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July 8, 2022

Mr. Richard Dreher
Chief Financial Officer
Pennsylvania Turnpike Commission
700 South Eisenhower Boulevard
Middletown, PA 17057

Subject: Pennsylvania Turnpike Commission 2022 Traffic and Toll Revenue Bring Down Letter

Dear Mr. Dreher:

The Pennsylvania Turnpike Commission (PTC or Commission) asked CDM Smith to prepare this *2022 Traffic and Toll Revenue Bring Down Letter* (2022 Bring Down Letter) to be used in support of the Commission's ongoing capital improvement program and other funding requirements. This letter provides an update to the *2021 Traffic and Toll Revenue Bring Down Letter* (2021 Bring Down Letter) dated May 28, 2021. This was the most recent update to a series of traffic and toll revenue forecasts that also includes the *6-Month Update to the 2020 Traffic and Toll Revenue Bring Down Letter* (2020 6-Month Update) dated December 18, 2020; the *2020 Traffic and Toll Revenue Bring Down Letter* (2020 Bring Down Letter), dated May 29, 2020; the *2019 Traffic and Toll Revenue Bring Down Letter* (2019 Bring Down Letter), dated April 29, 2019; and the *2018 Traffic and Toll Revenue Forecast Study* (2018 Forecast Study), dated April 20, 2018.

The 2021 Bring Down Letter included actual data through March 2021 and presented traffic and gross toll revenue forecasts from fiscal year (FY) 2020-21 through FY 2049-50. A fiscal year runs from June 1 through May 31. An additional 14 months of actual data (through May 2022) were available for this 2022 Bring Down Letter. The forecast period for this study is one additional year into the future, now extending through FY 2050-51.

This report will provide a summary of differences between the current traffic and revenue forecast and the one provided in the 2021 Bring Down Letter.

The updated forecasts reflect the following changes from the 2021 Bring Down Letter:

- E-ZPass market share estimates over the forecast period were reviewed and updated as needed.
- Actual traffic and toll revenue data were updated to include information through May 2022.

- A detailed review of COVID-19 related impacts was conducted based on an additional 14 months of actual data. Revised COVID-19 impacts have now been applied to the forecasts. In the previous forecast, no COVID-19 impacts are assumed after FY 2025-26, however the current forecast has lingering COVID-19 impacts throughout the remainder of the forecast period through FY 2050-51. The elevated gas prices that the U.S. has been experiencing since early 2022 are also expected to negatively impact transactions and revenue for much of the remainder of the decade, and thus additional fuel price impacts have been aggregated with COVID-19 impacts through FY 2028-29.

- A review of scheduled major roadway improvements was conducted to determine if there have been any changes since completion of the 2021 Bring Down Letter. Two new projects have been added, and the timing of others has been adjusted. This will be discussed in the Committed Roadway Improvements section of this report.

- The underlying econometric model that was developed as part of the 2018 Forecast Study will continue to be used, as has been the case with all Bring Down Letters since. However, the independent socioeconomic variables (population, employment, gross domestic product [GDP], retail sales, and motor fuel prices) that were used as inputs into the econometric model have been updated with the latest available forecasts. The resultant outputs from the econometric model have been utilized as part of the updated baseline transactions and revenue forecast.

These differences are described in more detail in the sections that follow below.

It is important to note that the intent of this 2022 Bring Down Letter is to review and revise, if warranted, the forecasts developed as part of the 2021 Bring Down Letter. Any adjustments would be made based on the 14 months of new actual traffic and toll revenue experience since the 2021 Bring Down Letter was completed, including COVID-19 impacts, as well as revised assumptions summarized in the bullet points above.

Historical Toll Rate Increases and Current Toll Rates

Table 1 provides a summary of historical toll rate increases on the Turnpike System from 1987 to the most recent increase implemented on January 2, 2022. Rate increases are presented as a percent increase over the prior toll rate for cash/video and E-ZPass. Note that toll rate increases are generally applied systemwide, although occasional exemptions occur, as indicated in Table 1.

CDM Smith

Table 1
Historical Toll Rate Increases
Pennsylvania Turnpike

Date	Percent Increase Cash/Video	Percent Increase E-ZPass	Comment
1/2/1987	40.0	NA	E-ZPass was not yet implemented on the Turnpike
6/1/1991	32.0	NA	E-ZPass was not yet implemented on the Turnpike
8/1/2004	42.5	42.5	
1/4/2009	25.0	25.0	No increase on Findlay Connector or MFE between Uniontown and Brownsville
1/3/2010	3.0	3.0	No increase on Findlay Connector
1/2/2011	10.0	3.0	No increase on Findlay Connector
1/1/2012	10.0	0.0	No increase on Findlay Connector
1/6/2013	10.0	2.0	
1/5/2014	12.0	2.0	No increase on Findlay Connector
1/4/2015	5.0	5.0	No increase on Findlay Connector
1/3/2016	6.0	6.0	No increase on Findlay Connector; DRB converted from ticket system to barrier system and rate changes implemented
1/8/2017	6.0	6.0	No increase on Findlay Connector or DRB
1/7/2018	6.0	6.0	No increase on Findlay Connector, DRB, or the Northeast Extension barrier facilities
4/29/2018	6.0	6.0	Northeast Extension barrier facilities only (1)
6/3/2018	6.0	6.0	Findlay Connector only (1)
1/6/2019	6.0	6.0	
10/27/2019	6.0	6.0	BVE, AKH, and Gateway only; additional 45% surcharge over cash rate added to video rate at these locations
1/5/2020	6.0	6.0	No increase on BVE, AKH, or Gateway
1/3/2021	6.0	6.0	Additional 45% surcharge over cash rate added to video rate for Ticket System and MFE
1/2/2022	5.0	5.0	No increase on Southern Beltway

Note: Beginning in 2016, all cash toll rate increases also reflect video toll rate increases.

(1) Toll rate increase coincided with vehicle classification changes from a weight-based to an axle-based system.

Periodic toll rate increases were implemented on the Turnpike System in 1987, 1991, and 2004. Beginning in 2009, annual toll increases have been implemented. During the 2000s decade, E-ZPass was phased into the Turnpike System. Until 2011, cash and E-ZPass toll rates always increased by the same percent. The toll rate schedule implemented on January 2, 2011 created a differential between cash and E-ZPass, as E-ZPass rates were increased by 3.0 percent and cash toll were increased by 10.0 percent. Rate increases differed between cash and E-ZPass in 2012, 2013, and 2014 further increasing the differential between cash and E-ZPass toll rates. After 2014, rate increases have been applied equally to both cash/video and E-ZPass.

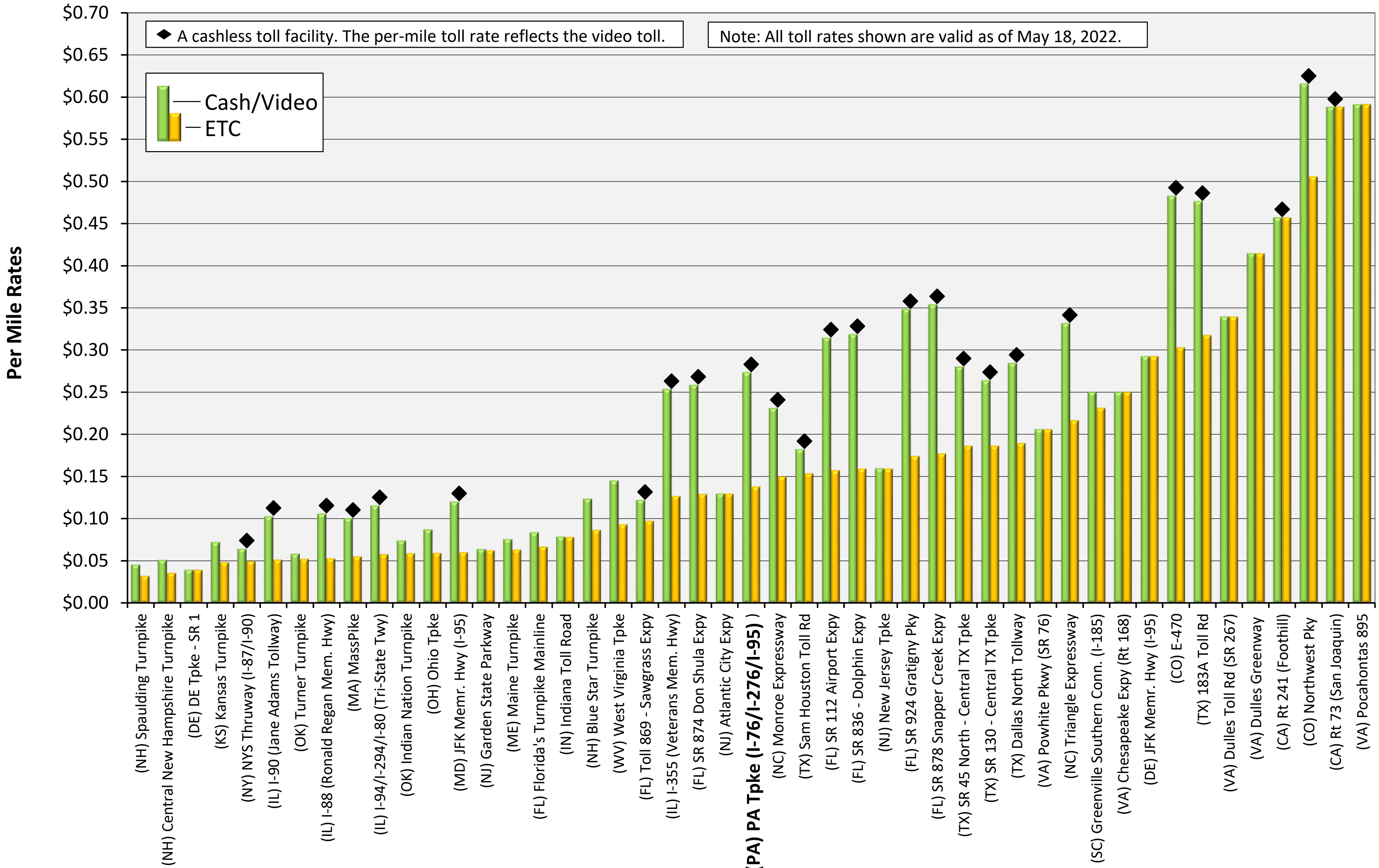
In 2015 toll rates increased by 5.0 percent. From 2016 to 2021, toll rates increased by 6.0 percent annually for both cash/video and E-ZPass. In 2022, the toll rate increase was 5.0 percent. As of June 2020, the entire Pennsylvania Turnpike System is an all-electronic tolling (AET) system; cash is no longer accepted, with all payments being conducted via E-ZPass or video tolling.

PTC policy has also been to implement a video toll surcharge upon conversion to AET; this has generally amounted to an additional 45-percent increase, making video rates about double E-ZPass rates. This 45-percent video surcharge was implemented on the last two components of the Pennsylvania Turnpike System that had previously lacked it, the Ticket System and MFE, in conjunction with the system-wide toll increase that was implemented on January 3, 2021. It is assumed that annual toll rate increases will occur throughout the forecast period, as described in the section Actual and Assumed Toll Rate Increases and shown in Table 13.

Figures 1 and 2 show the 2022 per-mile toll rates for a through-trip on 47 U.S. toll facilities, for passenger cars (PCs) and 5-axle commercial vehicles (CVs), respectively. Per-mile rates are shown for both cash/video and electronic toll collection (ETC) transactions in each figure. If a facility is all electronic (does not accept cash payments), the video toll rate is shown as the equivalent of a cash toll rate. All ETC facilities are marked with a diamond in Figures 1 and 2.

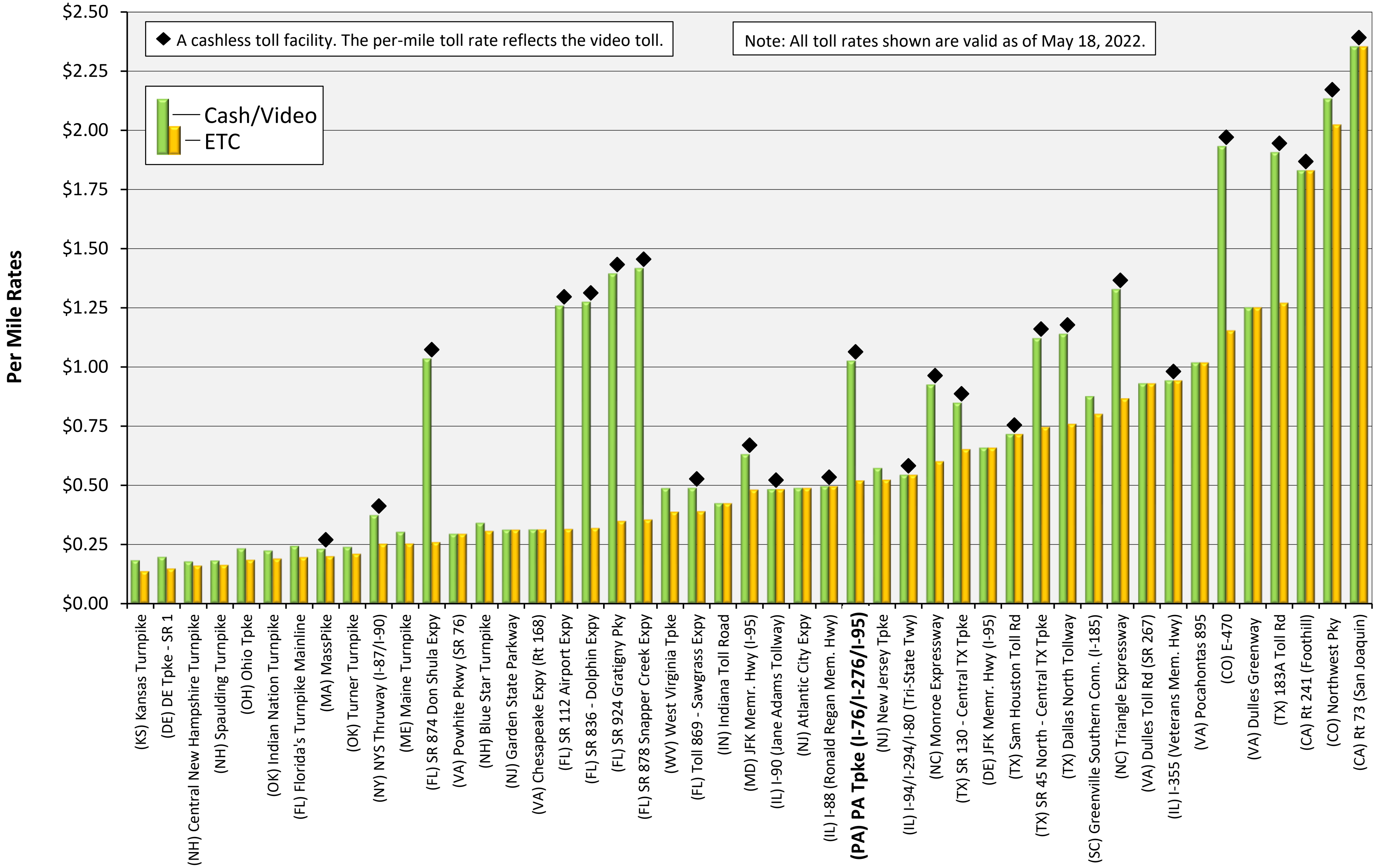
The per-mile through-trip toll rate is shown for the Pennsylvania Turnpike Mainline, which represents a trip on I-76/I-276/I-95 between Ohio and New Jersey. Figure 1 shows that despite 13 consecutive annual toll increases since 2009, PC per-mile toll rates on the Pennsylvania Turnpike System, at 14 cents per mile for E-ZPass customers and 28 cents per mile for video customers, are still very reasonably priced compared to other toll facilities in the U.S. In fact, the Pennsylvania Turnpike's PC ETC per-mile rates fall exactly in the middle of the 47 surveyed facilities.

Toll rates for 5-axle CVs (represented by weight class 6 for the Pennsylvania Turnpike Mainline) are equivalent to 52 cents per mile for E-ZPass and $1.06 per mile for video transactions for a through-trip on the Pennsylvania Turnpike Mainline. It should be remembered that the vast majority of both PC and CV trips are made using the more cost-effective E-ZPass payment method. This rate is also competitive with the surveyed peer facilities, ranking 28th of 47 facilities.



COMPARISON OF 2022 PASSENGER CAR PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 1



COMPARISON OF 2022 FIVE-AXLE VEHICLE PER-MILE THROUGH TRIP TOLL RATES (DATA SORTED BY ETC TOLL RATES)

FIGURE 2

Annual Transaction and Gross Toll Revenue Trends

Table 2 provides a summary of annual systemwide transactions and gross toll revenue trends from FY 1994-95 through FY 2021-22. Notably, this table excludes non-revenue transactions from PTC's non-AET facilities. The Pennsylvania Turnpike System is a large, mature system that has demonstrated long-term growth in transactions and toll revenue. Between FY 1994-95 and FY 2007-08 there was only one toll rate increase (in 2004) and Turnpike transactions and gross toll revenue grew by an average annual rate of 3.0 percent and 5.5 percent, respectively. Conversely, in the 11 years from FY 2008-09 to FY 2018-19, which was the last fiscal year to be completed before the onset of the COVID-19 pandemic, there were toll rate increases every year. During this period Turnpike transactions grew more slowly, by 0.6 percent annually, but due to the annual toll rate increases, Turnpike revenue grew more quickly, by 7.6 percent annually. In the three fiscal years since the start of the pandemic, from FY 2018-19 to FY 2021-22, total transactions fell by a total of 2.5 percent compared to FY 2018-19, an average of 0.9 percent per year. However, due to toll rate increases, total revenue was able to grow over the same period by a total of 17.5 percent, or 5.5 percent per year.

