



**MEMORANDUM**

**TO:** HPTE BOARD OF DIRECTORS  
**FROM:** KELLY BROWN, TOLLING OPERATIONS MANAGER  
**DATE:** May 20, 2020  
**SUBJECT:** REQUEST TO DELAY TOLL RATE ADJUSTMENT ON I-25 NORTH (US 36 TO 120TH AVE) IN RESPONSE TO COVID-19 PANDEMIC

**Purpose and Requested Action**

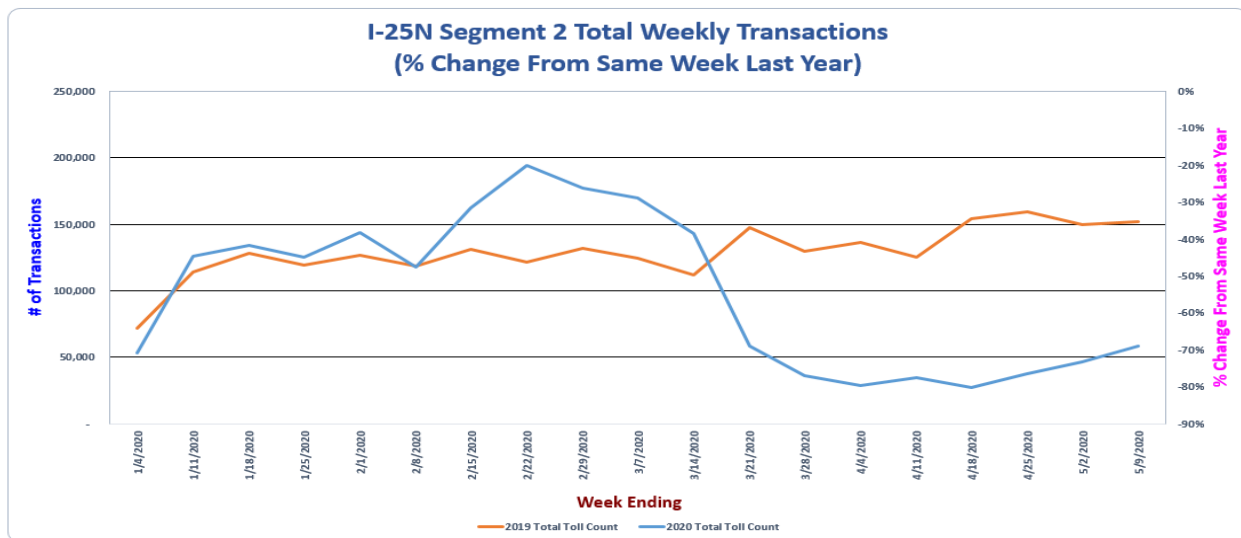
This memorandum presents a request from HPTE staff to adjust toll rates for AVI and LPT transactions for I-25 North Segment 2 (US 36 to 120<sup>th</sup> Ave.) to the current toll rates until spring 2021 in response to the COVID-19 pandemic in Colorado. This request would reverse the decision made by the Board at the March 2020 Board Meeting to approve a toll rate adjustment that would go into effect in June, 2020.

**Background and Details**

At the time of the Governor’s Stay at Home Order in March, the impact that the Public Health Orders and Executive Orders (Orders) would have on the HPTE Express Lanes traffic volumes at the time of the March 19, 2020 HPTE Board Meeting was unknown. During the March 19, 2020 HPTE Board Meeting staff presented a request to approve *Resolution #324: Approving a Proposed Toll Schedule for the I-25 North Express Lanes: Segment 2* which was approved by the Board.

Staff has since been tracking on a weekly basis the effects the Orders have had on HPTE Express Lanes traffic volumes and has noticed a decrease in traffic volumes between 60 and 74 percent compared to the same week in 2019.

At the March Board Meeting, staff indicated that the need for the I-25 North Segment 2 (US 36 to 120th Ave.) toll rate adjustment was necessary due to inflation, increased O&M costs and increased transaction processing costs based on a projected increase in traffic volume. After careful analysis of the traffic data, HPTE staff believes that with traffic volumes down due to the COVID-19 pandemic in Colorado, the toll rate adjustment is no longer necessary because the expected increases in O&M costs and transaction processing costs due to the projected rise in traffic and transactions does not look like it will materialize in 2020. Therefore, staff is confident that postponing the toll rate adjustment on I-25 North Segment 2 until 2021 will have no adverse effects on toll revenue covering expenses.



