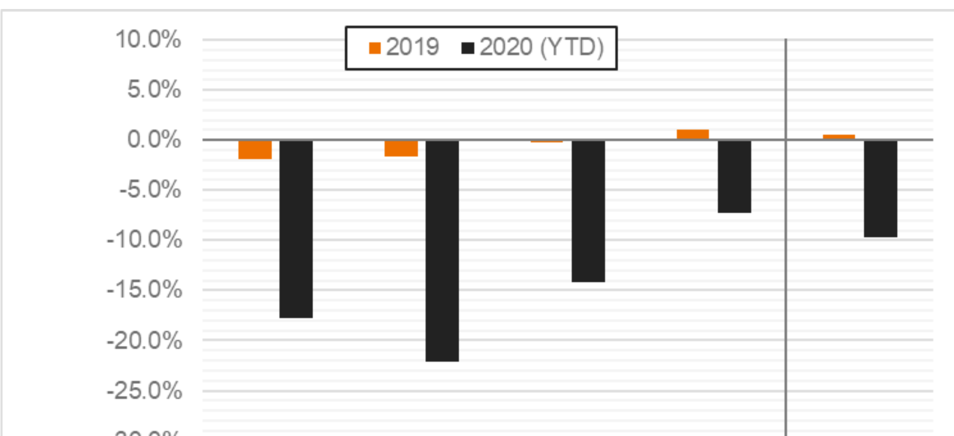


	Western	Central	Eastern	Long Distance	Total
2019	-3.0%	1.3%	0.8%	-0.9%	-0.8%
2020 (YTD)	-7.4%	-7.1%	-2.8%	-1.3%	-1.9%

Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

Figure 24 illustrates annual total toll revenue growth by Region for all vehicle classes. Total revenue increased 0.6 percent overall between 2018 and 2019, but declined modestly in the Western, Central, and Eastern Regions; highlighting the strong relationship between Long Distance trips and overall revenue. Revenue declined more drastically in 2020 as a direct result of the COVID-19 pandemic.

Figure 24: Revenue Growth by Region for All Vehicle Classes, 2019 and January through October 2020

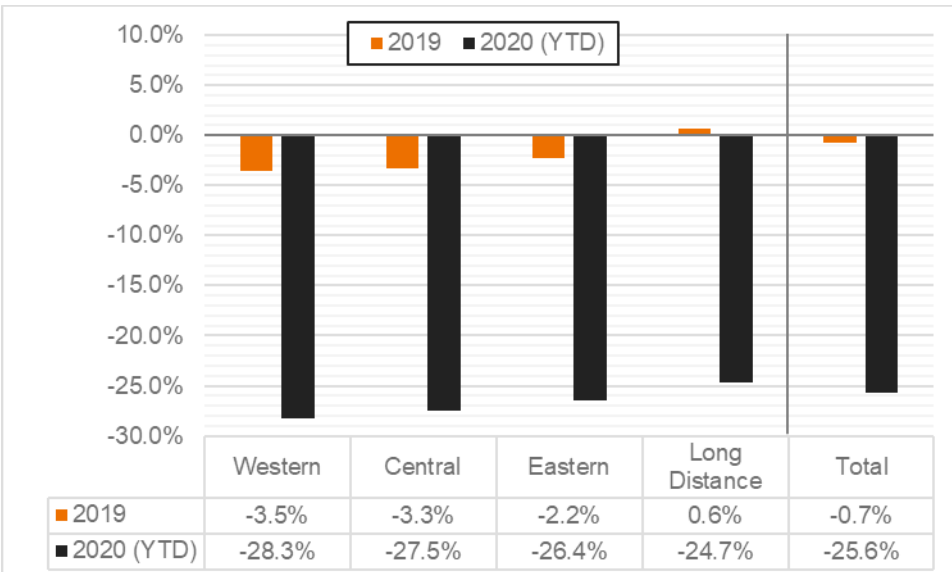


	Western	Central	Eastern	Long Distance	Total
2019	-1.9%	-1.6%	-0.2%	1.1%	0.6%
2020 (YTD)	-17.8%	-22.1%	-14.2%	-7.3%	-9.7%

Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

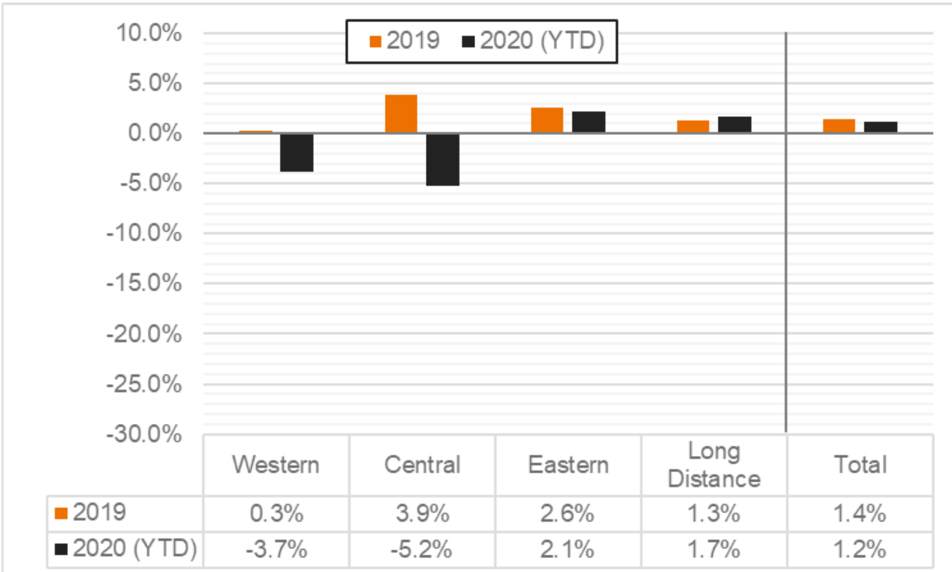
Figure 25 and Figure 26 illustrate annual car and truck revenue growth by Region, respectively. Car revenue declined between 2018 and 2019 across all Regions except in the “Long Distance” Region where revenue increased by 0.6 percent. Truck revenue increased between 2018 and 2019 across all Regions with the largest toll revenue growth of 3.9 percent occurring in the Central Region. In 2020, car revenue declined drastically across all Regions as a direct result of the COVID-19 pandemic. However, truck revenue has rebounded since the initial impact of the pandemic earlier in the year; while 2020 truck revenue is down in the Western and Central Regions compared to 2019, Eastern and “Long Distance” Region truck revenue has increased between 2019 and 2020. As a result, 2020 total truck revenue through October grew 1.2 percent compared to the same 10-month period in 2019.

Figure 25: Revenue Growth by Region for Cars, 2019 and January through October 2020



Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

Figure 26: Revenue Growth by Region for Trucks, 2019 and January through October 2020



Note: 2020 data through October 2020 (most recently full month of data available); 2020 year-to-date (YTD) totals are compared to 2019 totals from the corresponding period (January through October).

5.7 E-ZPASS ADOPTION OVER TIME

Since the implementation of electronic tolling in October 2009, E-ZPass adoption has steadily increased across the Ohio Turnpike customer base as illustrated in Table 24 and Figure 27. Reasons for increased E-ZPass adoption over time on the Turnpike may include:

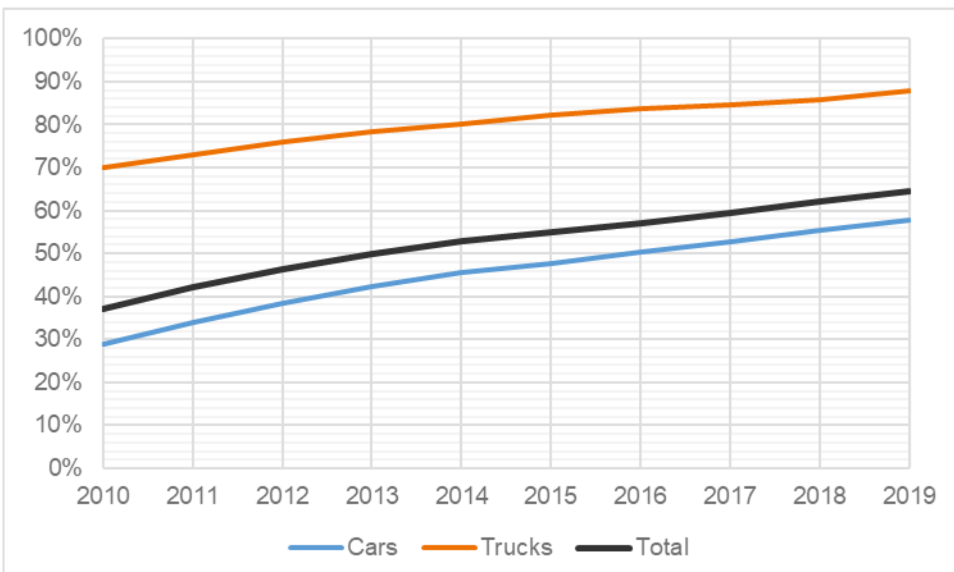
- Faster transactions times at exit plazas on the Turnpike since there is no need to interact with a toll collector or ATPM,
- Toll payment at highway speeds at Open Road Tolling (ORT) toll plazas on other toll roads (the Pennsylvania Turnpike's Gateway toll plaza just east of Ohio provided ORT exclusively to E-ZPass vehicles between 2007 and 2019), and
- Discounted toll rates on both the Ohio Turnpike and other toll roads (such as the Pennsylvania Turnpike).

Truck customers are more likely to use E-ZPass for their toll payment than car customers, with nearly 88 percent of 2019 truck trips compared to nearly 60 percent of 2019 cars trips paying with E-ZPass. This is may be due to trucks getting a greater absolute discount when using E-ZPass; a full-length car trip discount is $6.50 while a full-length Class 5 truck trip discount is $10.75.

Table 24: Historical E-ZPass Market Share of Trips, VMT, and Revenue; 2010-2019

Year	Trips			VMT			Revenue		
	Cars	Trucks	Total	Cars	Trucks	Total	Cars	Trucks	Total
2010	28.8%	69.9%	**37.2%**	30.2%	69.5%	**42.8%**	23.0%	67.0%	**46.7%**
2011	34.1%	73.0%	**42.2%**	35.0%	72.3%	**47.3%**	27.2%	69.8%	**50.7%**
2012	38.4%	75.9%	**46.2%**	39.1%	75.2%	**51.0%**	30.6%	72.7%	**53.9%**
2013	42.2%	78.4%	**49.8%**	42.8%	77.7%	**54.4%**	34.0%	75.4%	**57.1%**
2014	45.5%	80.0%	**52.9%**	46.2%	79.6%	**57.4%**	36.9%	77.3%	**59.8%**
2015	47.6%	82.1%	**54.9%**	48.1%	81.8%	**59.4%**	38.7%	79.8%	**61.9%**
2016	50.2%	83.6%	**57.1%**	50.4%	83.4%	**61.4%**	40.8%	81.7%	**63.8%**
2017	52.8%	84.7%	**59.5%**	53.0%	84.6%	**63.6%**	43.2%	83.0%	**65.9%**
2018	55.5%	85.9%	**62.2%**	55.5%	85.9%	**66.2%**	45.8%	84.4%	**68.5%**
2019	57.9%	87.8%	**64.6%**	57.7%	87.9%	**68.4%**	47.8%	86.7%	**70.9%**

Figure 27: Historical E-ZPass Market Share of Trips



6.0 HISTORICAL OPERATING & MAINTENANCE COSTS

This section discusses the historical operation and maintenance (O&M) expenses of the Turnpike. The major assets maintained by the Commission include:

- 241 miles of Turnpike mainline plus interchange ramps,
- 14 service plazas, configured in pairs at seven separate interchanges that average approximately 30 miles apart over the length of the road,
- 31 toll plazas, including 2 mainline plazas and 29 ramp plazas,
- 3 buildings for administration, telecommunication, and highway patrol, and
- 8 maintenance buildings and facilities.

Historical operating expenditures are shown in Table 25. Overall, Turnpike operating expenses have increased at average annual rate of 0.4 percent from 2010 through 2019. 2011 and 2016 had the biggest changes in O&M costs from the previous year, with 2011 being about 5 percent lower than 2010 (about $5.6 million) and 2016 being about 5 percent higher than 2015 (about $6 million).

Table 25: Historical O&M, 2010-2019 (in Thousands)

Year	Administration and Insurance	Maintenance of Roadway and Structures	Services and Toll Operations	Traffic Control, Safety, Patrol and Communications	Total
2010	$8,737	$37,577	$54,583	$14,989	$115,886
2011	$8,745	$36,132	$50,549	$14,871	$110,297
2012	$9,936	$35,565	$51,266	$14,559	$111,326
2013	$9,293	$35,015	$50,369	$14,040	$108,717
2014	$9,762	$36,702	$50,646	$13,657	$110,767
2015	$10,269	$35,810	$51,911	$13,912	$111,902
2016	$11,177	$38,319	$54,072	$14,399	$117,967
2017	$11,240	$37,936	$56,200	$13,386	$118,762
2018	$11,638	$39,770	$54,503	$13,429	$119,340
2019	$12,689	$39,455	$53,313	$14,391	$119,848

6.1 ADMINISTRATATION

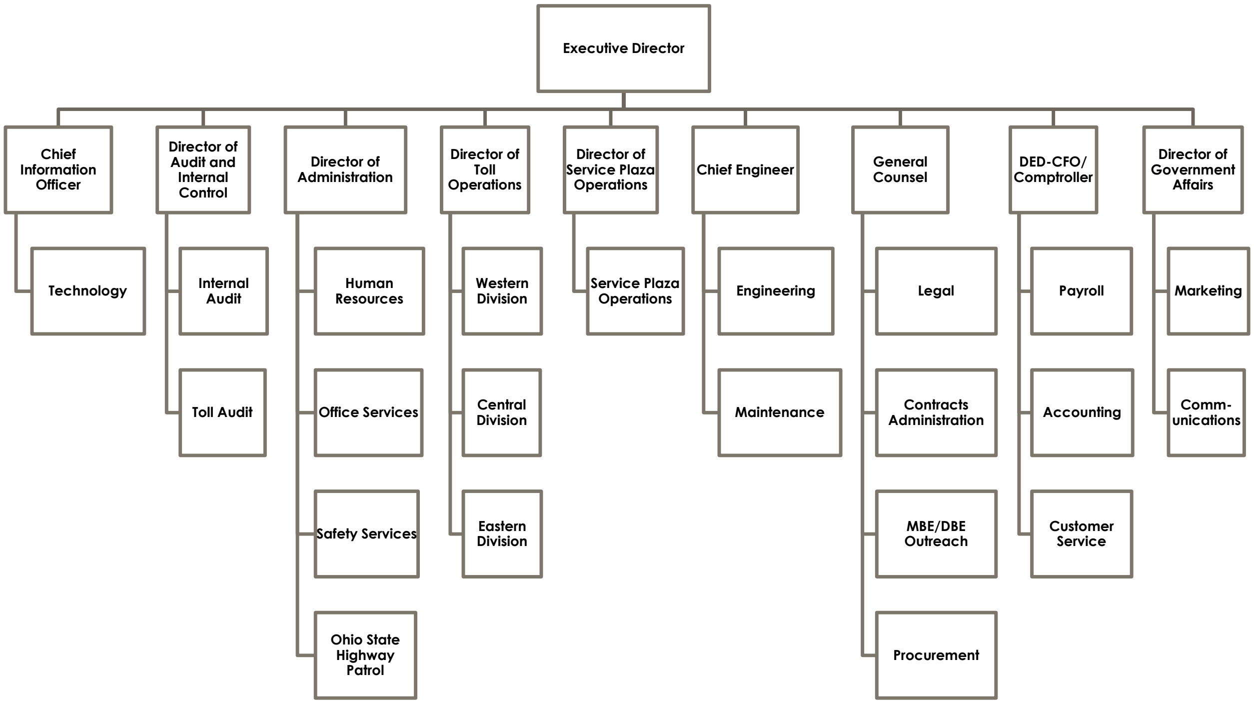
Administration costs include the salaries and benefits of all administrative staff from the following departments:

- Commission members
- Executive
- Legal (includes Risk Management/Right of Way Coordination, Contracts, Workers Compensation and Chief Investigator)
- CFO/Comptroller (includes Accounting, Customer Service Center, Payroll and Procurement)
- Governmental Affairs (includes Marketing and Communications)
- Human Resources
- Office Services
- Technology (Information Systems)
- Internal Auditing

Figure 28 shows the Commission's organizational chart.

Also included in administration costs are third party services such as legal, audit, insurance, marketing, financial, and consulting engineering. Office expenditures, including travel and meeting expenses, dues and subscription fees, office supplies, and other miscellaneous expenses, are also recorded here.

Figure 28: Ohio Turnpike and Infrastructure Commission Organizational Chart



6.2 INSURANCE

Insurance covers insurance premiums for all policies held by the Commission covering the bridges, buildings, property, equipment, as well as other business-related policies.

6.3 MAINTENANCE

Maintenance costs consist of a spectrum of routine and preventive maintenance activities necessary to keep the Turnpike in a state of good repair and provide a safe environment for its customers and employees. General categories under Maintenance include Maintenance Management Personnel, Roadway, and Facility Maintenance Activities (including field personnel), Snow and Ice Control, Equipment, and Other Expenditures, as described in more detail below.

1. O&M Management Personnel costs consist primarily of salaries and benefits for maintenance and engineering management staff that oversee overall maintenance activities, plans maintenance, schedules, and provides guidance to the field personnel. The personnel include several in-house

engineers on staff who oversee overall maintenance activities, plan maintenance schedules, and provide guidance to the field personnel.

2. Roadway Maintenance costs consist primarily of field personnel salaries, benefits, and overtime expenditures as well as materials and third-party services to conduct preventive and routine roadway maintenance. General roadway maintenance items budgeted for on an annual basis and carried out by Turnpike staff include such items as:
    a. Crack sealing and minor pavement repairs,
    b. Bridge and culvert maintenance,
    c. Signage and pavement markings,
    d. Roadside maintenance including mowing, landscaping, vegetation control, and cleaning the Right-of-Way,
    e. Drainage maintenance,
    f. Fence and Guardrail,
    g. Storm water management, and
    h. Environmental monitoring.
3. Facility Maintenance costs include non-personnel expenditures related to building maintenance and repairs, toll plaza lane repairs, landscaping, and mowing. It should be noted that the service plazas' utility costs have been included under Services and Toll Operations, not Facility maintenance.
4. Snow and Ice Control cost mainly includes the material and handling of road salts and other related materials to keep the Turnpike in a state of good repair during the winter.
5. Equipment costs consist of expenses associated with the maintenance of all equipment including light, medium, and heavy-duty trucks, specialized maintenance vehicles, safety equipment, small tools, and supplies.

Other expenditures associated with O&M consist of third-party services, publications and periodicals, office supplies, travel and meeting expenditures, and miscellaneous expenses associated with maintenance personnel.

6.4 TRAFFIC CONTROL, SAFETY, PATROL, AND COMMUNICATIONS

Traffic Control, Safety, Patrol, and Communications costs consist primarily of the Ohio State Highway Patrol unit assigned to the Turnpike and headquartered at the Commission Telecommunication building in Berea.

Other expenses in this line item include telecommunication costs, safety and traffic control, and services to travelers in distress. There are also two additional Highway Patrol posts that are incorporated into maintenance buildings and there is one additional free-standing patrol post at other locations along the Turnpike.

6.5 SERVICE PLAZA AND TOLL OPERATIONS

Service Plaza and Toll Operations costs mainly consist of expenses associated with services provided at Service Plazas and Toll Plazas including plaza personnel and toll collectors’ salaries.

The service plaza expenditures include personnel salaries, benefits, office furniture, supplies, equipment rental, utilities, custodial services, credit card fees, and miscellaneous expenses.

Toll collection costs consist of salaries of toll collectors, credit card fees from toll transactions, transponders, toll ticket costs, maintenance costs of the tolling system, third-party services such as armored car service, and other expenditures associated with toll revenue collections. Costs for running the services and toll plazas are also included here, such as utilities, office supplies, custodial and janitorial services, and other miscellaneous expenses.

7.0 SOCIOECONOMIC CONTEXT AND COVID-19 IMPACTS ON THE OHIO TURNPIKE

This section provides a brief overview of major economic trends relevant to understanding historical traffic growth on Ohio State Highways, as well as a look at recent impacts of the ongoing COVID-19 pandemic. While past performance is not necessarily an indicator of future conditions, this assessment provides context for understanding the performance of key drivers of travel demand in the past, and by extension, for assessing a probably range for future performance of the highway system.

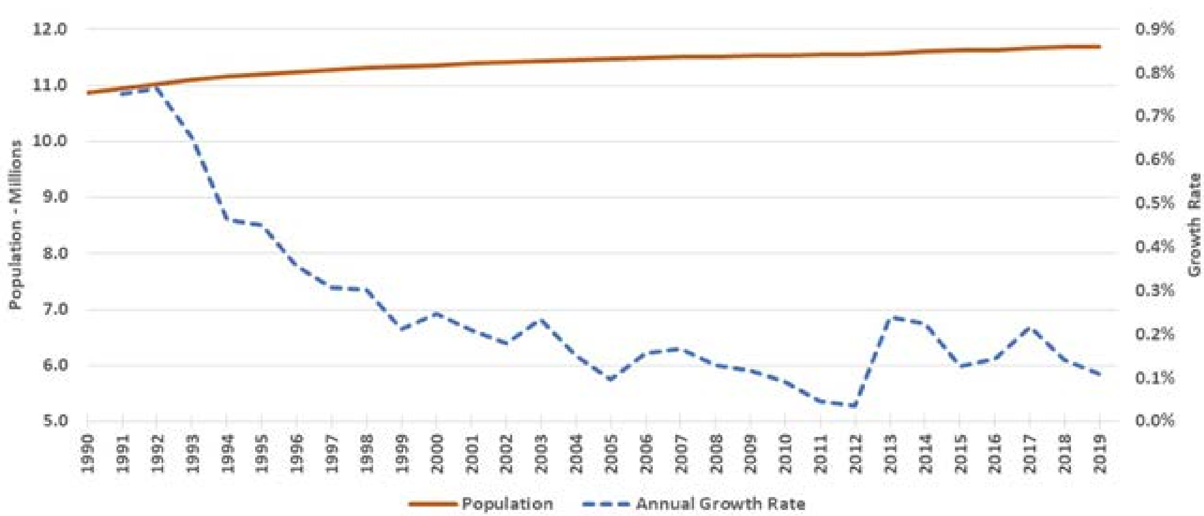
7.1 SOCIOECONOMIC CONTEXT

Historically, there is a level of correlation between traffic and socioeconomic trends. Roadways in high-population areas are more likely to yield higher traffic volumes due to the larger potential customer base. Employment is also positively correlated to traffic as drivers need an income to pay for vehicle costs (such as vehicle price, fuel costs, maintenance costs, and tolls) and people with jobs typically drive to work. The following sections present a summary of recent trends in relevant socioeconomic indicators such as population and employment.