Table 2
Annual Systemwide Traffic and Gross Toll Revenue Trends
Pennsylvania Turnpike System
(in thousands)

	Transactions						Gross Toll Revenue					
Fiscal Year (1)	Cars	Percent Change over Prior Year	Trucks	Percent Change over Prior Year	Total	Percent Change over Prior Year	Cars	Percent Change over Prior Year	Trucks	Percent Change over Prior Year	Total	Percent Change ov Prior Yea
1994-95	114,033	6.9	15,620	9.5	129,653	7.2	$165,850	4.9	$131,749	7.2	$297,599	5.9
1995-96	121,911	6.9	16,719	7.0	138,630	6.9	172,339	3.9	136,269	3.4	308,608	3.7
1996-97	126,654	3.9	17,479	4.5	144,133	4.0	179,303	4.0	140,837	3.4	320,140	3.7
1997-98	132,472	4.6	18,627	6.6	151,099	4.8	186,290	3.9	149,036	5.8	335,326	4.7
1998-99	136,399	3.0	19,833	6.5	156,232	3.4	191,804	3.0	158,761	6.5	350,565	4.5
1999-00	138,762	1.7	21,341	7.6	160,103	2.5	195,301	1.8	172,035	8.4	367,336	4.8
2000-01	141,033	1.6	21,278	(0.3)	162,311	1.4	193,563	(0.9)	172,337	0.2	365,900	(0.4)
2001-02	150,496	6.7	22,298	4.8	172,794	6.5	212,650	9.9	163,101	(5.4)	375,751	2.7
2002-03	156,220	3.8	23,179	4.0	179,399	3.8	219,201	3.1	168,021	3.0	387,222	3.1
2003-04	163,612	4.7	24,407	5.3	188,019	4.8	228,515	4.2	180,229	7.3	408,744	5.6
2004-05	163,316	(0.2)	25,109	2.9	188,425	0.2	309,032	35.2	236,126	31.0	545,158	33.4
2005-06	160,590	(1.7)	25,311	0.8	185,901	(1.3)	321,268	4.0	267,369	13.2	588,637	8.0
2006-07	160,107	(0.3)	25,316	0.0	185,423	(0.3)	322,781	0.5	269,861	0.9	592,642	0.7
2007-08	164,097	2.5	25,455	0.5	189,552	2.2	327,761	1.5	271,165	0.5	598,926	1.1
2008-09	162,638	(0.9)	23,583	(7.4)	186,220	(1.8)	356,345	8.7	259,259	(4.4)	615,605	2.8
2009-10	163,599	0.6	22,933	(2.8)	186,531	0.2	415,981	16.7	302,057	16.5	718,038	16.6
2010-11	165,231	1.0	23,812	3.8	189,043	1.3	435,752	4.8	328,105	8.6	763,856	6.4
2011-12	164,955	(0.2)	24,125	1.3	189,080	0.0	455,133	4.4	342,646	4.4	797,779	4.4
2012-13	163,690	(0.8)	24,207	0.3	187,897	(0.6)	471,514	3.6	350,226	2.2	821,740	3.0
2013-14	163,788	0.1	24,891	2.8	188,679	0.4	497,671	5.5	368,395	5.2	866,066	5.4
2014-15	166,192	1.5	26,144	5.0	192,336	1.9	533,054	7.1	401,197	8.9	934,251	7.9
2015-16 (2)	171,569	3.2	27,319	4.5	198,887	3.4	588,295	10.4	443,325	10.5	1,031,620	10.4
2016-17 (3,4)	172,799	0.7	27,703	1.4	200,501	0.8	638,787	8.6	476,188	7.4	1,114,975	8.1
2017-18 (5)	172,511	(0.2)	28,650	3.4	201,161	0.3	678,741	6.3	524,418	10.1	1,203,158	7.9
2018-19	173,429	0.5	29,625	3.4	203,054	0.9	740,578	9.1	594,808	13.4	1,335,385	11.0
2019-20 (6,7,8)	152,201	(12.2)	29,101	(1.8)	181,302	(10.7)	683,918	(7.7)	605,642	1.8	1,289,561	(3.4)
2020-21 (9)	136,717	(10.2)	30,875	6.1	167,591	(7.6)	610,597	(10.7)	647,972	7.0	1,258,570	(2.4)
2021-22 (10)	164,023	20.0	33,887	9.8	197,910	18.1	820,619	34.4	748,407	15.5	1,569,027	24.7

Average Annual Percent Change

	Transactions			Gross Toll Revenue		
Fiscal Year	Cars	Trucks	Total	Cars	Trucks	Total
FY 1994-95 - FY 2007-08	2.8	3.8	3.0	5.4	5.7	5.5
FY 2007-08 - FY 2018-19	0.5	1.4	0.6	7.7	7.4	7.6
FY 2018-19 - FY 2021-22	(1.8)	4.6	(0.9)	3.5	8.0	5.5
FY 1994-95 - FY 2021-22	1.4	2.9	1.6	6.1	6.6	6.4

(1) Fiscal year beginning June 1.
(2) The Delaware River Bridge toll plaza was converted from part of the Ticket System to a one-way barrier AET facility in January 2016.
(3) The Delaware River Bridge was closed due to structural integrity concerns from January 20, 2017 to March 9, 2017.
(4) AET conversion was implemented on Turnpike I-376 Beaver Valley Expressway in May 2017.
(5) AET conversion and vehicle classification changes were implemented on the Northeast Extension Barrier Facilities in April 2018.
(6) Toll by Plate surcharge for I-376 Beaver Valley Expressway was increased in October 2019.
(7) AET conversion was implemented at Gateway Toll Plaza and Turnpike 66 in October 2019.
(8) AET conversion with no surcharge for Toll by Plate was implemented on the Ticket System on March 16, 2020.
(9) AET conversion with no surcharge for Toll by Plate was implemented on the Mon/Fayette Expressway on June 16, 2020.
(10) A 13.2 mile extension of the Southern Beltway opened on October 15, 2021.

Monthly Transactions and Gross Toll Revenue Trends

Tables 3 through 12 present recent monthly transaction and gross toll revenue trends from FY 2018-19 through the end of FY 2021-22 (May 2022) for all PTC facilities. The information is provided for PCs, CVs, and total vehicles. The facilities are summarized in the following order:

- Table 3 – the total Turnpike System (comprised of all the facilities listed below);
- Table 4 – the Ticket System (comprised of I-76/I-276 and I-476);
- Table 5 – the combined Barrier System (comprised of all facilities listed below);
- Table 6 – Turnpike 43 (Mon/Fayette Expressway) (MFE);
- Table 7 – Turnpike 66 (Amos K. Hutchinson Bypass) (AKH);
- Table 8 – Northeast Extension (I-476) barrier plazas;
- Table 9 – Turnpike I-376 (Beaver Valley Expressway) (BVE);
- Table 10 – Turnpike I-576 (Southern Beltway – Findlay Connector);
- Table 11 – Delaware River Bridge (DRB); and
- Table 12 – Gateway Toll Plaza.

As shown in Table 3, total systemwide gross toll revenue decreased by 3.4 percent in FY 2019-20, the last three months of which were impacted by the COVID-19 pandemic. Even though the most significant monthly revenue losses occurred in FY 2019-20, total year revenues declined 2.4 percent further in FY 2020-21, as year-over-year revenues were down in the first nine months of the fiscal year due to being compared against pre-COVID revenues. However, revenue increased greatly in the final three months of the fiscal year (March, April, and May 2021) as traffic had grown significantly compared to the same months in 2020, which were the earliest stages of the pandemic. In FY 2021-22, toll revenue continued to grow and was 24.7 percent greater than the previous fiscal year. In fact, toll revenue in this most recent fiscal year was 17.5 percent higher than in FY 2018-19, which was entirely prior to, and thus unaffected by, the pandemic. CV toll revenue increased by 15.5 percent and PC toll revenue increased by 34.4 percent in FY 2021-22 compared to FY 2020-21. PC growth was stronger than CV growth because PCs were more significantly impacted by the pandemic and experienced steep declines during FY 2020-21, while CV revenue was impacted less severely and had returned to positive growth by September 2020.

It is important to note, however, that the negative impacts of COVID-19 have diminished greatly over time. In April 2020 (which includes the first full month of COVID-19 impacts), total gross toll revenue was 49.2 percent lower than the same month in 2019. That negative impact decreased over each of the next six months, such that October 2020 gross toll revenue was only 9.8 percent lower than the same month in the prior year. While negative revenue impacts grew over the winter months, due to both increasing infection rates (in November, December, and January) and snowstorms (February), March 2021 experienced positive revenue growth for the first time since the start of the pandemic. During this month both PC and CV traffic increased significantly compared to March 2020. As a result, total gross toll revenue was 32.0 higher in March 2021 than it was in March 2020. This large positive result in March 2021 is because this is the first month when growth is compared to a prior year's month that also included COVID-19 impacts.

During the second year of the pandemic, March 2021 through February 2022, year-over-year transactions increased by at least 8.7 percent each month. Excluding January 2022, during which Pennsylvania was hit with both the Omicron variant and multiple snowstorms, transaction growth was at least 14.0 percent each month. Due to the annual toll increases in January 2021 and January 2022, revenue grew even more, with growth of at least 19.9 percent each month. As the pandemic enters its third year, transaction and revenue growth in March, April, and May 2022 continued to be strong, if somewhat less robust than the prior year. In May 2022, the most recent month for which data is available, transactions grew by 7.1 percent and revenue grew by 9.4 percent compared to May 2021.

As previously mentioned, the Ticket System is by far the largest component of both traffic and toll revenue on the Turnpike System. As such, its overall growth patterns generally resemble those for the total system. As shown in Table 4, in FY 2021-22 total transactions increased 17.0 percent from the prior year, while toll revenue increased by 24.5 percent. PC transactions increased by 19.1 percent, while toll revenue grew 34.9 percent. CV transactions grew by 8.1 percent and toll revenue grew 15.3 percent compared to FY 2020-21.

Prior to the impacts of COVID-19 beginning in March 2020, annual year-over-year Ticket System toll transaction growth generally had been slightly negative for PCs and slightly positive for CVs. Annual toll rate increases, however, resulted in significant revenue increases over this time for both PCs and CVs on the Ticket System. As with the total systemwide trends shown in Table 3, the negative impacts of COVID-19 were greatest on the Ticket System in April 2020, when total transactions decreased by 61.3 percent and toll revenue decreased by 50.3 percent. By October 2020, however, the negative impacts were just 15.9 percent for transactions and 11.6 percent for toll revenue. Impacts grew more negative over the winter before rebounding in March, which experienced significant positive growth in both transactions and revenue for both PCs and CVs, although part of the reason for this positive growth was due to comparison against COVID-impacted figures in March 2020. In the 14 months since then, transactions have each continued to grow by at least 3.7 percent each month, while revenue has grown even faster, with growth of at least 8.0 percent each month. Notably, however, the lowest growth figures for both transactions and revenue in these last 14 months occurred in May 2022, the most recent month for which data is available. This may indicate that although growth is still occurring, the rate of growth is slowing, although this cannot be confirmed without a few more months of data. Throughout the pandemic, negative impacts have been more pronounced for PCs than for CVs.

Table 5 provides the same information for all barrier toll facilities combined. Barrier facility toll revenue comprises about 15 percent of total systemwide toll revenue. The negative impacts of COVID-19 on the barrier facilities are similar to those on the Ticket System. However, the recovery rate seems to be somewhat faster for the barrier facilities. During FY 2020-21, barrier facility toll transactions only fell 6.3 percent, compared to 8.0 percent on the Ticket System. In FY 2021-22, barrier system transactions grew 21.1 percent compared to 17.0 percent for the Ticket System. Revenue has behaved similarly, with the barrier system actually experiencing 4.3 percent growth during FY 2020-21, compared to a 3.5 percent decline on the Ticket System. However, barrier facilities' revenue growth only slightly outpaced Ticket System revenue growth in FY 2021-22, 25.6 percent to 24.5 percent. Part of these faster growth rates for the barrier system in FY 2021-22 can be attributable to a 13.2-mile extension of the Southern Beltway that opened on October 15, 2021.

The same information is provided for each individual barrier facility in Tables 6 through 12. As seen in Table 10, growth was particularly strong on the Southern Beltway in FY 2021-22, with transactions and revenue growing 203.7 percent and 223.6 percent, respectively, compared to FY 2020-21. This is due to the aforementioned 13.2-mile extension that opened in October 2021.

Table 3

Total Turnpike System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars						
	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	15,361	(1.1)	15,187	(31.0)	10,476	36.1	14,263
July	15,566	0.1	15,583	(22.2)	12,131	24.2	15,067
August	16,134	(0.4)	16,071	(21.2)	12,669	17.7	14,906
September	14,503	0.5	14,582	(17.0)	12,106	15.4	13,966
October	15,396	(0.0)	15,389	(18.0)	12,615	17.9	14,877
November	14,242	(0.3)	14,193	(24.9)	10,657	30.6	13,914
December	13,982	(0.5)	13,911	(29.1)	9,864	36.8	13,493
January	12,504	2.6	12,826	(23.1)	9,868	9.3	10,783
February	11,930	4.4	12,458	(30.1)	8,703	30.9	11,392
March	14,018	(33.1)	9,373	24.8	11,699	12.2	13,121
April	14,426	(66.4)	4,845	155.2	12,365	11.7	13,816
May	15,367	(49.4)	7,782	74.3	13,563	6.4	14,425
Total Year	173,429	(12.2)	152,201	(10.2)	136,717	20.0	164,023

Month	Commercial Vehicles						
	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	2,596	(1.5)	2,557	3.2	2,639	10.3	2,909
July	2,573	3.7	2,668	1.5	2,709	6.3	2,879
August	2,755	(1.2)	2,722	(2.3)	2,659	10.2	2,931
September	2,418	5.0	2,539	5.4	2,676	7.8	2,885
October	2,732	1.4	2,770	(0.6)	2,754	7.6	2,963
November	2,391	0.5	2,403	1.1	2,429	14.7	2,785
December	2,198	3.3	2,271	5.8	2,402	13.3	2,721
January	2,268	3.7	2,353	(1.0)	2,329	6.1	2,471
February	2,073	5.2	2,182	(4.5)	2,084	18.6	2,472
March	2,372	(0.3)	2,364	15.4	2,727	9.0	2,972
April	2,549	(22.8)	1,968	39.5	2,746	4.8	2,879
May	2,698	(14.6)	2,304	18.1	2,721	11.0	3,019
Total Year	29,625	(1.8)	29,101	6.1	30,875	9.8	33,887

Month	Total Vehicles						
	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	17,958	(1.2)	17,744	(26.1)	13,115	30.9	17,173
July	18,138	0.6	18,251	(18.7)	14,840	20.9	17,946
August	18,889	(0.5)	18,793	(18.4)	15,328	16.4	17,837
September	16,921	1.2	17,121	(13.7)	14,782	14.0	16,851
October	18,128	0.2	18,159	(15.4)	15,369	16.1	17,840
November	16,633	(0.2)	16,597	(21.2)	13,086	27.6	16,699
December	16,180	0.0	16,182	(24.2)	12,266	32.2	16,215
January	14,772	2.8	15,179	(19.6)	12,197	8.7	13,255
February	14,003	4.5	14,640	(26.3)	10,787	28.5	13,864
March	16,389	(28.4)	11,736	22.9	14,426	11.6	16,092
April	16,975	(59.9)	6,813	121.8	15,112	10.5	16,696
May	18,065	(44.2)	10,086	61.5	16,284	7.1	17,443
Total Year	203,054	(10.7)	181,302	(7.6)	167,591	18.1	197,910

Toll Revenue (in $1,000s)

Month	Passenger Cars						
	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$65,886	8.9	$71,743	(38.6)	$44,023	58.1	$69,587
July	69,178	9.8	75,990	(31.2)	52,311	57.1	82,170
August	70,545	9.6	77,351	(25.6)	57,533	35.3	77,844
September	60,348	8.0	65,184	(21.8)	51,000	28.3	65,449
October	61,611	9.7	67,615	(18.3)	55,274	42.0	78,514
November	59,156	8.3	64,068	(31.2)	44,052	36.6	60,174
December	57,377	10.8	63,565	(33.3)	42,380	68.3	71,327
January	50,969	11.5	56,826	(21.9)	44,355	26.6	56,165
February	49,844	11.1	55,386	(31.7)	37,832	42.8	54,033
March	61,426	(38.8)	37,574	41.0	52,982	18.3	62,696
April	63,940	(73.2)	17,157	247.1	59,547	16.3	69,253
May	70,298	(55.2)	31,458	120.3	69,308	5.9	73,407
Total Year	$740,578	(7.7)	$683,918	(10.7)	$610,597	34.4	$820,619

Month	Commercial Vehicles						
	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$49,757	5.4	$52,463	(0.6)	$52,165	18.1	$61,603
July	49,069	10.8	54,375	(3.1)	52,693	16.8	61,533
August	52,369	5.9	55,447	(3.5)	53,492	16.9	62,550
September	47,311	8.5	51,328	1.3	52,003	14.4	59,492
October	52,185	6.0	55,318	0.5	55,607	18.4	65,830
November	47,087	2.5	48,255	1.6	49,006	15.1	56,426
December	43,630	8.3	47,235	8.1	51,038	20.8	61,654
January	48,261	8.1	52,171	(0.5)	51,885	14.2	59,235
February	45,096	8.9	49,120	(2.0)	48,147	19.8	57,698
March	51,729	(5.4)	48,928	25.1	61,207	12.1	68,605
April	52,793	(20.2)	42,127	41.7	59,706	8.1	64,553
May	55,522	(12.0)	48,876	24.9	61,023	13	69,228
Total Year	$594,808	1.8	$605,642	7.0	$647,972	15.5	$748,407

Month	Total Vehicles						
	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$115,643	7.4	$124,206	(22.6)	$96,188	36.4	$131,190
July	118,247	10.2	130,365	(19.5)	105,004	36.9	143,703
August	122,914	8.0	132,798	(16.4)	111,025	26.5	140,394
September	107,658	8.2	116,512	(11.6)	103,003	21.3	124,941
October	113,795	8.0	122,933	(9.8)	110,881	30.2	144,344
November	106,243	5.7	112,323	(17.2)	93,058	25.3	116,600
December	101,007	9.7	110,800	(15.7)	93,418	42.3	132,981
January	99,230	9.8	108,997	(11.7)	96,240	19.9	115,400
February	94,940	10.1	104,507	(17.7)	85,979	30.0	111,731
March	113,155	(23.6)	86,502	32.0	114,189	15.0	131,302
April	116,733	(49.2)	59,283	101.2	119,253	12.2	133,806
May	125,820	(36.2)	80,335	62.2	130,332	9.4	142,635
Total Year	$1,335,385	(3.4)	$1,289,561	(2.4)	$1,258,570	24.7	$1,569,027

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion and vehicle classification changes were implemented on the Turnpike I-576 Findlay Connector in June 2018.

(5) AET conversion was implemented on Turnpike 66 Amos K. Hutchinson Bypass and Gateway Toll Plaza in October 2019.

(6) AET conversion was implemented on the Ticket System and Mon/Fayette Expressway in June 2020.

(7) A 13.2 mile extension of the Southern Beltway opened on October 15, 2021.

Table 4

Ticket System - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Commercial Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Total Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	11,580	(3.3)	11,195	(32.9)	7,508	40.0	10,510	1,939	(2.7)	1,887	4.3	1,968	11.2	2,188	13,519	(3.2)	13,082	(27.6)	9,476	34.0	12,698
July	11,596	(2.0)	11,365	(22.9)	8,757	26.2	11,050	1,915	2.7	1,967	2.8	2,022	7.4	2,171	13,512	(1.3)	13,332	(19.1)	10,779	22.7	13,221
August	12,019	(1.9)	11,786	(22.1)	9,184	18.6	10,890	2,040	(1.7)	2,006	(0.7)	1,993	10.7	2,207	14,059	(1.9)	13,792	(19.0)	11,177	17.2	13,097
September	10,836	(0.6)	10,768	(18.5)	8,772	16.7	10,238	1,790	4.3	1,867	6.9	1,995	9.1	2,176	12,626	0.1	12,635	(14.8)	10,767	15.3	12,414
October	11,483	(0.8)	11,387	(19.1)	9,218	17.4	10,817	2,024	0.4	2,031	1.7	2,066	6.8	2,206	13,506	(0.7)	13,418	(15.9)	11,283	15.4	13,023
November	10,625	(0.5)	10,574	(26.0)	7,829	28.0	10,019	1,784	(0.8)	1,770	3.7	1,836	11.6	2,048	12,409	(0.5)	12,343	(21.7)	9,665	24.9	12,067
December	10,462	(1.1)	10,347	(29.7)	7,269	33.7	9,720	1,650	2.2	1,686	8.4	1,829	9.5	2,002	12,112	(0.7)	12,033	(24.4)	9,097	28.8	11,721
January	9,453	1.8	9,623	(24.1)	7,302	6.3	7,761	1,699	2.7	1,745	1.1	1,765	3.1	1,819	11,152	1.9	11,368	(20.2)	9,067	5.7	9,580
February	8,931	4.8	9,358	(32.1)	6,354	30.1	8,266	1,547	4.5	1,616	(3.3)	1,563	16.2	1,817	10,478	4.7	10,974	(27.9)	7,917	27.4	10,083
March	10,475	(34.2)	6,890	24.5	8,578	10.0	9,433	1,762	0.4	1,768	16.4	2,058	5.3	2,168	12,237	(29.2)	8,658	22.9	10,637	9.1	11,601
April	10,728	(68.2)	3,413	165.9	9,077	8.9	9,884	1,880	(22.0)	1,466	40.5	2,060	1.8	2,098	12,608	(61.3)	4,879	128.2	11,137	7.6	11,982
May	11,371	(51.6)	5,501	81.1	9,962	3.2	10,276	1,990	(14.1)	1,711	19.7	2,047	6.5	2,180	13,361	(46.0)	7,211	66.5	12,009	3.7	12,456
Total Year	129,559	(13.4)	112,207	(11.0)	99,810	19.1	118,865	22,020	(2.3)	21,520	7.8	23,201	8.1	25,078	151,579	(11.8)	133,726	(8.0)	123,011	17.0	143,943

Toll Revenue (in $1,000s)

Month	Passenger Cars 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Commercial Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	Total Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$56,349	7.6	$60,635	(41.8)	$35,319	62.5	$57,377	$43,898	5.1	$46,135	(2.0)	$45,213	18.6	$53,638	$100,247	6.5	$106,770	(24.6)	$80,532	37.9	$111,015
July	59,123	8.5	64,149	(33.4)	42,697	60.3	68,423	43,294	10.4	47,784	(4.3)	45,733	17.3	53,654	102,417	9.3	111,932	(21.0)	88,430	38.0	122,077
August	60,200	8.8	65,501	(28.3)	46,956	38.1	64,828	46,144	5.5	48,699	(4.5)	46,518	17.4	54,595	106,344	7.4	114,200	(18.1)	93,474	27.8	119,423
September	51,234	7.0	54,814	(24.3)	41,486	29.3	53,642	41,775	7.7	45,003	0.1	45,044	14.7	51,683	93,009	7.3	99,817	(13.3)	86,530	21.7	105,325
October	51,943	9.7	57,006	(21.3)	44,868	44.8	64,959	45,892	5.4	48,375	(0.3)	48,241	18.8	57,319	97,835	7.7	105,381	(11.6)	93,109	31.3	122,279
November	49,943	7.6	53,745	(32.5)	36,264	32.9	48,187	41,520	1.1	41,992	1.6	42,655	13.9	48,605	91,463	4.7	95,737	(17.6)	78,919	22.6	96,792
December	48,312	10.0	53,142	(35.4)	34,329	72.9	59,349	38,457	7.1	41,206	8.0	44,492	20.5	53,632	86,769	8.7	94,348	(16.5)	78,821	43.3	112,981
January	42,828	10.1	47,167	(23.0)	36,314	26.5	45,926	42,586	7.4	45,721	(1.1)	45,231	14.1	51,605	85,414	8.8	92,888	(12.2)	81,545	19.6	97,532
February	41,868	10.5	46,274	(33.2)	30,899	40.9	43,533	39,811	8.3	43,112	(2.3)	42,135	18.8	50,044	81,679	9.4	89,386	(18.3)	73,034	28.1	93,578
March	51,714	(40.2)	30,904	39.5	43,127	17.6	50,734	45,684	(6.7)	42,610	25.4	53,427	11.3	59,456	97,398	(24.5)	73,515	31.3	96,553	14.1	110,190
April	53,860	(75.2)	13,360	265.6	48,848	14.9	56,151	46,431	(21.4)	36,517	42.4	51,990	7.4	55,817	100,291	(50.3)	49,878	102.2	100,838	11.0	111,968
May	59,310	(57.6)	25,131	128.4	57,404	3.8	59,559	48,818	(12.8)	42,565	25.3	53,338	12.5	60,013	108,128	(37.4)	67,696	63.6	110,743	8.0	119,573
Total Year	$626,685	(8.8)	$571,829	(12.8)	$498,511	34.9	$672,668	$524,309	1.0	$529,718	6.5	$564,017	15.3	$650,063	$1,150,994	(4.3)	$1,101,547	(3.5)	$1,062,528	24.5	$1,322,732

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in June 2020.

