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Ms. Deborah Sharpless  
Chief Financial Officer  
Maryland Transportation Authority  
2310 Broening Highway  
Suite 150  
Baltimore, MD 21224

Subject: **FINAL** Francis Scott Key Bridge Collapse Forecast Update

Dear Ms. Sharpless:

This letter summarizes the updated traffic and revenue forecast which accounts for the collapse of the Francis Scott Key Bridge (FSK) that occurred on March 26, 2024 and the subsequent diversion impacts. The forecast presented in this letter is an update of the November 2023 traffic and revenue forecast documented in the report "Maryland Transportation Authority FY 2024 Traffic and Toll Revenue Forecast Update".

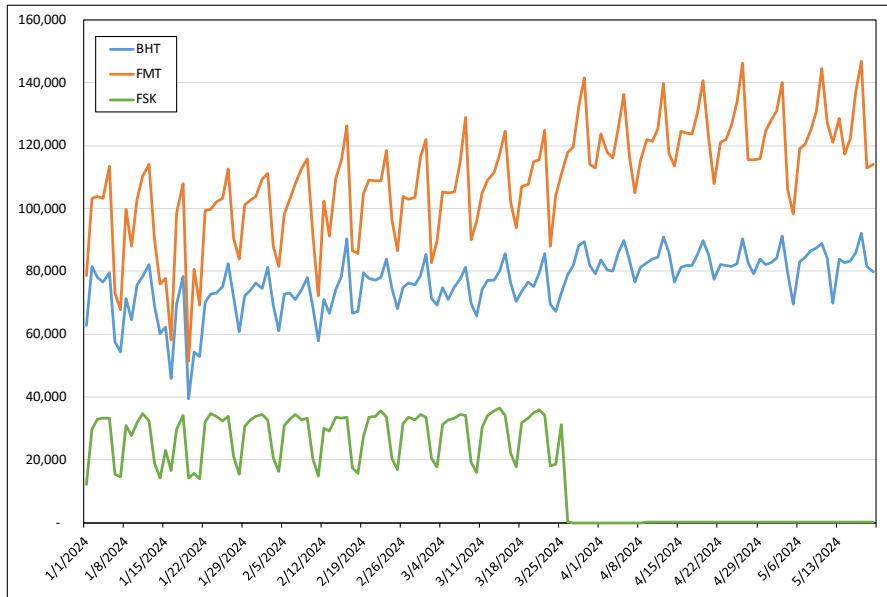
## **Methodology and Assumptions**

To quantify the impacts of trip diversion after the collapse, CDM Smith requested daily gantry transaction data from MDTA which captures the amount of traffic that shifted to the I-895 Baltimore Harbor Tunnel (BHT) and the I-95 Fort McHenry Tunnel (FMT), which are the two alternatives that cross the Patapsco River directly. While many vehicles were able to divert to the tunnels on I-95 and I-895, certain commercial vehicles are banned from using these facilities due to their size and hazardous waste restrictions. Furthermore, as congestion increases on the tunnels due to the traffic shift, some additional MDTA customers may choose to divert or forego their trip altogether. Because of this, a small share of traffic will shift to non-MDTA facilities such as the I-695 outer loop around Baltimore or local roads through the downtown area. CDM Smith attempted to identify where customers were diverting by using the Maryland Internet Traffic Monitoring System (ITMS), but data availability at the continuous count stations made this analysis inconclusive.

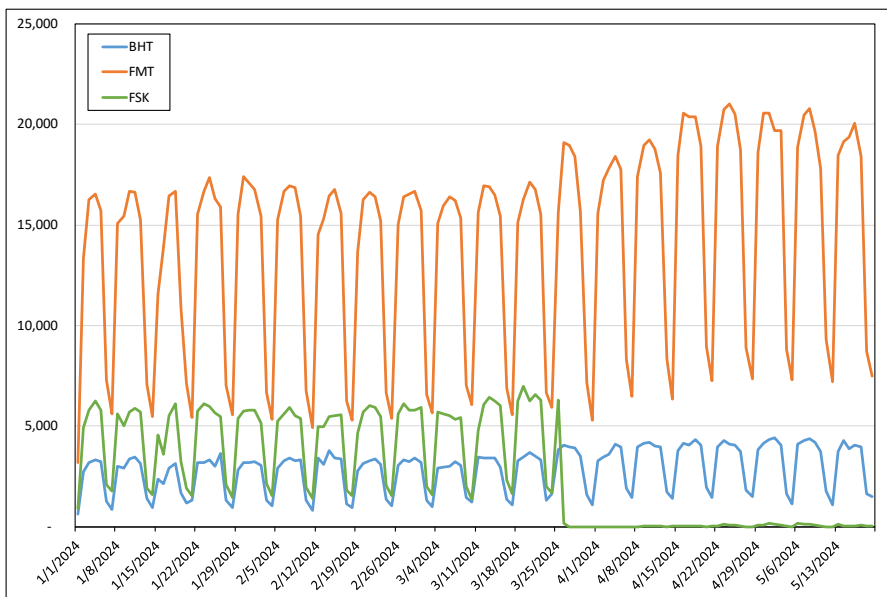
Additionally, the activity at the Port of Baltimore and the surrounding commercial area has a large impact on the traffic using the Francis Scott Key Bridge. The location of the Dundalk Marine Terminal (DMT) and Seagirt Marine Terminal (SMT) causes high commercial vehicle usage at the FSK turnaround toll gantry to Broening Highway and across the bridge to distribution areas along the East Coast. When the bridge collapsed and halted all activity at the Port, this reduced not only the commercial vehicles coming into the port but also the personal vehicles due to reductions in work force. As the cleanup has progressed of the steel bridge structures through April, several temporary channels have provided relief to the port allowing an uptick in activity.