7.1.1 Population

As shown in Figure 29, in the 30 years since 1990 the population of the State of Ohio has grown steadily at an average rate of 0.25 percent per year. Year over year, however, the annual growth rate has decreased from a high of 0.8 percent in 1991 to less than 0.3 percent since 2000. Although this declining population growth rate mirrors the trend observed for the entire U.S., in this period Ohio has consistently grown at approximately half the pace observed for the nation.

Figure 29: State of Ohio Population



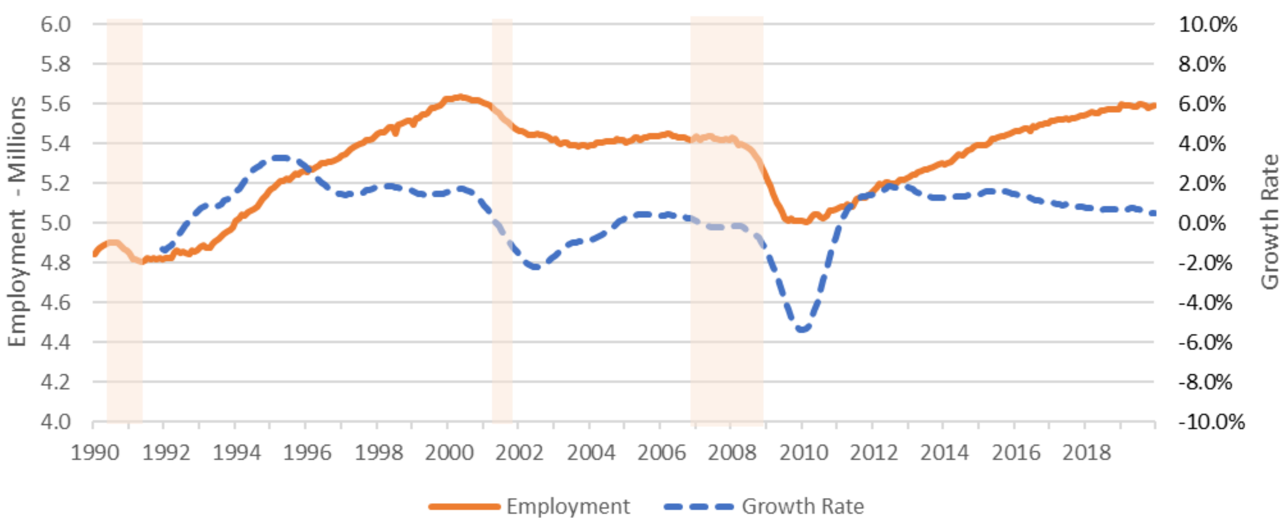
Source: U.S. Census Bureau, Population Division (https://www.census.gov/data/tables/time-series/demo/popest/intercensal-1990-2000-state-and-county-totals.html

7.1.2 Employment

The annual growth Employment in the State of Ohio exhibits cyclical periods of growth and decline, reflecting the national recessionary periods. As shown in Figure 30, over the past 30 years, employment exhibited negative year-over-year growth following recessions in 1991, 2002-2004 and 2008-2010. The highest employment, measured at 5.6 million jobs, was observed in 2000. While employment has grown steadily since 2010, by the end of 2019 it stood at less than 5.6 million.

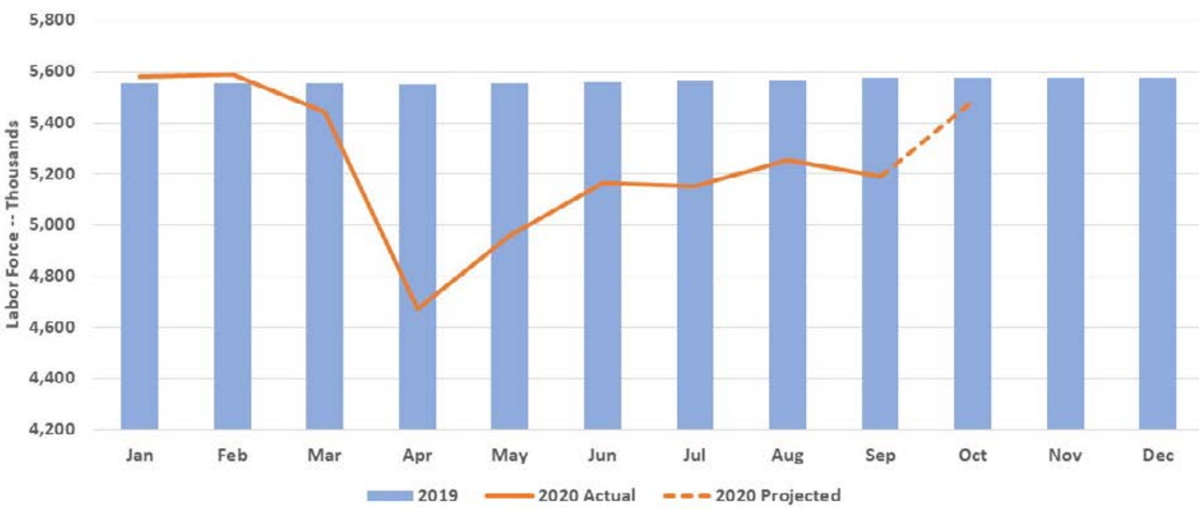
The COVID-19 pandemic of 2020 contracted the Ohio State labor force by nearly a million jobs, to a low in April 2020 of 4.6 million persons. The State appears to be recovering relatively quickly; the U.S. Bureau of Labor Statistics projected the October 2020 labor force at close to 5.5 million persons. It remains to be seen whether the surge in COVID-19 infections experienced in Q4 2020 has slowed down the recovery.

Figure 30: State of Ohio Employment



Source: U.S. Bureau of Labor Statistics (https://data.bls.gov/pdq/SurveyOutputServlet)

Figure 31: Ohio Employment during the COVID-19 Pandemic

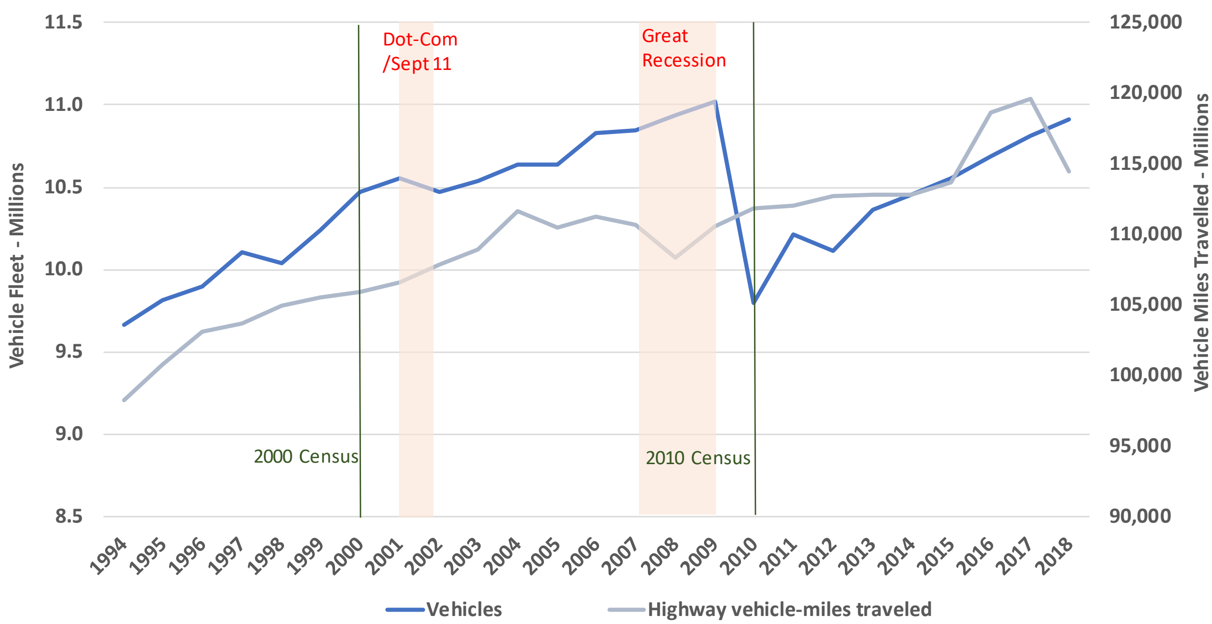


Source: U.S. Bureau of Labor Statistics (https://data.bls.gov/pdq/SurveyOutputServlet)

7.1.3 Vehicle Fleet and Vehicle Miles Traveled

During the 25 years between 1994 and 2018 Ohio vehicle miles traveled (VMT) increased by an average of 0.66 percent per year while the vehicle fleet grew by an average of half a percent per year. As shown in Figure 32, with the exception of the Great Recession in 2007-2009 and decline in 2018 of 4 percent, overall VMT has shown fairly steady growth, consistent with regional data and national experience. The vehicle fleet shows more volatility and is significantly impacted by both recessions, with typical lags in both declines and recovery, and realignments with underlying census data on ten-year cycles.

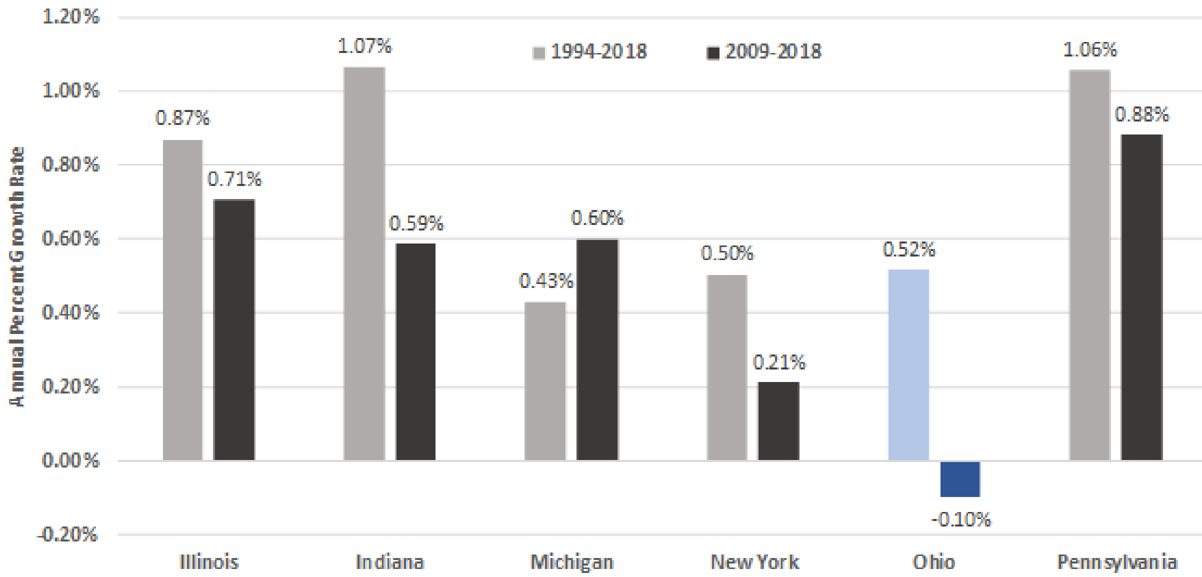
Figure 32: State of Ohio Vehicle Fleet and Vehicle Miles Traveled



Source: U.S. Bureau of Transportation Statistics. National Transportation Statistics. State Highway Travel database https://www.bts.gov/state-highway-travel

Evaluating average growth rates in the total vehicle fleet over multiple economic cycles, Ohio was slightly lower than the regional average over the 25-year cycle and far below the regional average over the past 10-year cycle. Figure 33 provides a comparison in vehicle fleet growth between Ohio and other states in the region with Ohio experiencing average annual growth of 0.52 percent over the past 25 years compared to a regional average of 0.71 percent and an annual average decline of 0.10 percent over the past 10 years compared to a regional average increase of 0.45 percent.

Figure 33: Registered Vehicle Growth Rates for Ohio and Regional States



Source: U.S. Bureau of Transportation Statistics. National Transportation Statistics. State Highway Travel database https://www.bts.gov/state-highway-travel

Although official data is not currently available for 2019 and 2020, the Ohio Bureau of Motor Vehicles statistics indicate an increase in vehicle registrations of 0.4 percent in 2019 over 2018[1] and the Ohio Office of Budget and Management indicates a sharp increase in auto sales tax revenue in July 2020 over the prior year of 25.7 percent. This increase is generally thought to be primarily pent up demand from large declines in auto sales from the start of COVID-19 related economic impacts in late February through May[2].

Based on historical experience and consideration of through trips from states in the region, an annual projected growth rate in the vehicle fleet of between 0 to 0.7 percent would be reasonable with the lower bounds of the range representing a more conservative approach. The longer-term economic impacts from COVID-19 are still being determined but after a sharp decline in early and mid-2020 there is anticipation of a sharper recovery in mid-2021 with projected widespread vaccine availability and extended pent up demand for travel and vehicle replacements and purchases.

7.1.4 Recessionary Cycles and Pandemic

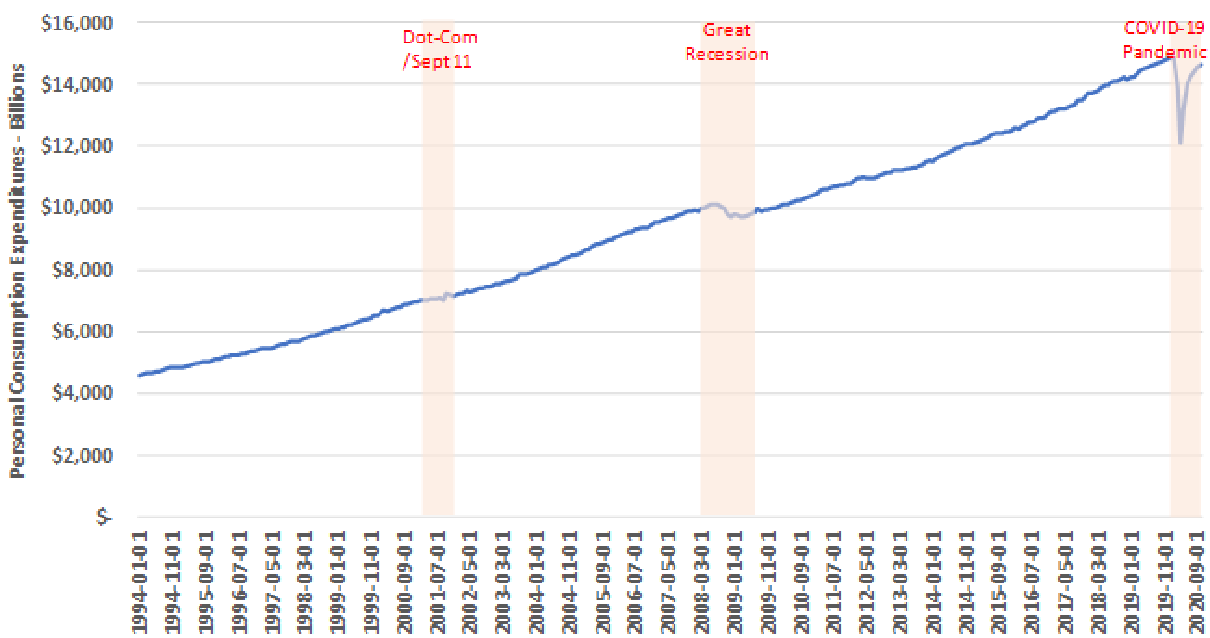
Until the recent pandemic, the Great Recession from December 2007 through June 2009 represented one of the most significant declines in GDP since the Great Depression in the early 1900's. U.S. GDP declined 5.1 percent during the Great Recession. By comparison, the GDP for the second quarter of 2020 declined by 31.4 percent as a result of the pandemic. While initial third quarter GDP information from the U.S. Bureau of Economic Analysis indicates a recovery of 33.1 percent over the second quarter, the net result of 2.9 percent below the third quarter of 2019. GDP growth in the fourth quarter is anticipated to be positive but

[1] Ohio Bureau of Motor Vehicles 2018 and 2019 Transaction and Revenue Statistics Facts & Figures (*https://www.bmv.ohio.gov/more-factfigures.aspx#gsc.tab=0*).
[2] Ohio Office of Budget and Management, Monthly Financial Report, August 10, 2020 (*https://archives.obm.ohio.gov/Files/Budget_and_Planning/Monthly_Financial_Report/2020-08-10_mfr.pdf*).

will continue to lag 2019-year end values. Depending on federal stimulus actions and the duration of current and potential future COVID-19 restrictions, 2021 could result in flat or low economic growth in comparison to 2020 and may remain below 2019 levels.

Figure 34 provides the historical trends in quarterly personal consumption expenditures, which, like GDP, is a strong indicator of overall economic activity. The pandemic has had a significant impact on overall economic performance, but expenditures have rebounded, specifically for online retail and distribution activities which supports growth in freight traffic. The rebound softened in late 2020 with renewed concerns over the spread of COVID-19 and reinstatement of restrictions on economic activities which is anticipated to continue into mid-2021. Upon widespread implementation of a vaccine(s), the recovery is anticipated to be more pronounced with significant expenditures attributed to pent up demand.

Figure 34: U.S. Total Personal Consumption Expenditures



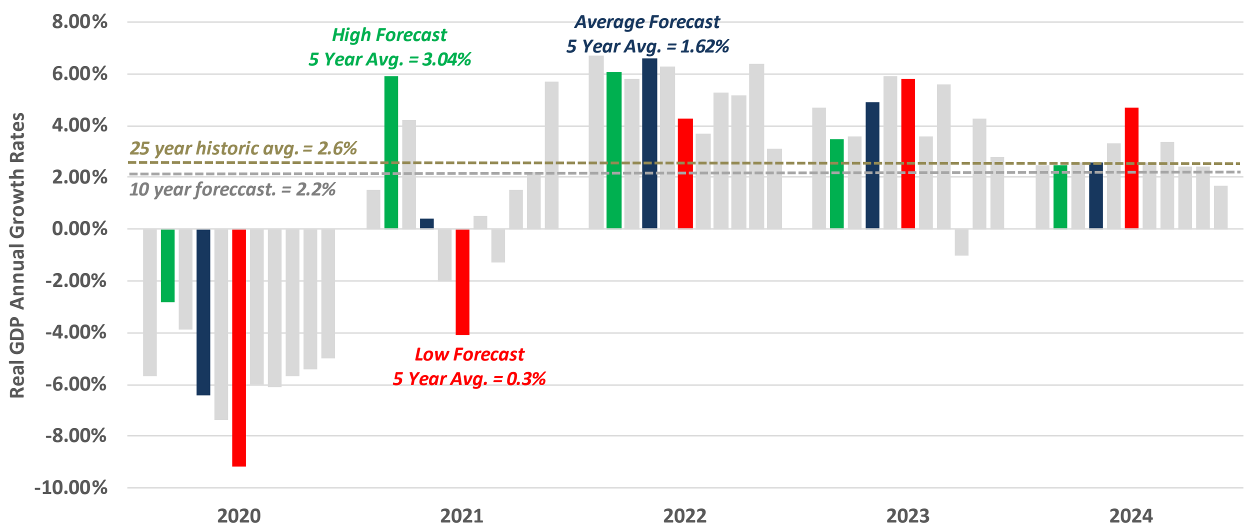
Source: U.S. Bureau of Economic Analysis, Personal Consumption Expenditures, retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PCE, December 8, 2020.

Full recovery from the pandemic will depend on various factors including vaccine adoption rates, federal stimulus support, and general consumer and business market optimism. Interest rates are anticipated to remain low until full economic recovery and continued high rates of unemployment will temper price escalation associated to increasing labor costs.

Figure 35 provides an outlook on potential scenarios for short-term growth rates in real gross domestic product (GDP) over the next five-years as consolidated and developed by Moody's Analytics. The 25-year historical average of 2.6 percent and 10-year forecast outlook from The Livingston Survey of 2.2 percent are provided for comparison purposes. The eleven forecasts range from a pessimistic annual average of 0.3 percent, including a decline of 9.2 percent in 2020, to an optimistic annual average of 3 percent, including an increase of 6.1 percent in 2022. The average of the eleven forecasts is approximately 1.6

percent, 1 percent below the 25-year historical average. The average assumes businesses reopen more slowly in the second quarter of 2021, federal fiscal stimulus measure proves less effective in boosting the economy than expected, and political and economic tensions with China being to rise tempering the post-pandemic recovery.

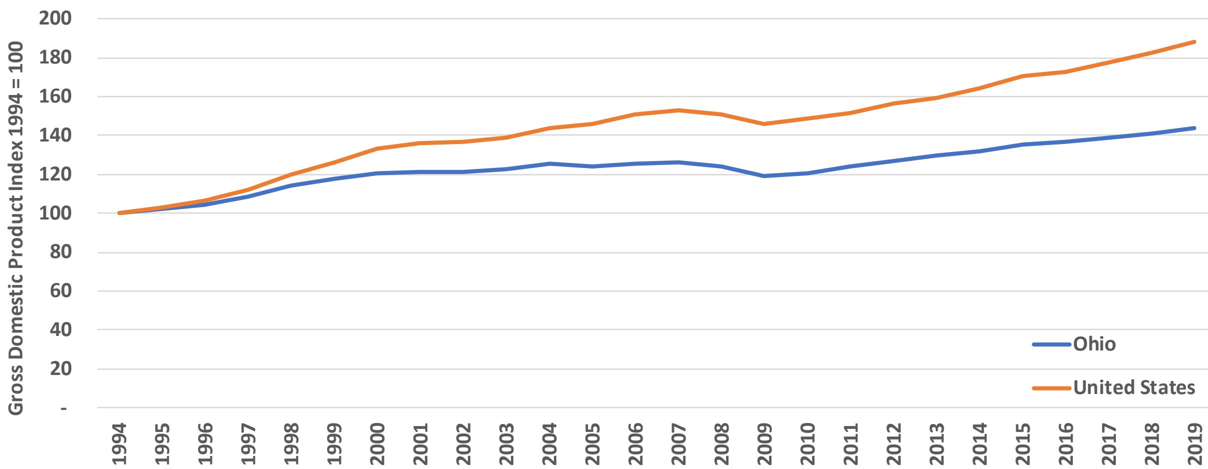
Figure 35: U.S. Real Gross Domestic Product Output



Sources: 10-year forecast – "Livingston Survey". Federal Reserve Bank of Philadelphia. Released June 12, 2020; 25-year historical average - U.S. Bureau of Economic Analysis, U.S. Real Gross Domestic Product, retrieved from BEA Interactive Data Tables – National Income and Product Accounts December 8, 2020; Source: 5-year forecast ranges – Moody's Analytics, U.S. Macroeconomic Outlook Baseline and Alternative Scenarios. Released May 2020.