Table 5

Combined Barrier Facilities - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	3,782	5.5	3,992	(25.6)	2,968	26.5	3,753	657	1.9	670	0.1	671	7.6	722	4,439	5.0	4,661	(21.9)	3,639	23.0	4,475
July	3,970	6.3	4,218	(20.0)	3,374	19.0	4,017	657	6.7	702	(2.1)	687	3.1	709	4,627	6.3	4,920	(17.5)	4,061	16.4	4,725
August	4,115	4.1	4,286	(18.7)	3,484	15.3	4,016	715	0.1	716	(6.9)	667	8.6	724	4,830	3.5	5,002	(17.0)	4,151	14.2	4,741
September	3,667	4.0	3,814	(12.6)	3,334	11.8	3,728	628	6.9	672	1.3	681	4.2	710	4,295	4.4	4,486	(10.5)	4,015	10.5	4,437
October	3,913	2.3	4,001	(15.1)	3,398	19.5	4,060	709	4.3	739	(6.8)	689	10.0	757	4,621	2.6	4,740	(13.8)	4,086	17.9	4,817
November	3,618	0.1	3,620	(21.9)	2,828	37.7	3,895	607	4.3	634	(6.4)	593	24.3	737	4,225	0.7	4,253	(19.6)	3,421	35.4	4,632
December	3,519	1.3	3,564	(27.2)	2,595	45.4	3,774	548	6.7	585	(1.9)	574	25.5	720	4,068	2.0	4,149	(23.6)	3,169	41.8	4,494
January	3,051	5.0	3,203	(19.9)	2,566	17.8	3,022	569	6.8	608	(7.2)	564	15.6	652	3,620	5.3	3,811	(17.9)	3,130	17.4	3,674
February	2,999	3.4	3,101	(24.2)	2,349	33.1	3,126	526	7.5	566	(8.0)	521	25.7	655	3,525	4.0	3,666	(21.7)	2,869	31.8	3,781
March	3,543	(29.9)	2,482	25.7	3,121	18.2	3,687	610	(2.4)	595	12.2	668	20.3	804	4,153	(25.9)	3,078	23.1	3,789	18.5	4,491
April	3,698	(61.3)	1,432	129.7	3,289	19.6	3,932	669	(25.0)	502	36.7	686	13.9	782	4,367	(55.7)	1,934	105.5	3,975	18.6	4,714
May	3,996	(42.9)	2,281	57.9	3,601	15.2	4,148	708	(16.2)	593	13.5	674	24.5	839	4,704	(38.9)	2,875	48.7	4,275	16.7	4,987
Total Year	43,870	(8.8)	39,994	(7.7)	36,906	22.4	45,158	7,605	(0.3)	7,582	1.2	7,674	14.8	8,809	51,475	(7.6)	47,575	(6.3)	44,580	21.1	53,967

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$9,537	16.5	$11,108	(21.6)	$8,704	40.3	$12,210	$5,859	8.0	$6,328	9.9	$6,952	14.6	$7,965	$15,396	13.2	$17,436	(10.2)	$15,656	28.9	$20,175
July	10,055	17.8	11,841	(18.8)	9,614	43.0	13,748	5,775	14.1	6,591	5.6	6,959	13.2	7,879	15,830	16.4	18,433	(10.1)	16,574	30.5	21,627
August	10,344	14.6	11,850	(10.7)	10,577	23.1	13,016	6,225	8.4	6,748	3.4	6,974	14.1	7,955	16,570	12.2	18,598	(5.6)	17,552	19.5	20,971
September	9,114	13.8	10,370	(8.3)	9,514	24.1	11,807	5,535	14.3	6,326	10.0	6,958	12.2	7,809	14,649	14.0	16,696	(1.3)	16,472	19.1	19,616
October	9,668	9.7	10,609	(1.9)	10,406	30.3	13,555	6,293	10.3	6,943	6.1	7,366	15.5	8,510	15,961	10.0	17,552	1.3	17,772	24.2	22,065
November	9,214	12.0	10,323	(24.6)	7,788	53.9	11,987	5,567	12.5	6,263	1.4	6,352	23.1	7,821	14,780	12.2	16,586	(14.8)	14,140	40.1	19,808
December	9,065	15.0	10,423	(22.8)	8,051	48.8	11,978	5,173	16.6	6,029	8.6	6,546	22.5	8,021	14,238	15.6	16,452	(11.3)	14,597	37.0	19,999
January	8,141	18.6	9,659	(16.8)	8,040	27.3	10,238	5,675	13.7	6,450	3.2	6,655	14.7	7,630	13,816	16.6	16,109	(8.8)	14,695	21.6	17,868
February	7,976	14.3	9,112	(23.9)	6,934	51.4	10,500	5,285	13.7	6,009	0.0	6,012	27.3	7,654	13,261	14.0	15,121	(14.4)	12,945	40.2	18,154
March	9,712	(31.3)	6,670	47.8	9,855	21.4	11,963	6,045	4.5	6,317	23.2	7,781	17.6	9,149	15,757	(17.6)	12,987	35.8	17,636	19.7	21,112
April	10,080	(62.3)	3,796	181.8	10,699	22.5	13,103	6,362	(11.8)	5,610	37.5	7,715	13.2	8,736	16,443	(42.8)	9,406	95.8	18,414	18.6	21,839
May	10,988	(42.4)	6,327	88.1	11,904	16.3	13,847	6,704	(5.9)	6,311	21.8	7,685	19.9	9,215	17,691	(28.6)	12,638	55.0	19,589	17.7	23,062
Total Year	$113,893	(1.6)	$112,089	(0.0)	$112,086	32.0	$147,951	$70,498	7.7	$75,925	10.6	$83,955	17.1	$98,344	$184,392	2.0	$188,014	4.3	$196,042	25.6	$246,295

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET Conversions at Findlay Connector, Amos K Hutchinson Bypass, Gateway Toll Plaza, and Mon/Fayette Expressway in June 2018, October 2019, October 2019, and June 2020 respectively.

(5) A 13.2 mile extension of the Southern Beltway opened on October 15, 2021.

Table 6
Turnpike 43 - Mon/Fayette Expressway - Monthly Transaction and Revenue Trends
Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	1,079	(1.6)	1,061	(11.7)	937	12.0	1,050	97	0.0	97	(2.4)	95	(7.1)	88	1,176	(1.5)	1,158	(10.9)	1,032	10.3	1,138
July	1,118	(1.6)	1,099	(5.9)	1,034	4.1	1,076	99	9.7	109	(12.7)	95	(12.9)	83	1,217	(0.7)	1,208	(6.5)	1,129	2.6	1,159
August	1,149	(2.9)	1,116	(7.6)	1,031	7.1	1,105	101	0.1	102	(16.7)	85	(0.5)	84	1,251	(2.7)	1,217	(8.3)	1,116	6.6	1,189
September	1,080	(1.2)	1,067	(3.8)	1,027	7.4	1,103	95	4.0	99	(12.1)	87	(2.6)	84	1,175	(0.8)	1,166	(4.5)	1,114	6.6	1,187
October	1,162	(3.5)	1,121	(6.5)	1,048	10.1	1,154	108	4.0	113	(21.2)	89	(0.4)	88	1,270	(2.9)	1,233	(7.8)	1,137	9.3	1,243
November	1,027	(5.6)	970	(11.4)	859	20.9	1,039	91	(4.3)	87	(18.9)	71	13.4	80	1,118	(5.5)	1,057	(12.0)	930	20.4	1,119
December	967	(2.0)	948	(16.1)	796	30.0	1,034	75	(4.8)	71	(5.8)	67	11.2	75	1,042	(2.2)	1,019	(15.3)	863	28.6	1,109
January	880	1.3	891	(11.0)	793	8.2	859	78	(3.8)	75	(11.7)	66	12.8	75	957	0.9	966	(11.1)	859	8.6	933
February	884	(1.7)	868	(13.7)	749	16.2	871	72	(6.5)	67	(10.1)	61	28.1	78	956	(2.1)	936	(13.4)	810	17.1	949
March	1,015	(23.6)	775	24.0	961	5.3	1,012	87	(12.1)	76	5.4	81	13.9	92	1,102	(22.7)	852	22.3	1,042	6.0	1,104
April	1,053	(51.5)	511	90.3	973	7.5	1,046	99	(31.9)	68	24.8	84	3.0	87	1,152	(49.8)	579	82.6	1,057	7.2	1,133
May	1,111	(31.6)	760	34.9	1,025	6.1	1,087	104	(16.1)	87	(5.8)	82	22.0	100	1,215	(30.3)	847	30.7	1,108	7.2	1,188
Total Year	12,524	(10.7)	11,188	0.4	11,235	10.7	12,437	1,107	(5.1)	1,051	(8.5)	962	5.4	1,014	13,631	(10.2)	12,239	(0.3)	12,196	10.3	13,451

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$1,772	7.5	$1,904	(16.3)	$1,594	33.4	$2,127	$462	8.3	$500	(3.6)	$482	2.2	$493	$2,234	7.6	$2,404	(13.6)	$2,076	26.2	$2,619
July	1,877	6.5	2,000	(12.1)	1,758	29.1	2,269	471	18.0	556	(16.0)	467	1.3	473	2,349	8.8	2,556	(13.0)	2,225	23.2	2,742
August	1,904	3.7	1,974	(8.1)	1,813	20.6	2,187	478	8.9	520	(16.1)	436	7.1	468	2,382	4.7	2,494	(9.8)	2,250	18.0	2,655
September	1,769	7.4	1,901	(9.6)	1,717	24.3	2,134	447	9.8	491	(11.2)	436	7.1	467	2,216	7.9	2,392	(10.0)	2,154	20.8	2,601
October	1,898	4.5	1,983	(2.3)	1,936	32.8	2,570	508	9.3	556	(15.3)	471	14.7	540	2,406	5.5	2,538	(5.2)	2,407	29.2	3,110
November	1,684	0.9	1,700	(16.9)	1,413	45.0	2,049	432	3.3	446	(19.0)	361	26.1	456	2,116	1.4	2,147	(17.3)	1,775	41.2	2,505
December	1,625	3.4	1,680	(11.5)	1,486	47.5	2,193	374	0.8	377	(5.0)	358	27.9	458	1,999	2.9	2,056	(10.3)	1,844	43.7	2,651
January	1,542	9.7	1,692	(6.5)	1,582	23.8	1,958	404	5.7	427	(11.5)	377	21.2	457	1,946	8.9	2,119	(7.5)	1,960	23.3	2,416
February	1,548	5.9	1,639	(11.4)	1,452	36.3	1,978	378	2.8	389	(12.6)	340	44.2	490	1,926	5.3	2,028	(11.7)	1,791	37.8	2,468
March	1,792	(26.1)	1,324	53.2	2,028	7.5	2,181	462	(14.3)	396	18.9	471	20.4	567	2,254	(23.7)	1,720	45.3	2,499	10.0	2,748
April	1,862	(53.1)	873	131.4	2,021	13.7	2,297	513	(29.3)	363	34.1	486	9.8	534	2,376	(48.0)	1,236	102.8	2,507	12.9	2,831
May	1,986	(31.9)	1,352	59.9	2,162	11.2	2,405	543	(16.5)	453	4.8	475	29.9	616	2,529	(28.6)	1,805	46.0	2,637	14.6	3,021
Total Year	$21,261	(5.8)	$20,022	4.7	$20,963	25.7	$26,349	$5,472	0.0	$5,473	(5.7)	$5,161	16.6	$6,018	$26,732	(4.6)	$25,496	2.5	$26,124	23.9	$32,368

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.
(4) AET conversion occurred in June 2020.

Table 7

Turnpike 66 - Amos K. Hutchinson Bypass - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	556	(2.7)	541	(12.3)	475	17.3	557	101	(6.1)	95	0.6	95	9.9	105	657	(3.2)	636	(10.4)	570	16.1	662
July	559	(0.7)	555	(7.5)	514	10.6	568	101	(0.9)	100	(1.2)	99	5.3	104	660	(0.7)	655	(6.5)	612	9.7	672
August	583	(1.5)	574	(8.9)	523	8.2	566	108	(3.8)	104	(6.8)	97	9.9	106	691	(1.8)	678	(8.6)	620	8.5	672
September	555	(3.2)	538	(5.6)	508	9.3	555	92	3.0	95	0.3	95	7.3	102	648	(2.3)	633	(4.7)	603	9.0	657
October	580	0.1	581	(10.1)	522	10.8	579	105	(0.7)	105	(8.4)	96	11.7	107	686	(0.0)	686	(9.8)	618	10.9	686
November	531	(3.3)	513	(10.1)	461	14.6	529	86	(0.6)	85	(3.9)	82	18.6	97	617	(2.9)	599	(9.2)	543	15.2	626
December	533	(3.1)	517	(15.8)	435	22.9	535	80	(3.0)	77	(2.3)	75	19.5	90	612	(3.1)	594	(14.1)	510	22.4	625
January	475	2.3	486	(13.1)	422	6.0	448	81	2.0	83	(10.8)	74	7.2	79	556	2.2	569	(12.7)	496	6.2	527
February	461	1.3	467	(13.2)	405	11.1	450	75	1.0	76	(5.8)	71	12.3	80	536	1.3	542	(12.2)	476	11.2	530
March	527	(27.0)	385	33.0	511	(0.7)	508	81	(5.6)	77	21.1	93	7.6	100	608	(24.1)	461	31.0	604	0.6	608
April	538	(50.1)	269	95.2	524	(2.5)	511	93	(28.1)	67	46.3	98	(4.4)	94	631	(46.8)	336	85.4	622	(2.8)	605
May	570	(31.1)	392	41.8	557	(2.9)	540	99	(15.4)	84	15.5	97	7.4	104	669	(28.8)	476	37.2	653	(1.4)	644
Total Year	6,466	(10.0)	5,818	0.7	5,858	8.3	6,345	1,102	(5.1)	1,046	2.4	1,072	9.0	1,168	7,568	(9.3)	6,864	1.0	6,929	8.4	7,513

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$995	4.8	$1,043	(4.8)	$992	20.3	$1,194	$504	(2.1)	$493	(0.7)	$490	16.8	$572	$1,499	2.5	$1,536	(3.5)	$1,482	19.2	$1,766
July	1,004	7.6	1,080	(5.0)	1,027	24.2	1,275	494	2.9	508	(4.2)	487	20.2	586	1,498	6.1	1,588	(4.7)	1,514	22.9	1,861
August	1,036	6.6	1,104	(4.3)	1,057	14.5	1,210	518	2.5	531	(8.3)	487	20.3	586	1,554	5.2	1,636	(5.6)	1,544	16.3	1,796
September	991	3.8	1,029	(2.1)	1,007	13.8	1,146	447	7.4	480	(2.2)	470	13.4	533	1,438	4.9	1,509	(2.1)	1,476	13.7	1,678
October	1,023	1.3	1,036	8.0	1,119	20.5	1,349	518	(3.7)	499	0.7	503	25.5	631	1,541	(0.3)	1,536	5.6	1,622	22.1	1,980
November	934	12.1	1,047	(15.6)	884	27.0	1,123	414	6.9	443	(6.8)	413	30.9	541	1,349	10.5	1,490	(13.0)	1,297	28.3	1,664
December	941	7.1	1,008	(8.1)	926	28.2	1,187	392	0.9	396	(2.0)	388	37.7	534	1,334	5.3	1,404	(6.4)	1,314	31.0	1,722
January	888	8.5	963	(7.6)	890	17.4	1,045	420	1.1	425	(4.2)	407	15.3	469	1,308	6.1	1,388	(6.6)	1,297	16.8	1,514
February	871	3.5	901	(7.7)	832	29.3	1,076	392	(2.9)	381	2.6	391	24.8	488	1,264	1.5	1,283	(4.6)	1,223	27.9	1,564
March	1,004	(30.5)	698	61.7	1,129	4.5	1,180	429	(12.6)	375	39.3	522	13.5	592	1,433	(25.1)	1,073	53.9	1,651	7.3	1,772
April	1,026	(49.8)	515	121.6	1,141	4.8	1,195	485	(28.9)	345	57.7	544	1.2	551	1,511	(43.1)	860	95.9	1,685	3.6	1,746
May	1,090	(25.5)	812	53.4	1,246	1.5	1,264	513	(14.9)	437	25.8	549	12.3	616	1,603	(22.1)	1,249	43.8	1,795	4.8	1,881
Total Year	$11,804	(4.8)	$11,237	9.0	$12,250	16.3	$14,244	$5,528	(3.9)	$5,314	6.4	$5,651	18.6	$6,700	$17,331	(4.5)	$16,551	8.2	$17,901	17.0	$20,944

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in October 2019.