### **Board Options and Recommendations**

1. Staff recommends that the Board approve Resolution #328 reversing the 2020/2021 AVI and LPT toll rate adjustments for I-25 North Segment 2 adopted on March 19, 2020 as Resolution #324 and adjusting the AVI and LPT toll rates for I-25 North Segment 2 back to their current level until spring 2021.
2. If the Board does not adopt Resolution #328, the toll rate adjustment approved by the Board in March, 2020 as Resolution #324 on I-25 North Segment 2 would go into effect 12:00 AM on the same date that the I-25 North Segment 3 Express Lanes open for tolling, currently anticipated to be June 10, 2020. *Note: The date that the I-25 North Segment 3 Express Lanes opens for tolling is subject to change pending any changes to the Final Acceptance Testing schedule*

### **Attachments**

Attachment A: 18 March 2020 Board Memo-I-25 Seg 2\_Request for Approval of the Toll Rate Adjustment FINAL

Attachment B: I-25 N Seg 2 Toll Rate Adjustment Technical Memo

Attachment C: Resolution #328 Approving a Proposed Toll Schedule for I-25 North Segment 2

# Attachment A

18 March 2020 Board Memo-I-25 Seg 2\_Request for Approval of the Toll Rate Adjustment FINAL



## MEMORANDUM

**TO:** HPTE BOARD OF DIRECTORS  
**FROM:** KELLY BROWN, TOLLING OPERATIONS MANAGER  
**DATE:** March 18, 2020  
**SUBJECT:** REQUEST FOR APPROVAL OF PROPOSED 2020/2021 TOLL RATE ADJUSTMENTS FOR I-25 NORTH (US 36 to 120<sup>th</sup> Ave.)

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### Purpose and Requested Action

This memorandum presents a request from HPTE Staff that the High Performance Transportation Enterprise (HPTE) Board of Directors APPROVE the proposed 2020/2021 toll rate adjustments for AVI and LPT transactions for I-25 North (US 36 to 120<sup>th</sup> Ave.) ("Segment 2") that were presented at the January 2020 Board Meeting.

### Policy Implications

The HPTE Board of Directors would be approving the recommended toll rate adjustment for AVI and LPT transactions for I-25 North (US 36 to 120<sup>th</sup> Ave.) ("Segment 2") per authority given by C.R.S. 43-4-806(2)(c)(I):

- If the proposed toll rate adjustments are approved by the Board, the new toll rates would go into effect on the same date that the I-25 North Segment 3 Express Lanes open for tolling, currently anticipated to be June 10, 2020. *Note: The date that the I-25 North Segment 3 Express Lanes opens for tolling is subject to change pending any changes to the Final Acceptance Testing schedule.*
- If the Board does not adopt the proposed toll rate adjustment, the current toll rates would remain unchanged.

### Background and Details

HPTE has an annual toll rate adjustment process every year where Express Lane toll rate adjustments are considered. During the annual toll rate adjustment process in summer 2019, HPTE staff recommended that the annual toll rate adjustments for Segment 2 be deferred until I-25 North Segment 3 opened for operations. Then at that time, initial toll rates for Segment 3 and a proposed toll rate adjustment for Segment 2 would be jointly presented to the HPTE Board. Going forward, Segments 2 and 3 will be put on the same toll rate adjustment schedule. Therefore, the next time staff will possibly come to the Board with a toll rate adjustment on this corridor is spring 2021.

Staff presented to the Board at the January, 2020 Board Meeting the supporting documentation for the proposed 2020/2021 toll rate adjustment. The materials from the January, 2020 Board meeting are attached as Attachment A.

If approved by the Board at the March 2020 meeting, the Segment 2 adjusted toll rates would go into effect on the same date that Segment 3 opens for tolling.

### Recommended New Rates

Staff recommends an adjustment to AVI and LPT toll rates of 6.5% to cover the rise in costs of operations, maintenance and inflation. The new AVI toll rates are rounded down to the nearest multiple of \$0.05. For example, the new AVI toll rate of \$1.10 was rounded down from \$1.12. The AVI toll rate adjustments range from five cents to twenty cents.

The new LPT toll rates have not been rounded up or down. The LPT toll rate adjustments range from twenty-five cents to forty-six cents.