Over the past 26 years, Ohio has lagged overall U.S. economic growth. Figure 36 compares the index for U.S. Real GDP and Ohio gross state product (GSP). Ohio has averaged an annual rate of growth of 1.58 percent compared to U.S. growth of 2.59 percent over the 26-year period. The gap reduces to an annual rate of growth of 1.91 percent for Ohio compared to 2.58 percent when only considering the last 10-years between 2010 and 2019.

Figure 36: U.S. Gross Domestic Product and Ohio Gross State Product Index



Sources: U.S. Bureau of Economic Analysis, Regional Product Division, retrieved from Interactive Data Tables September 30, 2020.

7.2 COVID-19 CONDITIONS

The following subsections provide relevant context of COVID-19 conditions in the region and recent traffic levels. Assumptions related to estimated traffic recovery were developed based on review of these conditions; the resulting assumptions and estimated ranges of long-term traffic and revenue are discussed further in Section 8.0.

7.2.1 Statewide COVID-19 Closures and Restrictions

The COVID-19 pandemic has had an unprecedented effect on traffic throughout the nation. Its effects can be seen as threefold: government-mandated closures and restrictions and suggested behaviors meant to reduce the spread of the disease; economic fallout from job losses related to these restrictions and behaviors; and long-term behavioral changes that are likely to occur as a large share of the population has shifted to working from home, and may continue to work from home more often than before the pandemic. Closures and restrictions impacting the state of Ohio are discussed below.

The first three cases of COVID-19 in Ohio were confirmed on March 9, 2020; on the same day, a state of emergency was declared with the release of Executive Order 2020-01D. Since declaration of the state of emergency, state departments began implementing measures to slow the spread of the virus, including the prohibition of mass gatherings in the State of Ohio, limited access to Ohio's nursing homes and similar facilities, required health screening for admission to state operated psychiatric hospitals and Ohio Department of Youth Services facilities, and closing all K-12 schools in the State of Ohio. On March 15, state officials ordered the closure of all bars and restaurants. On March 22, the Ohio Department of Health released stay-at-home orders requiring Ohioans to stay at home except in the event they must leave for essential activities.

Given a decline in COVID-19 spread following a mid-April initial peak in daily cases, the Director of the Ohio Department of Health published the Stay Safe Ohio order on April 30 to announce the initial lifting of certain mandatory requirements and restrictions, including the reopening of all businesses with the exception of the following: schools; restaurants and bars; personal appearance/beauty businesses; adult day support or vocational habilitation services in a congregate setting (defined as a single location where more than 10 people are present in confined space); older adult day care services and senior centers; child care services; and entertainment, recreation, and gymnasium businesses. The Stay Safe Ohio order was soon replaced by Governor DeWine's "Ohioans Protecting Ohioans Urgent Health Advisory" (released May 19). The Advisory replaced language requiring Ohioans to stay at home with a strong recommendation that citizens stay at home, especially those who are high-risk. The advisory also lifted the overall travel restrictions requiring one to quarantine if they travel to or return to Ohio (but still discouraged unnecessary travel). The Advisory maintained mass gathering restrictions limiting gatherings to a maximum of ten people.

A second, smaller peak of daily cases was recorded on July 13, possibly a result of gatherings to celebrate July 4th weekend.[3] While the state saw a reduction in the number of COVID-19 infections and deaths over the course of the summer since this smaller mid-July peak, the number of daily cases has been rising recently. In late November, the number of daily COVID-19 cases reached an all-time high at nearly six times the initial mid-April peak in daily cases.[4] This new wave of cases may be attributable to the onset of cooler weather in the fall months and the resumption of in-person education, as decided on a case-by-case basis by school districts and colleges and universities. It may also be attributable to the phased recommencement of in-person work across industries, or simply mounting complacency with respect to social distancing behaviors as people have fewer opportunities to socialize outdoors in the colder months. Finally, the higher number of COVID-positive cases reported daily may be related in part to increased testing overall; in addition to tests being more readily available in November compared to April, more people may have chosen to get tested before or immediately after the Thanksgiving holiday.

7.2.2 Local and Municipal COVID-19 Closures and Restrictions

As of December 10, 2020, all of Ohio's 88 counties were considered COVID-19 "high incidence" counties as defined by the Center for Disease Control and Prevention, meaning that these counties saw more than 100 cases per 100,000 residents in the prior two weeks. Five of the 88 counties – Medina, Portage, Richland, Stark, and Summit Counties, all located in northeast Ohio – were classified as "purple" counties, meaning they met at least six of seven indicators of concern for COVID-19 spread (COVID-19 Alert Indicators) for at least two consecutive weeks.[5] The color-coded public emergency levels used by the State of Ohio are described as follows:

- **Yellow** – Level 1 Public Emergency: active exposure and spread. Follow all current health orders. Zero to one of the COVID-19 alert indicators met, or low incidence threshold of under 10 cases per 100,000 over a two-week period.
- **Orange** – Level 2 Public Emergency: increased exposure and spread. Exercise high degree of caution. Two to three of the COVID-19 alert indicators met.

[3] Ohio Department of Health COVID-19 Dashboard daily case count metrics.
[4] Ohio Department of Health COVID-19 Dashboard daily case count metrics.
[5] County status update released by the Ohio Department of Health Public Health Advisory System on December 10 and reported by the Akron Beacon Journal (*https://www.beaconjournal.com/story/news/coronavirus/2020/12/10/covid-19-map-watch-dewine-ohio/3879283001/*).

- **Red** – Level 3 Public Emergency: very high exposure and spread. Limit activities as much as possible. Four to five of the COVID-19 alert indicators met; or if previously at Level 3, a county stays at Level 3 until it drops below the high incidence threshold of over 100 cases per 100,000 over a two-week period.
- **Purple** – Level 4 Public Emergency: severe exposure and spread. Only leave home for supplies and services. Six to seven of the COVID-19 alert indicators met for two consecutive weeks. The county will remain at Level 3 and be on a watch list the first week. Once at Level 4, a county stays at this level until it meets fewer than six indicators for two consecutive weeks.[6]

Besides the five purple counties previously mentioned and the five counties at orange (Level 2) status, the remaining 78 counties were classified as "red" on December 10. Lake and Lorain Counties in northeast Ohio and Montgomery County in southwest Ohio were reported as purple in the prior week (December 3) but had dropped to red by December 10.

On November 17, in an attempt to stem the spread of the virus, Gov. DeWine issued a three-week curfew (with some exceptions) from 10 PM to 5 AM. The curfew began on Thursday, November 19, and on December 10 it was extended until January 2, 2021. The curfew bans all but essential trips (for food, supplies and medical needs) and work-related travel, with the exception of some late-starting sporting which had proven to run consistently according to statewide protocols up until this point.[7] Many local leaders followed suit shortly following the announcement of Gov. DeWine's curfew in an effort to slow the spread of the virus. On November 18, Cuyahoga County Board of Health officials issued a stay-at-home advisory – which was set to last until Thursday, December 17 – that urged everyone to stay home except in the event of going to work or school, receiving medical care, buying essential items from a grocery store or pharmacy, picking up prepared food, or receiving deliveries.[8] Franklin, Medina, and Montgomery counties issued stay-at-home advisories on the same day.[9] On November 19, the Toledo-Lucas County Health Department also released a stay-at-home advisory in which avoiding unnecessary travel within and out of Ohio, limiting guests in your home, and canceling or reducing the size of large holiday celebrations and other gatherings were all strongly advised.[10] Summit County released a stay-at-home advisory on November 19 as well. Mahoning County Commissioners, in conjunction with Mahoning County Public Health, followed suit on November 24 when they released a stay-at-home advisory for the county.[11] While this list of counties with advisories is not exhaustive, these particular counties encompass major Ohio cities, including Columbus and Dayton and other cities of interest along the Turnpike such as Toledo, Akron, Cleveland, and Youngstown.

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[6] The County Alert Level definitions and Summary of COVID-19 Alert Indicators can be found here: *https://coronavirus.ohio.gov/static/OPHASM/Summary-Alert-Indicators.pdf*

[7] Reported by The Columbus Dispatch on December 10 (*https://www.dispatch.com/story/news/2020/12/10/gov-mike-dewine-extend-covid-19-curfew-issue-new-county-virus-ratings/3876807001/).*

[8] Reported by Cleveland.com on November 21 (*https://www.cleveland.com/entertainment/2020/11/actor-hospitalized-ex-mlb-pitcher-dies-cleveland-bar-hit-with-violations-added-restrictions-more-coronavirus-timeline-nov-14-20.html*).

[9] Reported by Mahoning Matters on November 19 (*https://www.mahoningmatters.com/local-news/local-leaders-enact-shutdowns-as-dewine-preaches-slow-down-2890772*).

[10] Advisory details available on the Toledo-Lucas County Health Department site (*https://lucascountyhealth.com/wp-content/uploads/2020/11/NOV-COVID19-Stay-at-Home-Advisory.pdf*).

[11] Reported by Mahoning Matters on November 24 (*https://www.mahoningmatters.com/local-news/breaking-mahoning-county-issues-stay-at-home-advisory-2905375*).

7.2.3 Regional COVID-19 Closures and Restrictions

As the Turnpike is part of an interstate route largely impacted by truck traffic, it is important to consider the prevalence of COVID-19 in Pennsylvania and Indiana, which flank the Turnpike to the East and West, respectively. According to the Pennsylvania Department of Health Coronavirus tracking page, Pennsylvania reached an all-time high of daily cases (cases included confirmed and probable cases) in the first week of December. Similarly, Indiana reached a peak number of statewide positive cases by day in the first week of December according to the Indiana COVID-19 Dashboard and Map.[12] The uptick in cases in both of these states may be met with increased efforts to subdue spread of the virus during the winter months and potentially a reworking or rollback of the phased reopening plans implemented throughout the summer months.

Long distance freight trips extending to and from western New York and southern Michigan also impact the composition of Turnpike traffic; thus, the incidence of cases and actions taken to prevent spread of COVID-19 in New York and Michigan potentially impact traffic patterns on the Turnpike. While New York saw an uptick in new cases in the first week of December, the initial peak of the virus in the first week of April remains the overall peak in the State.[13] Similar to Ohio, Pennsylvania, and Indiana, Michigan reached a peak in daily count of combined confirmed and probable cases this fall (in the second week of November) according to State of Michigan (Michigan.gov) Coronavirus Data.[14]

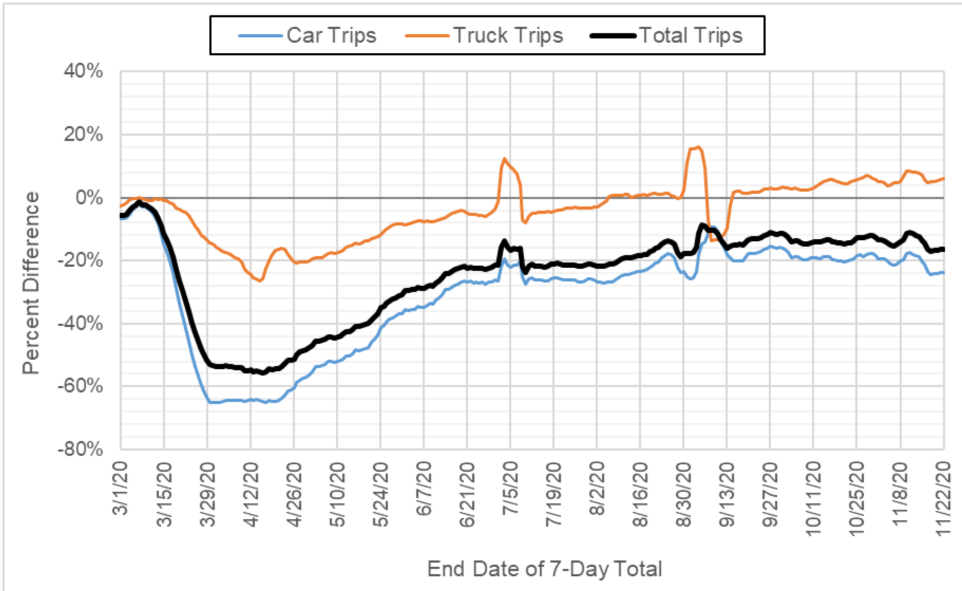
Throughout the course of the fall, most states (including Ohio and its neighbors, as described) have been experiencing another rise in cases (many reaching new daily highs in caseloads), and much public guidance has discouraged holiday-related travel and encouraged social distancing.

7.3 COVID-19 IMPACTS ON TRAFFIC & REVENUE

Throughout the pandemic, Stantec has been monitoring monthly and daily traffic and revenue data from many toll authorities. Figure 37, Figure 38, and Figure 39 show the impacts on the Turnpike's trips, vehicle miles traveled ("VMT"), and toll revenue, respectively, from March 1, 2020, through October 18, 2020, compared to the same days in 2019 (seven-day rolling total). Cars and trucks are analyzed separately, as different impacts have been seen on the two different vehicle types. Note that with Easter occurring on April 12 of this year compared to April 21 of last year and July 4th occurring on different days of the week between the two years, there were some definitive impacts on traffic and revenue not reflective of COVID-19 trends alone. Similar impacts attributable to holiday variation between 2019 and 2020 occur around Labor Day; in 2019, Labor Day was on September 2 so some of the holiday weekend fell in the month of August, while in 2020, Labor Day was on September 7 so the entire holiday weekend fell in the month of September.

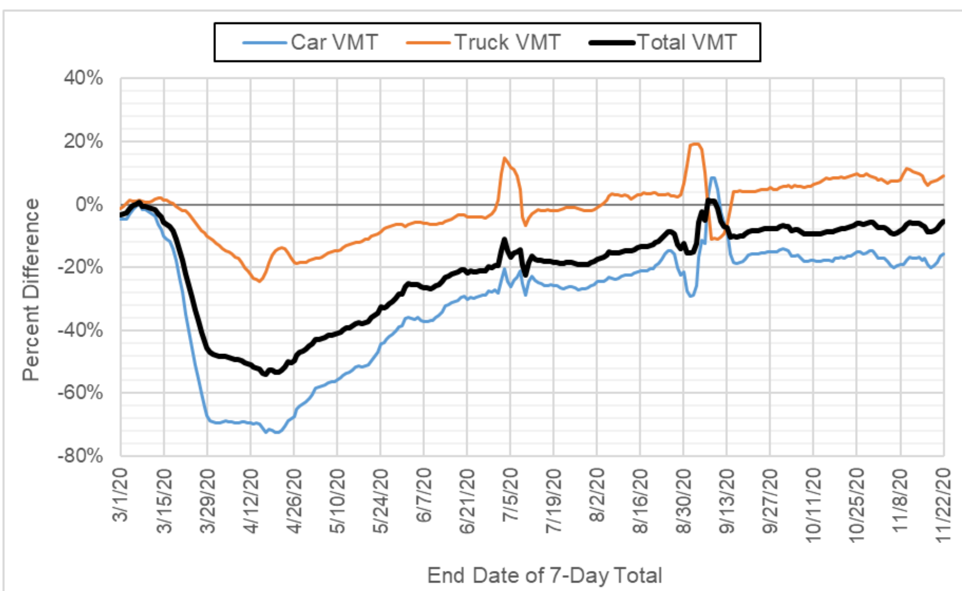
[12] Reported number of cases for Pennsylvania and Indiana as of December 11, 2020.
[13] According to the New York Times New York Coronavirus Map and Case Count as of December 11, 2020.
[14] Reported number of cases for Michigan as of December 11, 2020.

Figure 37: Comparison of 2020 to 2019 Weekly Trips, Rolling 7-Day Total, March to Mid-November



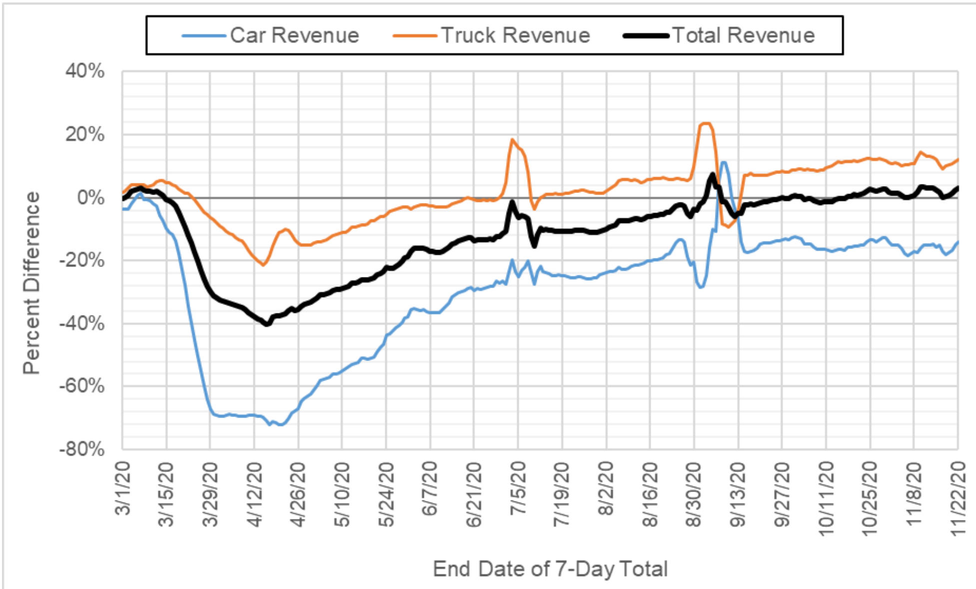
Data Source: Ohio Turnpike & Infrastructure Commission

Figure 38: Comparison of 2020 to 2019 Weekly Vehicle Miles Traveled (VMT), Rolling 7-Day Total, March to Mid-November



Data Source: Ohio Turnpike & Infrastructure Commission

Figure 39: Comparison of 2020 to 2019 Weekly Revenue, Rolling 7-Day Total, March to Mid-November



Data Source: Ohio Turnpike & Infrastructure Commission

Figure 40 and Figure 41 illustrate the breakdown of Turnpike traffic by general region as well as trip length. The pie charts on the left show statistics from April 2019, while the charts on the right show statistics from April 2020, during the height of widespread COVID travel restrictions. Car trips in April 2019 totaled 3.27 million trips, while car trips in April 2020 were some 62 percent lower at a volume of 1.24 million. Truck trips in April 2019 totaled 989.7 thousand, dropping just shy of 20 percent to 795.1 thousand in April 2019. These comparisons suggest that all trip types were significantly impacted; some trips were more impacted than others (illustrated by changes in the percentages of trip distribution).

Figure 40: Make Up of Car Trip Distribution Based on Region and Trip Length, April 2019 vs. April 2020

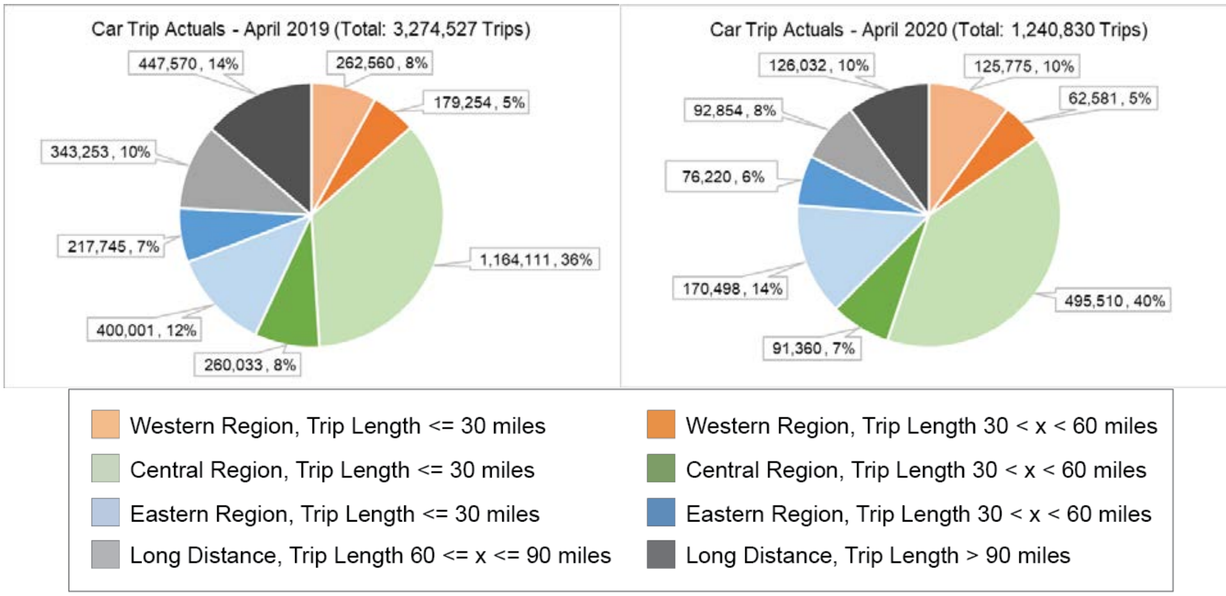
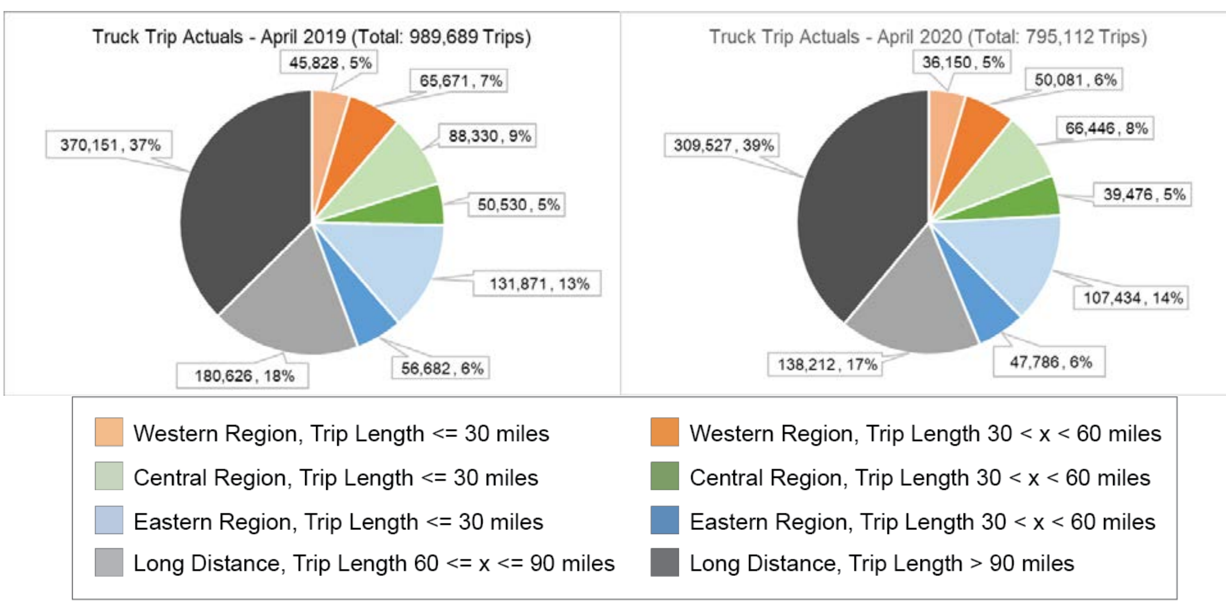


Figure 41: Make Up of Truck Trip Distribution Based on Region and Trip Length, April 2019 vs. April 2020



8.0 LONG-TERM TRANSACTION AND TOLL REVENUE ESTIMATES

This chapter summarizes the development of the traffic and revenue estimates including the modeling approach and assumptions used, as well as how impacts of the ongoing COVID-10 Pandemic were incorporated.