Table 8

Northeast Extension Barrier Plazas - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	417	10.7	462	(45.5)	252	40.3	353	108	5.4	113	(5.8)	107	6.0	113	525	9.6	575	(37.7)	359	30.1	466
July	488	14.7	560	(40.8)	331	34.2	445	109	12.2	123	(9.8)	111	5.5	117	598	14.3	683	(35.2)	442	27.0	562
August	530	9.3	580	(39.9)	348	24.9	435	121	3.8	126	(14.9)	107	10.6	118	651	8.3	705	(35.4)	455	21.6	553
September	389	8.7	423	(27.6)	307	14.0	350	100	15.2	116	(4.1)	111	3.8	115	490	10.0	539	(22.5)	417	11.3	464
October	397	10.4	438	(29.9)	307	21.3	372	111	7.0	119	(4.4)	113	2.8	117	507	9.7	556	(24.5)	420	16.3	489
November	367	3.6	381	(36.9)	240	37.5	330	96	3.8	100	(3.0)	97	10.3	107	463	3.6	480	(29.9)	337	29.7	437
December	331	2.9	340	(42.2)	197	44.7	284	87	8.5	94	1.2	95	5.6	101	417	4.0	434	(32.8)	292	31.9	385
January	257	9.6	282	(31.8)	192	10.9	213	91	8.5	99	(9.2)	90	2.7	92	348	9.3	381	(25.9)	282	8.3	305
February	262	5.9	277	(37.0)	175	31.5	229	82	10.4	90	(10.3)	81	13.2	92	344	6.9	368	(30.5)	256	25.7	321
March	318	(35.2)	206	17.8	243	8.4	263	95	1.6	96	8.7	105	5.8	111	412	(26.7)	302	14.9	347	7.6	374
April	366	(77.1)	84	231.7	278	14.2	317	103	(20.7)	82	27.2	104	6.3	110	469	(64.8)	165	130.8	381	12.0	427
May	420	(58.1)	176	85.4	326	5.6	345	114	(16.0)	96	10.2	106	8.3	114	534	(49.1)	272	58.9	432	6.3	459
Total Year	4,542	(7.4)	4,208	(24.1)	3,196	23.2	3,937	1,216	2.9	1,252	(2.2)	1,225	6.6	1,306	5,759	(5.2)	5,460	(19.0)	4,421	18.6	5,243

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$452	17.9	$533	(35.8)	$342	48.1	$507	$607	11.1	$674	5.1	$708	6.8	$756	$1,058	14.0	$1,207	(13.0)	$1,050	20.3	$1,263
July	524	27.8	669	(37.0)	422	56.7	661	595	20.5	717	0.3	719	8.5	780	1,119	23.9	1,386	(17.7)	1,141	26.3	1,441
August	583	18.8	693	(31.1)	477	23.7	591	666	12.4	749	(5.9)	705	11.3	785	1,250	15.4	1,442	(18.0)	1,183	16.3	1,376
September	435	15.0	500	(17.1)	415	22.1	507	566	22.9	695	4.4	726	6.3	771	1,001	19.5	1,195	(4.6)	1,141	12.1	1,278
October	424	22.4	519	(16.2)	435	30.0	565	636	14.9	731	3.4	756	7.8	815	1,060	17.9	1,250	(4.7)	1,191	15.9	1,380
November	392	12.2	440	(30.7)	305	46.0	445	574	10.5	634	1.4	643	16.6	749	965	11.2	1,073	(11.7)	947	26.1	1,194
December	342	14.1	390	(28.5)	279	49.5	417	524	15.1	603	9.2	658	13.9	750	866	14.7	993	(5.6)	937	24.5	1,167
January	302	21.2	366	(25.5)	272	22.6	334	578	15.5	667	(2.4)	651	11.5	726	879	17.5	1,033	(10.6)	924	14.8	1,060
February	306	14.0	349	(30.8)	241	52.0	367	525	15.9	609	(3.1)	590	22.1	721	831	15.2	958	(13.2)	832	30.8	1,088
March	373	(31.3)	256	37.5	352	15.7	407	612	6.6	652	16.6	760	12.8	858	984	(7.8)	908	22.5	1,112	13.8	1,265
April	432	(72.6)	118	246.2	409	20.5	492	649	(9.4)	588	25.6	738	12.6	831	1,081	(34.7)	706	62.5	1,147	15.4	1,324
May	490	(51.6)	237	93.6	459	15.4	530	696	(4.4)	665	11.7	743	14.9	854	1,186	(23.9)	902	33.3	1,203	15.1	1,384
Total Year	$5,054	0.3	$5,070	(13.0)	$4,409	32.1	$5,823	$7,227	10.5	$7,983	5.2	$8,398	11.9	$9,397	$12,281	6.3	$13,053	(1.9)	$12,806	18.8	$15,220

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

Table 9

Turnpike I-376 - Beaver Valley Expressway - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	621	3.7	644	(28.1)	463	22.0	565	127	(3.9)	122	(0.5)	122	6.0	129	748	2.4	766	(23.7)	585	18.7	694
July	643	2.8	661	(23.9)	503	18.2	594	129	(0.7)	128	(2.0)	125	2.3	128	771	2.2	788	(20.4)	628	15.1	722
August	677	(0.2)	675	(24.2)	512	14.4	585	142	(5.2)	134	(9.1)	122	7.1	131	818	(1.1)	809	(21.7)	634	13.0	716
September	619	2.0	632	(17.5)	521	6.3	554	122	2.6	125	2.4	128	(2.8)	124	741	2.1	756	(14.2)	649	4.5	679
October	657	2.0	670	(20.2)	534	7.6	575	140	(5.8)	132	(4.8)	125	4.0	130	796	0.6	801	(17.7)	660	6.9	705
November	591	0.5	593	(28.5)	425	20.9	513	112	(3.1)	108	(7.6)	100	16.6	117	703	(0.1)	702	(25.2)	525	20.1	630
December	582	0.4	585	(32.8)	393	28.1	503	99	(4.8)	94	(4.3)	90	19.8	108	681	(0.3)	678	(28.8)	483	26.5	611
January	519	5.1	545	(28.4)	391	6.8	417	101	(3.5)	97	(8.6)	89	3.7	92	620	3.7	642	(25.4)	479	6.2	509
February	508	2.0	518	(28.5)	370	14.1	423	95	(1.7)	93	(13.6)	80	14.4	92	603	1.4	611	(26.3)	451	14.1	515
March	596	(33.4)	397	23.5	491	5.0	515	109	(13.7)	94	20.2	113	6.5	120	705	(30.3)	491	22.8	604	5.3	635
April	613	(63.1)	226	127.2	513	4.3	535	125	(34.3)	82	49.9	123	(0.4)	123	738	(58.3)	308	106.6	636	3.4	658
May	660	(46.0)	356	52.7	544	1.2	550	133	(22.0)	103	14.0	118	12.4	132	793	(42.0)	460	44.0	662	3.2	683
Total Year	7,286	(10.7)	6,502	(13.0)	5,660	11.9	6,331	1,431	(8.3)	1,312	1.7	1,335	6.8	1,426	8,717	(10.3)	7,815	(10.5)	6,994	10.9	7,757

Toll Revenue (in $1,000s)

	Passenger Cars							Commercial Vehicles							Total Vehicles						
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$847	12.5	$953	(7.3)	$883	21.5	$1,073	$375	3.0	$386	13.9	$439	8.7	$478	$1,221	9.6	$1,339	(1.2)	$1,322	17.3	$1,550
July	875	15.1	1,007	(10.8)	898	35.1	1,213	373	7.5	401	8.4	434	13.4	493	1,248	12.8	1,408	(5.4)	1,332	28.1	1,706
August	935	7.3	1,003	(5.7)	947	19.1	1,127	415	0.4	417	4.5	435	13.5	494	1,350	5.2	1,420	(2.7)	1,382	17.3	1,621
September	861	11.1	957	(5.3)	907	13.2	1,027	357	10.4	394	13.1	446	1.5	453	1,218	10.9	1,351	0.1	1,353	9.4	1,480
October	892	16.8	1,042	1.6	1,059	14.6	1,213	410	2.7	421	9.5	461	8.8	502	1,302	12.3	1,463	3.8	1,519	12.9	1,715
November	803	34.9	1,083	(34.0)	715	38.4	989	326	15.5	376	(9.7)	340	28.1	435	1,129	29.3	1,459	(27.8)	1,054	35.1	1,424
December	784	34.7	1,057	(26.7)	774	28.9	999	286	14.4	327	(2.4)	319	29.2	412	1,070	29.3	1,384	(21.0)	1,094	29.0	1,411
January	763	29.3	987	(25.5)	735	19.7	880	307	10.5	340	(4.4)	325	9.6	356	1,071	23.9	1,327	(20.1)	1,060	16.6	1,236
February	755	21.3	916	(26.2)	676	33.7	904	302	7.8	326	(13.1)	283	28.5	364	1,057	17.4	1,242	(22.7)	960	32.2	1,268
March	900	(29.2)	637	53.0	975	8.8	1,061	356	(8.3)	327	28.0	418	14.0	477	1,257	(23.3)	964	44.5	1,393	10.3	1,537
April	920	(56.9)	397	152.5	1,001	12.5	1,127	403	(25.7)	299	51.8	455	8.2	492	1,323	(47.4)	696	109.2	1,456	11.2	1,619
May	984	(33.2)	657	67.7	1,102	4.4	1,151	426	(11.9)	376	18.6	446	17.3	523	1,411	(26.7)	1,033	49.8	1,548	8.1	1,674
Total Year	$10,321	3.6	$10,697	(0.2)	$10,671	19.6	$12,763	$4,337	1.2	$4,389	9.4	$4,802	14.1	$5,478	$14,657	2.9	$15,086	2.6	$15,473	17.9	$18,241

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

Table 10

Turnpike I-576 - Southern Beltway - Findlay Connector - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

	Passenger Cars								Commercial Vehicles								Total Vehicles							
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22		2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22		2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	140	0.5	140	(34.4)	92	33.9	123		22	54.2	33	(5.1)	32	16.7	37		161	7.7	174	(28.7)	124	29.5	160
July	140	5.8	148	(33.7)	98	26.4	124		22	23.0	27	8.7	30	17.5	35		162	8.1	175	(27.1)	128	24.3	159
August	139	7.4	149	(30.6)	104	19.0	123		30	(2.3)	29	4.0	31	15.2	35		169	5.7	179	(24.9)	134	18.1	158
September	124	10.8	137	(23.7)	105	11.7	117		31	(3.2)	30	11.4	33	10.0	36		155	8.0	167	(17.4)	138	11.3	154
October	139	8.6	151	(25.8)	112	166.0	298		25	38.7	35	(16.2)	29	105.8	61		164	13.2	186	(24.0)	141	153.4	358
November	128	4.0	133	(27.6)	96	349.4	433		23	76.8	41	(30.1)	29	233.7	96		151	15.3	174	(28.2)	125	322.7	529
December	124	6.2	132	(29.3)	93	378.1	445		22	70.5	37	(28.7)	27	306.2	108		146	15.8	169	(29.2)	120	362.2	553
January	118	5.9	125	(29.0)	89	300.5	356		22	75.4	39	(11.8)	35	176.2	96		141	17.0	165	(24.9)	124	265.6	452
February	115	3.3	118	(30.2)	83	348.4	370		22	67.1	37	0.0	37	157.4	95		137	13.7	155	(23.0)	120	289.2	466
March	131	(26.9)	96	13.0	108	327.2	463		36	(5.6)	34	(3.6)	33	265.8	120		167	(22.3)	130	8.7	141	312.9	583
April	129	(56.8)	56	100.8	112	337.1	490		38	(45.4)	21	89.7	40	204.5	121		168	(54.2)	77	97.8	152	302.4	611
May	141	(46.5)	75	55.7	117	357.0	536		36	(33.3)	24	41.1	34	287.2	132		177	(43.8)	99	52.2	151	341.3	668
Total Year	1,567	(6.8)	1,461	(17.2)	1,209	220.8	3,879		330	17.7	389	(0.2)	388	150.4	972		1,898	(2.5)	1,850	(13.6)	1,598	203.7	4,852

Toll Revenue (in $1,000s)

	Passenger Cars								Commercial Vehicles								Total Vehicles							
Month	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22		2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22		2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$157	11.8	$175	(21.7)	$137	28.6	$177		$56	67.7	$94	14.3	$108	21.6	$131		$213	26.6	$270	(9.1)	$245	25.6	$308
July	162	16.3	188	(29.9)	132	47.7	195		57	38.0	79	26.1	100	25.1	125		219	22.0	267	(13.3)	232	38.0	320
August	168	9.5	184	(19.1)	149	21.7	181		79	6.4	85	25.6	106	17.7	125		247	8.5	268	(5.0)	255	20.0	306
September	147	23.0	181	(21.9)	141	17.3	166		82	4.3	86	26.0	108	18.3	128		230	16.3	267	(6.5)	250	17.8	294
October	164	18.1	193	(11.6)	171	162.0	447		68	46.8	100	(2.1)	98	129.5	225		232	26.5	293	(8.4)	269	150.1	673
November	148	11.9	166	(24.7)	125	463.4	705		61	103.6	124	(24.2)	94	276.5	353		209	38.6	290	(24.5)	219	383.2	1,058
December	145	18.1	171	(13.4)	148	417.9	766		57	86.9	107	(20.4)	86	389.9	419		202	37.7	278	(16.1)	233	407.6	1,185
January	147	20.1	177	(24.7)	133	386.1	647		61	114.8	131	(2.5)	127	194.1	375		208	47.8	307	(15.3)	260	292.1	1,021
February	144	12.1	162	(26.1)	120	447.3	655		63	97.4	125	11.1	138	168.9	372		208	38.0	286	(9.9)	258	298.0	1,027
March	170	(31.3)	116	43.8	167	348.2	751		108	5.4	114	4.0	119	290.8	464		278	(17.0)	231	24.1	286	324.4	1,214
April	165	(49.9)	83	110.3	174	371.0	817		112	(37.1)	71	94.4	138	246.3	476		277	(44.7)	153	103.0	311	315.9	1,294
May	179	(37.1)	113	59.6	180	397.9	894		104	(23.3)	80	56.9	125	311.1	514		283	(32.0)	192	58.5	305	362.3	1,408
Total Year	$1,895	0.7	$1,909	(6.9)	$1,777	260.3	$6,400		$911	31.3	$1,195	12.7	$1,347	175.3	$3,708		$2,806	10.6	$3,104	0.6	$3,123	223.6	$10,108

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion and vehicle classification changes were implemented in June 2018.

(5) The I-576 tolling configuration was changed from six ramp tolls to two mainline toll gantries at the time of AET conversion in June 2018.

(6) A 13.2 mile extension of the Southern Beltway opened on October 15, 2021.

Table 11

Delaware River Bridge - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	645	28.4	828	(35.8)	532	51.6	806
July	664	28.4	853	(25.8)	633	38.9	879
August	689	24.0	855	(17.9)	701	26.2	885
September	616	21.6	748	(15.2)	635	23.5	784
October	700	8.6	760	(15.4)	643	27.3	819
November	699	9.2	763	(27.0)	557	42.9	796
December	720	6.0	763	(33.2)	510	43.4	732
January	612	8.8	666	(22.8)	514	8.1	555
February	586	11.6	653	(34.9)	426	44.3	614
March	707	(34.6)	462	30.6	604	16.4	703
April	746	(72.0)	209	216.0	660	19.5	788
May	799	(53.3)	373	105.0	764	6.5	814
Total Year	8,182	(3.0)	7,934	(9.5)	7,178	27.8	9,174

Month	Commercial Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	115	8.4	124	5.4	131	12.7	148
July	113	17.6	132	2.0	135	5.0	142
August	120	11.3	134	(2.1)	131	10.7	145
September	106	17.8	125	7.2	134	8.6	145
October	127	10.1	140	(0.9)	139	8.3	150
November	117	8.8	127	(0.2)	127	13.6	144
December	110	16.3	128	1.6	130	10.1	143
January	115	11.5	129	(3.2)	124	3.9	129
February	104	13.8	119	(7.4)	110	17.2	129
March	117	9.4	128	11.4	143	7.4	153
April	125	(15.0)	106	31.3	139	5.7	147
May	132	(10.5)	118	17.5	139	8.5	150
Total Year	1,400	7.8	1,509	4.7	1,581	9.2	1,725

Month	Total Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	760	25.4	953	(30.5)	662	43.9	953
July	777	26.8	985	(22.1)	768	32.9	1,021
August	810	22.1	988	(15.8)	832	23.8	1,030
September	722	21.0	873	(12.0)	769	20.9	929
October	827	8.9	900	(13.1)	782	23.9	969
November	815	9.1	890	(23.2)	683	37.5	939
December	830	7.4	891	(28.2)	640	36.7	875
January	727	9.2	794	(19.7)	638	7.2	684
February	690	11.9	772	(30.7)	535	38.7	743
March	824	(28.4)	591	26.4	747	14.7	856
April	870	(63.8)	315	153.9	799	17.1	935
May	931	(47.3)	491	83.9	903	6.8	964
Total Year	9,582	(1.5)	9,443	(7.3)	8,758	24.4	10,899

Toll Revenue (in $1,000s)

Month	Passenger Cars 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$3,291	34.5	$4,425	(29.1)	$3,139	58.6	$4,978
July	3,381	36.9	4,627	(21.7)	3,624	52.3	5,520
August	3,557	31.8	4,689	(12.8)	4,087	32.1	5,400
September	3,165	27.8	4,045	(9.0)	3,682	29.9	4,782
October	3,560	16.2	4,137	(6.1)	3,886	36.0	5,287
November	3,577	16.2	4,157	(25.2)	3,110	54.4	4,803
December	3,631	11.9	4,061	(23.0)	3,126	47.2	4,602
January	3,293	19.3	3,927	(19.3)	3,169	20.4	3,817
February	3,164	19.3	3,776	(31.3)	2,593	60.1	4,153
March	3,848	(32.9)	2,583	45.5	3,758	23.4	4,638
April	4,030	(69.5)	1,230	235.9	4,132	26.2	5,217
May	4,330	(49.2)	2,202	117.3	4,784	12.9	5,403
Total Year	$42,826	2.4	$43,859	(1.8)	$43,090	36.0	$58,600

Month	Commercial Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$2,043	14.3	$2,335	16.2	$2,713	16.9	$3,171
July	1,998	24.2	2,482	10.8	2,750	11.9	3,076
August	2,149	17.7	2,529	6.8	2,702	14.5	3,094
September	1,916	23.6	2,368	15.4	2,734	13.5	3,103
October	2,275	16.5	2,650	9.0	2,889	14.8	3,315
November	2,076	15.9	2,405	6.8	2,568	18.9	3,052
December	1,968	22.4	2,409	12.6	2,713	16.3	3,154
January	2,159	19.5	2,580	5.2	2,715	10.2	2,993
February	1,967	21.6	2,392	(0.3)	2,384	25.0	2,981
March	2,230	13.8	2,538	22.7	3,114	12.8	3,512
April	2,340	(5.7)	2,206	37.2	3,027	10.8	3,354
May	2,482	0.1	2,484	22.0	3,031	14.1	3,459
Total Year	$25,603	14.7	$29,379	13.5	$33,339	14.8	$38,264

Month	Total Vehicles 2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$5,334	26.7	$6,760	(13.4)	$5,851	39.3	$8,149
July	5,379	32.2	7,109	(10.4)	6,374	34.9	8,597
August	5,706	26.5	7,218	(6.0)	6,788	25.1	8,495
September	5,081	26.2	6,413	0.0	6,416	22.9	7,885
October	5,835	16.3	6,787	(0.2)	6,775	27.0	8,602
November	5,653	16.1	6,562	(13.5)	5,677	38.3	7,854
December	5,599	15.6	6,470	(9.8)	5,839	32.8	7,756
January	5,452	19.4	6,508	(9.6)	5,885	15.7	6,809
February	5,131	20.2	6,168	(19.3)	4,978	43.3	7,134
March	6,078	(15.7)	5,122	34.2	6,872	18.6	8,150
April	6,369	(46.0)	3,437	108.3	7,159	19.7	8,571
May	6,812	(31.2)	4,686	66.8	7,815	13.4	8,862
Total Year	$68,429	7.0	$73,239	4.4	$76,429	26.7	$96,863

NOTES:
(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.
(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.
(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

Table 12

Gateway Toll Plaza - Monthly Transaction and Revenue Trends

Transactions Include Only Toll Transactions - Non-Revenue Transactions Are Not Included