The daily gantry transactions for the BHT, FMT, and FSK are presented in **Figure 1** for passenger vehicles and **Figure 2** for commercial vehicles through May 19<sup>th</sup>. The charts show that transactions at BHT and FMT increased immediately following the FSK collapse. Commercial vehicles, especially at FMT, increased in each of the first four weeks in April, but stayed consistent in the first week of May and saw a decrease in the most recent week (5/12 to 5/19). The passenger cars, however, have remained relatively consistent since the collapse occurred.

**Figure 1 – Daily Passenger Car Gantry Transactions**



**Figure 2 – Daily Commercial Vehicle Gantry Transactions**



CDM Smith estimated the diversion impact based on an analysis of the daily gantry transactions at each of the harbor crossing facilities (BHT, FMT, and FSK). CDM Smith estimates that over the period 3/26 to 5/19, harbor crossing transactions were 8.5 percent lower than they would have been if FSK did not collapse. We estimate that 38 percent of the passenger car transactions at FSK and 54 percent of commercial vehicle transactions have diverted to either the BHT or FMT. In total, we estimate that 40 percent of transactions at FSK have diverted to either the BHT or FMT, and the remaining 60 percent transactions have been diverted to non-tolled routes or suppressed.

To further correlate this return of traffic to the port activity, CDM Smith requested traffic data at from the Maryland Port Administration (MPA) via MDTA. This data showed traffic in and out at the entry points for trucks and personal vehicles but was restricted to the DMT which operates under the MPA and historical data was unavailable. The SMT falls under the Ports America Chesapeake (PAC) and while they post daily transaction data on their website, there is no availability of historical data for comparison. Due to these reasons, the port data provided was used as a guide to see the progression of activity over the weeks in April, but it could not be directly tied to the traffic impacts.

CDM Smith has produced the forecast based on prior diversion analysis experience and a set of assumptions which are outlined below:

- The Port of Baltimore will reopen on July 1, 2024.
- To account for the return of port activity beginning in FY 2025, it is assumed the impacts experienced would be reduced by 5 percent for passenger cars and by 20 percent for commercial vehicles. This is an estimate and will be reviewed on an ongoing basis as cleanup is complete and the port is back to full operation.
- The Francis Scott Key Bridge replacement will open in the Fall of 2028.
- All planned construction and maintenance related impacts to the Francis Scott Key Bridge have been removed from the forecast, including the bridge deck replacement that was scheduled to cause diversion impacts beginning in FY 2030.
- No toll changes will occur for the duration of the forecast.

## Transactions and Revenue Forecast

Provided in this section are the annual transaction and toll revenue forecasts for the Legacy facilities, Intercounty Connector (ICC), and I-95 ETLs. For the Legacy facilities, actual data has been included for FY 2024 from July 2023 through April 2024. The forecast for the ICC and I-95 ETLs remains unchanged from the November 2023 report.

**Table 1** provides the annual transactions and toll revenue for the Legacy facility, split out by passenger cars and commercial vehicles. This forecast includes re-benchmarking harbor crossing Legacy facilities to actuals through February 2024 and impacts due to the collapse of FSK, both of which will be described in this document. **Table 2** provides the Legacy forecast split by individual facilities with additional historical data.



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**Table 1: Total Legacy System Forecast Revised for FSK Collapse**

Fiscal Year	Transactions (Millions) <sup>(1)</sup>			Toll Revenue (\$ Millions) <sup>(1)</sup>		
	PC	CV	Total	PC	CV	Total
2023 <sup>(2)</sup>	106.4	10.5	<b>116.9</b>	398.9	261.1	<b>660.0</b>
2024 <sup>(3)</sup>	107.2	9.8	<b>117.0</b>	386.4	243.8	<b>630.2</b>
2025	102.9	9.8	<b>112.7</b>	370.9	246.5	<b>617.5</b>
2026	104.5	9.9	<b>114.4</b>	378.2	249.6	<b>627.7</b>
2027	104.2	10.0	<b>114.2</b>	377.5	251.3	<b>628.8</b>
2028	102.0	10.0	<b>112.0</b>	370.5	252.5	<b>623.0</b>
2029	111.8	10.5	<b>122.3</b>	399.5	262.0	<b>661.5</b>
2030	114.9	10.7	<b>125.6</b>	408.1	266.7	<b>674.8</b>
2031	115.7	10.8	<b>126.4</b>	410.8	267.7	<b>678.5</b>
2032	116.5	10.8	<b>127.3</b>	413.6	268.9	<b>682.4</b>
2033	117.3	10.9	<b>128.2</b>	416.4	270.4	<b>686.8</b>

<sup>(1)</sup> Includes impacts due to leakage, including unpaid transactions.