**Board Options and Recommendations**

1. Act on Resolution #324 adopting the proposed 2020/2021 AVI and LPT toll rates for I-25 North Segment 2.
  - a. HPTE Staff recommends adopting the proposed toll rates.
2. Deny the request. Rates on I-25 North Segment 2 would remain unchanged until July 2021.

**Next Steps**

- If adopted, HPTE staff will implement the approved 2020/2021 AVI and LPT toll rates for I-25 North Segment 2 effective 12:00 AM on the same date that the I-25 North Segment 3 Express Lanes open for tolling, currently anticipated to be June 10, 2020. *Note: The date that the I-25 North Segment 3 Express Lanes opens for tolling is subject to change pending any changes to the Final Acceptance Testing schedule.*

**Attachments**

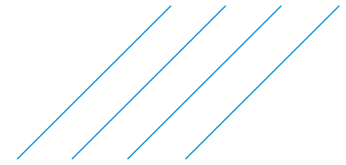
Attachment A: January 2020 Board Memo \_ HPTE Board Memo 1-25 North Segments 2 and 3 Toll Range Final

Attachment B: I-25 N Seg 2 Toll Rate Adjustment Technical Memo

Attachment C: Resolution #324 Approving a Proposed Toll Schedule for I-25 North Segment 2

# Attachment B

## **I-25 N Seg 2 Toll Rate Adjustment Technical Memo**



## Memo

To: Kelly Brown, High Performance Transportation Enterprise (HPTE)

From:	Rami Harb, Atkins	Email:	rami.harb@atkinsglobal.com
Date:	March 12, 2020	Phone:	720-475-7075
Ref:	I-25 North (Segment 2) Express Lanes (US 36 to 120th Avenue)	cc:	

Subject: Toll Rate Adjustment Analysis- I-25 Segment 2

## 1. Introduction

Atkins North America, Inc. (Atkins) and the Colorado High Performance Transportation Enterprise (HPTE) developed this Toll Rate Adjustment Analysis memorandum to document the methodology used to evaluate the need for toll rate increases on Interstate 25 (I-25) North Segment 2 Express Lanes (U.S. Highway 36 [US 36] to 120th Avenue). The current toll rates were set in 2018 based on analysis of the Segment 2 Express Lanes using data from November 2017 through March 2018.

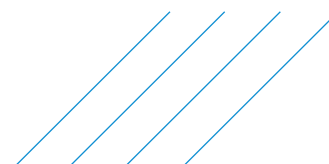
## 2. Methodology

A flowchart outlining the steps to be followed for determining the need for a toll rate increase is provided in **Appendix 1**. This flowchart was used as guidance to decide if a toll rate increase is required for I-25 North Segment 2. For the period April 2019 to December 2019, a three-step process was undertaken to analyze the need for toll rates increases. The analysis was done separately for the northbound and southbound directions.

First, average speeds in the express lanes were examined to determine if the express lanes meet the criterion of travel going at least 45 miles per hour (mph) for 90 percent of the time for a period of 180 consecutive days. In addition, the traffic Level of Service (LOS) for this segment of I-25 was analyzed to assess the performance of the express lanes.

Second, the traffic demand management analysis was performed to check whether the LOS criterion—meeting LOS C or better—would be met in the future for the period April 2020 to December 2020. The express lane traffic volumes were projected for the period April 2020 to December 2020 based on growth rate (1.3 percent) from the Colorado Department of Transportation (CDOT) Online Transportation Information System (OTIS). These projected volumes then were used to determine the future LOS in the express lanes. The data used for this analysis included:

- Average speed in the general-purpose and express lanes
- Traffic volumes in the general-purpose and express lanes
- Information on events (crashes, lane closures, maintenance, etc.) that occurred along the segment of I-25 as identified in the corridor's Event Audit Report. Nominal occurrences of adverse weather or crashes in the general-purpose lanes were taken as part of normal operations and included in the data. However, major events (those lasting more than two



hours per the *Manual on Uniform Traffic Control Devices* [MUTCD, 2009]) whose impact was identified as severe in the corridor’s Event Audit Report were excluded from the data.

- Growth rate calculated from CDOT’s OTIS traffic volume projections

Third, the Operations and Maintenance (O&M) cost, inflation, and toll transaction processing cost increases were evaluated by HPTE and provided to Atkins to consider increases based on costs.