Toll Transactions (in 1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	324	(2.9)	315	(30.9)	217	37.4	299	88	(3.7)	85	5.7	90	13.9	102	412	(3.1)	400	(23.1)	307	30.5	401
July	358	(4.3)	342	(23.6)	261	26.5	331	84	(2.0)	83	12.1	93	8.3	100	442	(3.9)	425	(16.6)	354	21.7	431
August	348	(3.2)	337	(21.4)	265	19.7	317	93	(5.5)	87	8.5	95	9.9	104	441	(3.7)	425	(15.3)	360	17.1	421
September	283	(5.3)	268	(13.5)	232	14.5	265	83	0.8	83	12.2	93	9.3	102	365	(3.9)	351	(7.4)	325	13.0	367
October	279	0.7	281	(17.9)	231	14.1	263	92	5.2	96	0.4	97	7.2	104	371	1.8	378	(13.2)	328	12.0	367
November	275	(2.9)	267	(29.0)	190	34.8	256	83	2.8	85	3.4	88	9.3	96	357	(1.5)	352	(21.2)	277	26.7	351
December	263	6.7	280	(38.8)	172	40.0	240	77	8.5	83	7.3	89	7.2	96	340	7.1	364	(28.2)	261	28.8	336
January	190	9.0	207	(20.5)	165	5.6	174	81	7.3	87	0.1	87	2.8	89	271	8.5	294	(14.4)	252	4.6	264
February	185	7.2	198	(28.8)	141	19.4	168	76	9.3	83	(3.7)	80	10.7	89	261	7.8	281	(21.3)	221	16.3	257
March	249	(35.4)	161	25.9	202	10.1	223	85	5.9	90	13.1	102	5.9	108	334	(24.9)	251	21.3	304	8.7	331
April	253	(69.3)	78	193.9	229	6.6	244	86	(10.4)	77	27.6	98	2.2	100	339	(54.4)	155	111.1	327	5.3	344
May	295	(49.7)	148	80.3	268	3.0	276	90	(10.0)	81	21.7	99	6.9	106	385	(40.4)	230	59.6	366	4.1	381
Total Year	3,302	(12.7)	2,883	(10.8)	2,572	18.8	3,056	1,018	0.4	1,022	8.8	1,111	7.7	1,197	4,320	(9.6)	3,905	(5.7)	3,683	15.5	4,253

Toll Revenue (in $1,000s)

Month	Passenger Cars							Commercial Vehicles							Total Vehicles						
	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22	2018-19	% Chg	2019-20	% Chg	2020-21	% Chg	2021-22
June	$2,023	2.6	$2,075	(22.1)	$1,616	33.3	$2,155	$1,813	1.8	$1,845	9.0	$2,012	17.5	$2,364	$3,837	2.2	$3,920	(7.4)	$3,628	24.6	$4,519
July	2,231	1.7	2,269	(22.7)	1,754	49.0	2,614	1,787	3.4	1,848	8.3	2,002	17.2	2,345	4,018	2.5	4,117	(8.8)	3,756	32.0	4,960
August	2,161	1.9	2,203	(7.0)	2,048	13.3	2,321	1,920	(0.1)	1,917	9.6	2,102	14.3	2,402	4,081	1.0	4,120	0.7	4,150	13.8	4,723
September	1,745	0.7	1,757	(6.4)	1,645	24.3	2,045	1,720	5.3	1,811	12.6	2,039	15.5	2,354	3,465	3.0	3,568	3.2	3,683	19.4	4,399
October	1,708	(0.5)	1,699	6.0	1,800	17.9	2,123	1,877	5.8	1,986	10.2	2,189	13.4	2,482	3,584	2.8	3,685	8.3	3,989	15.4	4,605
November	1,675	3.3	1,730	(28.5)	1,237	51.5	1,873	1,685	8.9	1,835	5.4	1,933	15.6	2,235	3,359	6.1	3,565	(11.1)	3,170	29.6	4,108
December	1,597	28.8	2,057	(36.2)	1,312	38.3	1,814	1,571	15.2	1,811	11.8	2,025	13.3	2,294	3,169	22.1	3,868	(13.7)	3,336	23.1	4,109
January	1,206	28.3	1,547	(18.6)	1,259	23.8	1,558	1,746	7.7	1,881	9.1	2,051	9.9	2,253	2,952	16.1	3,427	(3.4)	3,310	15.2	3,811
February	1,187	15.4	1,370	(25.6)	1,019	34.1	1,366	1,657	7.9	1,787	5.5	1,885	18.8	2,239	2,844	11.0	3,157	(8.0)	2,904	24.1	3,605
March	1,626	(35.1)	1,054	37.0	1,445	20.8	1,745	1,848	3.7	1,915	24.1	2,377	12.7	2,680	3,473	(14.5)	2,970	28.7	3,822	15.8	4,426
April	1,646	(64.7)	581	213.7	1,822	7.4	1,957	1,859	(6.6)	1,737	34.0	2,327	7.3	2,497	3,505	(33.9)	2,318	79.0	4,149	7.4	4,454
May	1,928	(50.5)	954	106.6	1,970	11.7	2,200	1,940	(6.3)	1,817	27.5	2,317	13.6	2,632	3,868	(28.4)	2,771	54.7	4,287	12.7	4,832
Total Year	$20,733	(6.9)	$19,295	(1.9)	$18,926	25.6	$23,771	$21,422	3.6	$22,191	13.8	$25,259	13.9	$28,780	$42,155	(1.6)	$41,486	6.5	$44,185	18.9	$52,551

NOTES:

(1) Toll increases occur every year with exceptions. Refer to Table 1 for details.

(2) Leap year occurred in 2020, resulting in exaggerated traffic and toll revenue impacts in February 2020 compared to February 2019.

(3) In response to the COVID-19 pandemic, schools were closed state-wide on March 16, 2020 and stay at home orders for some counties began to take effect on March 23, 2020. A state-wide stay at home order was issued April 1, 2020 and lifted on June 5, 2020.

(4) AET conversion occurred in October 2019.

Actual and Assumed Toll Rate Increases

Annual toll rate increases are assumed to occur on the entire Turnpike System. The toll rate increases are assumed to occur at 12:01 AM on the first Sunday after January 1 of each year unless otherwise noted. **Table 13** presents the annual percent increases in toll rates for E-ZPass, video, and registered video accounts (RVA) from calendar year 2021 through 2051.

Table 13
Actual and Assumed Percent Changes in Turnpike System Toll Rates
Pennsylvania Turnpike System

Calendar Year (2)	Percent Change in Turnpike System Toll Rates (1)		
	E-ZPass	Video	Registered Video Account (RVA)
2021 (3)	6.00	6.00/45.00 (4)	-15.00 (5)
2022 (3)	5.00 (6)	5.00 (6)	5.00 (6)
2023	5.00	5.00	5.00
2024	5.00	5.00	5.00
2025	5.00	5.00	5.00
2026	4.00	4.00	4.00
2027	3.50	3.50	3.50
2028	3.00	3.00	3.00
2029	3.00	3.00	3.00
2030	3.00	3.00	3.00
2031	3.00	3.00	3.00
2032	3.00	3.00	3.00
2033	3.00	3.00	3.00
2034	3.00	3.00	3.00
2035	3.00	3.00	3.00
2036	3.00	3.00	3.00
2037	3.00	3.00	3.00
2038	3.00	3.00	3.00
2039	3.00	3.00	3.00
2040	3.00	3.00	3.00
2041	3.00	3.00	3.00
2042	3.00	3.00	3.00
2043	3.00	3.00	3.00
2044	3.00	3.00	3.00
2045	3.00	3.00	3.00
2046	3.00	3.00	3.00
2047	3.00	3.00	3.00
2048	3.00	3.00	3.00
2049	3.00	3.00	3.00
2050	3.00	3.00	3.00
2051	3.00	3.00	3.00

(1) Toll rate increases are the same for all facilities and vehicle classes, except where otherwise noted.
(2) Except where otherwise indicated, toll rate increases are applied on or near January 1.
(3) Toll rate increases are actual.
(4) All rates increased by 6%. Video rates increased by an additional 45% on the Ticket System and Mon Fayette Expressway (Turnpike 43) to bring the video rate premium in line with those on PTC's other AET facilities.
(5) Registered video accounts are a new billing option that provides a 15% discount to video customers who pre-register their vehicle and provide electronic payment information.
(6) No increase on the Southern Beltway.

Rate increase assumptions are unchanged since the 2021 Bring Down Letter. With the suspension of cash collection in March and June of 2020 on the Ticket System and MFE, respectively, the Turnpike System now operates entirely under AET. As such, there are no cash rates shown in Table 13 for 2021 and beyond. As discussed above, to make the toll differential between E-ZPass and video rates similar on all toll facilities, in addition to a six-percent toll increase in January 2021, video rates on the Ticket System and MFE also increased by an additional 45 percent. Toll adjustment assumptions for the years 2023 and beyond are proposed and have not yet been formally approved by the PTC Board.

An additional rate tier, registered video account (RVA), has also been added to the rate schedule beginning in 2021. RVA accounts allow for a 15-percent discount off of the video rate for video customers who pre-register their vehicle with PTC and provide electronic payment information. This will allow PTC to process payments automatically without having to send billing invoices.

Actual and Assumed E-ZPass Penetration Rates

Table 14 presents the actual and assumed annual E-ZPass penetration rates from calendar year 2021 through 2051. The first three columns show the E-ZPass market share assumptions for the 2022 Bring Down Letter. These were adjusted slightly on a facility-by-facility basis, by the amount shown in the three rightmost columns, over assumptions used in the 2021 Bring Down Letter.

As shown, assumed E-ZPass market shares in the current analysis are noticeably different from those assumed in the 2021 Bring Down Letter. In both 2021 and thus far in 2022, actual PC and CV E-ZPass market share have been significantly lower than previously estimated. This has resulted in new 2022 estimates being 9.1 (PC) and 6.6 (CV) percent lower than previous estimates. One reason for the lower-than-expected rate of E-ZPass market share is the increased prevalence of telecommuting since the start of the pandemic. Due to consistent users of a facility, such as commuters, being more likely to be E-ZPass customers, the decreased share of commuters on the PTC system has resulted in the remaining user base having lower overall rates of E-ZPass usage.

A second reason for the decline in E-ZPass market share is the reclassification of some types of transactions that has occurred since AET implementation on each of the Turnpike's constituent systems. Any transactions that are not immediately processed as successful roadside E-ZPass transactions are classified as video transactions. However, about one-third of video transactions are actually VTOLLs, which are transactions made by E-ZPass account holders where the transponder is not read properly at the roadside. While these transactions are later linked to an E-ZPass account, they are not counted towards E-ZPass penetration rates.

Since the beginning of the pandemic and the implementation of system-wide AET in the spring of 2020, the system-wide share of VTOLL transactions has increased notably, as illustrated in **Figure 3**. In this figure the yellow line represents the monthly share of system-wide E-ZPass

Mr. Richard Dreher
July 8, 2022
Page 24

transactions, which declined sharply between April and July of 2020 and has yet to recover. Conversely, the blue line represents the system-wide share of combined E-ZPass and VTOLL transactions. This reflects the true customer base that has an E-ZPass transponder, as by definition all VTOLL transactions must be conducted by an E-ZPass customer. While this larger category also experienced a decline in the spring and summer of 2020, it rebounded more quickly and the long-term trend (represented by the dotted blue line) remains much closer to its pre-pandemic level.

Furthermore, prior to AET implementation, Toll By Plate (video) non-revenue transactions had been excluded from total transaction statistics. These video transactions are now included in the total number of transactions, thus lowering E-ZPass penetration rates.

Over the rest of the forecast period, the E-ZPass market share for both PCs and CVs grows faster than previously assumed, but because of the significant differential between the two forecasts in 2022, E-ZPass market share is estimated to be 5.5 percent lower overall in 2050 than in the previous forecast.

Figure 3
Historic E-ZPass and VToll Transactions
All Vehicles, Total PTC System

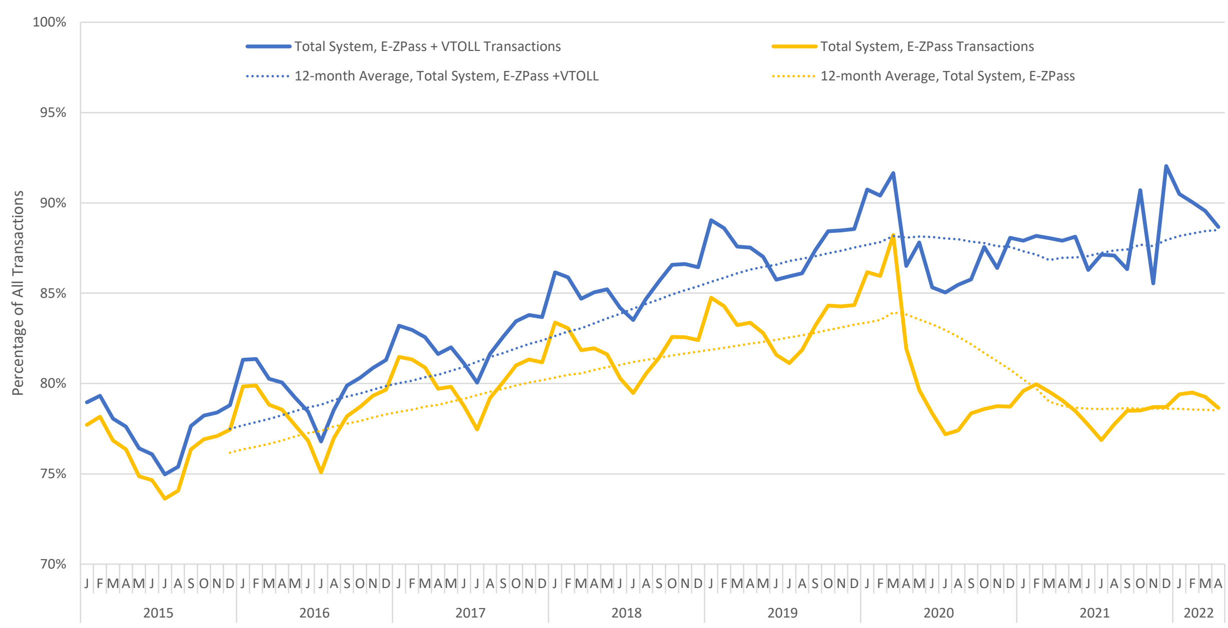


Table 14
Actual and Assumed Percent E-ZPass Penetration
Pennsylvania Turnpike System

	E-ZPass Penetration Rates					
Calendar	2022 Bring Down Letter			Difference from 2021 Bring Down Letter		
Year	Cars	Trucks	Total	Cars	Trucks	Total
2021 (1)	76.0	87.8	78.0	-9.2	-5.4	-8.3
2022	76.8	87.2	78.6	-9.1	-6.6	-8.5
2023	78.3	88.8	80.1	-8.3	-5.4	-7.7
2024	79.9	89.8	81.4	-7.4	-4.9	-7.0
2025	81.3	90.5	82.7	-6.6	-4.6	-6.2
2026	82.0	91.2	83.5	-6.3	-4.3	-6.0
2027	82.6	91.8	84.0	-6.2	-4.0	-5.8
2028	82.7	92.4	84.3	-6.4	-3.8	-6.0
2029	82.9	92.9	84.5	-6.6	-3.3	-6.1
2030	83.0	93.5	84.7	-6.7	-2.8	-6.1
2031	83.2	93.9	84.9	-6.7	-2.4	-6.0
2032	83.3	94.4	85.1	-6.7	-2.0	-5.9
2033	83.5	94.8	85.3	-6.6	-1.6	-5.8
2034	83.6	95.0	85.4	-6.6	-1.5	-5.7
2035	83.7	95.1	85.5	-6.5	-1.4	-5.7
2036	83.8	95.2	85.6	-6.5	-1.4	-5.6
2037	83.9	95.2	85.7	-6.5	-1.4	-5.6
2038	84.0	95.3	85.8	-6.4	-1.4	-5.6
2039	84.1	95.3	85.9	-6.4	-1.4	-5.5
2040	84.2	95.4	86.0	-6.3	-1.4	-5.5
2041	84.2	95.4	86.0	-6.3	-1.4	-5.5
2042	84.3	95.4	86.1	-6.3	-1.4	-5.5
2043	84.3	95.5	86.2	-6.3	-1.4	-5.5
2044	84.4	95.5	86.2	-6.3	-1.4	-5.5
2045	84.4	95.5	86.3	-6.3	-1.4	-5.5
2046	84.5	95.6	86.3	-6.3	-1.4	-5.5
2047	84.5	95.6	86.4	-6.3	-1.4	-5.5
2048	84.5	95.6	86.4	-6.3	-1.4	-5.5
2049	84.6	95.7	86.5	-6.4	-1.4	-5.5
2050	84.6	95.7	86.5	-6.4	-1.4	-5.5
2051	84.7	95.8	86.6			

(1) 2021 E-ZPass penetration rates are actual for the 2022 Bring Down Letter only.

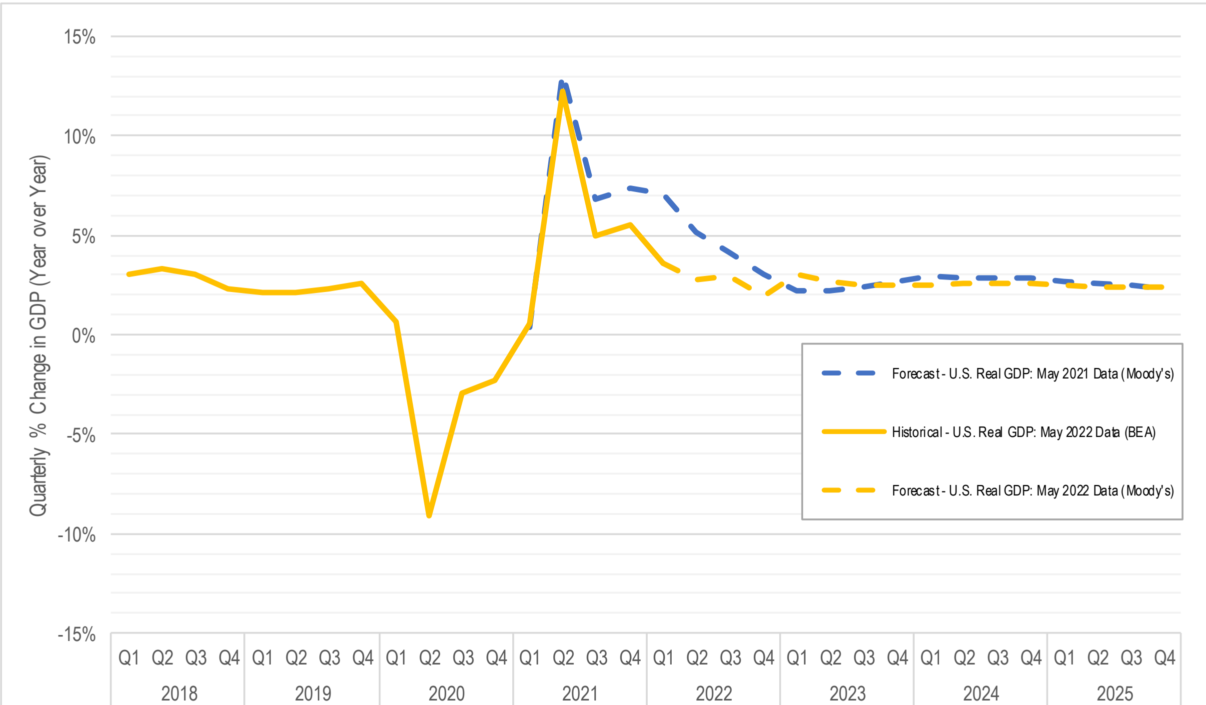
Summary of Changes in Future Year Estimates for U.S. Gross Domestic Product and Pennsylvania Gross State Product

This section presents a comparison of the Gross Domestic Product (GDP) and Pennsylvania Gross State Product (GSP) information available for the 2022 Bring Down Letter with updated forecasts for both measures from Moody's Analytics. This information was a key input in developing estimated growth forecasts for the Turnpike System. All GDP and GSP figures in this section refer to year-over-year comparisons. For example, the fourth quarter 2021 percent change would reflect the fourth quarter of 2021 versus the fourth quarter of 2020.

Figure 4 shows actual and estimated GDP at the time of the 2021 Bring Down Letter as well as the revised figures based on updated Moody's Analytics' forecasts as of May 2022. Since the 2021 Bring Down Letter, actual GDP growth figures have been released for an additional four quarters: the last three quarters of 2021 and the first quarter of 2022. While year-over-year GDP grew in each of these quarters, each also had lower growth than expected at the time of the 2021 Bring Down Letter, including a shrinking GDP between the fourth quarter of 2021 and the first quarter of 2022. The gap between actual and forecast GDP increased each quarter, growing from a 0.9 percent shortfall (12.2 percent actual compared to 13.1 percent forecast) in the second quarter of 2021 to a 3.5 percent shortfall (3.6 percent actual compared to 7.1 percent forecast) in the first quarter of 2022. This indicates that while some economic indicators, such as unemployment, remain strong, overall economic growth has slowed compared to May 2021.