<sup>(2)</sup> Represents actual data.

<sup>(3)</sup> Includes actual data through April 2024.



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**Table 2: Legacy System Forecast by Facility Revised for FSK Collapse**

Fiscal Year <sup>(1)</sup>	Transactions (Millions) <sup>(4)</sup>								Annual Percent Growth
	JFK	Hatem	BHT	FMT	FSK	Bay	Nice	Total <sup>(2)</sup>	
2019	15.2	5.1	20.8	48.2	12.8	13.6	3.3	<b>119.1</b>	(2.0)
2020 <sup>(3)</sup>	12.5	4.4	14.2	42.3	11.9	11.5	2.8	<b>99.6</b>	(16.4)
2021	8.8	3.1	11.9	29.0	8.4	8.5	1.7	<b>71.5</b>	(28.3)
2022	15.7	4.5	26.0	43.4	12.2	14.8	3.4	<b>120.0</b>	68.0
2023	15.1	4.5	27.4	41.5	12.1	13.3	3.1	<b>116.9</b>	(2.6)
2024 <sup>(3)</sup>	14.7	4.3	28.4	43.8	9.1	13.6	3.2	<b>117.0</b>	0.1
2025	15.1	4.6	30.1	47.8	0.0	12.1	3.0	<b>112.7</b>	(3.7)
2026	15.3	4.6	29.4	49.5	0.0	12.6	3.1	<b>114.4</b>	1.5
2027	15.3	4.6	26.7	51.5	0.0	12.9	3.1	<b>114.2</b>	(0.2)
2028 <sup>(3)</sup>	15.4	4.6	21.2	54.7	0.0	12.9	3.1	<b>112.0</b>	(1.9)
2029	15.5	4.6	30.1	47.1	8.8	13.0	3.2	<b>122.3</b>	9.2
2030	15.6	4.6	30.2	45.9	13.1	13.0	3.2	<b>125.6</b>	2.7
2031	15.7	4.6	30.5	46.3	13.1	13.0	3.2	<b>126.4</b>	0.7
2032	15.7	4.7	30.8	46.6	13.2	13.1	3.2	<b>127.3</b>	0.7
2033	15.8	4.7	31.1	46.9	13.3	13.1	3.3	<b>128.2</b>	0.7
Fiscal Year <sup>(1)</sup>	Toll Revenue (\$ Millions) <sup>(4)</sup>								Annual Percent Growth
	JFK	Hatem	BHT	FMT	FSK	Bay	Nice	Total <sup>(2)</sup>	
2019	176.0	12.2	70.3	217.4	50.5	53.7	21.0	<b>601.1</b>	(0.7)
2020 <sup>(3)</sup>	154.1	11.4	47.5	194.3	47.5	46.0	17.3	<b>518.2</b>	(13.8)
2021	117.2	9.2	39.8	141.5	35.7	33.0	10.8	<b>387.4</b>	(25.2)
2022	197.0	18.3	95.7	225.6	55.9	61.9	24.7	<b>679.0</b>	75.3
2023	191.9	15.1	102.2	215.5	56.8	56.4	22.1	<b>660.0</b>	(2.8)
2024 <sup>(3)</sup>	182.2	15.3	100.3	213.3	42.7	54.5	21.8	<b>630.2</b>	(4.5)
2025	192.2	15.6	105.0	233.6	0.0	49.8	21.2	<b>617.5</b>	(2.0)
2026	194.4	15.8	103.0	240.9	0.0	52.0	21.6	<b>627.7</b>	1.7
2027	195.5	15.9	94.7	247.5	0.0	53.5	21.8	<b>628.8</b>	0.2
2028 <sup>(3)</sup>	196.6	15.9	76.5	258.4	0.0	53.6	21.9	<b>623.0</b>	(0.9)
2029	197.7	15.9	104.7	226.3	40.9	53.8	22.1	<b>661.5</b>	6.2
2030	198.7	16.0	104.3	219.0	60.6	54.0	22.2	<b>674.8</b>	2.0
2031	199.8	16.0	105.3	220.3	60.5	54.1	22.4	<b>678.5</b>	0.5
2032	200.8	16.1	106.3	221.6	60.8	54.3	22.6	<b>682.4</b>	0.6
2033	201.8	16.1	107.3	222.9	61.5	54.4	22.7	<b>686.8</b>	0.6

<sup>(1)</sup> Actual data presented for FY 2019 through FY 2023, and FY 2024 through April 2024.

<sup>(2)</sup> Summations may not equal total due to rounding.

<sup>(3)</sup> Leap Year

<sup>(4)</sup> Includes impacts due to leakage, including unpaid transactions.

**Table 3** shows the comparison of the harbor crossing facilities (BHT, FMT, FSK) re-benchmarked version of the November 2023 forecast and the original November 2023 forecast. The goal of re-benchmarking was to account for any difference between the actual data and the forecast from the period from October 2023 to February 2024 and incorporate that difference going forward. This makes the estimate of lost revenue more accurate by updating the split between the three harbor crossings, and overall traffic and revenue trends to the most recent available data. Within the re-benchmarked forecast, actuals through March 25, 2024 are included so estimated lost revenue is not impacted by anything that occurs on or before March 25.