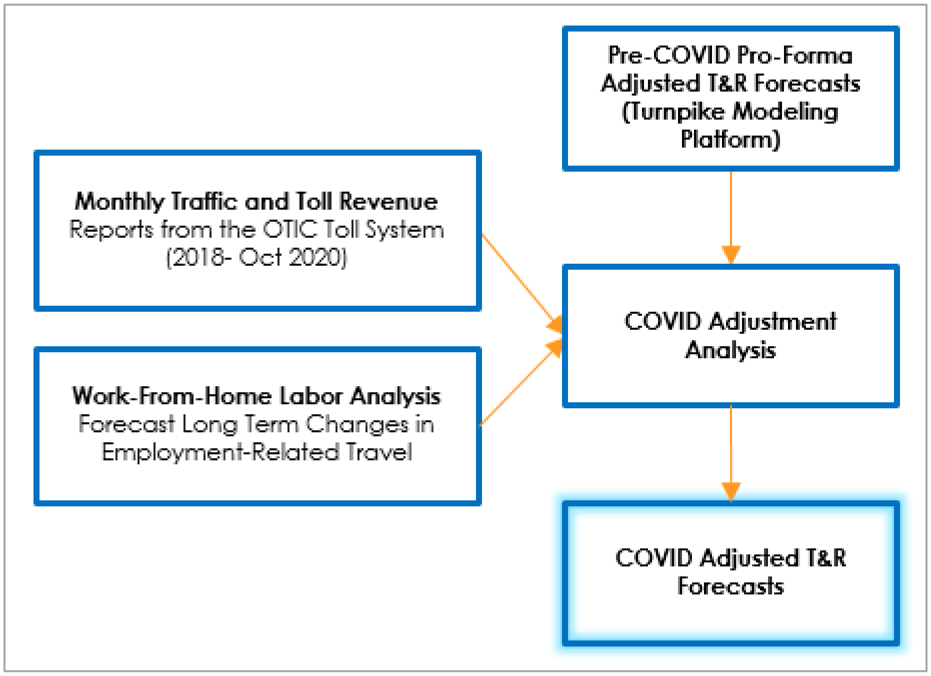
8.1 FORECAST METHODOLOGY

Forecasts of traffic and revenue were prepared using a detailed spreadsheet model with the ability to assess toll traffic behavior by exit-entry pair on an annual basis. The modeling process considers background growth, toll increases and toll diversion, as well as toll system modifications. Using this model, a pro-forma pre-COVID-19 forecast was prepared using transaction data through 2019, and then estimated impacts of COVID-19 were layered on top of this pro-forma forecast to estimate potential recovery paths from the lows in traffic and revenue observed in late spring 2020.

8.1.1 Traffic and Revenue Model Development

To capture the effects of toll rate and toll system modifications and the short- and long-term potential impacts of the COVID-19 pandemic, the preparation of long-term estimates was a multi-step process. Figure 42 details the general analysis methodology applied to generate these estimates. A baseline “pro-forma” estimate considered historical Turnpike traffic and socioeconomic trends and is comparable to previously prepared long-term forecasts. This baseline “pro-forma” estimate was then reasonably adjusted to include COVID-19 impacts, which consider three alternative scenarios of potential outcomes based on specific assumptions that vary by the extent and duration (“less severe / shorter duration,” “more severe / longer duration,” and “mid-range”) of the COVID-19 impacts on OTIC toll traffic and revenue. These estimates have been prepared using data available through November 15, 2020, as well as the latest recommendations and policies from federal and state entities.

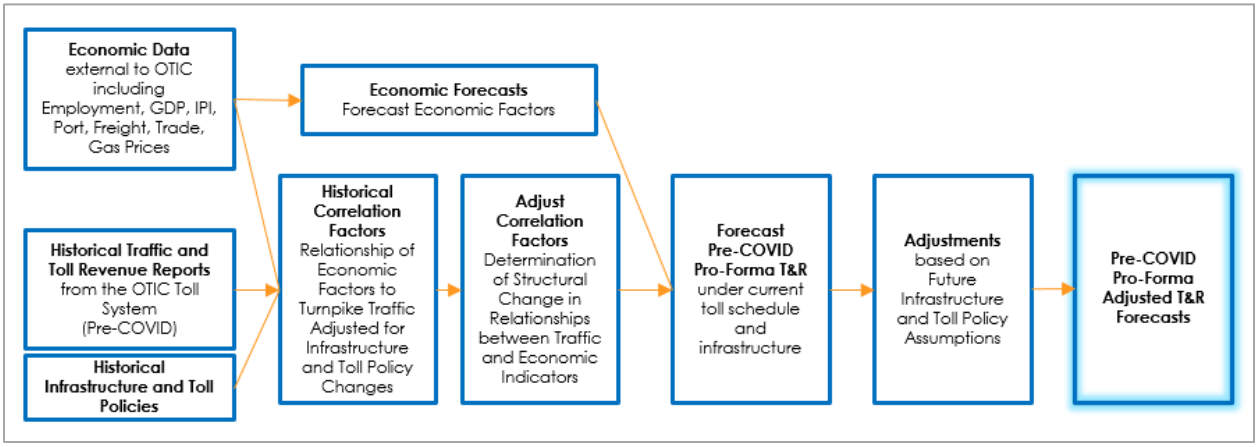
Figure 42: 2020 Traffic and Revenue Analysis Methodology



8.1.1.1 Modeling Platform

Traffic and toll revenue forecasts were developed with the aid of a computerized modeling platform created specifically for the Turnpike. The base function of this model is to take current traffic volumes by class and payment type for each Turnpike movement (origin-destination pair) and adjust them in the future years for various factors such as underlying socio-economic/demographic growth in the corridor, both historical and projected, as well as overall inflationary pressures and applicable customer reactions to anticipated toll adjustments. These adjustments result in forecasted traffic volumes being developed for each year of the forecast period. Gross toll revenues are then calculated based on these new adjusted traffic volumes by applying the appropriate toll rates to the volume of each origin-destination pair by payment type and vehicle class, and total vehicle miles traveled are calculated by multiplying the forecasted trips for each movement by the applicable distance traveled. These forecasts were then fed into a secondary model that adjusted the toll rates by origin-destination pair for the proposed modified toll system, accounting for additional traffic shifts and providing the modified system traffic and revenues. Figure 43 shows the flow of the forecasting process.

Figure 43: Ohio Turnpike Model Methodology



In the creation of a base structure for forecasting calculations, it becomes necessary to assume some consistency in relationships between historical and future traffic and revenue trends. The following assumptions were used in the creation of the forecasting framework:

- Traffic Growth Trends: Correlations between historical traffic and socioeconomic indices such as employment and manufacturing are one source of data used to forecast growth. Gross Domestic Product (GDP) and the Industrial Production Index (IPI) are two factors utilized.

- E-ZPass Market Share Trends: In the past, on both the Turnpike and other facilities offering electronic payment, the proportion of trips paid by E-ZPass has slowly increased over time until it approaches some level of market saturation, regardless of toll increases. It was assumed that this behavior will hold true in the future.

- Regional Divisions: To simplify general inputs such as annual traffic growth and E-ZPass market share growth, it was assumed that Turnpike movements could be grouped regionally or by trip length. The origin-destination matrix was analyzed and O/D pairs were split into four categories: Western Region (Toledo), Central Region (Cleveland), Eastern Region (Youngstown) and Long distance (trip lengths greater than 60 miles).

- Inflation and Toll Schedules: Toll schedules for each class and payment type through 2023 for the current system were provided to Stantec by the Commission. The rates are calculated off an assumed 2.7 percent annual inflation. Stantec calculated toll schedules for the years 2024 through 2056, adjusting for the expiration of a toll increase exemption for Class 1 E-ZPass trips under 30 miles in length in 2024. In this analysis, toll increases for the year 2023 were modified to be 7.7 percent in place of the previously approved 2.7 percent, with another 7.7 percent increase in 2024. This analysis assumes that toll rates will increase at a rate of 2.7 percent annually (in line with inflation) 2025 through 2028, and annual toll inflation-based increases of 2.0 percent beginning in 2029, to remain conservative.

- Toll System Modification: For some customers, tolls would be collected in different or multiple locations, but efforts were made to keep tolls for through travelers the same as if there were no modification. For some shorter trips, tolls will increase due to the nature of the modification, while for other trips, tolls will decrease and some shorter trips may become untolled. It was assumed that for E-ZPass trips under 30 miles, a rebate would be put in place beginning with the implementation of the new system in late 2021 through 2023 to maintain the current E-ZPass trip toll rates. Additionally, the modified system would adjust the minimum toll rate for cash vehicles from $0.50 to $1.00.

- Customer Reaction to Toll Adjustments: In the face of a toll adjustment, some customers opt to change their travel behavior. Stantec applied customer reaction curves based on region, payment type, and experience from previous toll increases on the Turnpike (and on similar projects elsewhere) to estimate the number of customers that might modify their travel behavior if or when a toll increase occurs. These curves are used to estimate the number of customers reacting to a given toll increase, based on the relative adjustment of the toll increase.

The model, based on the assumptions discussed in the following section, calculates the forecasted toll transactions for the entire system (ticketed and barrier), the VMT on the ticketed portion of the Turnpike, and the toll revenue by applying logic to matrices of the projected annual trip movements for each payment class. Each toll increase is analyzed individually, and some adjustment to traffic is necessary even in years without toll increases, as traffic grows and changes between payment types based on historical trends. As all calculations are performed on each entry-exit movement combination to the Turnpike system, the applicable toll and mileage can be applied to each trip for a customized forecast resulting in more precise estimates of total revenue and toll transactions.

8.1.2 Traffic and Revenue Assumptions

The assumptions for the various forecasting models are identified in this section.

8.1.2.1 Pro-Forma Pre-COVID Long Range Forecast

In this section, the assumptions of the pro-forma pre-COVID-19 forecasting model outlined in the previous section are presented. These assumptions include traffic growth, toll policies, diversion, and payment classes.

Background Growth

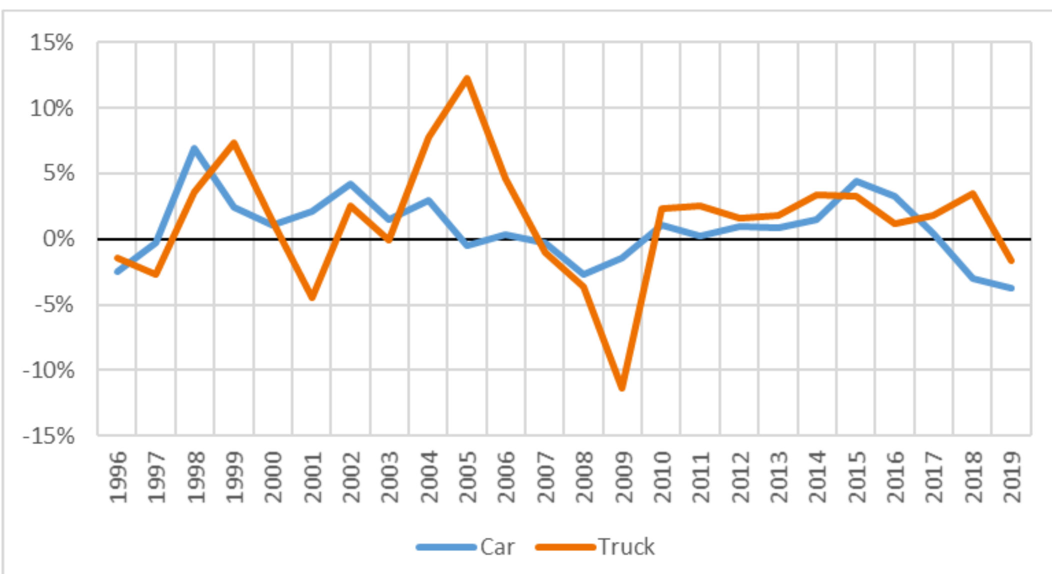
Historically, traffic trends have been influenced by socioeconomic conditions, and there are often correlations between traffic growth and socioeconomic factors such as Industrial Production growth (IPI) and Gross Domestic Product (GDP). Any forecast of toll traffic and revenues will, of necessity, consider the significant variations that can and do occur in the national, regional, and local economies, and population changes. With this in mind, Stantec performed an analysis of the historical economic trends seen over the last several decades with an emphasis on the most recent correlations, plus an analysis of those trends that can influence driving behaviors.

In the past, data trends have suggested correlations between Turnpike car traffic and GDP, employment, and population. Turnpike traffic in recent years has trended downward, while GDP and employment growth have been positive, suggesting a weakening correlation to traffic growth compared to that assumed in the generation of previous long-term traffic growth estimates. The correlation factors in the model were adjusted downward, resulting in minimal background growth in passenger car traffic. As traffic growth has averaged low in recent years (presented in Figure 44) , this is consistent with a trendline analysis approach.

Similarly, data trends had previously suggested correlations between commercial traffic and IPI, though in recent years IPI growth and commercial traffic growth have diverged. Several major events in the past couple of decades have significantly affected commercial traffic, both positively and negatively on the Turnpike, including economic recessions, speed limit changes, toll increases and classification changes, and toll changes on connecting or competing roadways. To be conservative in the assessment of past trends and the outlook of future commercial traffic growth, lower long-term growth estimates for commercial vehicles were applied in this forecast than in previous forecasts.

Historical traffic growth rates for both cars and trucks are shown in Figure 44. Average growth for the period 2009 through 2019 was 0.6 percent annually for cars and nearly 2 percent annually for trucks. This period included recovery from the Great Recession. Looking back further, average annual truck growth from 1999 through 2009 was lower at 0.6 percent annually. It is estimated that truck volumes will grow at this lower rate of 0.6 percent annually on average between 2020 and 2040, excluding toll system modifications, and that car traffic growth will remain roughly at current, pre-COVID levels.

Figure 44: Annual Historical Traffic Growth, 1996 – 2019, by Car and Truck Class



Toll Increases

As discussed further in Section 4.1, the Commission implemented a toll increase plan that increases rates by an average of 2.7 percent each year for 10 years beginning January 1, 2014 and continuing through 2023, except for cars with E-ZPass traveling less than 30 miles. Toll rates for these vehicles will be frozen at 2013 rates until January 1, 2024 when they will have a one-time increase equivalent to the 10 years of annual increases, to the same per mile rate as other E-ZPass trips.

Recent conditions have resulted in the need for an additional toll adjustment in 2023 and 2024 above the 2.7 percent, bringing the toll increase for these two years to 7.7 percent across all classes. It was assumed that from 2025 through 2028 the standard annual increase of 2.7 percent would be continued, dropping off to 2.0 percent annual increase in 2029. Toll increases are applied to a base per-mile toll rate and the toll rate charged is rounded to the nearest quarter.

Table 26 presents a comparison of estimated Class 1 (car) toll rates for 2023, the first year the modified toll system would be fully operational. There is some difference due to the way the tolls for a full-length trip would be rounded at the new barriers and on the reduced ticket system, but round trip toll rates would be similar.

Table 26: Estimated 2023 System Full Trip Toll for Class 1

Direction of Travel	Current System		Modified System (Including Barrier Toll)	
	Cash	E-ZPass	Cash	E-ZPass
Westbound	$ 22.25	$ 15.25	$ 21.00	$ 14.50
Eastbound	$ 22.25	$ 15.25	$ 24.00	$ 16.50
Round Trip	$ 44.50	$ 30.50	$ 45.00	$ 31.00

Toll rates assumed in this analysis are consistent with those that have been approved with the Commission through 2022. Toll rates for the years 2023 and beyond have not been approved by the Commission at this time.

Diversion

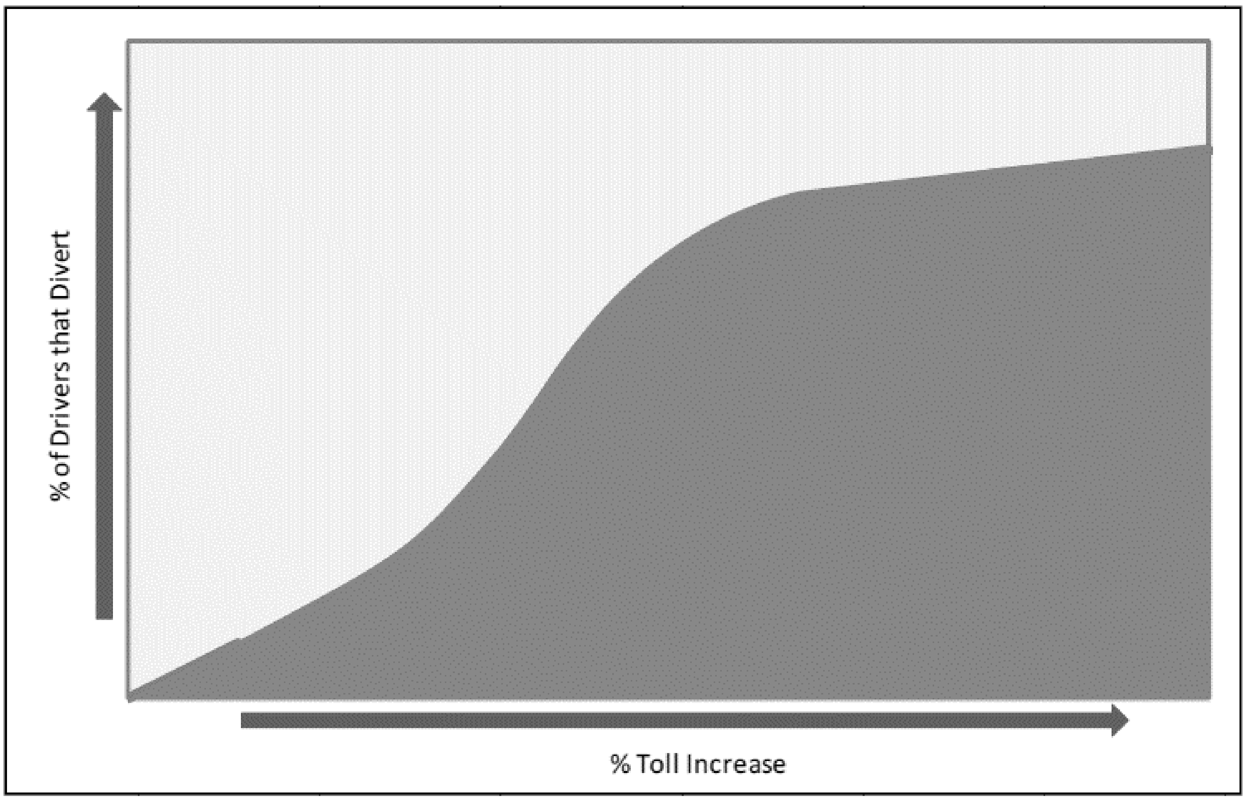
The Turnpike's traffic and toll revenue model accounts for the impact of the assumed toll rate schedule on traffic volumes and estimates the resulting toll revenue. Generally, increases in toll rates will cause tolled traffic volumes to decrease, either because motorists switch to alternate routes to avoid paying the higher toll or reduce their number of trips as a result of the price elasticity of their travel demand.

Not all customers will react to a toll increase in the same way. Some customers may not change their behavior at all, while others might decide to use a different route, combine trips, or not make that trip at all anymore. Still other customers might decide to change how they pay for a trip (e.g., current cash-paying customers may open E-ZPass accounts) to lessen the impact to their wallet.

This effect has been observed on the Turnpike and many other national toll facilities that also offer multiple payment methods and discount plans, often resulting in an overall lower diversion of traffic from the facility than may have been experienced in the past when tolls were increased and there was a single method of payment.

The model includes toll reaction curves to estimate the total number of trips that would be impacted by a given toll increase, and to determine those trips that would remain on the toll facility and pay the new toll rate, those that would divert off of the toll facility, and those that would switch toll payment methods. Figure 45 shows a representative illustration of how customers might react to toll increases of varying degrees. In addition to diversion from the toll facility, some motorists will also convert to different payment methods to incur a smaller increase.

Figure 45: Representative Diversion Curve, Percent Diverted Vehicles vs. Percent Toll Increase



Drivers familiar with their travel route options are likely to weigh their travel time versus their trip cost when choosing how to get from point A to point B, or whether to make the trip at all. The proposed toll increases on the Turnpike will cause a certain amount of traffic to leave the facilities. Of this traffic, many will travel on another route to their destination; however, some trips will also no longer be made. Often times, customers will initially test alternate routes, only to revert to their original path after finding the alternate route less desirable.

