

Resolution – HPTE #184

Approving Toll Rate Range for the I-70 Mountain Express Lane (I-70 Peak Period Shoulder Lane) Project

WHEREAS, pursuant to Section 43-4-806, *et seq.*, C.R.S., the General Assembly of the State of Colorado created the Colorado High Performance Transportation Enterprise (“HPTE”) as a government-owned business within the Colorado Department of Transportation (“CDOT”) to pursue innovative means of more efficiently financing important surface transportation projects that will improve the safety, capacity, and accessibility of the surface transportation system; and

WHEREAS, such innovative means of financing projects include, but are not limited to, public-private partnerships, operating concession agreements, user fee-based project financing, and availability payment and design-build contracting; and

WHEREAS, pursuant to Section 43-4-806(2)(c)(I), C.R.S., the Board of the HPTE (the “Board”) has the authority to establish user fees for the privilege of using surface transportation infrastructure; and

WHEREAS, pursuant to Section 43-4-808(3)(b), C.R.S., HPTE may incorporate congestion management and congestion pricing into its schedule of user fees; and

WHEREAS, HPTE, in partnership with CDOT, is currently undertaking the I-70 Mountain Express Lane Project (formerly known as the I-70 Peak Period Shoulder Lane Project) in the I-70 Mountain Corridor, located along a 13-mile segment of eastbound I-70 within CDOT’s existing right-of-way (the “Project”); and

WHEREAS, the Project consists of widening an existing shoulder, which will be operated as a tolled express lane during peak travel periods, in order to improve travel times, enhance recent improvements made to the Veterans Memorial Tunnels, provide travelers with a choice of a new travel lane, and manage congestion in the I-70 Mountain Corridor; and

WHEREAS, the Project will be the first tolled operation in the nation focused exclusively on a recreational corridor, so there is little comparable data available for setting initial toll rates for the Project; and

WHEREAS, traffic volumes in the corridor are known to fluctuate rapidly, increasing by as much as 200-300% over a period of 2-3 hours, and as a result, the Board desires to permit a high level of flexibility to adjust user fee rates within the approved range to most effectively manage congestion based on real-time conditions; and

WHEREAS, the Board has reviewed the range of user fee rates proposed for the Project, attached hereto and incorporated herein as **Exhibit A** (the “Toll Rate Range”), and based on the information presently available, considers the Toll Rate Range to be reasonable and appropriate.

NOW THEREFORE BE IT RESOLVED, the Board of the HPTE hereby approves and adopts the proposed range of user fee rates for the I-70 Mountain Express Lane Project set forth in the Toll Rate Range attached to this Resolution, and authorizes HPTE staff and consultants to adjust user fee rates on the Project upward from the minimum rate provided in the Toll Rate Range as reasonably necessary to manage congestion based on real-time conditions in the I-70 Mountain Corridor, while ensuring reliable travel times for toll-paying customers.

Signed as of October 14, 2015

Kari V. Grant
Interim Secretary, HPTE Board

**Exhibit A to HPTE Resolution #184
(Toll Rate Range)**

ExpressToll Transponder Rate	License Plate Toll @ 35% Surcharge not to exceed \$10.00	LPT Pricing Difference
\$3.00	\$4.05	\$1.05
\$4.00	\$5.40	\$1.40
\$5.00	\$6.75	\$1.75
\$6.00	\$8.10	\$2.10
\$7.00	\$9.45	\$2.45
\$8.00	\$10.80	\$2.80
\$9.00	\$12.15	\$3.15
\$10.00	\$13.50	\$3.50
\$11.00	\$14.85	\$3.85
\$12.00	\$16.20	\$4.20
\$13.00	\$17.55	\$4.55
\$14.00	\$18.90	\$4.90
\$15.00	\$20.25	\$5.25
\$16.00	\$21.60	\$5.60
\$17.00	\$22.95	\$5.95
\$18.00	\$24.30	\$6.30
\$19.00	\$25.65	\$6.65
\$20.00	\$27.00	\$7.00
\$21.00	\$28.35	\$7.35
\$22.00	\$29.70	\$7.70
\$23.00	\$31.05	\$8.05
\$24.00	\$32.40	\$8.40
\$25.00	\$33.75	\$8.75
\$26.00	\$35.10	\$9.10
\$27.00	\$36.45	\$9.45
\$28.00	\$37.80	\$9.80
\$29.00	\$39.00	\$10.00
\$30.00	\$40.00	\$10.00