**Table 3: Impact of Re-benchmarking:  
 Comparing Re-benchmarked Forecast to the Original November 2023 Forecast**

Fiscal Year	Transactions - Impact of Re-benchmarking							
	Difference				Percent Difference			
	BHT	FMT	FSK	Total Harbor Crossing	BHT	FMT	FSK	Total Harbor Crossing
2024	0.4	1.9	0.8	<b>3.1</b>	1.3%	4.8%	6.6%	<b>3.9%</b>
2025	0.9	3.1	0.9	<b>5.0</b>	3.4%	7.5%	8.0%	<b>6.2%</b>
2026	0.9	3.3	0.9	<b>5.1</b>	3.4%	7.6%	8.0%	<b>6.3%</b>
2027	0.8	3.4	1.0	<b>5.2</b>	3.4%	7.6%	8.0%	<b>6.4%</b>
2028	0.6	3.6	1.2	<b>5.4</b>	3.3%	7.7%	7.9%	<b>6.7%</b>
2029	1.0	3.2	1.0	<b>5.2</b>	3.4%	7.6%	8.0%	<b>6.2%</b>
2030	1.0	3.2	0.9	<b>5.2</b>	3.4%	7.5%	8.0%	<b>6.1%</b>
2031	1.0	3.3	0.9	<b>5.2</b>	3.4%	7.6%	8.0%	<b>6.1%</b>
2032	1.0	3.3	0.9	<b>5.2</b>	3.4%	7.6%	8.0%	<b>6.1%</b>
2033	1.0	3.3	0.9	<b>5.3</b>	3.4%	7.6%	8.0%	<b>6.1%</b>
<b>Total</b>	<b>8.6</b>	<b>31.7</b>	<b>9.3</b>	<b>49.7</b>	<b>3.2%</b>	<b>7.3%</b>	<b>7.9%</b>	<b>6.0%</b>
Fiscal Year	Toll Revenue - Impact of Re-benchmarking							
	Difference				Percent Difference			
	BHT	FMT	FSK	Total Harbor Crossing	BHT	FMT	FSK	Total Harbor Crossing
2024	(\$3.3)	(\$2.9)	\$4.0	<b>(\$2.2)</b>	-3.1%	-1.4%	7.3%	<b>-0.6%</b>
2025	(\$3.6)	(\$1.4)	\$4.2	<b>(\$0.8)</b>	-3.6%	-0.7%	8.2%	<b>-0.2%</b>
2026	(\$3.5)	(\$1.4)	\$4.3	<b>(\$0.6)</b>	-3.6%	-0.6%	8.1%	<b>-0.2%</b>
2027	(\$3.2)	(\$1.3)	\$4.6	<b>\$0.0</b>	-3.6%	-0.6%	7.9%	<b>0.0%</b>
2028	(\$2.4)	(\$1.3)	\$4.9	<b>\$1.2</b>	-3.6%	-0.5%	7.5%	<b>0.3%</b>
2029	(\$3.8)	(\$1.4)	\$4.6	<b>(\$0.5)</b>	-3.6%	-0.6%	8.2%	<b>-0.1%</b>
2030	(\$3.9)	(\$1.4)	\$4.2	<b>(\$1.1)</b>	-3.6%	-0.6%	8.0%	<b>-0.3%</b>
2031	(\$4.1)	(\$1.4)	\$4.0	<b>(\$1.5)</b>	-3.6%	-0.6%	7.9%	<b>-0.4%</b>
2032	(\$4.1)	(\$1.4)	\$4.0	<b>(\$1.5)</b>	-3.6%	-0.6%	7.9%	<b>-0.4%</b>
2033	(\$4.0)	(\$1.4)	\$4.3	<b>(\$1.1)</b>	-3.6%	-0.6%	8.0%	<b>-0.3%</b>
<b>Total</b>	<b>(\$36.0)</b>	<b>(\$15.3)</b>	<b>\$43.2</b>	<b>(\$8.1)</b>	<b>-3.5%</b>	<b>-0.7%</b>	<b>7.9%</b>	<b>-0.2%</b>

**Table 4** contains the estimates for the impact of the FSK collapse for each of the harbor crossing facilities. The total transaction and revenue lost on the combined harbor crossings is 35.2 million and \$141.2 million, respectively, over the period from FY 2024 to FY 2033. These estimates include a small positive impact to the forecast due to the removal of the bridge deck replacement project previously assumed for FY 2030 – FY 2033. Considering only FY 2024 to FY 2029, the lost transactions and lost revenue are estimated to be 35.9 million and \$143.9 million, respectively.