Toll Changes due to System Modification

As discussed in Section 4.2, impacts of the toll system modernization plan (removing toll plaza gates and restructuring select toll plazas) on traffic and revenue were previously studied in 2017. The results of this analysis were used to estimate the change in annual car and truck transactions associated with the new system, as well as slight adjustments to payment types and resulting revenue. The current date for estimated "go-live" of the modified toll system is mid-March 2023. For this analysis, changes were assumed to be effective April 1, 2023. It should be noted that in the modified toll system, it is possible for one vehicle to incur more than one transaction per trip, which results in a bump in transaction forecasts, but not in revenue forecasts. Toll rates remain similar in the modified system, and the revenue stream shows less of an impact. It should also be noted that in the modified toll system, the minimum toll rate will increase for non-E-ZPass vehicles from the current $0.50 to $1.00.

Payment Assumptions

Toll rates vary by method of payment, and these balances shift over time and will incorporate a new payment category with the system modifications beginning in 2023. The following subsections discuss specific assumptions related to E-ZPass market share and Image-Based Tolls.

E-ZPass Market Share

Historically, E-ZPass market share on the Turnpike and other similar facilities offering electronic payment has slowly increased over time until it approaches some level of market saturation, regardless of toll increases. The market share typically increases at a decreasing rate – rapidly in the first few years after implementation, and then at a decreasing rate until eventually leveling out as the market share approaches a maximum sustainable level for that toll facility.

E-ZPass market share on the Turnpike currently varies dramatically by vehicle class and trip movement, with 2019 total showing an average of 57.9 percent for car trips and 87.8 percent for truck trips. This calculates to an overall average E-ZPass market share of roughly 64.6 percent. It was assumed that the E-ZPass market share would be similar for a particular class over each analysis region, though the market shares themselves would differ for each trip movement within the region.

With the implementation of highway speed E-ZPass lanes as part of the toll system modification, it was assumed that cars would see a bump of around five percent in E-ZPass market share, while truck market share was not expected to increase, since most trucks already utilize this method of payment on the Turnpike. Estimated future E-ZPass market shares for cars and trucks are presented in Figure 46.

Figure 46: E-ZPass Market Share

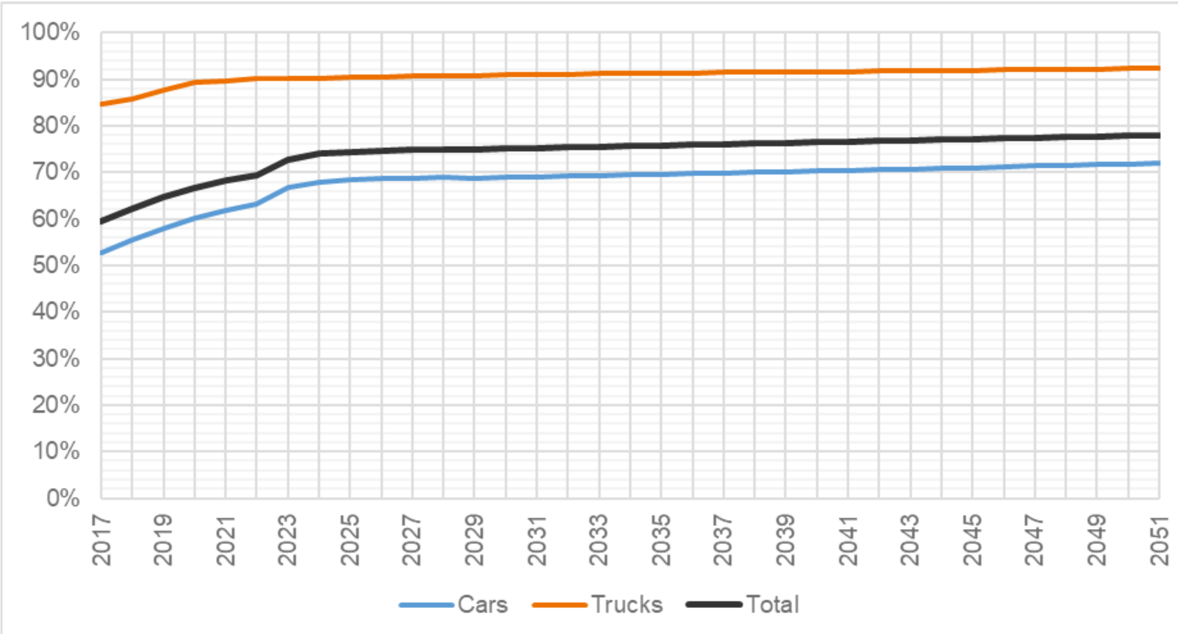


Table 27: Historical and Forecasted E-ZPass Market Share of Transactions, 2015-2051

Year	Trips		
	Cars	Trucks	Total
2015*	47.6%	82.1%	**54.9%**
2016*	50.2%	83.6%	**57.1%**
2017*	52.8%	84.7%	**59.5%**
2018*	55.5%	85.9%	**62.2%**
2019*	57.9%	87.8%	**64.6%**
2020	60.1%	89.3%	**66.7%**
2021	61.9%	89.7%	**68.2%**
2022	63.1%	90.1%	**69.3%**
2023	66.8%	90.1%	**72.7%**
2024	67.9%	90.1%	**74.0%**
2025	68.3%	90.3%	**74.3%**
2026	68.6%	90.5%	**74.6%**
2027	68.8%	90.6%	**74.8%**
2028	69.0%	90.8%	**75.0%**
2029	68.8%	90.9%	**75.0%**
2030	69.0%	90.9%	**75.1%**
2031	69.1%	91.0%	**75.3%**
2032	69.2%	91.1%	**75.4%**
2033	69.3%	91.2%	**75.5%**
2034	69.5%	91.2%	**75.7%**
2035	69.6%	91.3%	**75.8%**
2036	69.7%	91.4%	**75.9%**
2037	69.8%	91.4%	**76.0%**
2038	70.0%	91.5%	**76.2%**
2039	70.1%	91.6%	**76.3%**
2040	70.3%	91.6%	**76.5%**
2041	70.4%	91.7%	**76.6%**
2042	70.6%	91.8%	**76.7%**
2043	70.7%	91.8%	**76.9%**
2044	70.9%	91.9%	**77.0%**
2045	71.0%	92.0%	**77.2%**
2046	71.2%	92.0%	**77.3%**
2047	71.3%	92.1%	**77.5%**
2048	71.5%	92.2%	**77.6%**
2049	71.6%	92.2%	**77.7%**
2050	71.8%	92.3%	**77.9%**
2051	71.9%	92.4%	**78.0%**

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll increases are planned each year.
(3) Toll System Modernization will be fully implemented in 2023.

Image-Based Tolls

With the removal of gates from toll collection points, the Ohio Turnpike will implement a violation enforcement system. Vehicles that pas through the toll plaza without paying will be identified by images of their license plates and invoiced by mail.

Table 28 presents the assumed portion of traffic that would avoid paying tolls at the toll plazas in the modernized system. In addition to these unpaid tolls, it is estimated that roughly five percent of E-ZPass transactions will generate and be recognized through an image-based toll transaction.

Table 28: Estimated Violation Rates

Collection Speed	Cash	E-ZPass
Gated	0%	0%
Low Speed	2%	1%
Highway Speed	10%	1%

The invoicing process results in some amount of unpaid toll revenue, due to factors such as blocked license plates, invalid vehicle records or addresses, and customers who do not respond to the invoice. This unrealized revenue is referred to as “leakage” and is calculated by applying payment assumptions in the form of a revenue collection “waterfall”. The assumptions in this waterfall are a combination of statistics specific to the Ohio Turnpike, such as estimates of the prevalence of in-state versus out-of-state license plates, as well as Stantec’s experience and knowledge form other toll facilities. Each of the elements that factor into the collectability of toll revenue is described in detail in the following sections.

After applying all of the various payment factors, the resulting share of uncollectable toll revenue is estimated at roughly 40 percent for cars and 50 percent for trucks. As the E-ZPass market share growth throughout the forecast period, the amount of uncollectable toll revenue will decrease. Since very few customers are expected to fall into this category (as shown in Table 28), the overall impact of these assumptions results in a lowering of the potential gross revenue by less than one percent.

8.1.2.2 Construction Impacts

Currently planned construction along the Turnpike largely falls into the categories of Pavement and Resurfacing, or Toll System Modernization projects. It is assumed in this analysis that traffic impacts caused by construction lane closures would be mitigated and minimized by effective planning, signage, and the utilization off-peak and overnight hours.

8.1.2.3 COVID-19 Recovery Assumptions

Stantec's COVID-19 impact scenarios were built upon Turnpike and other available national data through October 2020 and consider a range of potential outcomes based on specific assumptions that vary by the extent and duration of the COVID-19 impacts on Turnpike toll revenue.

The following summarizes the high-level findings from this COVID-19 impact analysis based on the specific stated assumptions and with impact ranges determined using the "shorter duration" and "longer duration" scenarios as bookends (the former assuming shorter recovery from COVID-19-related traffic impacts and the latter assuming longer recovery from COVID-19-related traffic impacts), and a third scenario, the "mid duration" scenario that is approximately one-third of the way between the "shorter" and "longer" scenarios. Note that toll revenue loss is not as severe as traffic loss because commercial vehicles, which pay higher tolls than cars, have been less affected by the pandemic, as illustrated previously in Figure 37, Figure 38, and Figure 39.

System-wide, April traffic volumes dropped approximately 60 percent for cars, and 20 percent for trucks. By the end of summer, truck volumes on average were nearing estimated pro-forma forecast levels, while cars were still around 25 percent below. September volumes suggested a jump in recovery, but some of this is thought to be related to the different timing of the Labor Day holiday in 2019 versus 2020.

Figure 47 presents a summary of monthly near-term actual and estimated COVID-19 Impacts on traffic defined as year over year percent change for the same month. A summary of estimated annual impacts on traffic through 2026 is presented in Table 29.

Figure 47: Monthly COVID-19 Impacts on Traffic, Actual January 2020 to September 2020 and Estimated October 2020 to December 2021

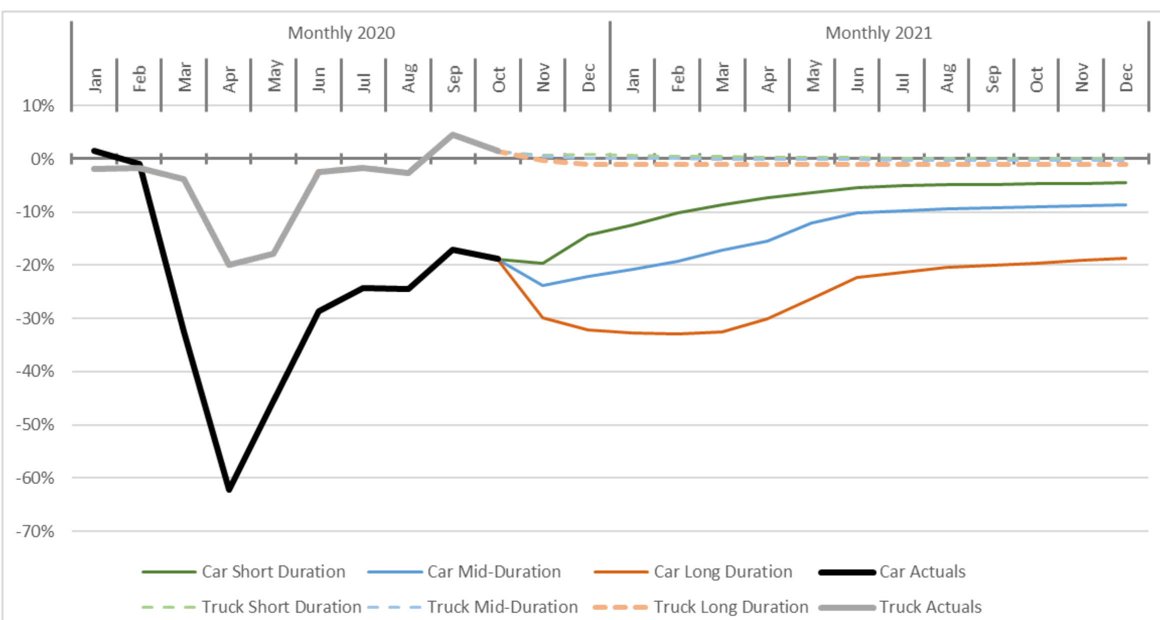


Table 29: Estimated Annual COVID-19 Impacts on Traffic, 2020 through 2026

COVID Recovery Scenarios		Percent Below Pro-Forma Pre-COVID Impact Estimate						
		2020	2021	2022	2023	2024	2025	2026
Cars	Short-Duration Recovery Estimate	-25%	-6%	-3%	-1%	-1%	-1%	-1%
	Mid-Duration Recovery Estimate	-26%	-12%	-8%	-6%	-3%	-2%	-2%
	Long-Duration Recovery Estimate	-27%	-24%	-15%	-11%	-8%	-5%	-4%
Trucks	Short-Duration Recovery Estimate	-4%	0%	0%	0%	0%	0%	0%
	Mid-Duration Recovery Estimate	-4%	0%	0%	0%	0%	0%	0%
	Long-Duration Recovery Estimate	-4%	-1%	-1%	-1%	-1%	-1%	-1%

The growth assumptions for the short duration, mid duration, and long duration scenarios include:

- For cars following the “shorter duration” scenario, it was assumed that November would come in slightly lower than October based on data for the first two weeks, but that growth would resume in December throughout the state. Using the June through August improvement as a guideline for the remainder of 2020, a lesser rate of improvement was assumed throughout 2021. By December 2021, total traffic was assumed to reach levels of 6 percent below the pro-forma forecast, and would reach a new normal of one percent below pro-forma levels in 2026.

- For cars following the “mid-duration” scenario, September and October car traffic was assumed to be above trend, with lower forecasted traffic growth continuing through November, with growth resuming in December of 2020 and continuing throughout 2021. By December 2021, total traffic was assumed to reach levels of 12 percent below the pro-forma forecast, and would reach a new normal of two percent below pro-forma levels around 2026.

- For the cars following the “longer duration” scenario, car traffic was assumed to be lower through the fall of 2020 and remain flat through winter of 2021, due to the potential for increased COVID activity and limited seasonal travel, as well as the uncertainty about remaining or new restrictions and advisories that would keep people away from places to which they have normally traveled. Beginning in spring of 2021, traffic then was assumed to begin a slow and drawn out recovery, not reaching a new normal of four percent below the pro-forma forecast until 2026, with long-term impacts stemming from changes in job-related travel behavior.

- Truck traffic has recently exceeded the pro-forma estimated traffic, but it is possible that the strong commercial traffic recovery is related to the backlog of demand created by the late spring impacts on many factories, as well as changes in shopping habits during the pandemic. It is estimated that truck traffic will not stay above forecast, but will instead return to pro-forma levels over the next year in the shorter duration scenario, and dropping slightly below pro-forma levels in the longer duration scenarios (mid-duration and longer duration scenarios).

- For both cars and trucks, the “mid-duration” scenarios assume a track roughly two-thirds of the way between the shorter duration and longer duration scenarios, or roughly one-third of the way below the shorter duration track.

8.1.2.4 Long Term Impacts of the On-Going COVID-19 Pandemic

This subsection details assumptions related to estimated traffic recovery from COVID-19 pandemic impacts and provides a range of long-term traffic and revenue which represent a range of recovery tracks.

As a general benchmark for estimating long term-traffic impacts due to changes in travel behavior related to more employees working-from-home (WFH) long term, employment sector data was analyzed for potential shifts in the portion of employment that might work from home and no longer commute. Data for the respective metropolitan statistical areas of Cleveland, Toledo, and Youngstown were used as a guide, and both pre-and post-COVID WFH share of employment were estimated. For Cleveland, this analysis suggested that the "new normal" post-COVID could see a change from an estimated 4 percent of the employees working from home to approximately 9 percent working from home in the long term as is shown in Table 30. This 5 percent increase in WFH activity was used as guidance for estimating potential long-term impacts of COVID in the Cleveland region, and similar analyses was conducted to provide guidance for Toledo and Youngstown regions. Table 30 presents a summary of the estimated 2019 verses estimated 2025 WFH Share for the three metropolitan regions analyzed.

Table 30: Historical and Estimated Future WFH Share

MSA	2019 WFH Share (latest available US Census data)	2020 WFH Share Estimate	2025 Approx. "New Normal" WFH Share	Approximate Change
Toledo (OH)	2.2% (Toledo City)	3.0%	7.3%	**4%**
Cleveland-Elyria (OH)	4.2% (Cleveland City)	4.0%	9.2%	**5%**
Youngstown-Warren-Boardman (OH, PA)	4.5% (Youngstown City)	4.0%	7.9%	**4%**

The following figures present a comparison of estimated WFH percentages by industry for 2019 and 2025, for each of the three metropolitan areas. As illustrated by Figure 48, the size of each industry sector is a significant component in the assessment of overall changes in the region due to changes in WFH trends. For example, Figure 48 shows that the category of Financial Services is expected to see a large shift in WFH of 15 percent (from 9 percent to 24 percent), but the relative change caused by this is less than the smaller shift estimated for the Professional and Business Services sector of 11 percent, since the Professional and Business Services sector makes up a larger portion of overall employment in the Cleveland region. Some of the largest sectors such as Trade, Transportation & Utilities as well as Education and health services are expected to have little to no change in WFH behavior.

Figure 48: Estimated Pre- and Post-COVID Work from Home (WFH) Share of Employment by Industry, Cleveland-Elyria Metropolitan Statistical Area

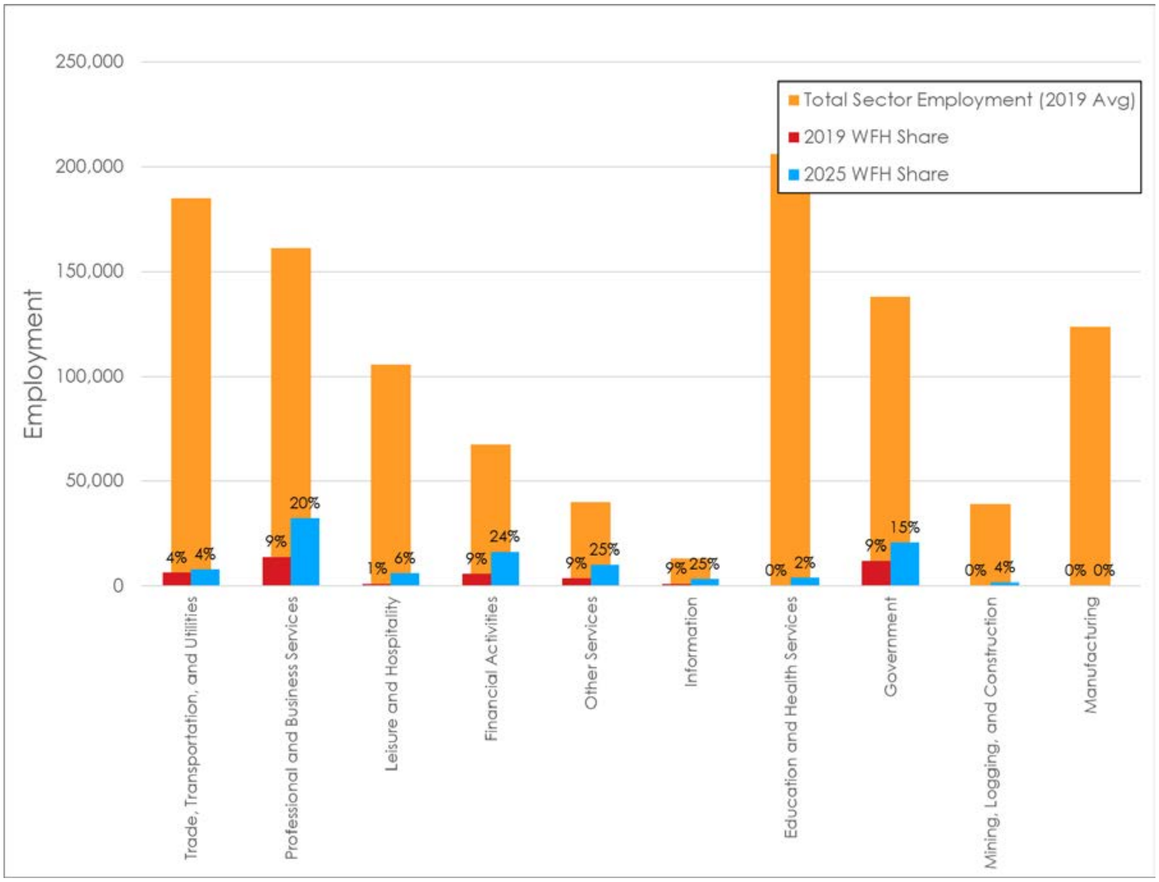


Figure 49: Estimated Pre- and Post-COVID Work from Home (WFH) Share of Employment by Industry, Toledo Metropolitan Statistical Area