Date: October 8, 2015

To: High Performance Transportation Enterprise Board

From: Brent E. Butzin, HPTE General Counsel
Joe Mahoney, OMPD

Subject: I-70 Mountain Express Lane (PPSL) Toll Rate Ranges

Purpose

The purpose of this memorandum is to summarize staff's planned approach for variable toll rates for the I-70 Mountain Express Lane (PPSL), and request Board approval of the attached toll rate schedule.

Action

This item is for discussion and approval. The toll rate range for the I-70 PPSL as stated was presented at public outreach events in September. The purpose of the range of rates and how the toll rate range effects operations were the primary questions received in the public forums. The amount of the toll rate was generally accepted.

Background

I-70 Mountain Express lane (PPSL) is expected to open for tolled traffic in December 2015. The I-70 Mountain Express lane will be the first toll operation in the nation focused exclusively on a recreational corridor. The information that has been collected historically concerning the value of time for travelers, which is used as a basis for setting toll rates, comes mostly from commuter corridor surveys. So there is little comparable data available for setting initial toll rates for the PPSL, or for predicting the flexibility required for adjusting toll rates over the course of a day of operations.

Details

HPTE's consultants recommend setting a base toll rate sufficient to cover toll collection costs, but low enough to attract initial customers to the toll lane, even when traffic in the general purpose lanes is relatively light and the corridor is free flowing. Given the unique travel characteristics of the I-70 Mountain Corridor, traffic volumes can increase by 200% to 300% over a period of 2-3 hours. As a result, PPSL operations will require a high level of flexibility to adjust toll rates, as an increased toll rate is the sole mechanism available to better ensure a reliable through-trip for the toll-paying customer.

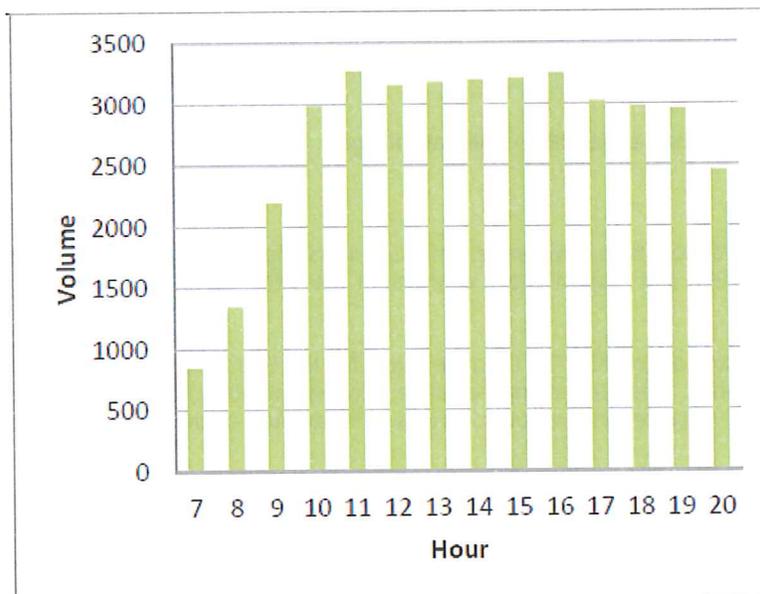
To allow for this flexibility, staff is recommending the establishment of an open toll rate range for the PPSL. Actual toll rate changes will be based on traffic volume in the corridor as compared to volumes being experienced upstream at the Eisenhower Johnson Memorial Tunnel and US 40 Empire (An example of the decision process is outlined in Table 1 Attached). Staff is finalizing guiding metrics and triggers for PPSL operations to use in determining when adjustments to toll rates (increase and decrease) within the approved range should be implemented.