**Table 4: Impact of the FSK Collapse: Estimate of Lost Transactions and Lost Revenue  
Comparing FSK Collapse Forecast to Re-benchmarked Forecast**

Fiscal Year	Transactions - Impact of FSK Collapse							
	Difference				Percent Difference			
	BHT	FMT	FSK	Total Harbor Crossing	BHT	FMT	FSK	Total Harbor Crossing
2024	0.5	0.7	(3.2)	<b>(2.0)</b>	1.7%	1.6%	-26.3%	<b>-2.5%</b>
2025	1.9	3.1	(12.1)	<b>(7.1)</b>	6.7%	7.0%	-100.0%	<b>-8.4%</b>
2026	2.0	3.2	(12.5)	<b>(7.3)</b>	7.1%	6.9%	-100.0%	<b>-8.5%</b>
2027	2.2	3.5	(13.6)	<b>(7.9)</b>	9.2%	7.2%	-100.0%	<b>-9.2%</b>
2028	2.9	3.9	(15.8)	<b>(9.0)</b>	15.8%	7.7%	-100.0%	<b>-10.6%</b>
2029	0.8	1.1	(4.4)	<b>(2.5)</b>	2.7%	2.4%	-33.3%	<b>-2.8%</b>
2030	(0.5)	(0.1)	0.7	<b>0.1</b>	-1.6%	-0.3%	5.8%	<b>0.1%</b>
2031	(0.9)	(0.2)	1.3	<b>0.2</b>	-2.7%	-0.5%	10.8%	<b>0.2%</b>
2032	(0.9)	(0.2)	1.3	<b>0.2</b>	-2.7%	-0.5%	10.7%	<b>0.2%</b>
2033	(0.4)	(0.1)	0.7	<b>0.1</b>	-1.4%	-0.2%	5.3%	<b>0.1%</b>
<b>Total</b>	<b>7.6</b>	<b>14.9</b>	<b>(57.7)</b>	<b>(35.2)</b>	<b>2.7%</b>	<b>3.2%</b>	<b>-45.0%</b>	<b>-4.0%</b>
Fiscal Year	Toll Revenue - Impact of FSK Collapse							
	Difference				Percent Difference			
	BHT	FMT	FSK	Total Harbor Crossing	BHT	FMT	FSK	Total Harbor Crossing
2024	\$1.4	\$4.2	(\$15.0)	<b>(\$9.5)</b>	1.4%	2.0%	-26.0%	<b>-2.6%</b>
2025	\$6.9	\$20.6	(\$56.0)	<b>(\$28.6)</b>	7.0%	9.6%	-100.0%	<b>-7.8%</b>
2026	\$7.2	\$21.1	(\$57.9)	<b>(\$29.5)</b>	7.5%	9.6%	-100.0%	<b>-7.9%</b>
2027	\$8.3	\$22.3	(\$62.0)	<b>(\$31.4)</b>	9.6%	9.9%	-100.0%	<b>-8.4%</b>
2028	\$11.0	\$24.3	(\$70.3)	<b>(\$34.9)</b>	16.9%	10.4%	-100.0%	<b>-9.4%</b>
2029	\$3.2	\$7.2	(\$20.5)	<b>(\$10.0)</b>	3.1%	3.3%	-33.3%	<b>-2.6%</b>
2030	(\$2.4)	(\$0.7)	\$3.6	<b>\$0.5</b>	-2.2%	-0.3%	6.3%	<b>0.1%</b>
2031	(\$4.2)	(\$1.3)	\$6.4	<b>\$0.9</b>	-3.8%	-0.6%	11.8%	<b>0.2%</b>
2032	(\$4.2)	(\$1.3)	\$6.4	<b>\$0.9</b>	-3.8%	-0.6%	11.7%	<b>0.2%</b>
2033	(\$2.1)	(\$0.7)	\$3.3	<b>\$0.5</b>	-2.0%	-0.3%	5.7%	<b>0.1%</b>
<b>Total</b>	<b>\$25.0</b>	<b>\$95.8</b>	<b>(\$262.0)</b>	<b>(\$141.2)</b>	<b>2.5%</b>	<b>4.3%</b>	<b>-44.5%</b>	<b>-3.7%</b>



**Table 5** compares the current forecast to the original November 2023 forecast. The differences include the impact of re-benchmarking the harbor crossing facilities and the estimated impacts from the FSK collapse. Compared to the November 2023 forecast, FY 2024 harbor crossing transactions are expected to be 0.9 million higher and revenue is expected to be \$12.8 million lower. Throughout the forecast period, transactions are expected to be 14.3 million above the previous forecast and toll revenue is expected to be \$150.5 million lower than the previous forecast.