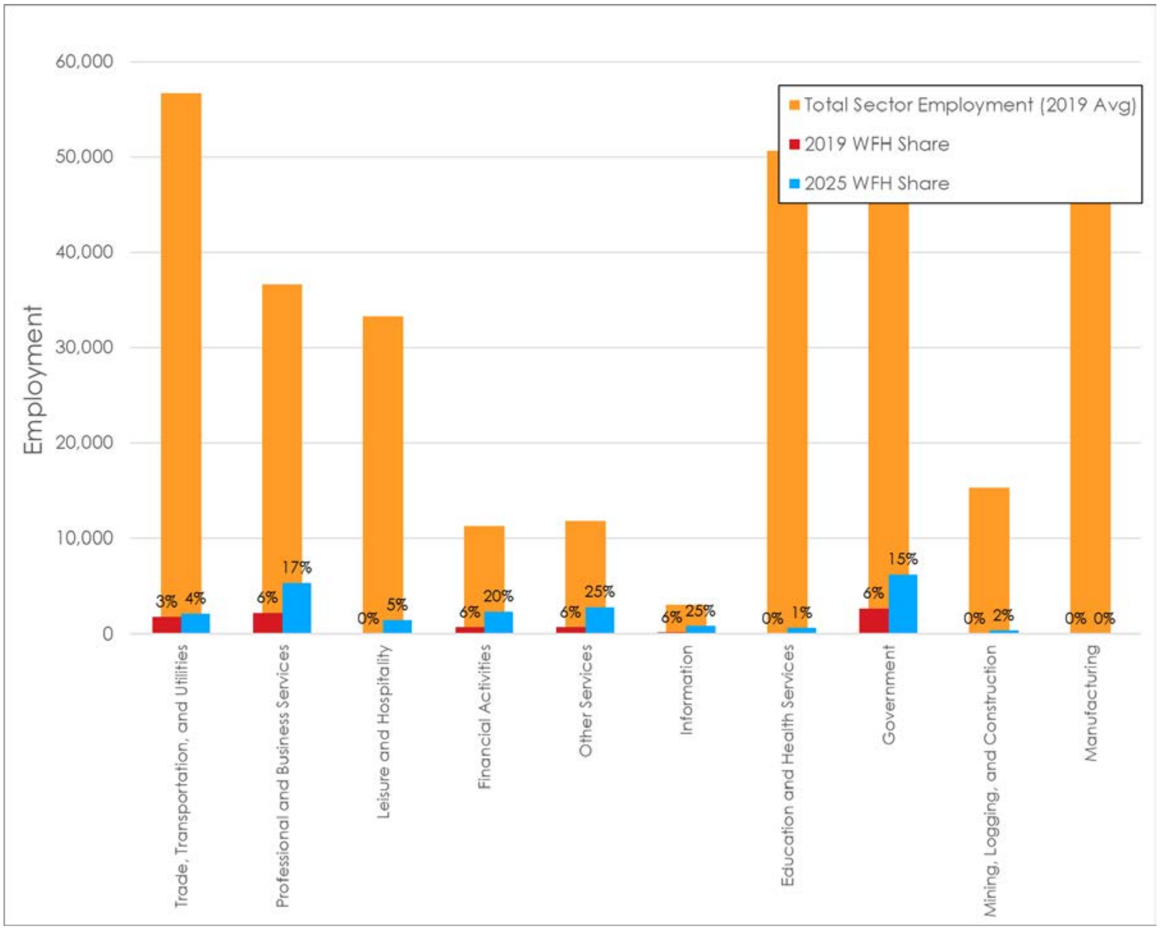
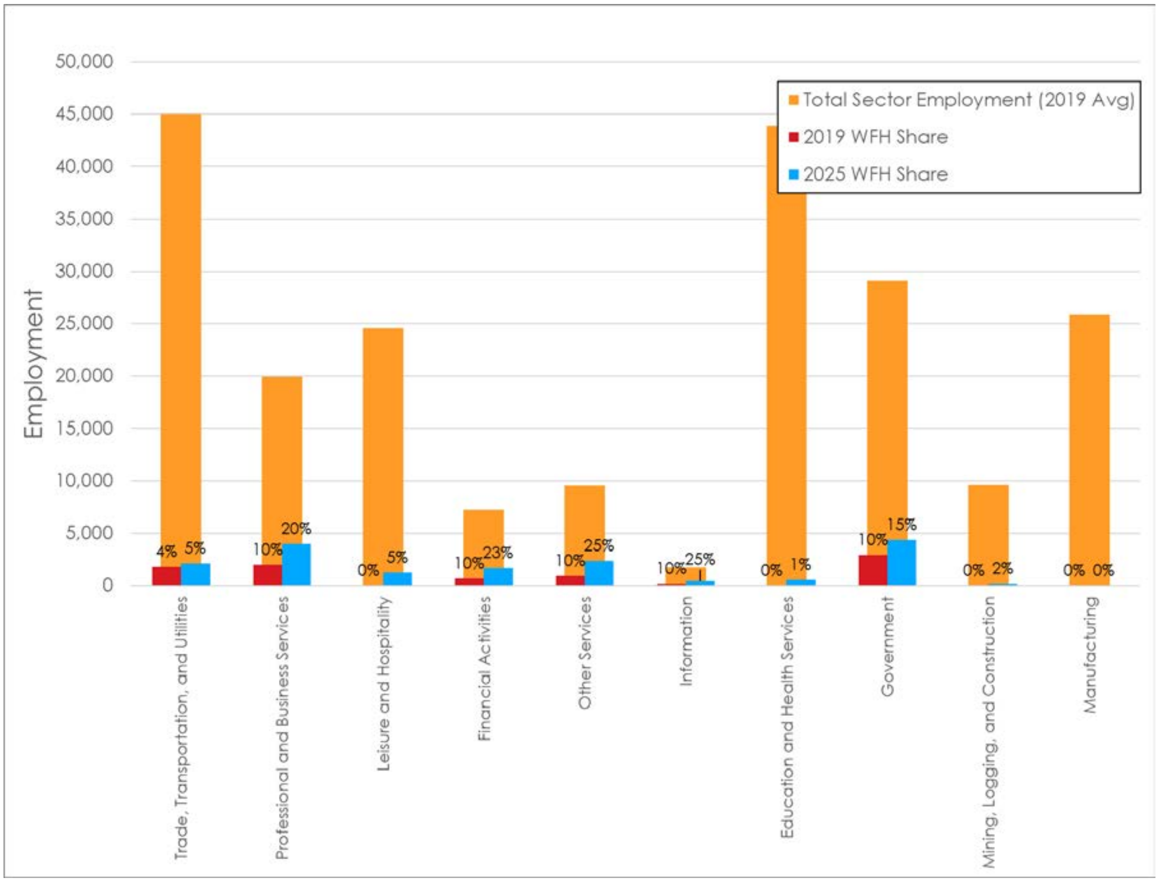


Figure 50: Estimated Pre- and Post-COVID Work from Home (WFH) Share of Employment by Industry; Youngstown-Warren-Boardman, OH-PA, Metropolitan Statistical Area



These long-term changes in WFH behavior will focus on employment related trips and will not impact all types of trips on the Turnpike. Specifically, trips impacted will generally be work-based trips, including commuting, business travel, and other trips previously conducted to or from the driver's place of employment.

To make a reasonable estimate the portion of Turnpike traffic in each region potentially impacted by this WFH shift, frequency data from a 2006 survey of Turnpike patrons was considered, which indicated that roughly 38 percent of cars use the Turnpike two or more times per week.

The Turnpike transaction data indicates that approximately 25 percent of car trips on the Turnpike are greater than 60 miles in length. It was assumed that most long-distance (greater than 60 miles) trips are less frequent than twice per week, and these trips were removed from the WFH analysis; the WFH analysis focused on the 75 percent of car trips that are shorter than 60 miles in length. Of these trips, roughly 50 percent were estimated to be frequent travelers of more than 2 trips per week, as shown in Table 31.

Table 31: Estimation of Frequency by Trip Length

<table>
<tr><th colspan="2">Trip Length</th><th colspan="2">Theoretical Vehicles</th><th>Frequent Vehicles</th><th>Unlikely to be Long Distance</th><th>Frequent Trips</th><th>Estimated Percent Frequent by Trip Length</th></tr>
<tr><td rowspan="2">Cars</td><td>Short & Middle Distance (1 to 60 m)</td><td>750</td><td rowspan="2">1000</td><td rowspan="2">38%, or 380</td><td>380</td><td>380</td><td>51%</td></tr>
<tr><td>Long Distance (>60 m)</td><td>250</td><td>0</td><td>0</td><td>0%</td></tr>
<tr><td colspan="2">Total</td><td>1000</td><td>1000</td><td>380</td><td>380</td><td>380</td><td>38%</td></tr>
</table>

We estimated 60 percent of the regional non-long-distance trips could be impacted by the estimated changes in WFH behavior. Combined with the estimated change in employment-related trips of 4 to 6 percent, the overall estimated potential impact on traffic in these regions is between 2.5 and 3.5 percent, as shown in Table 32.

Table 32: Estimation of Potential Impact on Total Traffic

Region	Max Potential Change in Employment-based Trips	Estimated Percent of Traffic Impacted	Max Potential Change in Total Traffic
Toledo	-4.6%	60.0%	**-2.8%**
Cleveland	-5.7%	60.0%	**-3.4%**
Youngstown	-4.2%	60.0%	**-2.5%**

The results of this analysis of WFH impacts on future traffic were used as a guide to develop a range of long-term impacts for regional traffic. When preparing the estimates of potential shift in WFH behavior, a “worst case” scenario was assumed that anchored the long-duration impacts only slightly more conservatively than the values shown in Table 32. The short duration was assumed to be much less impactful, and the mid-duration assumed something in between the short duration and the guiding values from Table 32. Estimated impacts on non-long-distance cars generally range from around -1.0 percent in the short-duration scenario to about -3.5 to -5.0 percent in the long-duration scenario. The values assumed for each duration, region, and vehicle type are shown in Table 33. Although long distance trips were not assumed to be directly impacted by changes in employment, some potential impact was built into the mid-duration and long-durations scenarios (-2.0 percent). Trucks were similarly assumed to have the potential for some potential impact, estimated at -1.0 percent in the long-duration scenario.

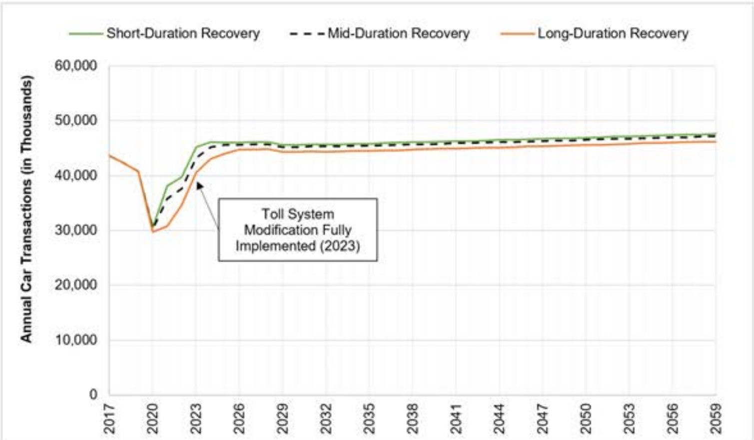
Table 33: Applied Impacts on Overall Traffic by Class and Region, by Duration of COVID-19 Scenario

Applied Region		Short-Duration	Mid-Duration	Long-Duration
Cars	Western	-1.0%	-2.0%	-4.0%
	Central	-1.5%	-2.5%	-5.0%
	Eastern	-1.0%	-2.0%	-3.5%
	Long Distance	0.0%	-0.5%	-2.0%
Trucks	Western	0.0%	-0.3%	-1.0%
	Central	0.0%	-0.3%	-1.0%
	Eastern	0.0%	-0.3%	-1.0%
	Long Distance	0.0%	-0.3%	-1.0%

8.2 TRANSACTION, VMT, AND GROSS REVENUE ESTIMATES

Provided herein are the estimated ranges of long-term traffic and revenue (for the Short-Duration, Mid-Duration, and Long-Duration COVID-19 recovery scenarios) which incorporate the research, analysis, and assumptions discussed in prior chapters. In the following figures, actual annual Turnpike transactions and toll revenue performance from 2017 through 2019 and estimated annual transactions and toll revenue from 2020 through 2051 are provided (the estimated transactions and toll revenue for 2020 include actual data from January through mid-October). Figure 51 and Figure 52 illustrate historical and projected transactions, and Figure 53 and Figure 54 illustrate historical and projected revenue. To provide further detail of our analysis, potential car and truck impacts are shown separately. For all four figures, 2017 through 2019 plotted values are actuals and 2020 through 2051 values are estimates. A noticeable jump in transactions is evident in 2023 estimates; this jump results from consideration of the toll system modification timeline as Toll System Modifications are intended to be fully implemented by April 1, 2023.

Figure 51: Actual (through October 2020) and Estimated Transactions by Year, Car Transactions (Left) and Truck Transactions (Right), by COVID-19 Duration Recovery Scenario



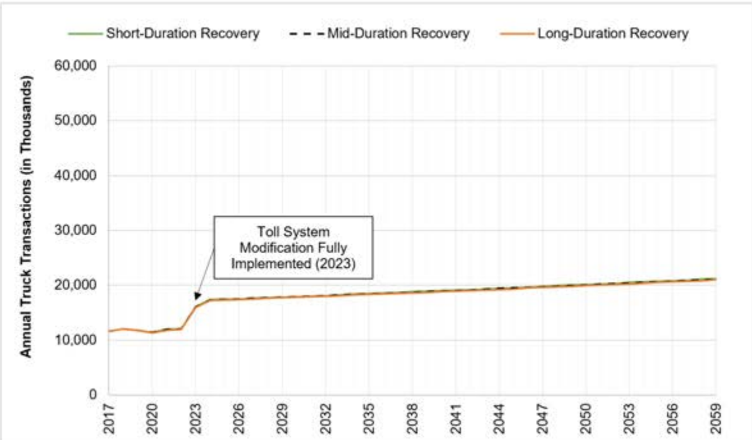


Figure 52: Actual (through October 2020) and Estimated Transactions by Year, Total Transactions, by COVID-19 Recovery Scenario

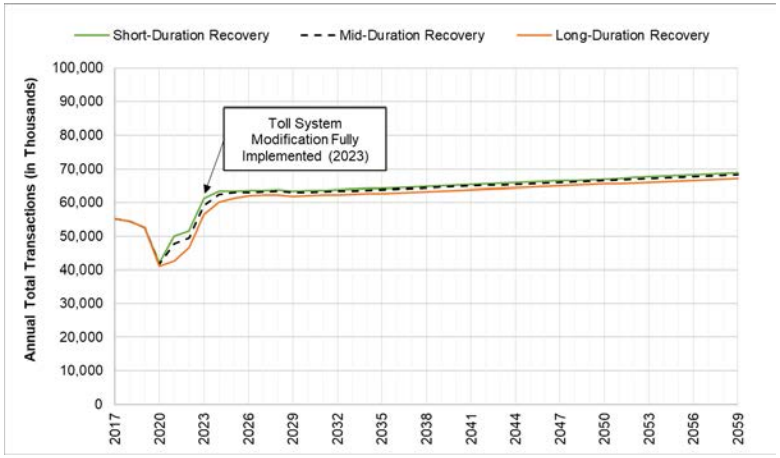
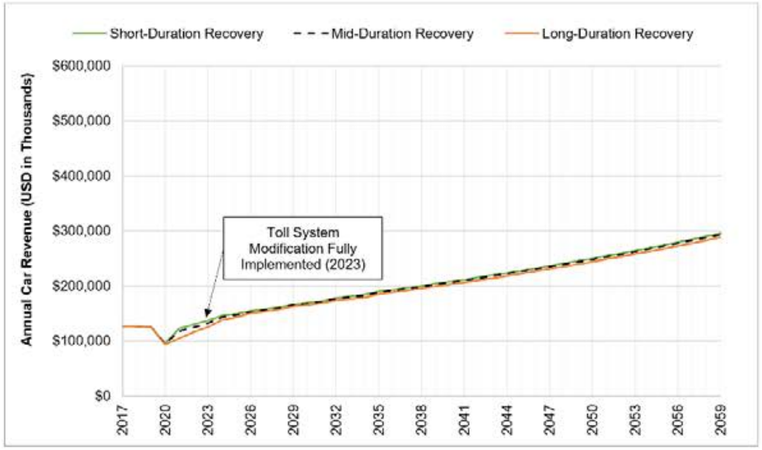


Figure 53: Actual (through October 2020) and Estimated Revenue by Year, Car Revenue (Left) and Truck Revenue (Right), by COVID-19 Recovery Scenario



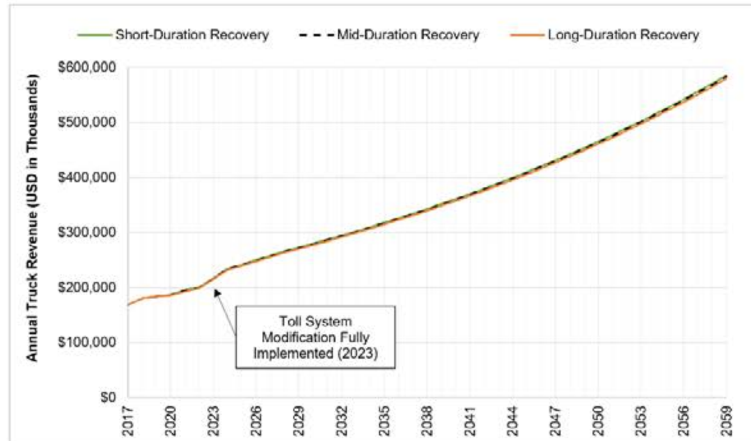


Figure 54: Actual (through October 2020) and Estimated Revenue by Year, Total Revenue, by COVID-19 Recovery Scenario

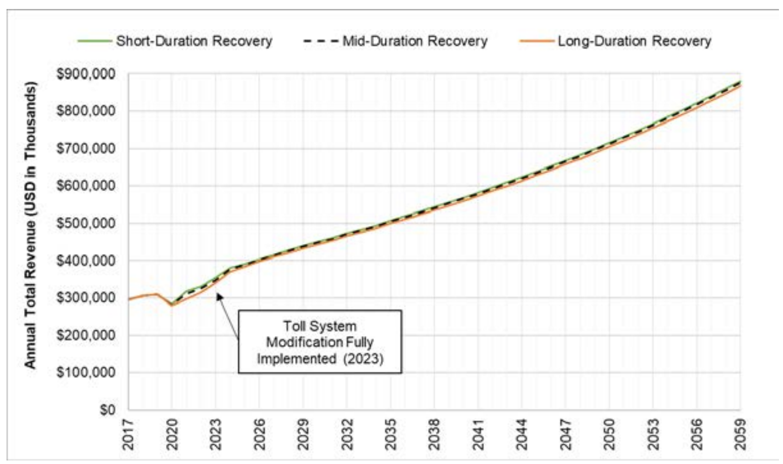


Table 34: Actual (through October 2020) and Estimated Transactions, VMT, and Revenue, Short-Duration

Year	Transactions		VMT		Revenue		
	Car	Truck	Car	Truck	Car	Truck	Total
2015*	42.1	11.3	1,998.2	1,003.1	$122.3	$157.9	$280.3
2016*	43.4	11.4	2,029.9	1,007.7	$126.2	$162.3	$288.6
2017*	43.6	11.6	2,017.0	1,020.9	$127.5	$168.3	$295.8
2018*	42.3	12.0	1,969.7	1,064.8	$126.4	$179.7	$306.1
2019*	40.7	11.8	1,925.7	1,056.2	$126.1	$183.1	$309.2
2020	30.6	11.4	1,452.2	1,042.2	$96.4	$186.4	$282.8
2021	38.1	12.0	1,814.8	1,064.1	$123.6	$195.4	$319.0
2022	39.7	12.0	1,867.5	1,064.3	$129.7	$200.4	$330.1
2023	45.2	16.1	1,875.7	1,069.0	$137.4	$216.7	$354.1
2024	46.1	17.4	1,860.1	1,072.6	$146.2	$234.2	$380.4
2025	46.0	17.5	1,861.6	1,078.3	$149.2	$241.8	$391.0
2026	46.0	17.5	1,871.0	1,084.2	$154.3	$249.7	$404.0
2027	46.1	17.6	1,862.6	1,090.0	$157.9	$257.7	$415.6
2028	46.1	17.7	1,863.4	1,095.9	$161.3	$266.1	$427.4
2029	45.6	17.8	1,857.5	1,102.1	$166.9	$272.9	$439.8
2030	45.6	17.9	1,863.5	1,108.3	$169.8	$279.9	$449.7
2031	45.7	18.0	1,865.8	1,114.6	$173.0	$287.1	$460.1
2032	45.7	18.1	1,866.2	1,121.1	$178.7	$294.5	$473.2
2033	45.7	18.2	1,868.7	1,127.2	$181.5	$302.1	$483.6
2034	45.8	18.4	1,871.7	1,133.5	$184.1	$309.8	$493.9
2035	45.8	18.5	1,872.3	1,133.3	$190.2	$317.8	$508.0
2036	45.9	18.6	1,875.2	1,146.4	$193.1	$326.0	$519.1
2037	46.0	18.7	1,877.8	1,152.9	$197.1	$334.4	$531.5
2038	46.1	18.8	1,880.8	1,159.4	$200.2	$342.9	$543.1
2039	46.1	18.9	1,883.4	1,166.0	$204.7	$351.8	$556.5
2040	46.2	19.0	1,885.9	1,172.6	$208.1	$360.8	$568.9
2041	46.3	19.1	1,888.7	1,179.2	$211.9	$370.1	$582.0
2042	46.3	19.2	1,891.4	1,186.0	$216.0	$379.6	$595.6
2043	46.4	19.3	1,894.2	1,192.7	$219.9	$389.4	$609.3
2044	46.5	19.4	1,897.1	1,199.5	$224.0	$399.4	$623.4
2045	46.5	19.5	1,900.0	1,206.3	$228.2	$409.7	$637.9
2046	46.6	19.6	1,903.0	1,213.2	$232.4	$420.3	$652.7
2047	46.7	19.8	1,906.1	1,220.2	$236.8	$431.1	$667.9
2048	46.8	19.9	1,909.2	1,227.1	$241.2	$442.2	$683.4
2049	46.8	20.0	1,912.4	1,234.2	$245.7	$453.6	$699.3
2050	46.9	20.1	1,915.6	1,241.2	$250.3	$465.3	$715.6
2051	47.0	20.2	1,918.9	1,248.3	$255.0	$477.3	$732.3

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll increases are planned each year.
(3) Toll System Modernization will be fully implemented in 2023.
(4) Numbers may not add due to rounding.