Accordingly, GDP growth through the end of 2022 is now expected to be lower than previously forecast. However, for the first three quarters of 2023 growth is now expected to be higher than previously predicted, largely because GDP growth in 2022 is now expected to be less robust. Longer term, in the latest May 2022 forecast, year-over-year GDP is expected to grow at a steady rate of between 2.4 and 2.6 percent throughout 2024 and 2025, which is a rate similar to, although slightly below, the previously forecast.

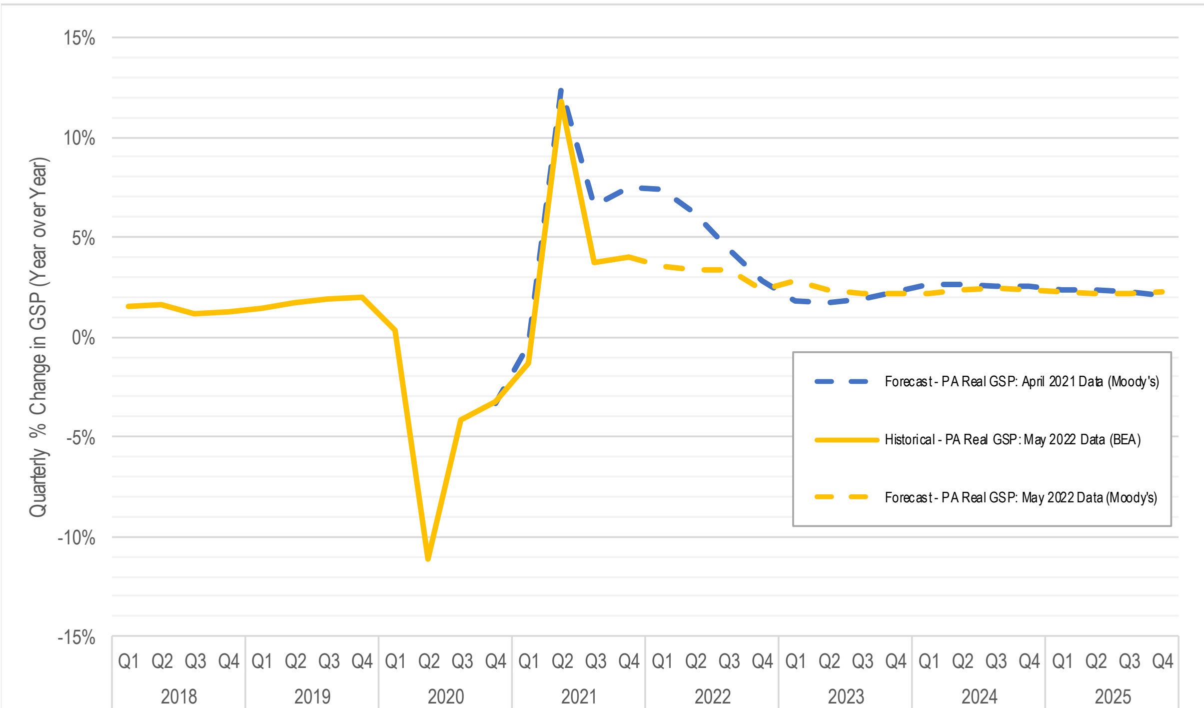
Figure 4
Comparison of May 2021 to May 2022 Quarterly Growth Estimates of U.S. Gross Domestic Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (May 2021 and May 2022 Releases)

Figure 5 shows GSP trend and forecast data for Pennsylvania. However, because GSP data lags GDP data, GSP is actual through only the fourth quarter of 2021. Like GDP, actual GSP growth during 2021 was weaker than predicted at the time of the 2021 Bring Down Letter. First quarter 2021 GSP contracted more than forecast in April 2021 (falling 1.3 percent compared to the 0.4 percent decline forecast) and grew more slowly than forecast in the remaining three quarters of 2021. Similarly to GSP, growth in 2022 is now expected to be notably slower than previously forecast, with slightly stronger growth in 2023 and very similar, albeit slightly lower, growth than previously forecast in both 2024 and 2025.

Figure 5
Comparison of April 2021 and May 2022 Quarterly Growth Estimates of Pennsylvania Gross State Product



Sources: Historical estimates are from the BEA, and the forecasts are from Moody's Analytics (April 2021 and May 2022 Releases)

Summary of Trends in Fuel Prices

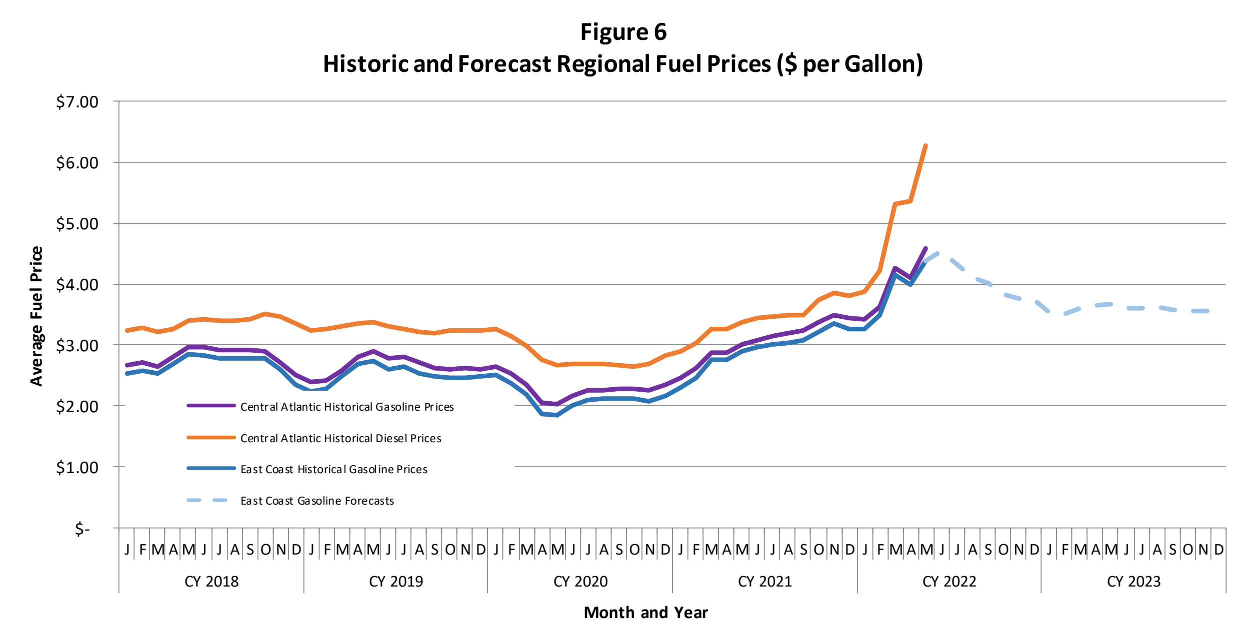
Figure 6 portrays actual gasoline and diesel prices for the central Atlantic region from January 2018 through May 2022. Actual gasoline prices for the east coast are also shown. They closely mirror those for the central Atlantic gasoline prices and are shown here because the Energy Information Administration (EIA) only provides monthly forecasts for this larger region. Figure 6 shows the monthly gasoline price forecast through the end of 2023.

As shown, central Atlantic gasoline and diesel prices have followed generally similar trends throughout this period and have moved in tandem. Prices for both increased slowly in early 2018, reaching a high of $2.97 per gallon for gasoline in May 2018. Diesel prices reached a high of $3.52 per gallon in October 2018. Prices of both gasoline and diesel fell in late 2018 and early 2019. Between February and May 2019 prices rose, with gasoline prices increasing more rapidly than diesel prices. For the remainder of 2019, prices decreased slightly, with diesel prices remaining very stable and gasoline prices experiencing slightly more volatility.

However, in 2020 prices fell sharply, first in response to an early March announcement that Saudi Arabia and Russia would increase oil supply in the coming months, and second, by an extreme worldwide economic slowdown in response to the COVID-19 pandemic. As a result, May 2020 per gallon prices in the Central Atlantic region fell to $2.03 and $2.68 for gasoline and diesel, respectively. Prices then stayed relatively flat for the next several months before beginning to rise quickly through the winter of 2020-21 as the economic effects of the pandemic waned. Prices continued to rise, albeit it a slower rate, through the spring, summer, and fall of 2021. Price increases briefly leveled off in the winter of 2021-22 before sharply increasing in February and, especially, March 2022 in response to uncertainty and disruptions in supply caused by the war in Ukraine and subsequent sanctions against Russia. Rising prices briefly abated in April before another sharp increase in May. During this month, nominal prices reached a high of $4.59 per gallon of gasoline and $6.26 per gallon of diesel in the central Atlantic region.

As noted above, the EIA only forecasts future gasoline prices for the east coast, which is a region that is larger than, and wholly encompasses, the central Atlantic region. Historically, east coast region prices move in tandem with central Atlantic prices but are approximately 10 to 20 cents lower. East coast gasoline prices are forecast to continue rising in June before falling throughout the remainder of 2022 and the first few months of 2023. Prices are then forecast to remain generally stable throughout 2023, at between $3.51 and $3.66 per gallon. Although these prices are significantly lower than current prices, they are also significantly higher than those experienced in the few years prior to 2022. Based on historical trends, central Atlantic prices can be expected to follow the same pattern, but at slightly higher prices.

The May 2022 gasoline prices are about $1.83 higher than forecast at the time of the 2021 Bring Down Letter. Over the remainder of 2022, the current forecast is between $1.23 and $1.94 higher each month than the previous forecast. (A 2023 forecast was not available at the time of the 2021 Bring Down Letter.) The rapid increase in actual gasoline prices over the past few months and forecast slow decline of those prices in the coming 18 months, coupled with the highest inflation experienced in the past 40 years may be tempering desire for travel while these conditions persist, resulting in a less robust economic recovery than expected at the time of the 2021 Bring Down Letter. This largely aligns with the revised GDP and GSP forecasts discussed previously.



Source: U.S. Energy Information Administration, release dates 6/13/2022 (historical) and 6/7/2022 (forecast).
Note: Retail Prices in USD for Regular All Formulations Retail Gasoline and Number 2 Diesel.
Central Atlantic states include Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania.
East Coast states include Central Atlantic and New England states, Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia.

Consumer Confidence

Consumer confidence is an important measure in that it highlights consumer's confidence in making purchases, their willingness to travel more, etc. Higher consumer confidence spurs demand for various goods and services, and it can be inferred that higher demand results in higher traffic on the roadways. Consumer confidence scores are indexed to the year 1985, for which consumer confidence equaled 100.

Figure 7 shows the Conference Board Consumer Confidence Index for the period between January 2018 and May 2022. Individual blue bars show index values for each month while the dotted line shows the three-month moving average. Consumer confidence exceeded 120 at the start of 2018 and rose throughout the year, peaking at a high of 137.9 in October 2018, which was the highest level of consumer confidence since September 2000. In 2019, consumer confidence fell slightly compared to 2018 but remained strong compared to historical levels.

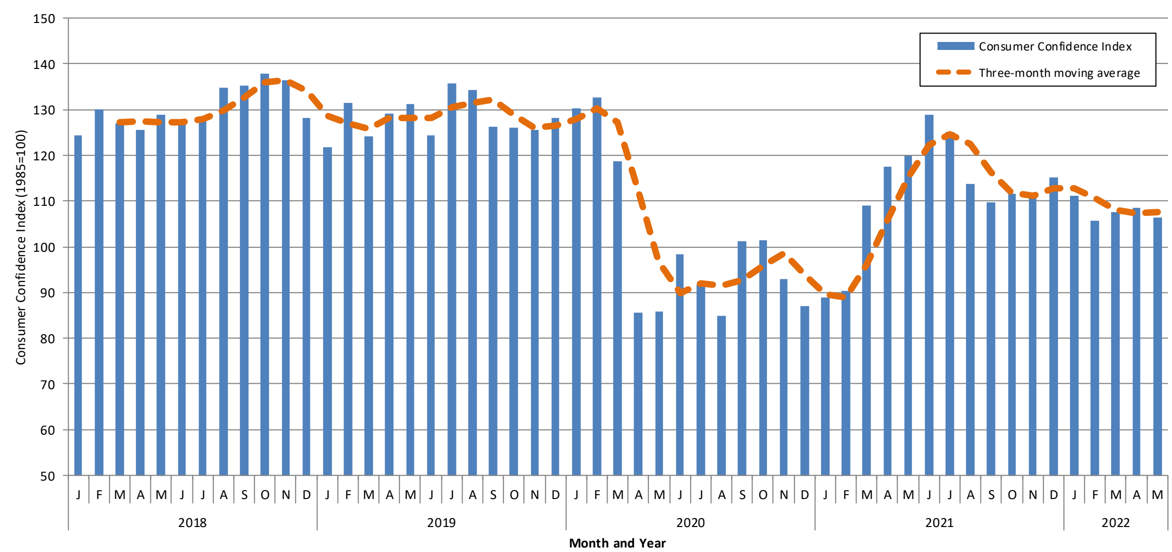
Through the first two months of 2020, consumer confidence remained strong, increasing slightly since the end of 2019. However, since then, consumer confidence has fluctuated significantly, generally mirroring the national narrative regarding efforts to contain the COVID-19 pandemic. In 2020 consumer confidence declined sharply in March and even more significantly in April, when it fell to 85.7, reflecting the widespread economic shutdowns that were put in place as a result of the

COVID-19 pandemic. Consumer confidence rose as economic and travel restrictions were lifted in May and June, when it reached 98.3, indicating that consumers' expectations for the economy may have been stabilizing. However, it fell again in July and August, bottoming out at 84.8, reflecting increased COVID-19 infection rates that occurred in much of the southern and western U.S. as those states further loosened restrictions on commercial activities and people moved activities indoors to air-conditioned spaces. The Index once again rose in September and October, reaching 101.4, which was its highest level since March. However, consumer confidence fell to 87.1 by December as infection rates and deaths from COVID-19 reached their highest levels at any point during the pandemic.

In 2021, as the nationwide vaccination campaign began and infection rates began to stabilize, consumer confidence rose slightly to 95.2 in February before jumping significantly to 114.9 in March, its highest level in a year. Consumer confidence rose incrementally in each of the following months, reaching 128.9 in June, which is equivalent to the fairly consistent levels of pre-COVID consumer confidence experienced from 2018 to early 2020. The Index declined in each of the next three months, falling to 109.8 in September, which may be reflective of consumers' concern with the nationwide rise in COVID-19 cases that occurred during the summer due to the Delta variant. In October and November, consumer confidence remained relatively flat, rising slightly in both months to 111.9 in November. During these two months, the rate of new COVID-19 cases generally slowed, prior to the introduction of the Omicron variant in late November. However, consumer confidence rose further to 115.2 in December, despite the unprecedented surge in cases that occurred during the month due to the Omicron variant. This represented the first time that the level of consumer confidence moved in the same direction as the number of COVID-19 cases.

In January 2022, as infection rates continued to grow through the Omicron surge, consumer confidence fell to 111.1, its lowest level since September 2021. In February 2022, as gas prices and inflation surged while COVID-19 cases declined drastically, consumer confidence fell to 105.7. Since then, as fuel prices and inflation continued to rise while employment remained strong, it has remained relatively stable, with a May value of 106.4.

Figure 7
Conference Board Consumer Confidence Index



Source: The Conference Board, release date May 31, 2022

Committed Roadway Improvements

Table 15 lists major capacity-enhancing roadway improvements with dedicated funding on the Pennsylvania Turnpike System. Most of these projects are part of PTC's statewide Total Reconstruction Initiative, which is a multi-year project to widen the mainline and the Northeast Extension to six lanes (three in each direction). On the Mainline I-76/I-276 this includes work throughout the Pittsburgh, Somerset, and Philadelphia metro areas. Nearly 130 miles had been completed as of March 2022, with an additional 21 miles under construction or funded. An additional 24 miles of the Northeast Extension have been widened, with 6 more miles scheduled to be completed by 2030. Since the 2021 Bring Down letter, funding has been designated for two mainline widening projects, from mileposts 312 to 316 and 324 to 326, and the widening project for miles A38-A44 on the Northeast Extension has been split into two separate phases. Table 15 has been updated to reflect these changes. No projects have been completed since the 2021 Bring Down Letter, so no projects have been removed from the list. Furthermore, some dates and mileposts were updated to reflect the latest information available from PTC.

Table 15 also highlights five non-widening projects:

- A new cashless tolling interchange between I-276 and Lafayette Street in Montgomery County;
- The opening of additional direct connection ramps between I-95/I-295/I-276 in all directions;
- The construction of two interchanges between I-476 and I-81 to create a Scranton Beltway;
- An eight-mile extension of MFE to PA Route 837 in Allegheny County; and
- A 12.5-mile extension of Findlay Connector (Southern Beltway) in the Pittsburgh area.

These projects will serve to enhance capacity and create additional connections to other routes, all of which are expected to increase the number of travelers, and therefore revenue, on the Pennsylvania Turnpike System. Notably, the Southern Beltway project is now nearly complete. A partial interchange with I-79 (from I-79 northbound to the Southern Beltway westbound and from the Southern Beltway eastbound to I-79 southbound) opened in October 2021. Ramps for all remaining movements opened on June 24, 2022. The forecast incorporates estimated traffic and revenue impacts of the complete Southern Beltway beginning in October 2021, with a ramp-up period extending through 2026.

The other four non-widening projects listed above will have positive impacts on traffic and revenue but are not currently reflected in the traffic and revenue forecast. The scheduled completion date for each of these projects is in either 2028 or 2029, beyond the five-year window in which capacity-enhancing capital projects are typically factored into the forecast.

In addition to PTC-funded projects, the Pennsylvania Department of Transportation's (PennDOT's) Transportation Improvement Program (TIP) was reviewed. This review found no projects on competing or complementary routes that are expected to have an impact on Pennsylvania Turnpike System traffic and revenue.

Table 15
Major Committed Roadway Improvements on the Pennsylvania Turnpike System (1)

Milepost	Counties	Description	Actual or Assumed Start Date	Assumed Completion Date
Mainline I-76/I-276/I-95				
28-31	Allegheny and Butler	Reconstruct and widen to 3 lanes in each direction	May 2020	September 2022
102-109	Somerset County	Reconstruct and widen to 3 lanes in each direction	January 2021	August 2024
126-131	Somerset and Bedford	Reconstruct and widen to 3 lanes in each direction	June 2022	Fall 2026
312-316	Chester	Reconstruct and widen to 3 lanes in each direction	Spring 2023	Fall 2027
324-326	Chester and Montgomery	Reconstruct and widen to 3 lanes in each direction	Fall 2021	Summer 2025
331	Montgomery	Construct a new cashless tolling interchange at Lafayette Street	2025	2028
I-95 Interchange	Bucks	Construct additional ramps to allow for direct connections of I-95/I-295/I-276 in all directions	2024	2029
Northeast Extension I-476				
A38-A43	Montgomery and Bucks	Reconstruct and widen to 3 lanes in each direction	Fall 2021	Fall 2027
A43-A44	Bucks	Reconstruct and widen to 3 lanes in each direction	2027	2030
Scranton Beltway	Lackawanna and Luzerne	Link I-476 to I-81 with two interchanges to create a Scranton Beltway	Winter 2025	Fall 2028
Mon/Fayette Expressway Turnpike 43				
PA-51 to PA Route 837	Allegheny	Construct a eight-mile extension of the existing Turnpike 43 including three new interchanges	Spring 2023	Fall 2028
Southern Beltway Toll 576				
US-22 to I-79	Washington and Allegheny	Construct a 12.5-mile cashless tolling extension of Toll 576 from the southern terminus of the Findlay Connector at US-22 to I-79 including four new interchanges	December 2016	June 2022

(1) The major committed roadway improvement projects listed here are a small subset of all projects listed in PTC's FY 2023 Ten Year Capital Plan.