**Table 5: Difference in Transactions and Revenue  
 Comparing FSK Collapse Forecast to November 2023 Forecast**

Fiscal Year	Transactions - Total Impact							
	Difference				Percent Difference			
	BHT	FMT	FSK	Total Harbor Crossing	BHT	FMT	FSK	Total Harbor Crossing
2024	0.7	2.7	(2.5)	<b>0.9</b>	2.6%	6.5%	-21.3%	<b>1.1%</b>
2025	2.8	6.2	(11.2)	<b>(2.1)</b>	10.3%	15.0%	-100.0%	<b>-2.7%</b>
2026	2.9	6.5	(11.6)	<b>(2.3)</b>	10.8%	15.0%	-100.0%	<b>-2.8%</b>
2027	3.0	6.9	(12.6)	<b>(2.7)</b>	12.8%	15.4%	-100.0%	<b>-3.3%</b>
2028	3.5	7.5	(14.6)	<b>(3.6)</b>	19.7%	16.0%	-100.0%	<b>-4.6%</b>
2029	1.8	4.3	(3.4)	<b>2.7</b>	6.2%	10.1%	-28.0%	<b>3.2%</b>
2030	0.5	3.1	1.6	<b>5.3</b>	1.7%	7.3%	14.3%	<b>6.3%</b>
2031	0.2	3.0	2.2	<b>5.4</b>	0.6%	7.0%	19.7%	<b>6.4%</b>
2032	0.2	3.1	2.2	<b>5.4</b>	0.6%	7.1%	19.6%	<b>6.3%</b>
2033	0.6	3.2	1.6	<b>5.4</b>	1.9%	7.3%	13.7%	<b>6.3%</b>
<b>Total</b>	<b>16.1</b>	<b>46.5</b>	<b>(48.4)</b>	<b>14.3</b>	<b>5.9%</b>	<b>10.7%</b>	<b>-40.7%</b>	<b>1.7%</b>
Fiscal Year	Toll Revenue - Total Impact							
	Difference				Percent Difference			
	BHT	FMT	FSK	Total Harbor Crossing	BHT	FMT	FSK	Total Harbor Crossing
2024	(\$3.1)	\$1.3	(\$11.0)	<b>(\$12.8)</b>	-3.0%	0.6%	-20.0%	<b>-3.4%</b>
2025	\$3.2	\$19.2	(\$51.8)	<b>(\$29.4)</b>	3.2%	8.9%	-100.0%	<b>-8.0%</b>
2026	\$3.6	\$19.8	(\$53.5)	<b>(\$30.1)</b>	3.7%	8.9%	-100.0%	<b>-8.1%</b>
2027	\$5.1	\$21.0	(\$57.5)	<b>(\$31.4)</b>	5.7%	9.3%	-100.0%	<b>-8.4%</b>
2028	\$8.6	\$23.1	(\$65.4)	<b>(\$33.7)</b>	12.7%	9.8%	-100.0%	<b>-9.1%</b>
2029	(\$0.6)	\$5.9	(\$15.8)	<b>(\$10.5)</b>	-0.6%	2.7%	-27.9%	<b>-2.8%</b>
2030	(\$6.3)	(\$2.1)	\$7.8	<b>(\$0.7)</b>	-5.7%	-1.0%	14.8%	<b>-0.2%</b>
2031	(\$8.3)	(\$2.7)	\$10.3	<b>(\$0.6)</b>	-7.3%	-1.2%	20.6%	<b>-0.2%</b>
2032	(\$8.3)	(\$2.7)	\$10.4	<b>(\$0.7)</b>	-7.2%	-1.2%	20.5%	<b>-0.2%</b>
2033	(\$6.2)	(\$2.1)	\$7.6	<b>(\$0.6)</b>	-5.5%	-0.9%	14.2%	<b>-0.2%</b>
<b>Total</b>	<b>(\$12.2)</b>	<b>\$80.5</b>	<b>(\$218.8)</b>	<b>(\$150.5)</b>	<b>-1.2%</b>	<b>3.6%</b>	<b>-40.0%</b>	<b>-4.0%</b>



**Table 6** and **Table 7** provide the forecast for the ICC and I-95 ETLs, which remain unchanged from the November 2023 forecast. **Table 8** presents the other revenue forecast, which was reduced slightly in FY 2025 through FY 2029 due to the transaction loss on the Legacy system, and increased slightly in the following years due to the re-benchmarking process.

**Table 6: Intercounty Connector Forecast (Unchanged from November 2023)**

Fiscal Year	Trips (Millions) <sup>(1)</sup>			Toll Revenue (\$ Millions) <sup>(1)</sup>		
	E-ZPass	Video	Total	E-ZPass	Video	Total
2023 <sup>(2)</sup>	29.9	4.2	<b>34.1</b>	58.3	11.9	<b>70.2</b>
2024	30.4	3.7	<b>34.2</b>	59.0	12.7	<b>71.8</b>
2025	30.7	3.1	<b>33.9</b>	59.7	8.9	<b>68.6</b>
2026	31.3	3.4	<b>34.7</b>	60.9	9.5	<b>70.4</b>
2027	32.0	3.4	<b>35.4</b>	62.1	9.7	<b>71.8</b>
2028	32.6	3.5	<b>36.1</b>	63.4	9.8	<b>73.2</b>
2029	33.3	3.6	<b>36.8</b>	64.6	10.0	<b>74.6</b>
2030	33.9	3.6	<b>37.5</b>	65.9	10.2	<b>76.1</b>
2031	34.4	3.7	<b>38.1</b>	66.9	10.4	<b>77.3</b>
2032	35.0	3.7	<b>38.7</b>	67.9	10.5	<b>78.4</b>
2033	35.5	3.8	<b>39.3</b>	69.0	10.7	<b>79.7</b>

<sup>(1)</sup> Includes impacts due to leakage, including unpaid transactions.

<sup>(2)</sup> Represents actual data.