## 3. Summary of Findings

### 3.1. Traffic Management

**Table 1** shows the percentage of time that the average express lane speed was below 45 mph at different times of the weekdays during the analysis period. **The express lanes average speeds satisfied the criterion of operating at higher than 45 miles per hour at least 90 percent of the time.**

**Table 1: Percentage of Time the Express Lane Speed Falls below 45 MPH each Hour**

Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
NB (%)	2	2	1	0	3	2	1	2	1	1	0	1	1	0	0	0	2	5	1	1	1	1	1	1
SB (%)	1	2	1	2	2	1	4	6	4	2	1	1	0	0	0	0	1	1	1	1	1	0	0	0

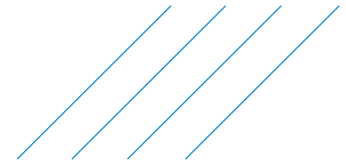
**Table 2** shows the average LOS for the express lanes at different weekday times. The LOS in the express lanes, based on average density of vehicles, was at LOS C or better for each hour of the day. Based on the traffic parameters above, the express lanes are performing as intended in providing acceptable LOS. For the hours at LOS C, the traffic volumes were projected a year into the future to determine if the LOS criterion (LOS C or better) would be met during the year 2020. As shown in Error! Reference source not found., the future LOS is LOS C for the hours analyzed. Therefore, the current toll rates are managing traffic demand in the express lanes as intended based on the LOS.

**Table 2: Level of Service by Hour**

Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
<b>Northbound</b>																								
2019 LOS	A	A	A	A	A	A	A	A	A	A	A	A	A	B	A	B	C	C	A	A	A	A	A	A
Projected 2020 LOS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C	C	-	-	-	-	-	-
<b>Southbound</b>																								
2019 LOS	A	A	A	A	A	A	C	C	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Projected 2020 LOS	-	-	-	-	-	-	C	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Based on the traffic operations results above, it was determined that current toll rates fulfil the travel speed and LOS criteria for the express lanes.





## 3.2. Inflation and Operations and Maintenance Costs

To estimate inflation adjustment, HPTE staff evaluated the changes in the Denver-Aurora-Lakewood Consumer Price Index (CPI), the increase in Operations and Maintenance costs, and the increase in toll transaction processing costs. As a result, HPTE determined the need to increase toll rates by 6.5 percent.

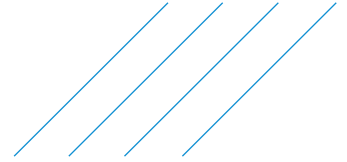
## 4. Recommendation for New Rates

Based on the results noted in the previous section, HPTE recommended revised Automatic Vehicle Identification (AVI) and License Plate Tolling (LPT) toll rates for the toll schedule shown below in **Table 3**. There is no change to the multi-axle (4+) surcharge; it remains at \$25.