Table 35: Actual (through October 2020) and Estimated Transactions, VMT, and Revenue, Mid-Duration

Year	Transactions		VMT		Revenue		
	Car	Truck	Car	Truck	Car	Truck	Total
2015*	42.1	11.3	1,998.2	1,003.1	$122.3	$157.9	$280.3
2016*	43.4	11.4	2,029.9	1,007.7	$126.2	$162.3	$288.6
2017*	43.6	11.6	2,017.0	1,020.9	$127.5	$168.3	$295.8
2018*	42.3	12.0	1,969.7	1,064.8	$126.4	$179.7	$306.1
2019*	40.7	11.8	1,925.7	1,056.2	$126.1	$183.1	$309.2
2020	30.2	11.4	1,438.1	1,040.2	$95.5	$186.1	$281.6
2021	35.8	11.9	1,730.6	1,056.8	$117.7	$194.2	$311.9
2022	37.6	12.0	1,792.7	1,060.8	$124.5	$199.8	$324.3
2023	43.2	16.0	1,810.4	1,065.4	$132.6	$216.0	$348.6
2024	45.2	17.3	1,831.6	1,069.0	$143.9	$233.5	$377.4
2025	45.6	17.4	1,849.0	1,074.8	$148.2	$241.0	$389.2
2026	45.6	17.5	1,858.4	1,080.6	$153.2	$248.8	$402.0
2027	45.7	17.6	1,850.0	1,086.4	$156.8	$256.9	$413.7
2028	45.7	17.7	1,850.7	1,092.2	$160.2	$265.2	$425.4
2029	45.2	17.8	1,845.0	1,098.4	$165.8	$272.0	$437.8
2030	45.2	17.9	1,850.9	1,104.6	$168.7	$279.0	$447.7
2031	45.3	18.0	1,853.2	1,110.9	$171.8	$286.2	$458.0
2032	45.3	18.1	1,853.6	1,117.4	$177.5	$293.5	$471.0
2033	45.3	18.2	1,856.1	1,123.5	$180.3	$301.1	$481.4
2034	45.4	18.3	1,859.1	1,129.8	$182.9	$308.8	$491.7
2035	45.4	18.4	1,859.6	1,129.5	$188.9	$316.8	$505.7
2036	45.5	18.5	1,862.5	1,142.6	$191.8	$324.9	$516.7
2037	45.6	18.6	1,865.1	1,149.1	$195.8	$333.3	$529.1
2038	45.7	18.7	1,868.0	1,155.5	$198.9	$341.8	$540.7
2039	45.7	18.8	1,870.7	1,162.1	$203.3	$350.6	$553.9
2040	45.8	18.9	1,873.1	1,168.7	$206.7	$359.6	$566.3
2041	45.9	19.0	1,875.9	1,175.3	$210.5	$368.9	$579.4
2042	45.9	19.1	1,878.6	1,182.0	$214.5	$378.4	$592.9
2043	46.0	19.3	1,881.4	1,188.8	$218.4	$388.1	$606.5
2044	46.1	19.4	1,884.3	1,195.5	$222.5	$398.1	$620.6
2045	46.1	19.5	1,887.2	1,202.4	$226.7	$408.4	$635.1
2046	46.2	19.6	1,890.1	1,209.2	$230.9	$418.9	$649.8
2047	46.3	19.7	1,893.2	1,216.1	$235.2	$429.7	$664.9
2048	46.4	19.8	1,896.3	1,223.1	$239.6	$440.7	$680.3
2049	46.4	19.9	1,899.4	1,230.1	$244.0	$452.1	$696.1
2050	46.5	20.0	1,902.6	1,237.1	$248.6	$463.8	$712.4
2051	46.6	20.2	1,905.9	1,244.2	$253.3	$475.7	$729.0

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll increases are planned each year.
(3) Toll System Modernization will be fully implemented in 2023.
(4) Numbers may not add due to rounding.

Table 36: Actual (through October 2020) and Estimated Transactions, VMT, and Revenue, Long-Duration

Year	Transactions		VMT		Revenue		
	Car	Truck	Car	Truck	Car	Truck	Total
2015*	42.1	11.3	1,998.2	1,003.1	$122.3	$157.9	$280.3
2016*	43.4	11.4	2,029.9	1,007.7	$126.2	$162.3	$288.6
2017*	43.6	11.6	2,017.0	1,020.9	$127.5	$168.3	$295.8
2018*	42.3	12.0	1,969.7	1,064.8	$126.4	$179.7	$306.1
2019*	40.7	11.8	1,925.7	1,056.2	$126.1	$183.1	$309.2
2020	29.7	11.3	1,419.5	1,037.2	$94.2	$185.6	$279.8
2021	30.8	11.8	1,551.0	1,044.3	$105.3	$192.0	$297.3
2022	34.6	11.9	1,683.2	1,054.4	$116.7	$198.6	$315.3
2023	40.6	15.9	1,724.0	1,059.1	$126.1	$214.7	$340.8
2024	43.0	17.2	1,761.4	1,062.6	$138.3	$232.0	$370.3
2025	44.0	17.3	1,795.3	1,068.3	$143.8	$239.6	$383.4
2026	44.7	17.4	1,826.2	1,074.1	$150.6	$247.3	$397.9
2027	44.7	17.5	1,818.0	1,079.9	$154.1	$255.3	$409.4
2028	44.8	17.6	1,818.7	1,085.7	$157.4	$263.6	$421.0
2029	44.3	17.7	1,813.0	1,091.8	$162.9	$270.4	$433.3
2030	44.3	17.8	1,818.8	1,097.2	$165.8	$277.1	$442.9
2031	44.4	17.9	1,821.1	1,103.4	$168.9	$284.3	$453.2
2032	44.3	18.0	1,821.5	1,109.9	$174.4	$291.6	$466.0
2033	44.4	18.1	1,823.9	1,115.9	$177.1	$299.1	$476.2
2034	44.5	18.2	1,826.9	1,122.2	$179.7	$306.7	$486.4
2035	44.5	18.3	1,827.4	1,122.0	$185.7	$314.6	$500.3
2036	44.6	18.4	1,830.3	1,135.0	$188.5	$322.7	$511.2
2037	44.6	18.5	1,832.8	1,141.4	$192.4	$331.0	$523.4
2038	44.7	18.6	1,835.7	1,147.8	$195.5	$339.5	$535.0
2039	44.8	18.7	1,838.3	1,154.3	$199.8	$348.3	$548.1
2040	44.9	18.8	1,840.7	1,160.9	$203.1	$357.2	$560.3
2041	44.9	18.9	1,843.4	1,167.4	$206.9	$366.4	$573.3
2042	45.0	19.0	1,846.1	1,174.1	$210.8	$375.8	$586.6
2043	45.1	19.1	1,848.8	1,180.8	$214.7	$385.5	$600.2
2044	45.1	19.2	1,851.6	1,187.5	$218.7	$395.4	$614.1
2045	45.2	19.3	1,854.5	1,194.3	$222.8	$405.6	$628.4
2046	45.3	19.5	1,857.4	1,201.1	$226.9	$416.1	$643.0
2047	45.3	19.6	1,860.4	1,208.0	$231.1	$426.8	$657.9
2048	45.4	19.7	1,863.5	1,214.9	$235.4	$437.8	$673.2
2049	45.5	19.8	1,866.6	1,221.8	$239.8	$449.1	$688.9
2050	45.6	19.9	1,869.7	1,228.8	$244.3	$460.7	$705.0
2051	45.6	20.0	1,872.9	1,235.9	$248.9	$472.5	$721.4

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll increases are planned each year.
(3) Toll System Modernization will be fully implemented in 2023.
(4) Numbers may not add due to rounding.

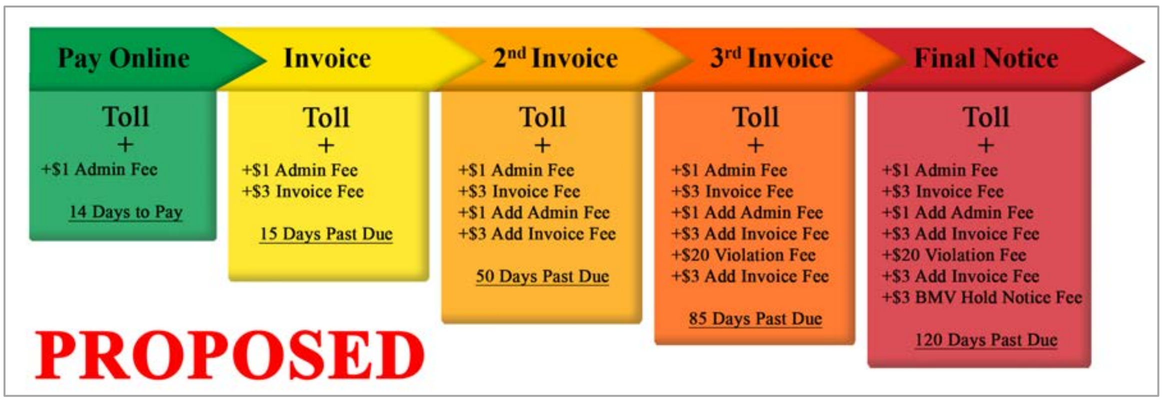
8.3 FEE REVENUES

Estimates were made of violation transactions resolved at or passing through each tier of invoicing, as discussed in section 8.1.2.1 At each level of invoicing, both administrative fees and invoicing fees are charged to customers when they eventually pay.

8.3.1 Fee Structure

Fee revenues were calculated using the proposed fees shown in Figure 55. For the estimated number of paying transactions settled at each invoicing tier, the administrative fee (typically accumulating $1 per tier) was assumed to be charged per transaction. Similarly, violation fees were assumed to be charged per transaction, with a cap of $100 in admin and violation fees per customer. Invoicing fees were assumed to be charged per invoice. It was assumed that invoices would be issued monthly. The relationship between customers and transactions was estimated using frequency data collected in surveys previously conducted for the Ohio Turnpike.

Figure 55: Proposed Invoicing Fees



Source: Ohio Turnpike & Infrastructure Commission

8.3.2 Fee Revenue

To provide a reasonable estimate of Fee Revenue to carry through to Net Revenue calculations, fee revenues were calculated for the mid-duration scenario, and are presented in Table 37.

Table 37: Fee Revenue (000s)

Year	Fee Revenues	
2023	$1.3	
2024	$2.7	107.8%
2025	$2.7	0.0%
2026	$2.7	-0.4%
2027	$2.7	-0.7%
2028	$2.7	0.0%
2029	$2.6	-0.8%
2030	$2.6	-0.4%
2031	$2.6	0.0%
2032	$2.6	-0.4%
2033	$2.6	0.0%
2034	$2.6	0.0%
2035	$2.6	-0.4%
2036	$2.6	0.0%
2037	$2.6	0.0%
2038	$2.6	0.0%
2039	$2.6	0.0%
2040	$2.6	-0.4%
2041	$2.6	0.4%
2042	$2.6	0.0%
2043	$2.6	0.4%
2044	$2.6	0.4%
2045	$2.6	0.0%
2046	$2.6	0.4%
2047	$2.6	0.4%
2048	$2.6	0.0%
2049	$2.7	0.4%
2050	$2.7	0.4%
2051	$2.7	0.0%

Notes: Toll System Modernization will be fully implemented in 2023.

9.0 LONG-TERM OPERATING COSTS ESTIMATES

This section presents a review of projected Operation and Maintenance (O&M) expenditures consisting of Administration, Insurance, Traffic Control and Safety, Maintenance as well as Service and Toll Operations costs for the Turnpike. The Stantec team completed this review of future operating expenditures based on both historical information and the Commission's latest 2020 projection of operating expenses, including future cost measures being planned by the Commission and the planed implementing of TCS and CSC modernization. For the long-term projections, most operating expenditures will be recurring costs and only increase due to inflation except for toll collection costs. This is because the Turnpike has been in operation for over 50 years, with a stable organization structure and labor force, and with no major infrastructure expansions or major reorganizations being planned in the foreseeable future. The Stantec team's opinion is that the projected O&M expenditures are sound.

Factors that will affect long-term projection of the costs, include:

- Planned conversion of the existing TCS and CSC: Several initiatives are included in the adopted TCS and CSC Strategic Plan, such as the removal of 9 of the existing gantries, removal of all entry lane gates and exit gates in E-ZPass Only lanes, and installation of license plate image capture cameras. Additionally, two new gantries will be built at MP 49 and MP 211 (marking the new ends of the closed ticket system) and the existing Eastgate plaza will be converted to one-way WB. These changes will have impacts on the toll collection costs and on toll infrastructure-related maintenance costs, such as the reduction in toll staffing needs due to the removal of some of the existing gantries and introduction of dedicated gateless E-ZPass lanes.

- E-ZPass market share rates: The increasing usage of E-ZPass will correspond to a decreasing number of cash transactions, which may reduce the need for manual toll collection. Also, the introduction of dedicated gateless E-ZPass lanes from the TCS conversion will encourage E-ZPass usage due to the faster travel speeds that such these lanes provide. On the other hand, the any increases in total traffic or credit card usage could potentially slow down such a reduction.

- ATPMs: Further implementation of ATPMs could potentially reduce the need for manual toll collection at some toll locations. As part of the conversion of the existing TCS, enough ATPMs will be deployed such that all toll plazas can be operated without toll collectors working the night shift.

- Staffing Replacements: In 2010, the Commission reduced its staff size through the Voluntary Separation Incentive Program ("VSIP"). More recently it has, through attrition, replaced some of the full-time employees with part-time employees to further reduce toll collection costs. It is believed that the current practices of replacing full-time staff with part-time staff would continue in the near future, as more employees voluntarily choose to retire or leave.

- Labor contract negotiation with the Union: The previous contract expired December 31, 2019. The Commission is currently negotiating a new contract. Negotiations had been delayed because of COVID-19 but have recently resumed.

- The Commission assumed salaries will continue to grow with inflation (estimated at 2.5 percent), consistent with what was forecasted for the maintenance labor forces.

Table 38 presents the results of the projections for Total Operations and Maintenance Expenditures through 2051. As seen in the table, the forecasted operations and maintenance expenditures grow from about $112 million in 2015 to $237.7 million in 2051. In addition, Service Plaza and Tolling Operations account for between 37 and 47 percent of total O&M expenditures, ranging from about $52 million in 2015 to about $89 million in 2051. It shall be noted that the forecasted operations and maintenance expenditures assumed the conversion to the new TCS and CSC will occur by the end of 2023. Also starting in 2017, maintenance labor costs were no longer allocated to different maintenance categories. This change will not affect the total costs of maintenance.

Table 38: Historical and Projected Total O&M Expenditures (000s)

Year	Administration		Traffic Control, Safety, Patrol, and Communications	Maintenance of Roadway and Structures	Services and Toll Operation	Total Operating Expenses	Annual O&M Expense Growth
	Admin	Insurance					
2015*	$9.3	$0.9	$13.9	$35.8	$51.9	$111.9	
2016*	$10.2	$1.0	$14.4	$38.3	$54.1	$118.0	5.4%
2017*	$10.3	$0.9	$13.4	$37.9	$56.2	$118.8	0.7%
2018*	$10.8	$0.8	$13.4	$39.8	$54.5	$119.3	0.5%
2019*	$11.8	$0.9	$14.4	$39.5	$53.3	$119.8	0.4%
2020	$12.2	$0.9	$14.1	$40.7	$50.3	$118.2	-1.4%
2021	$12.7	$1.0	$14.5	$43.0	$51.8	$123.0	4.1%
2022	$13.0	$1.0	$14.9	$44.1	$51.9	$124.9	1.5%
2023	$13.3	$1.0	$15.3	$45.2	$52.8	$127.6	2.2%
2024	$13.6	$1.0	$15.7	$46.3	$53.0	$129.6	1.6%
2025	$13.9	$1.0	$16.1	$47.5	$53.3	$131.8	1.7%
2026	$14.2	$1.0	$16.5	$48.7	$53.7	$134.1	1.7%
2027	$14.6	$1.1	$16.9	$49.9	$54.0	$136.5	1.8%
2028	$15.0	$1.1	$17.3	$51.1	$54.4	$138.9	1.8%
2029	$15.4	$1.1	$17.7	$52.4	$54.9	$141.5	1.8%
2030	$15.8	$1.1	$18.1	$53.7	$55.4	$144.1	1.9%
2031	$16.2	$1.2	$18.6	$55.0	$56.0	$147.0	2.0%
2032	$16.6	$1.2	$19.1	$56.4	$56.7	$150.0	2.0%
2033	$17.0	$1.2	$19.6	$57.8	$57.4	$153.0	2.0%
2034	$17.4	$1.3	$20.1	$59.2	$58.2	$156.2	2.1%
2035	$17.8	$1.3	$20.6	$60.7	$59.7	$160.1	2.5%
2036	$18.2	$1.3	$21.1	$62.2	$61.2	$164.0	2.4%
2037	$18.7	$1.4	$21.6	$63.8	$62.7	$168.2	2.6%
2038	$19.2	$1.4	$22.1	$65.4	$64.3	$172.4	2.5%
2039	$19.7	$1.5	$22.7	$67.0	$65.9	$176.8	2.6%
2040	$20.2	$1.5	$23.3	$68.7	$67.5	$181.2	2.5%
2041	$20.7	$1.5	$23.9	$70.4	$69.2	$185.7	2.5%
2042	$21.2	$1.6	$24.5	$72.2	$70.9	$190.4	2.5%
2043	$21.7	$1.6	$25.1	$74.0	$72.7	$195.1	2.5%
2044	$22.2	$1.7	$25.7	$75.9	$74.5	$200.0	2.5%
2045	$22.8	$1.7	$26.3	$77.8	$76.4	$205.0	2.5%
2046	$23.4	$1.8	$27.0	$79.7	$78.3	$210.2	2.5%
2047	$24.0	$1.8	$27.7	$81.7	$80.3	$215.5	2.5%
2048	$24.6	$1.9	$28.4	$83.7	$82.3	$220.9	2.5%
2049	$25.2	$1.9	$29.1	$85.8	$84.4	$226.4	2.5%
2050	$25.8	$2.0	$29.8	$87.9	$86.5	$232.0	2.5%
2051	$26.4	$2.0	$30.5	$90.1	$88.7	$237.7	2.5%

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll System Modernization will be fully implemented in 2023.
(3) Numbers may not add due to rounding.

10.0 NET REVENUES

Net revenues are calculated by subtracting operating and maintenance costs from total gross pledged revenues. Total gross pledged revenues include both toll revenues and other pledged revenues.

10.1 FORECAST OF OTHER PLEDGED REVENUES

"Other" pledged revenues include sources of revenue dedicated to the Turnpike that are generated from sources other than tolls. Examples of "other" revenue include Concession Revenue from plazas along the Turnpike, as well as investment income. Forecasts for these "other" revenues were provided by the Commission and are shown in Table 39. A list of "other" revenue sources considered follows:

- Special Toll Permits include fees for large combination vehicles (LCVs) and permits for oversize and overweight vehicles.
- Concession Revenues consist of both fixed and percentage-based revenues from sales at the Commission's Service Plazas. Concession revenues are mainly comprised of restaurant and fuel sales, and common area maintenance charges, property management fees, and capital improvement fees.
- Other Revenues include all the other pledged income to the Commission including E-ZPass transponder fees, licenses, tower leases, royalties, and advertising.
- Investment Income is based on the current plan of finance.

Table 39: Ohio Turnpike Non-Toll ("Other") Revenues (in Millions)

Year	Other Revenues				
	Special Toll Permits	Concessions	Lease & License/ Other	Investment Earnings	Total
2015*	$3.4	$16.1	$4.2		$23.8
2016*	$3.4	$16.3	$5.0		$24.7
2017*	$3.4	$17.1	$5.6		$26.1
2018*	$3.5	$17.3	$6.2		$27.0
2019*	$3.5	$17.1	$7.0	$5.0	$32.6
2020	$3.4	$12.1	$10.9	$1.1	$27.5
2021	$3.7	$13.6	$7.3	$0.3	$24.9
2022	$3.8	$17.6	$8.3	$0.5	$30.2
2023	$3.9	$18.1	$8.8	$0.9	$31.7
2024	$4.0	$18.5	$9.3	$1.6	$33.4
2025	$4.1	$19.0	$9.8	$2.2	$35.1
2026	$4.2	$19.5	$10.3	$3.1	$37.1
2027	$4.3	$19.9	$10.8	$3.8	$38.9
2028	$4.4	$20.4	$11.3	$3.8	$40.0
2029	$4.5	$21.0	$11.8	$4.5	$41.8
2030	$4.6	$21.5	$12.3	$5.4	$43.8
2031	$4.8	$22.0	$12.8	$6.0	$45.6
2032	$4.9	$22.6	$13.3	$5.7	$46.4
2033	$5.0	$23.1	$13.8	$5.8	$47.7
2034	$5.1	$23.7	$14.3	$5.5	$48.6
2035	$5.3	$24.3	$14.8	$5.6	$50.0
2036	$5.4	$24.9	$15.3	$5.7	$51.3
2037	$5.5	$25.5	$15.8	$5.8	$52.7
2038	$5.7	$26.2	$16.3	$5.9	$54.0
2039	$5.8	$26.8	$16.8	$6.0	$55.4
2040	$5.9	$27.5	$17.3	$6.1	$56.8
2041	$6.1	$28.2	$17.8	$6.2	$58.3
2042	$6.2	$28.9	$18.3	$6.3	$59.7
2043	$6.4	$29.6	$18.8	$6.4	$61.2
2044	$6.6	$30.4	$19.3	$6.5	$62.7
2045	$6.7	$31.1	$19.8	$6.6	$64.2
2046	$6.9	$31.9	$20.3	$6.7	$65.8
2047	$7.1	$32.7	$20.8	$6.8	$67.4
2048	$7.2	$33.5	$21.3	$6.9	$68.9
2049	$7.4	$34.3	$21.8	$7.0	$70.6
2050	$7.6	$35.2	$22.3	$7.1	$72.2
2051	$7.8	$36.1	$22.8	$7.2	$73.9

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll System Modernization will be fully implemented in 2023.
(3) Numbers may not add due to rounding.

10.2 FORECAST OF NET REVENUES

Table 40 presents the net revenues, calculated from the total Turnpike gross revenues (mid-duration toll revenues plus other revenues) less Operating and Maintenance costs. The estimates of gross and net toll revenue are in nominal dollars. Over the 31-year forecast period from 2020 through 2051, Toll, Fee and Other revenues total some $18.1 Billion, while Operating and Maintenance costs total roughly $5.4 Billion. Net revenues for the 31-year period are estimated at $12.7 Billion.