**Table 7: I-95 Express Toll Lanes (ETLs) Forecast (Unchanged from November 2023)**

Fiscal Year	Trips (Millions) <sup>(1)</sup>			Toll Revenue (\$ Millions) <sup>(1)</sup>		
	E-ZPass	Video	Total	E-ZPass	Video	Total
2023 <sup>(2)</sup>	8.6	0.4	<b>9.0</b>	13.3	0.8	<b>14.1</b>
2024	8.9	0.4	<b>9.2</b>	13.6	0.8	<b>14.4</b>
2025 <sup>(3)</sup>	9.8	0.4	<b>10.2</b>	17.4	1.0	<b>18.5</b>
2026	10.7	0.4	<b>11.2</b>	21.4	1.3	<b>22.7</b>
2027	11.2	0.5	<b>11.6</b>	22.4	1.3	<b>23.7</b>
2028 <sup>(4)</sup>	13.5	0.6	<b>14.0</b>	28.7	1.7	<b>30.4</b>
2029	15.6	0.6	<b>16.3</b>	34.3	2.0	<b>36.3</b>
2030	16.2	0.7	<b>16.9</b>	35.6	2.1	<b>37.7</b>
2031	16.8	0.7	<b>17.5</b>	37.0	2.2	<b>39.2</b>
2032	17.4	0.7	<b>18.1</b>	38.4	2.2	<b>40.6</b>
2033	18.0	0.7	<b>18.8</b>	39.8	2.3	<b>42.1</b>

<sup>(1)</sup> Includes impacts due to leakage, including unpaid transactions.

<sup>(2)</sup> Represents actual data.

<sup>(3)</sup> Phase 1 of northbound extension assumed opening on Jan 1, 2025.

<sup>(4)</sup> Phase 2 of northbound extension and I-695 DCs assumed opening on Jan 1, 2028.



**Table 8: Other Revenue Forecast**

Fiscal Year <sup>(1)</sup>	Legacy Facilities								Intercounty Connector & I-95			Total Other Revenue <sup>(2)</sup>
	Service Fees and Sales				Violation Recovery	Commercial Vehicles			Service Fees and Sales		Violation Recovery	
	Unused Pre-Paid Trip Revenue	Transponder Sales	Monthly Account Fees	Hatem E-Z Pass Program	Civil Penalties	Post-Usage Discount	High Frequency Discount	Over-size Permit Fee	Transponder Sales	Monthly Account Fees	Civil Penalties	
2019	14.00	(0.60)	1.59	1.68	21.27	(8.58)	(1.20)	1.26	(0.10)	0.27	10.19	<b>39.78</b>
2020	10.64	0.22	2.05	1.69	16.93	(8.63)	(1.30)	1.06	0.04	0.34	11.93	<b>34.96</b>
2021	4.49	(0.12)	2.01	1.57	13.66	(6.76)	(0.84)	1.05	(0.00)	0.05	3.58	<b>18.70</b>
2022	11.41	0.33	(0.32)	1.76	18.03	(10.87)	(1.02)	1.19	0.04	(0.04)	6.17	<b>26.68</b>
2023	16.90	0.29	2.36	1.86	14.42	(8.54)	(0.97)	1.28	0.03	0.26	5.47	<b>33.36</b>
2024	17.06	0.32	3.03	1.78	49.47	(8.76)	(0.95)	1.24	0.03	0.26	11.89	<b>75.37</b>
2025	15.94	0.29	2.15	1.87	28.82	(8.26)	(0.94)	1.24	0.03	0.27	6.65	<b>48.06</b>
2026	16.02	0.29	2.16	1.87	27.53	(8.30)	(0.94)	1.25	0.03	0.27	6.43	<b>46.61</b>
2027	16.10	0.29	2.17	1.88	27.64	(8.33)	(0.95)	1.25	0.03	0.27	6.56	<b>46.91</b>
2028	16.18	0.29	2.18	1.88	27.61	(8.37)	(0.95)	1.26	0.03	0.27	6.69	<b>47.07</b>
2029	16.26	0.29	2.19	1.89	29.96	(8.90)	(1.01)	1.34	0.03	0.27	6.82	<b>49.14</b>
2030	16.34	0.29	2.20	1.89	30.20	(8.93)	(1.01)	1.34	0.03	0.27	6.93	<b>49.56</b>
2031	16.42	0.29	2.21	1.90	30.45	(8.97)	(1.02)	1.35	0.03	0.27	7.03	<b>49.97</b>
2032	16.50	0.29	2.23	1.90	30.67	(9.02)	(1.02)	1.36	0.03	0.28	7.14	<b>50.36</b>
2033	16.59	0.29	2.24	1.91	30.88	(9.07)	(1.03)	1.36	0.03	0.28	7.25	<b>50.72</b>

(1) FY 2019 - 2023 represents actual data, and FY 2024 includes actual data through April 2024.

(2) Summations may not match total due to rounding.

**Table 9** provides estimated total MDTA systemwide transactions for all facilities, and **Table 10** provides estimated systemwide revenue including other revenue. A comparison of estimated systemwide transactions and revenue from the current forecast to the November 2023 forecast is provided in **Table 11**. Current forecast estimates for FY 2024 are 1.3 percent higher for transactions and 2.3 percent lower for revenue than the November 2023 forecast. For the full forecast period from FY 2024 through FY 2033, current forecast estimates of transactions and revenue are 0.8 percent higher and 1.7 percent lower, respectively, than the November 2023 forecast. The impacts shown in Table 11 differ from Table 5 for two reasons: updated actuals for all Legacy facilities (Table 5 only shows the harbor crossings), and the small adjustments to other revenue.