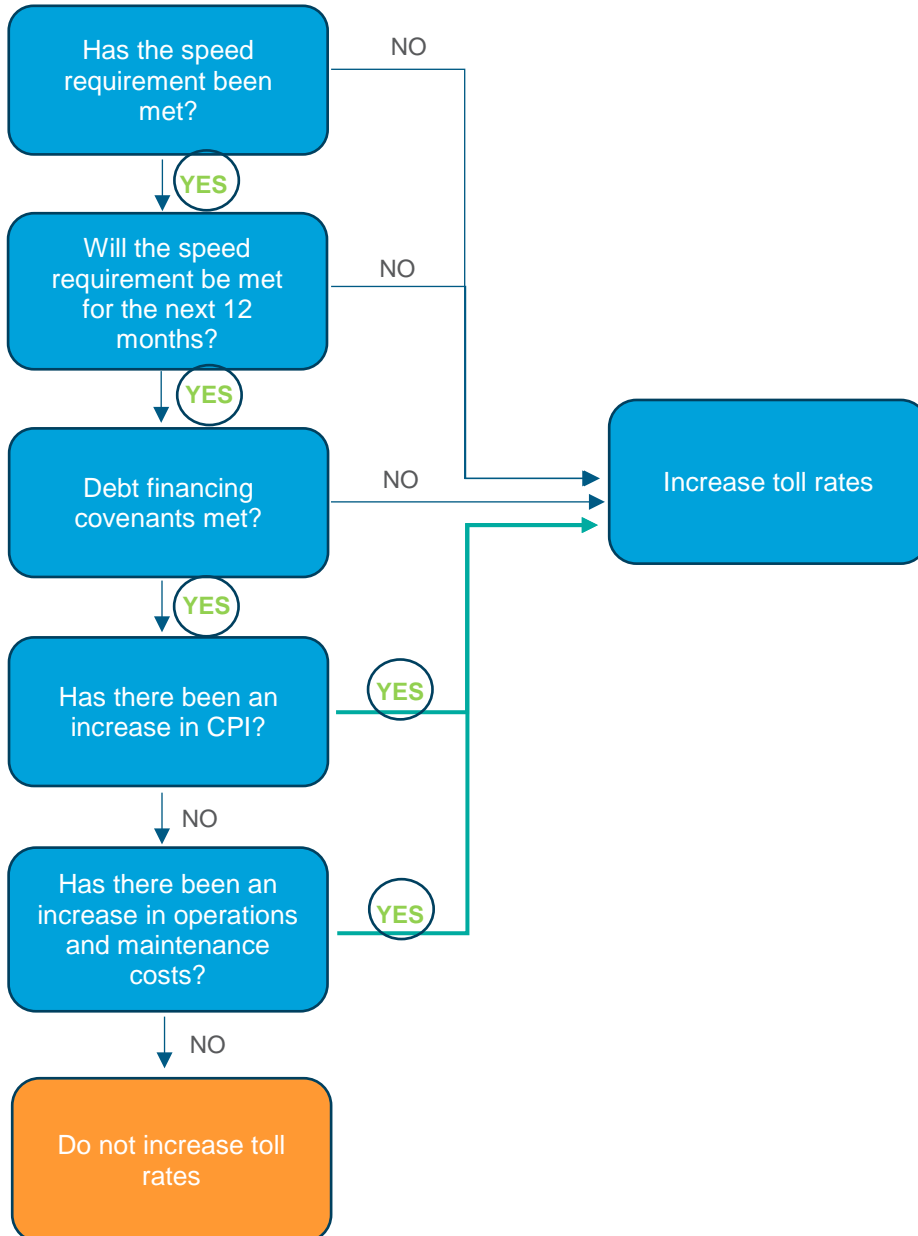
**Table 3: Proposed New Toll Rates for I-25 Segment 2**

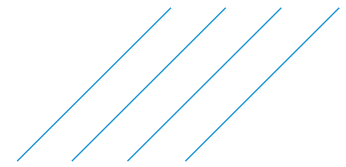
	Northbound				Southbound			
	AVI	NEW AVI	LPT	NEW LPT	AVI	NEW AVI	LPT	NEW LPT
5:00 AM-6:00 AM	\$1.05	\$1.10	\$3.79	\$4.04	\$1.05	\$1.10	\$3.79	\$4.04
6:00 AM-6:45 AM	\$1.05	\$1.10	\$3.79	\$4.04	\$1.05	\$1.10	\$3.79	\$4.04
6:45 AM-7:15 AM	\$1.05	\$1.10	\$3.79	\$4.04	\$1.30	\$1.35	\$4.22	\$4.49
7:15 AM-8:15 AM	\$1.05	\$1.10	\$3.79	\$4.04	\$2.35	\$2.50	\$5.89	\$6.27
8:15 AM-8:45 AM	\$1.05	\$1.10	\$3.79	\$4.04	\$1.55	\$1.65	\$4.64	\$4.94
8:45 AM-10:00 AM	\$1.05	\$1.10	\$3.79	\$4.04	\$1.30	\$1.35	\$4.22	\$4.49
10:00 AM-12:00 PM	\$1.05	\$1.10	\$3.79	\$4.04	\$1.05	\$1.10	\$3.79	\$4.04
12:00 PM-3:00 PM	\$1.05	\$1.10	\$3.79	\$4.04	\$1.05	\$1.10	\$3.79	\$4.04
3:00 PM-3:30 PM	\$1.30	\$1.35	\$4.22	\$4.49	\$1.05	\$1.10	\$3.79	\$4.04
3:30 PM-4:30 PM	\$1.55	\$1.65	\$4.64	\$4.94	\$1.05	\$1.10	\$3.79	\$4.04
4:30 PM-6:00 PM	\$3.15	\$3.35	\$7.15	\$7.61	\$1.05	\$1.10	\$3.79	\$4.04
6:00 PM-8:00 PM	\$1.30	\$1.35	\$4.22	\$4.49	\$1.05	\$1.10	\$3.79	\$4.04
8:00 PM-5:00 AM	\$1.05	\$1.10	\$3.79	\$4.04	\$1.05	\$1.10	\$3.79	\$4.04
Weekend	\$1.30	\$1.35	\$4.22	\$4.49	\$1.30	\$1.35	\$4.22	\$4.49

**Appendix 2** shows a comparison of maximum toll rate per mile for all tolled roadways operating in the United States, including I-25 North Express Lanes.