Under this approach, the Board is being asked to approve a minimum and maximum transponder toll and License Plate Toll (LPT) Rate. The toll would be subject to adjustment by PPSL operations to maintain target operational speeds for traffic in the PPSL. Real-time travel speeds in the PPSL will be monitored by PPSL operations. The specific toll rate ranges to be recommended by staff and HPTE's consultants suggests a toll rate range from a minimum toll of \$3.00 at initial opening to a maximum toll of \$30.00 (at the automated transponder rate). The HPTE has established guidelines for calculating a LPT rate. Based upon these guidelines it is recommended that the LPT rate be set at the transponder rate in effect plus a surcharge of 35% not exceed \$10.00. (See Table 2 Attached)

It is also the above-signed attorney's opinion as counsel to HPTE that the Board is legally permitted to approve an open toll range that will allow staff to adjust toll rates based on real-time corridor conditions. Particularly, Section 43-4-808(3)(b), C.R.S. authorizes HPTE to incorporate congestion pricing into a schedule of user fees imposed by the enterprise.

Table 1 – Example Decision Process to Effect a Change in Toll Rate

Toll rate changes are dependent on overall volume in the corridor. The posted speed limit in the corridor is 55 mph. Historically corridor approximate speeds and corresponding volumes are as follows: 2,000 vehicle per hour (vph) at 50 mph / 2,500 vph at 20 mph / 3,000 vph at 5 - 10 mph. Traffic Demand Management and a reliable trip to the toll customer are the primary objectives for the corridor. The graph below shows how corridor volumes build very quickly.



Data Source: CDOT Twin Tunnels ATR

The following table outlines how GP Lanes and the Express lane interact and how toll pricing allows greater corridor volumes while ensuring a reliable trip for the toll customer.

Tolling Scenarios							
<i>Stated Time of Day is for Example Only.</i>							
<i>Actual Times Vary Greatly Depending on Volume in the Corridor</i>							
Scenario 1: Day with Typical Volumes							
Time	Volume in 2 GP lanes	GP Lane Speed	Express Lane Volume	Express Lane Speed	Total Volume in Corridor	Action	Toll Rate
8:00 AM	500	55	0	0	500	Express Lane - Closed	\$0.00
9:00 AM	750	55	0	0	750	Open Express Lane	\$3.00
10:00 AM	1,800	40	400	55	2,200	Increase Toll	\$8.00
11:00 AM	2,400	30	600	45	3,000	Increase Toll	\$13.00
12:00 PM	2,500	25	800	45	3,300		\$13.00
1:00 PM	2,600	25	700	45	3,300		\$13.00
2:00 PM	2,700	20	650	45	3,350	Increase Toll	\$18.00
3:00 PM	2,600	25	700	45	3,300		\$18.00
4:00 PM	2,700	20	800	45	3,500		\$18.00
5:00 PM	2,550	25	500	45	3,050	Decrease Toll	\$13.00
6:00 PM	2,000	45	300	55	2,300	Decrease Toll	\$8.00
7:00 PM	1,750	40	300	55	2,050	Decrease Toll	\$4.00
8:00 PM	1,500	55	0	0	1,500	Express Lane - Closed	\$0.00

Table 2 – Recommended Range for Toll rates

ExpressToll Transponder Rate	License Plate Toll @ 35% Surcharge not to exceed \$10.00	LPT Pricing Difference
\$3.00	\$4.05	\$1.05
\$4.00	\$5.40	\$1.40
\$5.00	\$6.75	\$1.75
\$6.00	\$8.10	\$2.10
\$7.00	\$9.45	\$2.45
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\$10.00	\$13.50	\$3.50
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