Econometric Forecasting Update

A Bring Down Letter typically utilizes the same demand growth projections from the previous underlying investment grade study, which, in this case, was in 2018. Since then, the U.S. endured a pandemic and short-term recession, and high inflation, fuel prices, and telecommuting rates, among other changes. Therefore, CDM Smith has updated the econometric model developed in 2018 with current independent projections of socioeconomic variables (e.g., population, gross regional product [GRP], and motor fuel prices, etc.) to better capture existing conditions.

Annual socioeconomic forecast growth for every county was applied to the anchored 2016 values used in the 2018 Forecast Study, which thus retained the historical series, equations, and estimated coefficients, establishing alternative forecast trajectories based on the most-recent independent variable trends in the same terms as the historical inputs in the unaltered equations (e.g., real GRP remains in 2009 dollars). Consequently, the socioeconomic forecasting differences are thus restricted to only growth pattern updates, not historical revisions, inflated dollar-denominated terms, etc. In the 2018 econometric analysis, three variables impact transaction forecasts: fuel prices, population, and real gross regional product (GRP), with the latter as the major variable.

Population was an explanatory variable for Northeast Extension Ticket System PCs. Woods & Poole revised such forecasts downward for Pennsylvania (3 percent by 2050) and the Northeast Extension's 15-county catchment area (7 percent by 2050), resulting in downward forecast revisions.

Real GRP was an explanatory variable for most plaza groupings. Statewide, Woods & Poole's latest forecast was not substantially different from the 2018 Forecast Study, except for adjustments to 2020 and 2021 historical data. However, within the state, some smaller counties had notable long-term growth differences than previously forecast. Such changes are relatively immaterial in catchment areas including larger metropolitan areas with multiple counties as the individual-county changes are dwarfed and/or offset by changes in other counties within the same catchment area.

Of the PTC catchment counties, GRP was most significantly altered in Westmoreland County, east of Pittsburgh with forecast GDP in 2050 now estimated 30 percent higher than in the 2018. As a result, the GRP reallocation noticeably effects Turnpike 43 (MFE), Turnpike 66 (AKH), and I-376 (BVH). **Table 16** includes historical compound average growth rates (CAGR) for various time periods, forecast CAGR from the 2018 Forecast Study, the updated CAGR, and the difference between those two forecasts.

Along the Ticket System, the updates exhibit almost identical trends as previously, although slightly reduced. In western Pennsylvania, the results are effectively identical, whereas in the eastern part of the state, results are reduced slightly by 0.1 to 0.2 percent annually, applied to both passenger and commercial vehicle equations.

The most notable decline is for Northeast Extension Ticket System PCs due to declines in forecast population growth and the relatively large coefficient for that explanatory variable, amplifying the effect on estimate transaction growth. Annual growth forecasts are reduced by 1.4 percent, from 2.0 to 0.6 percent, with the current forecasts more in line with more recent historical growth.

All other barrier system facilities have smaller changes as they have a more localized focus than the Ticket System and are thus explained with narrower catchment areas surrounding the facilities. In particular, the plaza groupings for Turnpike 43 (MFE) and Turnpike 66 (AKH) have a relatively small number of counties within the respective catchment areas and include Westmoreland County, which had the most significant positive adjustment to real GRP compared to the prior forecast.

The traffic and revenue forecast has adopted these growth forecasts and selectively applied and/or adjusted them based on other considerations. Although the downward revision of CAGR that most Turnpike groupings experienced due to revised population and GRP forecasts are seemingly minor, the compounding nature of growth rates and the 30-year time horizon of this traffic and revenue result in this revised econometric forecast being the primary driver of the notable decline in transactions, as compared to the 2021 Bring Down Letter, that is expected throughout the forecast period and is summarized later on in Table 22.

Table 16
Econometric Forecasting Update Results

	History CAGR			Forecast '16-'50 CAGR		
Grouping/Vehicles	'87-'16	'94-'16	'07-'16	2018	2022	Δ
Gateway PC	1.7%	1.4%	1.7%	1.1%	1.1%	0.0%
Pittsburgh PC	0.8%	0.7%	-0.3%	0.5%	0.5%	0.0%
Western Rural PC	0.9%	0.8%	-0.6%	0.5%	0.4%	-0.1%
Eastern Rural PC	2.2%	1.9%	0.4%	1.6%	1.4%	-0.2%
Philadelphia PC	2.1%	1.4%	0.3%	0.9%	0.8%	-0.1%
DRB PC	1.4%	1.3%	0.5%	#N/A	#N/A	#N/A
Northeast Ticket PC	3.0%	2.0%	-0.3%	2.0%	0.6%	-1.4%
Northeast Barrier PC	#N/A	0.4%	-0.4%	0.5%	0.4%	-0.2%
I-376 PC	#N/A	1.7%	-1.4%	1.5%	1.9%	0.5%
PA 66 PC	#N/A	3.0%	-1.1%	0.8%	2.5%	1.8%
Mon Fayette PC	#N/A	3.1%	0.5%	0.5%	1.4%	0.9%
I-576 PC	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Gateway CV	0.6%	0.7%	0.1%	0.5%	0.4%	-0.1%
Pittsburgh CV	1.4%	1.4%	-0.2%	1.0%	0.8%	-0.1%
Western Rural CV	1.4%	1.5%	-1.3%	0.8%	0.8%	0.0%
Eastern Rural CV	2.6%	2.6%	0.5%	2.0%	1.9%	-0.1%
Philadelphia CV	1.8%	2.3%	0.7%	1.2%	1.1%	-0.1%
DRB CV	1.1%	1.8%	-2.5%	#N/A	#N/A	#N/A
Northeast Ticket CV	4.1%	3.6%	1.3%	2.5%	2.3%	-0.2%
Northeast Barrier CV	#N/A	1.6%	2.1%	0.8%	1.2%	0.4%
I-376 CV	#N/A	4.7%	1.8%	2.4%	2.5%	0.1%
PA 66 CV	#N/A	4.5%	1.7%	0.8%	3.2%	2.4%
Mon Fayette CV	#N/A	6.3%	9.6%	1.8%	2.0%	0.2%
I-576 CV	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Actual Versus Estimated Traffic and Toll Revenue

Table 17 provides a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2021 Bring Down Letter. The analysis period in this table is from April 2021 through May 2022. This 14-month period corresponds to the period for which actual data currently exist but was estimated at the time of the 2021 Bring Down Letter.

For the 14-month period shown in Table 17, total system actual PC transactions and revenue exceeded estimates by 3.2 percent and 4.3 percent, respectively. CV transactions and revenue exceeded estimates by 5.7 percent and 5.8 percent, respectively. For all vehicles, actual transactions were 3.6 percent above estimates, while toll revenue overperformed estimates by 5.0 percent.

Table 17
Comparison of Estimated and Actual Traffic Volumes and Gross Toll Revenue
From April 2021 Through May 2022 (1)
Pennsylvania Turnpike System

	Total Traffic (in Thousands)			Total Gross Toll Revenue (in Thousands)		
Facility	Estimated	Actual	Percent Difference between Actual and Estimated	Estimated	Actual	Percent Difference between Actual and Estimated
			Passenger Cars			
Ticket System	133,809	137,903	3.1	$754,613	$778,921	3.2
Gateway	3,690	3,552	(3.7)	27,520	27,563	0.2
Delaware River Bridge	9,735	10,598	8.9	59,822	67,516	12.9
Turnpike 43	13,458	14,435	7.3	28,360	30,532	7.7
Turnpike 66	7,047	7,426	5.4	14,544	16,631	14.3
Northeast Extension (Barrier)	5,033	4,541	(9.8)	6,779	6,691	(1.3)
Turnpike I-376	7,891	7,388	(6.4)	15,014	14,867	(1.0)
Turnpike I-576	3,422	4,109	20.1	3,888	6,753	73.7
Barrier Subtotal	50,276	52,048	3.5	$155,927	$170,554	9.4
Total System	184,085	189,951	3.2	$910,540	$949,475	4.3
			Commercial Vehicles			
Ticket System	27,466	29,185	6.3	$718,098	$755,392	5.2
Gateway	1,317	1,395	5.9	30,201	33,423	10.7
Delaware River Bridge	1,851	2,003	8.2	39,890	44,322	11.1
Turnpike 43	1,193	1,180	(1.0)	6,824	6,979	2.3
Turnpike 66	1,335	1,363	2.1	7,184	7,793	8.5
Northeast Extension (Barrier)	1,566	1,515	(3.2)	10,918	10,879	(0.4)
Turnpike I-376	1,662	1,667	0.3	6,239	6,378	2.2
Turnpike I-576	853	1,046	22.6	2,294	3,970	73.1
Barrier Subtotal	9,776	10,169	4.0	$103,551	$113,744	9.8
Total System	37,242	39,354	5.7	$821,649	$869,136	5.8
			Total Vehicles			
Ticket System	161,275	167,088	3.6	$1,472,711	$1,534,313	4.2
Gateway	5,007	4,946	(1.2)	57,721	60,987	5.7
Delaware River Bridge	11,585	12,601	8.8	99,713	111,838	12.2
Turnpike 43	14,651	15,615	6.6	35,183	37,511	6.6
Turnpike 66	8,382	8,789	4.8	21,728	24,424	12.4
Northeast Extension (Barrier)	6,600	6,057	(8.2)	17,697	17,570	(0.7)
Turnpike I-376	9,553	9,055	(5.2)	21,253	21,245	(0.0)
Turnpike I-576	4,275	5,155	20.6	6,182	10,723	73.5
Barrier Subtotal	60,052	62,217	3.6	$259,477	$284,298	9.6
Total System	221,327	229,306	3.6	$1,732,188	$1,818,611	5.0

(1) These 14 months correspond to the period for which actual data exists, but was estimated at the time of CDM Smith's 2021 Bring Down Letter.

Table 17 also includes a comparison of actual traffic and toll revenue versus estimated traffic and toll revenue from CDM Smith's 2021 Bring Down Letter for each individual Turnpike toll facility. Total transactions for the Ticket System were 3.6 percent higher than the forecast traffic, while actual total revenue was 4.2 percent higher than estimated. For the combined barrier toll facilities, total actual toll transactions exceeded CDM Smith estimates by 3.6 percent and actual toll revenue exceeded estimates by 9.6 percent.

Turnpike I-576's significant overperformance of 20.6 percent on transactions and 73.5 percent on revenue is due to the fact that it partially opened in October 2021, rather than the January 2022 date that was utilized in the forecast. As a result, it had more than two full months of transactions and revenue that were unanticipated at the time of the 2021 Bring Down Letter. However, Turnpike I-576 generates the second-fewest transactions and least revenue of any the Barrier Facilities operated by PTC. Therefore, even if this facility is ignored, the Barrier Systems as a whole still overperformed forecast transactions and revenue by 2.3 and 8.0 percent, respectively.

Estimated COVID-19 Traffic and Toll Revenue Impacts

A key undertaking of this new forecast was to update the traffic and toll revenue impacts related to the COVID-19 pandemic over the forecast period. This section will provide a summary of the underlying assumptions CDM Smith has made in estimating the depth and longevity of the COVID-19 related impacts on Turnpike System traffic and toll revenue. Actual traffic and toll revenue experience through the end of May 2022 was collected as part of this analysis. Pandemic-related impacts began negatively effecting Turnpike System transactions and toll revenue in March 2020. A key assumption in this analysis is that negative traffic and revenue impacts due to the increased prevalence of telecommuting that began during the pandemic will continue through the end of the forecast period in FY 2050-51.

Due to the unpredictable nature of the pandemic and the changing infection rates, changes to operating procedures and capacity restrictions of businesses and schools is an unknown variable. Although future resurgence of the virus could potentially result in the re-establishment of restrictions, very few restrictions seem to have been reinstated, either nationally or within Pennsylvania, while case counts rose throughout the spring of 2022. Similarly, transactions levels were not noticeably impacted during this period either. Accordingly, traffic recovery is assumed to continue through the remainder of 2022.

Compounding the negative transaction and revenue effects of COVID-19, since the fall of 2021 gas prices have risen significantly. Although prices are forecast to decrease over the coming months and years, they are likely to remain elevated above pre-pandemic levels, and thus have a dampening effect on transactions for much of the current decade. Therefore, gasoline prices are estimated to have further negative effects on transactions and revenue from May 2022 through

December 2028. Negative impacts are estimated to range from 0.2 to 0.8 percent of baseline transactions during this period and are included within the total estimated COVID-19 impacts.

Table 18 shows estimated historical and future COVID-19 related impacts on toll revenue between FY 2018-19 and FY 2028-29. Only the final three months of FY 2019-20 (March, April, May) were impacted, but over that time gross toll revenue was estimated to have been reduced by about $143.1 million, or 10.0 percent of annual total gross revenue. While the peak monthly negative impacts occurred in FY 2019-20, the largest annual declines are estimated to have occurred in FY 2020-21 since this included 12 months of negative impacts. As shown in Table 18, total gross toll revenue losses have been $254.2 million, or 16.8 percent of total gross toll revenue for the fiscal year.

Table 18
Estimated Annual Gross Toll Revenue COVID Impacts (1)
Total System
Pennsylvania Turnpike Commission

Fiscal Year (2)	Annual Gross Toll Revenue Impacts (in thousands)			Percentage Impacts on Annual Gross Toll Revenue		
	Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2018-19 (3,4,5)	$0	$0	$0	0.0%	0.0%	0.0%
2019-20 (3,6,7)	(115,318)	(27,781)	(143,099)	(14.4)	(4.4)	(10.0)
2020-21 (3,8)	(231,302)	(22,870)	(254,172)	(27.5)	(3.4)	(16.8)
2021-22 (3,9)	(96,577)	26,094	(70,483)	(10.5)	3.6	(4.3)
2022-23 (10)	(104,898)	13,044	(91,854)	(10.9)	1.7	(5.3)
2023-24 (10)	(77,178)	2,436	(74,742)	(7.6)	0.3	(4.1)
2024-25 (10)	(39,330)	(1,189)	(40,519)	(3.7)	(0.1)	(2.1)
2025-26 (10)	(29,358)	(1,489)	(30,846)	(2.6)	(0.2)	(1.5)
2026-27 (10)	(31,097)	(2,170)	(33,268)	(2.7)	(0.2)	(1.6)
2027-28 (10)	(32,796)	(2,636)	(35,431)	(2.7)	(0.3)	(1.6)
2028-29 (10)	(31,977)	(1,804)	(33,781)	(2.5)	(0.2)	(1.5)

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual revenue experience.
(4) The Findlay Connector converted to AET in early June 2018.
(5) The partial I-95 Interchange (Stage 1) opened in September 2018.
(6) AKH and Gateway converted to AET at the end of October 2019.
(7) Cash collection on Ticket System suspended and converted to AET on March 16, 2020.
(8) Mon-Fayette Expressway converted to AET on June 11, 2020.
(9) Reflects opening of Southern Beltway between US 22 and I-79 beginning in October 2021.
(10) Reflects COVID-19 and related recessionary impacts, including fuel price impacts.

Negative gross toll revenue impacts are estimated to lessen over the following eight years. By FY 2028-29 total gross toll revenue losses are assumed to be only about 1.5 percent of annual gross toll revenue. No fuel price impact is assumed beginning in FY 2029-30, although negative COVID-19 impacts of 1 to 4 percent, depending on the system, is assumed for PCs through the end of the forecast period in FY 2050-51. These negative impacts account for the increased prevalence of telecommuting that is assumed to be a permanent fixture of nationwide traffic patterns.

As shown, CV revenue is assumed to increase between FY 2021-22 and FY 2023-24. This is due to outperformance from CV traffic as well as variations in trip length and size distribution from impacts from the pandemic. These positive impacts are forecasted to decline by FY 2024-25 as CV traffic returns to more normal patterns. The negative impacts to CV revenue beginning in FY 2024-25 are due to the negative impacts of fuel prices outweighing the positive impacts of COVID-19 from that point forward.

Estimated Traffic and Gross Toll Revenue

Updated traffic and gross toll revenue estimates were developed through FY 2050-51 incorporating the following changes into the forecast. All these changes were described in previous sections.

- Actual traffic and revenue experience through May 2022 (Tables 3-12);
- Revised estimates of E-ZPass penetration rates (Table 14);
- Long-range growth of socioeconomic indicators (Table 16); and
- Updated impacts related to COVID-19 and fuel prices (Table 18).

Other assumptions remain unchanged from the 2021 Bring Down Letter, including:

- Future toll increase assumptions (Table 13);
- Other than the completion of the Southern Beltway, there will be no new capacity-enhancing roadway improvements in the next five years (Table 15); and
- Structure of the CV discount program.

Table 19 shows the total traffic and toll revenue for the Ticket System only. Data for FY 2020-21 and FY 2021-22 each reflect a full year of actual experience. Total toll transactions increase from 123.0 million to 183.4 million over the period shown in Table 19, an average annual increase of 1.3 percent. Gross toll revenue increases from $1.1 billion to $4.3 billion by FY 2050-51. This amounts to an average annual increase of 4.8 percent, reflecting the impact of normal growth plus the annual rate adjustments.

The same information is shown for the Barrier System in **Table 20**. Total annual toll transactions are estimated to grow from 44.6 million to 62.7 million over the period shown, an average rate of 1.1 percent. New toll transactions from the initial opening of the Southern Beltway in October 2021 and the opening of all ramps movements between the Southern Beltway and I-79 in June 2022 contribute to total barrier growth rates. Barrier System total revenue is estimated to increase from $196.0 million to $735.0 million over the same period, an annual rate of 4.5 percent, reflecting normal growth plus annual rate adjustments.

Table 19
Estimated Annual Transactions and Gross Toll Revenue (1)
Ticket System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal		**Annual Traffic**			**Annual Gross Toll Revenue**		
Year	(2)	Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
2020-21	(3)	99,810	23,201	123,011	$498,511	$564,017	$1,062,528
2021-22	(3,4)	118,865	25,078	143,943	672,668	650,063	1,322,732
2022-23	(4)	118,425	23,813	142,238	699,170	675,055	1,374,225
2023-24	(4)	123,124	23,754	146,878	767,673	706,086	1,473,759
2024-25	(4)	129,590	23,851	153,441	849,935	744,786	1,594,721
2025-26	(4)	132,149	23,977	156,126	904,242	783,593	1,687,835
2026-27	(4)	132,770	24,121	156,891	943,216	818,573	1,761,789
2027-28	(4)	133,660	24,268	157,928	981,224	850,806	1,832,030
2028-29	(4)	135,018	24,449	159,467	1,021,430	883,776	1,905,206
2029-30	(4)	136,507	24,685	161,192	1,064,305	920,867	1,985,172
2030-31	(4)	137,552	24,889	162,441	1,105,228	958,085	2,063,313
2031-32	(4)	138,584	25,102	163,686	1,147,546	996,762	2,144,308
2032-33	(4)	139,625	25,312	164,937	1,191,501	1,036,802	2,228,303
2033-34	(4)	140,644	25,532	166,176	1,236,878	1,078,459	2,315,337
2034-35	(4)	141,641	25,780	167,421	1,283,722	1,122,039	2,405,761
2035-36	(4)	142,614	26,041	168,655	1,332,053	1,167,407	2,499,460
2036-37	(4)	143,555	26,300	169,855	1,381,828	1,214,409	2,596,237
2037-38	(4)	144,447	26,553	171,000	1,432,927	1,262,825	2,695,752
2038-39	(4)	145,289	26,795	172,084	1,485,336	1,312,569	2,797,905
2039-40	(4)	146,112	27,035	173,147	1,539,415	1,364,068	2,903,483
2040-41	(4)	146,899	27,274	174,173	1,595,030	1,417,388	3,012,418
2041-42	(4)	147,668	27,511	175,179	1,652,403	1,472,596	3,124,999
2042-43	(4)	148,412	27,747	176,159	1,711,514	1,529,766	3,241,280
2043-44	(4)	149,123	27,981	177,104	1,772,291	1,588,972	3,361,263
2044-45	(4)	149,819	28,215	178,034	1,835,012	1,650,298	3,485,310
2045-46	(4)	150,500	28,447	178,947	1,899,725	1,713,826	3,613,551
2046-47	(4)	151,159	28,679	179,838	1,966,394	1,779,639	3,746,033
2047-48	(4)	151,813	28,911	180,724	2,035,294	1,847,823	3,883,117
2048-49	(4)	152,470	29,145	181,615	2,106,608	1,918,619	4,025,227
2049-50	(4)	153,130	29,381	182,511	2,180,421	1,992,127	4,172,548
2050-51	(4)	153,793	29,619	183,412	2,256,820	2,068,451	4,325,271

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) Reflects COVID-19 and related impacts through FY 2050-51, including fuel price impacts through FY 2028-29.