**Table 9: Total Systemwide Transactions**

Fiscal Year	Transactions (millions)				Annual Percent Change
	Legacy	ICC	I-95 ETL	Total <sup>(1)</sup>	
2023 <sup>(2)</sup>	116.9	34.1	9.0	<b>160.0</b>	-
2024 <sup>(3)</sup>	117.0	34.2	9.2	<b>160.4</b>	0.3
2025	112.7	33.9	10.2	<b>156.8</b>	(2.3)
2026	114.4	34.7	11.2	<b>160.3</b>	2.2
2027	114.2	35.4	11.6	<b>161.2</b>	0.6
2028	112.0	36.1	14.0	<b>162.1</b>	0.6
2029	122.3	36.8	16.3	<b>175.4</b>	8.2
2030	125.6	37.5	16.9	<b>180.0</b>	2.6
2031	126.4	38.1	17.5	<b>182.0</b>	1.1
2032	127.3	38.7	18.1	<b>184.1</b>	1.1
2033	128.2	39.3	18.8	<b>186.2</b>	1.2

<sup>(1)</sup> Summations may not equal total due to rounding.

<sup>(2)</sup> Represents actual data.

<sup>(3)</sup> Includes actual data through April 2024.

**Table 10: Total Systemwide Revenue**

Fiscal Year	Revenue (\$ millions)					Annual Percent Change
	Legacy	ICC	I-95 ETL	Other <sup>(1)</sup>	Total <sup>(2)</sup>	
2023 <sup>(3)</sup>	660.0	70.2	14.1	33.4	<b>777.6</b>	-
2024 <sup>(4)</sup>	630.2	71.8	14.4	75.4	<b>791.8</b>	1.8
2025	617.5	68.6	18.5	48.1	<b>752.6</b>	(4.9)
2026	627.7	70.4	22.7	46.6	<b>767.4</b>	2.0
2027	628.8	71.8	23.7	46.9	<b>771.2</b>	0.5
2028	623.0	73.2	30.4	47.1	<b>773.7</b>	0.3
2029	661.5	74.6	36.3	49.1	<b>821.6</b>	6.2
2030	674.8	76.1	37.7	49.6	<b>838.1</b>	2.0
2031	678.5	77.3	39.2	50.0	<b>844.9</b>	0.8
2032	682.4	78.4	40.6	50.4	<b>851.9</b>	0.8
2033	686.8	79.7	42.1	50.7	<b>859.2</b>	0.9

<sup>(1)</sup> Includes Other Revenue from Legacy, ICC, and I-95 ETL. Does not include concession revenue.

<sup>(2)</sup> Summations may not equal total due to rounding.

<sup>(3)</sup> Represents actual data.

<sup>(4)</sup> Includes actual data through April 2024.

**Table 11: Comparison with November 2023 Forecast**

Fiscal Year	Transactions				Revenue			
	Nov. 2023 Forecast	Current Forecast	Difference		Nov. 2023 Forecast	Current Forecast	Difference	
			Value	Percent			Value	Percent
2023 <sup>(1)</sup>	160.0	160.0	-	0.0%	777.6	777.6	-	0.0%
2024 <sup>(2)</sup>	158.4	160.4	2.0	1.3%	810.8	791.8	(19.0)	-2.3%
2025	158.9	156.8	(2.1)	-1.4%	782.0	752.6	(29.4)	-3.8%
2026	162.6	160.3	(2.3)	-1.4%	797.6	767.4	(30.2)	-3.8%
2027	163.9	161.2	(2.7)	-1.7%	802.7	771.2	(31.6)	-3.9%
2028	165.7	162.1	(3.6)	-2.2%	807.8	773.7	(34.1)	-4.2%
2029	172.7	175.4	2.7	1.6%	830.9	821.6	(9.3)	-1.1%
2030	174.7	180.0	5.3	3.0%	837.5	838.1	0.6	0.1%
2031	176.7	182.0	5.4	3.0%	844.2	844.9	0.7	0.1%
2032	178.7	184.1	5.4	3.0%	851.2	851.9	0.7	0.1%
2033	180.8	186.2	5.4	3.0%	858.6	859.2	0.6	0.1%
<b>Total</b>	<b>1,853.0</b>	<b>1,868.5</b>	<b>15.4</b>	<b>0.8%</b>	<b>9,001.0</b>	<b>8,850.0</b>	<b>(151.1)</b>	<b>-1.7%</b>

<sup>(1)</sup> Represents actual data.

<sup>(2)</sup> Current Forecast includes actual data through April 2024.



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## Summary

Based on an estimated 40 percent combined recapture rate for passenger and commercial vehicles diverting from the Key Bridge to the two adjacent Patapsco River tunnels, CDM Smith estimates the MDTA's lost revenues during the four full years of Key Bridge closure to range from \$28.6 million in FY 2025 to \$34.9 million in FY 2028. Cumulatively from the date of collapse to the assumed reopening in the fall of 2028, CDM Smith estimates the lost revenue to be \$143.9 million (see Table 4).

We appreciate the opportunity to provide traffic and revenue forecasting support on this task. Do not hesitate to contact us should you require additional background information on the analysis summarized in this report.

Sincerely,

A handwritten signature in black ink that reads "Kelly Morison". The signature is written in a cursive, flowing style.

Kelly Morison  
Project Technical Leader  
CDM Smith Inc.



Ms. Deborah Sharpless  
June 6, 2024  
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## 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 MDTA. 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 MDTA. 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.

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