Net Revenues

Table 40: Historical and Projected Net Revenues (in Millions)

Year	Toll Revenues		Fee Revenues		Other Revenues		Total Revenues		O&M Expenses		Net Revenues	
2015*	$280.3				$23.8		$304.1		$111.9		$192.1	
2016*	$288.6	3.0%			$24.7	4.0%	$313.3	3.0%	$118.0	5.4%	$195.3	1.7%
2017*	$295.8	2.5%			$26.1	5.6%	$321.9	2.8%	$118.8	0.7%	$203.1	4.0%
2018*	$306.1	3.5%			$27.0	3.5%	$333.1	3.5%	$119.3	0.5%	$213.8	5.2%
2019*	$309.2	1.0%			$32.6	20.8%	$341.8	2.6%	$119.8	0.4%	$222.0	3.8%
2020	$281.6	-8.9%			$27.5	-15.6%	$309.1	-9.6%	$118.2	-1.4%	$190.9	-14.0%
2021	$311.9	10.8%			$24.9	-9.5%	$336.8	9.0%	$123.0	4.1%	$213.8	12.0%
2022	$324.3	4.0%			$30.2	21.4%	$354.5	5.3%	$124.9	1.5%	$229.6	7.4%
2023	$348.6	7.5%	$1.3		$31.7	4.7%	$381.6	7.6%	$127.6	2.2%	$254.0	10.6%
2024	$377.4	8.3%	$2.7	107.8%	$33.4	5.5%	$413.5	8.4%	$129.6	1.6%	$283.9	11.8%
2025	$389.2	3.1%	$2.7	0.0%	$35.1	5.0%	$427.0	3.3%	$131.8	1.7%	$295.2	4.0%
2026	$402.0	3.3%	$2.7	-0.4%	$37.1	5.6%	$441.7	3.5%	$134.1	1.7%	$307.7	4.2%
2027	$413.7	2.9%	$2.7	-0.7%	$38.9	4.8%	$455.2	3.0%	$136.5	1.8%	$318.7	3.6%
2028	$425.4	2.8%	$2.7	0.0%	$40.0	2.8%	$468.0	2.8%	$138.9	1.8%	$329.1	3.3%
2029	$437.8	2.9%	$2.6	-0.8%	$41.8	4.6%	$482.2	3.0%	$141.5	1.8%	$340.7	3.5%
2030	$447.7	2.3%	$2.6	-0.4%	$43.8	4.9%	$494.1	2.5%	$144.1	1.9%	$350.0	2.7%
2031	$458.0	2.3%	$2.6	0.0%	$45.6	4.0%	$506.2	2.4%	$147.0	2.0%	$359.2	2.6%
2032	$471.0	2.8%	$2.6	-0.4%	$46.4	1.9%	$520.1	2.7%	$150.0	2.0%	$370.1	3.0%
2033	$481.4	2.2%	$2.6	0.0%	$47.7	2.8%	$531.7	2.2%	$153.0	2.0%	$378.7	2.3%
2034	$491.7	2.1%	$2.6	0.0%	$48.6	1.9%	$542.9	2.1%	$156.2	2.1%	$386.7	2.1%
2035	$505.7	2.8%	$2.6	-0.4%	$50.0	2.7%	$558.3	2.8%	$160.1	2.5%	$398.2	3.0%
2036	$516.7	2.2%	$2.6	0.0%	$51.3	2.7%	$570.6	2.2%	$164.0	2.4%	$406.6	2.1%
2037	$529.1	2.4%	$2.6	0.0%	$52.7	2.6%	$584.4	2.4%	$168.2	2.6%	$416.2	2.4%
2038	$540.7	2.2%	$2.6	0.0%	$54.0	2.6%	$597.3	2.2%	$172.4	2.5%	$424.9	2.1%
2039	$553.9	2.4%	$2.6	0.0%	$55.4	2.6%	$611.9	2.4%	$176.8	2.6%	$435.1	2.4%
2040	$566.3	2.2%	$2.6	-0.4%	$56.8	2.6%	$625.7	2.3%	$181.2	2.5%	$444.5	2.2%
2041	$579.4	2.3%	$2.6	0.4%	$58.3	2.5%	$640.3	2.3%	$185.7	2.5%	$454.6	2.3%
2042	$592.9	2.3%	$2.6	0.0%	$59.7	2.5%	$655.2	2.3%	$190.4	2.5%	$464.8	2.3%
2043	$606.5	2.3%	$2.6	0.4%	$61.2	2.5%	$670.3	2.3%	$195.1	2.5%	$475.2	2.2%
2044	$620.6	2.3%	$2.6	0.4%	$62.7	2.5%	$685.9	2.3%	$200.0	2.5%	$485.9	2.3%
2045	$635.1	2.3%	$2.6	0.0%	$64.2	2.4%	$702.0	2.3%	$205.0	2.5%	$497.0	2.3%
2046	$649.8	2.3%	$2.6	0.4%	$65.8	2.4%	$718.2	2.3%	$210.2	2.5%	$508.0	2.2%
2047	$664.9	2.3%	$2.6	0.4%	$67.4	2.4%	$734.9	2.3%	$215.5	2.5%	$519.4	2.2%
2048	$680.3	2.3%	$2.6	0.0%	$68.9	2.4%	$751.9	2.3%	$220.9	2.5%	$531.0	2.2%
2049	$696.1	2.3%	$2.7	0.4%	$70.6	2.3%	$769.3	2.3%	$226.4	2.5%	$542.9	2.2%
2050	$712.4	2.3%	$2.7	0.4%	$72.2	2.3%	$787.3	2.3%	$232.0	2.5%	$555.3	2.3%
2051	$729.0	2.3%	$2.7	0.0%	$73.9	2.3%	$805.5	2.3%	$237.7	2.5%	$567.8	2.3%

Notes: (1) Asterisk (*) denotes actuals.
(2) Toll increases are planned each year.
(3) Toll System Modernization will be fully implemented in 2023.
(4) Numbers may not add due to rounding.

11.0 LIMITS AND DISCLAIMERS

This report provides a summary of past traffic and revenue performance of the Ohio Turnpike and data related to potential future traffic and revenue for a 31-year period. These potential future traffic and revenue are based on the stated assumptions herein. Notably, since March 2020, the traffic on the Ohio Turnpike has been negatively affected by the onset of the COVID-19 pandemic (Pandemic). A Pandemic of this magnitude has never occurred in recent history and there are no similar events that can be used to estimate how long low volumes may continue, if a recovery will occur rapidly or slowly or the residual effects in 2021 and beyond. To address these unknowns, Stantec has presented traffic and revenue forecasts representing a range of scenarios as to the magnitude and duration of the effects (Scenarios). These Scenarios were presented to provide ranges in performance based on varied assumptions. Due to the current dynamic and fluid situation, the calculations presented herein are those based on the stated assumptions; Stantec does not opine on which, if any, of these outcomes might best represent the actual outcomes of the Pandemic..

It is Stantec's opinion that the forecasts provided in this report have been prepared in accordance with accepted industry-wide practice. In addition to the statements above, Stantec considers it is necessary to state that the forecast and associated calculations take into consideration the following caveats:

- Based on the current uncertainties, this report presents the results of Stantec's consideration of the information available to us as of the date hereof and the application of Stantec's experience and professional judgment to that information excluding the actual outcomes of the Pandemic.
- The future economic and social conditions or demographic developments cannot be predicted with certainty.
- The calculations contained in this report, while presented with numerical specificity, are based on a number of estimates and assumptions which, though considered reasonable to us, are inherently subject to significant economic and competitive uncertainties and contingencies, many of which will be beyond Stantec's control and that of the Commission. In many instances, a broad range of alternative assumptions could be considered reasonable. Changes in the assumptions used could result in material differences in presented calculations.
- If, for any reason, any of these stated conditions should change due to changes in the economy or competitive environment, or other factors, Stantec's calculations may require amendment or further adjustments.
- The standards of operation and maintenance on the Ohio Turnpike will be maintained as planned within the business rules and practices, such that the System will be well maintained, efficiently operated, and effectively signed to encourage usage.
- The general configuration and location of the Ohio Turnpike and its interchanges will remain as discussed in the report.
- Access to and from the Ohio Turnpike will remain as discussed in the report.

- No other new competing highway projects are assumed to be constructed or significantly improved in the project corridor during the project period, except those identified within the report.
- Major highway improvements that are currently underway or fully funded will be completed as planned.
- Beyond 2025, no reduced growth initiatives or related controls that would significantly inhibit normal development patterns will be introduced during the forecast period.
- Beyond 2025, there will be no future serious protracted recession during the forecast period.
- Beyond 2025, no local, regional, or national emergency will arise that will abnormally restrict the use of motor vehicles.

Many statements contained in this report that are not historical facts are forward-looking statements, which are based on Stantec's opinions, as well as assumptions made by, and information currently available to, the management and staff of Stantec. Because the statements are based on expectations about future events and economic performance and are not statements of fact, actual results may differ materially from those projected. The words "anticipate", "assume", "estimate", "expect", "objective", "projection", "plan", "forecast", "goal", "budget", or similar words are intended to identify forward-looking statements. The words or phrases "to date", "now", "currently", and the like are intended to mean as of the date of this report.

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

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

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

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EXHIBIT E

BOOK ENTRY ONLY SYSTEM

Description of DTC's Procedures

The following information on the Book Entry Only System applicable to the 2021 Senior Lien Bonds has been supplied by DTC, and none of the Commission, the Commission's Municipal Advisor, the Underwriters, Bond Counsel, or Underwriters' Counsel make any representations, warranties or guarantees with respect to its accuracy or completeness.

DTC will act as securities depository for the 2021 Senior Lien Bonds. The 2021 Senior Lien 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 2021 Senior Lien Bond certificate will be issued for each maturity in each series in the aggregate principal amount of the 2021 Senior Lien Bonds for that maturity and series and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates.

Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. 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" and, together with Direct Participants, "Participants"). DTC has S&P'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 the 2021 Senior Lien Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2021 Senior Lien Bonds on DTC's records. The ownership interest of each actual purchaser of each of the 2021 Senior Lien Bonds (the "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 purchases. Beneficial Owners are, however, expected to receive written confirmations providing details of the transactions, as well as periodic statements of their holdings, from the Direct or Indirect Participants through which the Beneficial Owners entered into the transaction. Transfers of ownership interests in the 2021 Senior Lien 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 interest in 2021 Senior Lien Bonds, except in the event that use of the Book Entry Only System for the 2021 Senior Lien Bonds is discontinued. See "Revision of Book Entry System - Replacement 2021 Senior Lien Bonds," below.

To facilitate subsequent transfers, all 2021 Senior Lien 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 the 2021 Senior Lien Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee does not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2021 Senior Lien Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2021 Senior Lien 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.

Redemption notices shall be sent to DTC. If less than all of the Series 2013 Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor such other DTC nominee) will consent or vote with respect to the 2021 Senior Lien 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 2021 Senior Lien Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal, premium, if any, and interest payments on the 2021 Senior Lien 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 its agent, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Direct and Indirect 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 Direct and Indirect Participants and not of DTC (or its nominee), or the Commission or its agent, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Commission or its agent, disbursement of such payments to Direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct and Indirect Participants.

Revision of Book Entry System

DTC may discontinue providing its service with respect to the 2021 Senior Lien Bonds at any time by giving reasonable notice to the Commission or its agent. Under such circumstances, in the event a successor securities depository is not obtained, the 2021 Senior Lien Bond certificates are required to be printed and delivered. The Beneficial Owner, upon registration of certificates held in the Beneficial Owner's name, will become the Holder of the 2021 Senior Lien Bonds.

The Commission may decide to discontinue use of the system of book entry transfers through DTC (or a successor securities depository). In such event, 2021 Senior Lien Bond certificates will be printed and delivered to DTC.

EXHIBIT F

LONG-TERM PRO-FORMA DEBT SERVICE COVERAGE

See attached.

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COMPOSITE ANNUAL DEBT SERVICE REQUIREMENT COVERAGE TABLE

Fiscal Year	Net Pledged Revenues [1]	Outstanding Senior Lien Annual Debt Service Requirement	2021 Senior Lien Bonds Annual Debt Service Requirement	Total Senior Lien Annual Debt Service Requirement	Senior Lien Debt Service Coverage	Outstanding Junior Lien Annual Debt Service Requirement	Total Composite Annual Debt Service Requirement	Aggregate Debt Service Coverage
2021	$213,778	$59,759	$5,607	$65,366	3.27x	$52,342	$117,708	1.82x
2022	229,640	60,783	6,751	67,533	3.40x	55,717	123,250	1.86x
2023	253,966	53,847	6,751	60,597	4.19x	78,158	138,755	1.83x
2024	283,897	45,661	6,751	52,411	5.42x	85,140	137,552	2.06x
2025	295,174	51,827	6,751	58,577	5.04x	78,869	137,446	2.15x
2026	307,694	32,459	6,751	39,209	7.85x	92,986	132,195	2.33x
2027	318,751	28,275	6,751	35,025	9.10x	101,172	136,197	2.34x
2028	329,159	14,958	6,751	21,708	15.16x	119,489	141,198	2.33x
2029	340,717	12,291	6,751	19,041	17.89x	127,160	146,201	2.33x
2030	350,023	12,120	6,751	18,871	18.55x	132,325	151,196	2.32x
2031	359,178	8,939	6,751	15,689	22.89x	140,233	155,922	2.30x
2032	370,075	8,312	6,751	15,063	24.57x	141,602	156,664	2.36x
2033	378,716	8,313	6,751	15,063	25.14x	142,778	157,841	2.40x
2034	386,699	8,310	6,751	15,061	25.68x	142,816	157,876	2.45x
2035	398,159	8,309	6,751	15,059	26.44x	142,819	157,878	2.52x
2036	406,598	10,725	6,751	17,475	23.27x	140,681	158,156	2.57x
2037	416,155	16,884	6,751	23,635	17.61x	134,572	158,207	2.63x
2038	424,931	16,353	6,751	23,103	18.39x	134,575	157,678	2.69x
2039	435,127	16,394	6,751	23,145	18.80x	134,574	157,719	2.76x
2040	444,543	16,844	6,751	23,595	18.84x	134,578	158,173	2.81x
2041	454,579	16,926	10,846	27,772	16.37x	134,577	162,349	2.80x
2042	464,836	10,056	17,715	27,771	16.74x	134,577	162,348	2.86x
2043	475,214	8,371	19,399	27,770	17.11x	106,588	134,358	3.54x
2044	485,915	8,309	19,464	27,774	17.50x	105,574	133,347	3.64x
2045	496,937	8,309	19,460	27,769	17.90x	105,158	132,927	3.74x
2046	507,983	21,686	6,362	28,048	18.11x	74,463	102,511	4.96x
2047	519,353	28,139	3,742	31,881	16.29x	48,425	80,306	6.47x
2048	530,947	4,816	22,955	27,770	19.12x	7,406	35,176	15.09x
2049	542,966	-	27,770	27,770	19.55x	-	27,770	19.55x
2050	555,310	-	27,769	27,769	20.00x	-	27,769	20.00x
2051	567,880	-	4,622	4,622	122.87x	-	4,622	122.87x
Total	$12,544,900	$597,975	$313,980	$911,943		$3,029,352	$3,941,295	

Values in ($000)'s. Table does not reflect interest earnings in Debt Service Reserve Fund and the Infrastructure Fund. Table does not reflect any bonds that may be issued after the issuance of the Series 2021 Bonds.

(1) Please see the Traffic and Revenue Report for further details

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EXHIBIT G

FORM OF CONTINUING DISCLOSURE CERTIFICATE

THIS CONTINUING DISCLOSURE CERTIFICATE (the "Certificate") is executed and delivered February 16, 2021 by the Ohio Turnpike and Infrastructure Commission (the "Issuer") in connection with the issuance of $135,010,000 State of Ohio Turnpike Revenue Bonds, 2021 Series A (the "Bonds"). The Issuer certifies, covenants and agrees as follows:

1. Purpose of Continuing Disclosure Certificate.

This Certificate is being given, signed and delivered for the benefit of the Bondholders (defined herein) and Beneficial Owners (defined herein) of the Bonds and in order to assist the Participating Underwriters of the Bonds in complying with the Rule (defined herein).

2. Definitions.

Certain capitalized terms are defined in the introduction of this Certificate. In addition, the following capitalized terms shall have the following meanings when used in this Certificate:

"*Annual Financial Information*" shall mean a copy of the annual audited financial statements of the Issuer. Those financial statements shall be prepared in accordance with accounting principles generally accepted in the United States of America, provided, however, that the Issuer may change the accounting principles used for preparation of such financial information so long as the Issuer includes a statement to the effect that different accounting principles are being used, stating the reason for such change and how to compare the financial information provided by the differing financial accounting principles. Any or all of the items listed above may be set forth in other documents, including a Comprehensive Annual Financial Report or offering documents of debt issues of the Issuer or related public entities, which have been transmitted to the MSRB, or may be included by specific reference to documents available on the MSRB's Internet Website.

"*Beneficial Owner*" shall mean any person which has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds (including holding Bonds through nominees, depositories or other intermediaries).

"*Bondholders*" shall mean any holder of the Bonds and any Beneficial Owner thereof.

"*EMMA*" means the Electronic Municipal Market Access System of the MSRB or any successor system or process of disclosure.

"*Event*" shall mean any of the following events with respect to the Bonds:

(i) Principal and interest payment delinquencies;

(ii) Non-payment related defaults, if material;

(iii) Unscheduled draws on debt service reserves reflecting financial difficulties;

(iv) Unscheduled draws on credit enhancements reflecting financial difficulties;

(v) Substitution of credit or liquidity providers, or their failure to perform;

(vi) 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 security, or other material events affecting the tax-exempt status of the security;

(vii) Modifications to rights of security holders, if material;

(viii) Bond calls, if material, and tender offers (except for mandatory scheduled redemptions not otherwise contingent upon the occurrence of an event);

(ix) Defeasances;

(x) Release, substitution or sale of property securing repayment of the securities, if material;

(xi) Rating changes;

(xii) Bankruptcy, insolvency, receivership or similar event of the obligated person (Note: For the purposes of this event, the 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);

(xiii) The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, 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;

(xiv) Appointment of a successor or additional trustee or the change of name of a trustee, if material;

(xv) Incurrence by the Issuer of a (i) debt obligation, (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation, or (iii) a guarantee of (i) or (ii), excluding municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule (each, a "Financial Obligation"), if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Issuer, any of which affect security holders, if material; and

(xvi) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Issuer, any of which reflect financial difficulties.

The SEC requires the listing of (i) through (xvi) although some of such events may not be applicable to the Bonds.

"*MSRB*" shall mean the Municipal Securities Rulemaking Board.

"*Offering Document*" shall mean the Official Statement, dated January 26, 2021.

"*Operating Data*" shall mean an update of the information of the type included in the following sections of the Offering Document: the tables titled **"Comparative Traffic Statistics," "Vehicles by Class," "Toll Revenue by Class", "Approved Toll Rate Schedule For Years 2021 through 2023 Cost of One-Way Full Length Trip Across The Ohio Turnpike",** and **"Toll Rates Per Mile"** under the caption **"TOLLS and TOLL COLLECTION"** and the table titled **"Revenue Bond Coverage"** under the caption **"RESULTS OF OPERATIONS"**.

"*Participating Underwriter*" shall mean any of the original underwriters of the Bonds required to comply with the Rule in connection with the offering of the Bonds.

"*Rule*" means SEC Rule 15c2-12, as amended from time to time

"*SEC*" shall mean the Securities and Exchange Commission.

"*State*" shall mean the State of Ohio.

3. Disclosure of Information.

(A) Information to be Provided and Filing Date. Except to the extent this Certificate is modified or otherwise altered in accordance with Section 4 hereof, the Issuer shall make, or cause to made, public through the MSRB (EMMA system) the information set forth in subsections (1), (2) and (3) below:

(1) Annual Financial Information and Operating Data. Annual Financial Information and Operating Data at least annually not later than July 1 following each fiscal year beginning July 1, 2021. The Annual Financial Information and Operating Data may be submitted as a single submission (for example but without limitation, included within the Issuer's Comprehensive Annual Financial Report, if any) or as separate submissions comprising a package, and may cross-reference other information; provided that the Annual Financial Information may be submitted separately if the audited financial statements of the Issuer are not available by the filing date set forth above, in which case those audited financial statements of the Issuer will be submitted when and if available.

(2) Events Notices. Notice of the occurrence of an Event, in a timely manner, not in excess of ten (10) business days after the occurrence of the Event.

(3) Failure to Provide Annual Financial Information or Operating Data. Notice, in a timely manner, of the failure of Issuer to provide the Annual Financial Information or Operating Data by the date required herein.

(B) Filing of Information.

Annual Financial Information, Operating Data and notice of all Event occurrences shall be filed with the MSRB (EMMA), in an electronic format as prescribed by the MSRB, accompanied by identifying information as prescribed by the MSRB, or in such other manner in the future as may be prescribed by the MSRB.

To the extent the Issuer is obligated to file any Annual Financial Information or Operating Data with the MSRB pursuant to this Certificate, such Annual Financial Information or Operating Data may be set forth in the document or set of documents transmitted to the MSRB, or may be included by specific reference to documents transmitted to the MSRB or SEC.

4. Amendment or Modification.

The Issuer reserves the right to amend this Certificate, and noncompliance with any provision of this Certificate may be waived, as may be necessary or appropriate to (a) achieve its compliance with any applicable federal securities law or rule, (b) cure any ambiguity, inconsistency or formal defect or omission, and (c) address any change in circumstances arising from a change in legal requirements, change in law or change in the identity, nature or status of the Issuer or type of business conducted by the Issuer. Any such amendment or waiver shall not be effective unless the Certificate (as amended or taking into account such waiver) would have materially complied with the requirements of the Rule at the time of the primary offering of the Bonds, after taking into account any applicable amendments to or official interpretations of the Rule, as well as any change in circumstances, and until the Issuer shall have received either (i) a written opinion of bond counsel or other qualified independent special counsel selected by the Issuer that the amendment or waiver would not materially impair the interests of Holders or Beneficial Owners, or (ii) the written consent to the amendment or waiver of the Holders of at least a majority of the principal amount of each series of the Bonds then outstanding.

5. Miscellaneous.

(A) Termination. The Issuer's obligations under this Certificate shall terminate when all of the Bonds are or are deemed to be no longer outstanding by reason of redemption or legal defeasance or at maturity.

(B) Additional Information. Nothing in this Certificate shall be deemed to prevent the Issuer from disseminating any other information, using the means of dissemination set forth in this Certificate or any other means of communication, or including any other information in any Annual Financial Statement or notice of occurrence of an Event, in addition to that which is required by this Certificate. If the Issuer chooses to include any information in any Annual Financial Statement, Operating Data or notice of occurrence of an Event in addition to that which is specifically required by this Certificate, the Issuer shall have no obligation under this Certificate to update such information or include it in any future Annual Financial Statement, Operating Data or notice of occurrence of an Event.

(C) Defaults; Remedies. In the event of a failure of the Issuer to comply with any provision of this Certificate, any Bondholder may take such action as may be necessary and appropriate, including seeking an action in mandamus or specific performance to cause the Issuer to comply with its obligations under this Certificate. A default under this Certificate shall not constitute a default on the Bonds or any trust agreement pursuant to which they are issued, and the sole remedy available in any proceeding to enforce this Certificate shall be an action to compel specific performance.

(D) Beneficiaries. This Certificate shall inure solely to the benefit of the Issuer, the Participating Underwriter and Bondholders, or beneficial owners thereof, and shall create no rights in any other person or entity.

6. Notices.

Any notices or communications to the Issuer may be given as follows:

To the Issuer: Ohio Turnpike and Infrastructure Commission
682 Prospect Street
Berea, Ohio 44017-2799
Attention: Chief Financial Officer

IN WITNESS WHEREOF, the Issuer has caused its duly authorized officer to execute this Certificate as of the day and year first above written.

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION, Issuer

By:____
Name:
Title:

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OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION • STATE OF OHIO TURNPIKE REVENUE BONDS, 2021 SERIES A

OHIO
TURNPIKE

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