Table 20
Estimated Annual Transactions and Gross Toll Revenue (1)
Barrier Systems
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Annual Traffic: Passenger Cars	Annual Traffic: Commercial Vehicles	Annual Traffic: Total Vehicles	Annual Gross Toll Revenue: Passenger Cars	Annual Gross Toll Revenue: Commercial Vehicles	Annual Gross Toll Revenue: Total Vehicles
2020-21	(3,4)	36,906	7,674	44,580	$112,086	$83,955	$196,042
2021-22	(3,5,6)	45,158	8,809	53,967	147,951	98,344	246,295
2022-23	(6,7)	46,723	9,290	56,013	155,143	103,453	258,596
2023-24	(6)	47,494	9,348	56,842	164,149	104,860	269,009
2024-25	(6)	48,728	9,454	58,182	174,230	108,195	282,425
2025-26	(6)	49,150	9,556	58,706	183,391	113,805	297,196
2026-27	(6)	49,181	9,651	58,832	191,359	118,689	310,048
2027-28	(6)	49,286	9,747	59,033	198,858	123,415	322,273
2028-29	(6)	49,514	9,861	59,375	206,435	128,475	334,910
2029-30	(6)	49,783	9,999	59,782	214,478	134,124	348,602
2030-31	(6)	49,883	10,121	60,004	222,076	139,784	361,860
2031-32	(6)	49,972	10,242	60,214	229,897	145,649	375,546
2032-33	(6)	50,055	10,362	60,417	237,972	151,724	389,696
2033-34	(6)	50,126	10,481	60,607	246,275	158,021	404,296
2034-35	(6)	50,198	10,599	60,797	254,840	164,527	419,367
2035-36	(6)	50,279	10,697	60,976	263,732	171,163	434,895
2036-37	(6)	50,355	10,765	61,120	272,936	177,924	450,860
2037-38	(6)	50,422	10,830	61,252	282,369	184,899	467,268
2038-39	(6)	50,479	10,894	61,373	292,026	192,081	484,107
2039-40	(6)	50,534	10,959	61,493	301,983	199,528	501,511
2040-41	(6)	50,591	11,026	61,617	312,248	207,251	519,499
2041-42	(6)	50,659	11,092	61,751	322,870	215,245	538,115
2042-43	(6)	50,726	11,157	61,883	333,815	223,522	557,337
2043-44	(6)	50,783	11,221	62,004	345,049	232,091	577,140
2044-45	(6)	50,831	11,285	62,116	356,610	240,964	597,574
2045-46	(6)	50,873	11,348	62,221	368,506	250,153	618,659
2046-47	(6)	50,906	11,410	62,316	380,731	259,668	640,399
2047-48	(6)	50,932	11,472	62,404	393,320	269,523	662,843
2048-49	(6)	50,958	11,534	62,492	406,325	279,752	686,077
2049-50	(6)	50,984	11,596	62,580	419,760	290,369	710,129
2050-51	(6)	51,010	11,658	62,668	433,639	301,389	735,028

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) Mon-Fayette Expressway converted to AET on June 11, 2020.
(5) The Southern Beltway between US 22 and I-79 opened in October 2021.
(6) Reflects COVID-19 and related impacts through FY 2050-51, including fuel price impacts through FY 2028-29.
(7) Reflects opening of all ramp movements between the Southern Beltway and I-79 in June 2022.

Table 21 presents estimated total combined Ticket and Barrier System transactions, gross toll revenue, and toll discounts and adjustments. The vast majority of discounts and adjustments result from commercial account toll adjustments due to PTC's volume discount program. This program provides a 3.0-percent discount to accounts that accrue $20,000 or more in monthly tolls. Discounts and adjustments shown in Table 21 assume no changes to the post-paid commercial volume discount program during the forecast period. Actual discounts and adjustments have been slowly increasing over time and amounted to 1.74 percent of CV gross toll revenue in FY 2021-22. The forecast assumes that the adjustment will continue to gradually increase to 2.01 percent of CV gross toll revenue in FY 2029-30 and then remain at that level for the remainder of the forecast period.

As shown in Table 21, total toll transactions are expected to increase from 167.6 million to 246.1 million over the period shown. This amounts to an average annual growth rate of 1.3 percent. Total net toll revenue is estimated to grow from approximately $1.3 billion in FY 2020-21 to $5.1 billion by FY 2050-51. This reflects an average annual growth rate in gross toll revenue of 4.7 percent. Again, this includes the impact of normal growth plus annual toll rate adjustments.

Table 22 compares the current traffic and net toll revenue forecast with the forecast developed in the 2021 Bring Down Letter. As shown, actual total transactions for FY 2020-21 were 1.6 percent lower than forecast in the 2021 Bring Down Letter. Conversely, actual FY 2021-22 transactions were 4.3 percent higher than previously estimated due to better-than-expected COVID-19 impacts. Over the next four fiscal years, through FY 2025-26, the current forecast estimates that transactions will be between 0.2 and 2.5 percent higher each year than previously estimated. However, in the remainder of the forecast period current forecast total toll transactions are less than those forecast in the 2021 Bring Down Letter. The difference is 0.7 percent in FY 2025-26, growing each successive year to 5.5 percent in FY 2049-50. Previously detailed updates to the econometric forecast account for most of the long-term difference in the forecast, although higher than previously expected gas prices and long-term COVID-19 impacts on passenger vehicles not previously included also contribute to the downward revision.

Differences between the 2021 Bring Down Letter and current forecasts are smaller for annual net toll revenue, however. As was the case with transactions, revenue in FY 2021-22 overperformed the prior estimate, with an even larger difference of 5.5 percent, and is now forecast to be higher each fiscal year through FY 2024-25. Beginning in FY 2025-26, revenue is forecast to be 0.8 percent lower than estimated in the 2021 Bring Down Letter. This discrepancy grows each year through FY 2049-50, when the difference is 4.5 percent and is mostly a result of the lower long-term growth forecast from the updated econometric modeling.

Table 21
Estimated Annual Transactions and Toll Revenue (1)
Total System
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Annual Traffic: Passenger Cars	Annual Traffic: Commercial Vehicles	Annual Traffic: Total Vehicles	Annual Gross Toll Revenue: Passenger Cars	Annual Gross Toll Revenue: Commercial Vehicles	Annual Gross Toll Revenue: Total Vehicles	Discounts and Adjustments	Net Toll Revenue
2020-21	(3,4)	136,717	30,875	167,591	$610,597	$647,972	$1,258,570	($11,233)	$1,247,337
2021-22	(3,5,6)	164,023	33,887	197,910	820,619	748,407	1,569,027	(12,997)	1,556,030
2022-23	(6,7)	165,148	33,103	198,251	854,313	778,508	1,632,821	(13,893)	1,618,928
2023-24	(6)	170,618	33,102	203,720	931,822	810,946	1,742,768	(14,878)	1,727,890
2024-25	(6)	178,318	33,305	211,623	1,024,165	852,981	1,877,146	(16,075)	1,861,071
2025-26	(6)	181,299	33,533	214,832	1,087,633	897,398	1,985,031	(17,137)	1,967,894
2026-27	(6)	181,951	33,772	215,723	1,134,575	937,262	2,071,837	(18,133)	2,053,704
2027-28	(6)	182,946	34,015	216,961	1,180,082	974,221	2,154,303	(19,091)	2,135,212
2028-29	(6)	184,532	34,310	218,842	1,227,865	1,012,251	2,240,116	(20,089)	2,220,027
2029-30	(6)	186,290	34,684	220,974	1,278,783	1,054,991	2,333,774	(21,201)	2,312,573
2030-31	(6)	187,435	35,010	222,445	1,327,304	1,097,869	2,425,173	(22,063)	2,403,110
2031-32	(6)	188,556	35,344	223,900	1,377,443	1,142,411	2,519,854	(22,958)	2,496,896
2032-33	(6)	189,680	35,674	225,354	1,429,473	1,188,526	2,617,999	(23,885)	2,594,114
2033-34	(6)	190,770	36,013	226,783	1,483,153	1,236,480	2,719,633	(24,849)	2,694,784
2034-35	(6)	191,839	36,379	228,218	1,538,562	1,286,566	2,825,128	(25,855)	2,799,273
2035-36	(6)	192,893	36,738	229,631	1,595,785	1,338,570	2,934,355	(26,900)	2,907,455
2036-37	(6)	193,910	37,065	230,975	1,654,764	1,392,333	3,047,097	(27,981)	3,019,116
2037-38	(6)	194,869	37,383	232,252	1,715,296	1,447,724	3,163,020	(29,094)	3,133,926
2038-39	(6)	195,768	37,689	233,457	1,777,362	1,504,650	3,282,012	(30,238)	3,251,774
2039-40	(6)	196,646	37,994	234,640	1,841,398	1,563,596	3,404,994	(31,422)	3,373,572
2040-41	(6)	197,490	38,300	235,790	1,907,278	1,624,639	3,531,917	(32,649)	3,499,268
2041-42	(6)	198,327	38,603	236,930	1,975,273	1,687,841	3,663,114	(33,919)	3,629,195
2042-43	(6)	199,138	38,904	238,042	2,045,329	1,753,288	3,798,617	(35,235)	3,763,382
2043-44	(6)	199,906	39,202	239,108	2,117,340	1,821,063	3,938,403	(36,597)	3,901,806
2044-45	(6)	200,650	39,500	240,150	2,191,622	1,891,262	4,082,884	(38,007)	4,044,877
2045-46	(6)	201,373	39,795	241,168	2,268,231	1,963,979	4,232,210	(39,469)	4,192,741
2046-47	(6)	202,065	40,089	242,154	2,347,125	2,039,307	4,386,432	(40,982)	4,345,450
2047-48	(6)	202,745	40,383	243,128	2,428,614	2,117,346	4,545,960	(42,551)	4,503,409
2048-49	(6)	203,428	40,679	244,107	2,512,933	2,198,371	4,711,304	(44,179)	4,667,125
2049-50	(6)	204,114	40,977	245,091	2,600,181	2,282,496	4,882,677	(45,870)	4,836,807
2050-51	(6)	204,803	41,277	246,080	2,690,459	2,369,840	5,060,299	(47,625)	5,012,674

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) Mon-Fayette Expressway converted to AET on June 11, 2020.
(5) The Southern Beltway between US 22 and I-79 opened in October 2021.
(6) Reflects COVID-19 and related impacts through FY 2050-51, including fuel price impacts through FY 2028-29.
(7) Reflects opening of all ramp movements between the Southern Beltway and I-79 in June 2022.

Table 22
Comparison of New Traffic and Revenue Estimates with those from the 2021 Bring Down Letter
Total System
Pennsylvania Turnpike

Traffic and Toll Revenue in Thousands

Fiscal Year (1)	Total Annual Transactions: Current Estimates (2)	Total Annual Transactions: 2021 Bring Down Letter (3)	Total Annual Transactions: Percent Difference	Annual Net Toll Revenue: Current Estimates (2)	Annual Net Toll Revenue: 2021 Bring Down Letter (3)	Annual Net Toll Revenue: Percent Difference
2020-21	167,591	170,245	(1.6)	$1,247,337	$1,241,524	0.5
2021-22	197,910	189,679	4.3	1,556,030	1,474,668	5.5
2022-23	198,251	197,797	0.2	1,618,928	1,608,015	0.7
2023-24	203,720	201,375	1.2	1,727,890	1,724,690	0.2
2024-25	211,623	206,550	2.5	1,861,071	1,852,011	0.5
2025-26	214,832	212,517	1.1	1,967,894	1,983,054	(0.8)
2026-27	215,723	217,189	(0.7)	2,053,704	2,094,597	(2.0)
2027-28	216,961	219,411	(1.1)	2,135,212	2,180,262	(2.1)
2028-29	218,842	221,640	(1.3)	2,220,027	2,264,058	(1.9)
2029-30	220,974	223,881	(1.3)	2,312,573	2,354,571	(1.8)
2030-31	222,445	226,055	(1.6)	2,403,110	2,450,434	(1.9)
2031-32	223,900	228,182	(1.9)	2,496,896	2,550,715	(2.1)
2032-33	225,354	230,279	(2.1)	2,594,114	2,654,690	(2.3)
2033-34	226,783	232,310	(2.4)	2,694,784	2,762,173	(2.4)
2034-35	228,218	234,292	(2.6)	2,799,273	2,873,291	(2.6)
2035-36	229,631	236,230	(2.8)	2,907,455	2,988,177	(2.7)
2036-37	230,975	238,130	(3.0)	3,019,116	3,106,855	(2.8)
2037-38	232,252	239,926	(3.2)	3,133,926	3,228,613	(2.9)
2038-39	233,457	241,679	(3.4)	3,251,774	3,354,433	(3.1)
2039-40	234,640	243,417	(3.6)	3,373,572	3,484,753	(3.2)
2040-41	235,790	245,131	(3.8)	3,499,268	3,619,665	(3.3)
2041-42	236,930	246,814	(4.0)	3,629,195	3,759,262	(3.5)
2042-43	238,042	248,455	(4.2)	3,763,382	3,903,589	(3.6)
2043-44	239,108	250,064	(4.4)	3,901,806	4,052,898	(3.7)
2044-45	240,150	251,642	(4.6)	4,044,877	4,207,362	(3.9)
2045-46	241,168	253,184	(4.7)	4,192,741	4,367,104	(4.0)
2046-47	242,154	254,707	(4.9)	4,345,450	4,532,502	(4.1)
2047-48	243,128	256,214	(5.1)	4,503,409	4,703,807	(4.3)
2048-49	244,107	257,730	(5.3)	4,667,125	4,881,600	(4.4)
2049-50	245,091	259,256	(5.5)	4,836,807	5,066,127	(4.5)
2050-51	246,080			5,012,674		

(1) PTC fiscal year ends May 31.
(2) Reflects actual experience through May 2022.
(3) Reflects actual traffic and revenue experience through March 2021.

Table 23 summarizes the full net revenue forecast, including written off bad debt expenses. Now that the PTC system is fully AET, there is some amount of video tolls that will be uncollectable and written off as a bad debt expense, thereby subtracting from net toll revenue. As transactions are estimated to grow each year, along with higher revenue due to toll increases, so too does bad debt expense. In FY 2021-22, the first full year of AET operation, bad debt expense was $99.0 million and is estimated to grow to $234.1 million in FY 2050-51 recognizing growth in transactions and annual toll increases. Total net toll revenue minus the video bad debt expense is estimated to grow from approximately $1.2 billion in FY 2020-21 to $4.8 billion by FY 2050-51.

Table 23
Total System: Estimated Annual Video Revenue Leakage (1)
Pennsylvania Turnpike Commission

Traffic and Toll Revenue in Thousands

Fiscal Year	(2)	Net Toll Revenue	Estimated Video Revenue Bad Debt Expense	Net Toll Revenue Minus Video Bad Debt Expense
2020-21	(3,4)	$1,247,337	($58,542)	$1,188,795
2021-22	(3,5,6)	1,556,030	(99,014)	1,457,016
2022-23	(6,7)	1,618,928	(107,641)	1,511,287
2023-24	(6)	1,727,890	(108,946)	1,618,944
2024-25	(6)	1,861,071	(112,342)	1,748,729
2025-26	(6)	1,967,894	(113,247)	1,854,647
2026-27	(6)	2,053,704	(113,038)	1,940,666
2027-28	(6)	2,135,212	(114,016)	2,021,196
2028-29	(6)	2,220,027	(116,455)	2,103,572
2029-30	(6)	2,312,573	(119,067)	2,193,506
2030-31	(6)	2,403,110	(121,526)	2,281,584
2031-32	(6)	2,496,896	(124,282)	2,372,614
2032-33	(6)	2,594,114	(127,077)	2,467,037
2033-34	(6)	2,694,784	(130,272)	2,564,512
2034-35	(6)	2,799,273	(134,421)	2,664,852
2035-36	(6)	2,907,455	(139,188)	2,768,267
2036-37	(6)	3,019,116	(144,113)	2,875,003
2037-38	(6)	3,133,926	(149,179)	2,984,747
2038-39	(6)	3,251,774	(154,394)	3,097,380
2039-40	(6)	3,373,572	(159,782)	3,213,790
2040-41	(6)	3,499,268	(165,366)	3,333,902
2041-42	(6)	3,629,195	(171,186)	3,458,009
2042-43	(6)	3,763,382	(177,216)	3,586,166
2043-44	(6)	3,901,806	(183,421)	3,718,385
2044-45	(6)	4,044,877	(189,826)	3,855,051
2045-46	(6)	4,192,741	(196,436)	3,996,305
2046-47	(6)	4,345,450	(203,253)	4,142,197
2047-48	(6)	4,503,409	(210,317)	4,293,092
2048-49	(6)	4,667,125	(217,963)	4,449,162
2049-50	(6)	4,836,807	(225,887)	4,610,920
2050-51	(6)	5,012,674	(234,100)	4,778,574

(1) Annual toll rate increases are implemented on or about January 1st of each year.
(2) PTC fiscal year ends May 31.
(3) Reflects actual traffic and revenue experience.
(4) Mon-Fayette Expressway converted to AET on June 11, 2020.
(5) The Southern Beltway between US 22 and I-79 opened in October 2021.
(6) Reflects COVID-19 and related impacts through FY 2050-51, including fuel price impacts through FY 2028-29.
(7) Reflects opening of all ramp movements between the Southern Beltway and I-79 in June 2022.

Fiduciary Disclaimer

CDM Smith used currently-accepted professional practices and procedures in the development of the traffic and revenue estimates in this report. However, as with any forecast, it should be understood that differences between forecasted and actual results may occur, as caused by events and circumstances beyond the control of the forecasters. In formulating the estimates, CDM Smith reasonably relied upon the accuracy and completeness of information provided (both written and oral) by the Pennsylvania Turnpike Commission (PTC). CDM Smith also relied upon the reasonable assurances of independent parties and is not aware of any material facts that would make such information misleading.

CDM Smith made qualitative judgments related to several key variables in the development and analysis of the traffic and revenue estimates that must be considered as a whole; therefore, selecting portions of any individual result without consideration of the intent of the whole may create a misleading or incomplete view of the results and the underlying methodologies used to obtain the results. CDM Smith gives no opinion as to the value or merit of partial information extracted from this report.

All estimates and projections reported herein are based on CDM Smith's experience and judgment and on a review of information obtained from multiple agencies, including PTC. These estimates and projections may not be indicative of actual or future values, and are therefore subject to substantial uncertainty. Certain variables such as future developments, economic cycles, pandemics, government actions, climate change related events, or impacts related to advances in automotive technology etc. cannot be predicted with certainty, and may affect the estimates or projections expressed in this report, such that CDM Smith does not specifically guarantee or warrant any estimate or projection contained within this report.

While CDM Smith believes that the projections and other forward-looking statements contained within the report are based on reasonable assumptions as of the date of the report, such forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from the results predicted. Therefore, following the date of this report, CDM Smith will take no responsibility or assume any obligation to advise of changes that may affect its assumptions contained within the report, as they pertain to socioeconomic and demographic forecasts, proposed residential or commercial land use development projects and/or potential improvements to the regional transportation network.

The report and its contents are intended solely for use by PTC and designated parties approved by PTC and CDM Smith. Any use by third-parties, other than as noted above, is expressly prohibited. In addition, any publication of the report without the express written consent of CDM Smith is prohibited.

CDM Smith is not, and has not been, a municipal advisor as defined in Federal law (the Dodd Frank Bill) to PTC and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to PTC with respect to the information and material contained in this report. CDM Smith is not recommending and has not recommended any action to PTC. PTC should discuss the information and material contained in this report with any and all internal and external advisors that it deems appropriate before acting on this information.

*   *   *

Sincerely,

Scott A. Allaire

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