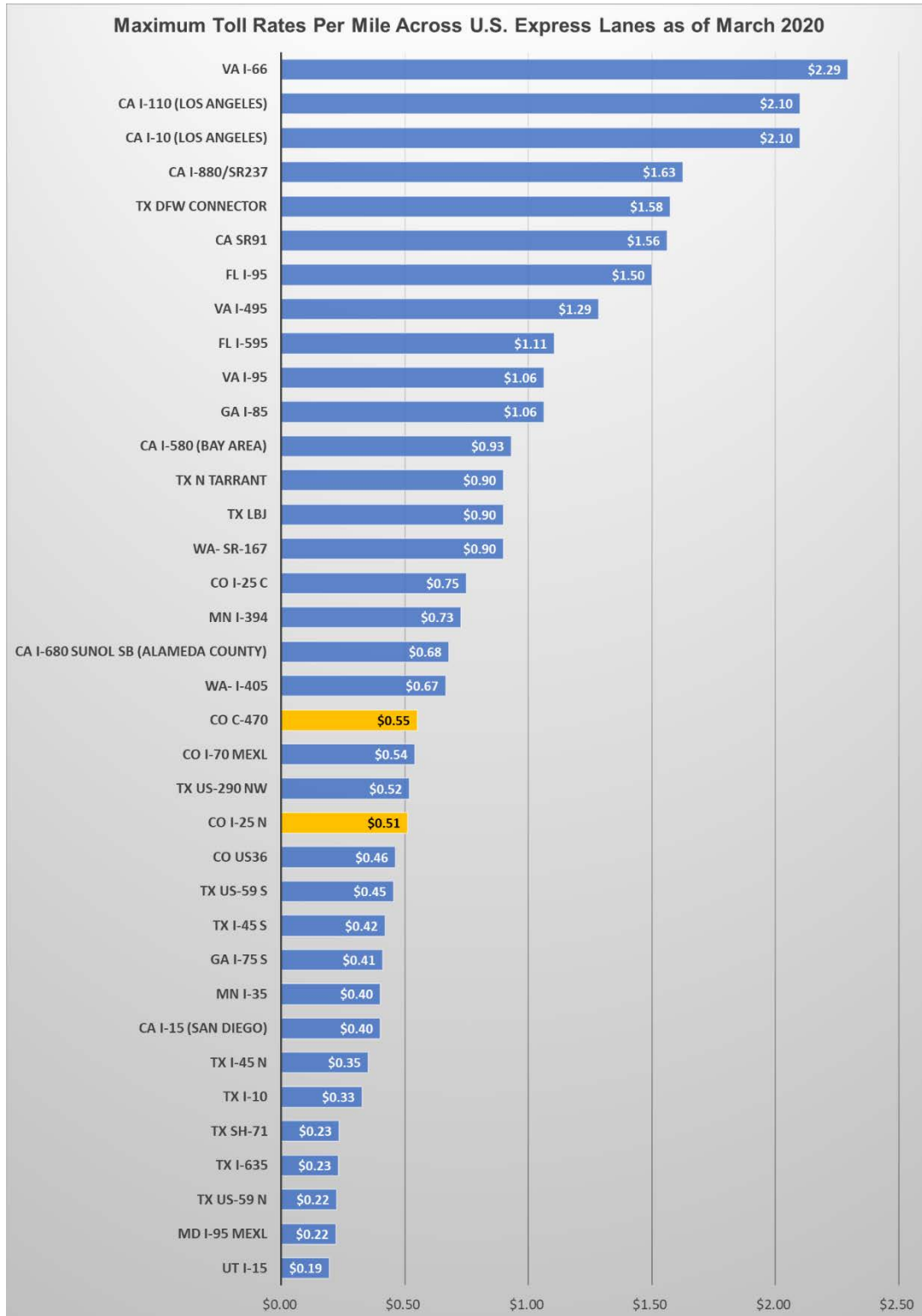


## APPENDIX 1: Toll Rate Increase Flowchart





## APPENDIX 2: Toll Rates Per Mile



# Attachment C

Resolution #328 Approving a Proposed Toll Schedule for I-25 North Segment 2