



# **I-405 / SR 167 Express Toll Lanes Low-Income Toll Study**

## ***Project Update – Introduction***

**Carl See**

Deputy Director

Washington State Transportation Commission

# I-405 / SR 167 Express Toll Lanes Low-Income Toll Study

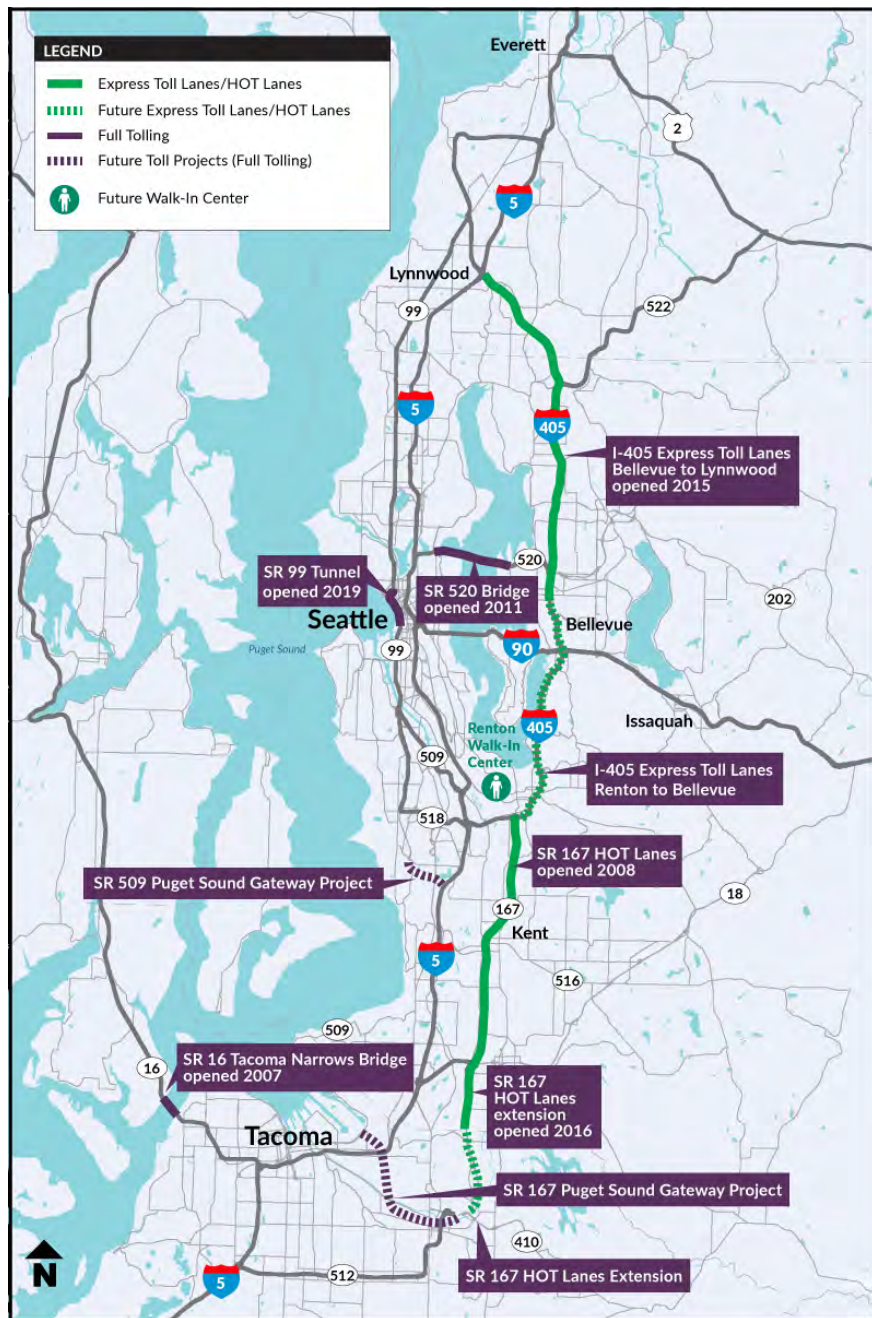
- The Legislature directed the WSTC to undertake the study in the 2019 Legislative session. A final report is due by June 2021.
- The study is to assess the impacts of tolling on low-income drivers of the I-405/ SR 167 ETLs and recommend possible approaches to mitigating such impacts.



# I-405 / SR 167 Express Toll Lanes Low-Income Toll Study

- This study includes the following:
  - National scan of implemented and considered low-income tolling programs.
  - Research of existing capacities for implementing a low-income toll program for the facilities, and of existing financial and performance commitments.
  - Assessment of low-income populations who use the I-405 / SR 167 ETL facilities, and their potential benefits / challenges from a low-income toll program.
  - Survey of low-income residents in King, Pierce, and Snohomish counties about proposed discount options and use of the I-405 and SR 167 corridors.
  - Evaluation of impacts on tolling policies, traffic performance, revenues, costs, operations, and enforcement.
  - Final report with recommendations to the Legislature.





# I-405 / SR 167 Express Toll Lanes

- Express Toll Lanes (ETLs) include two of the five existing state toll facilities.
- I-405 ETLs opened in 2015 from Bellevue to Lynnwood.
- SR 167 HOT lanes / ETLs opened in 2008 from Renton to Auburn, with southern extension opening in 2016.
- By about 2025, ETLs will be extended on I-405 from Bellevue to Renton and on SR 167 to Puyallup, creating about 50 mile ETL corridor.

# I-405 / SR 167 Express Toll Lanes

- Toll Rates
  - Change dynamically based on congestion, with intent to keep traffic flowing smoothly.
  - In effect 5am-7pm each weekday on I-405 ETLs and from 5am-7pm daily on SR 167 HOT lanes, except for designated holidays.
  - Range between \$0.75 – \$10.00 on I-405; \$0.50 – 9.00 on SR 167.
  - Average peak period/peak direction toll rates (Dec 2019):
    - \$4.80 on I-405; \$4.54 on SR 167
- HOV Policies
  - I-405: HOV 3+ are toll-free at all times, while 2+ are toll-free only during off-peak hours (weekends and 9am-3pm on weekdays).
  - SR 167: HOV 2+ are toll-free at all times.



# Study Milestones



- Jan/Feb 2020: Begin research and assessment of low-income programs.
- May 2020: Status report to WSTC.
- July 2020: Mid-Study status report by consultants.
- October 2020: Selection criteria presented to WSTC for input.
- November 2020: Proposed program options presented to WSTC.
- **Dec 2020 / Jan 2021: WSTC selects toll program options for further consideration.**
- Winter / Spring 2021: Update to Legislature and presentation of preliminary report to WSTC.
- June 2021: Final Report presented to WSTC and Legislature.

# Low-Income Toll Program Study for I-405 & SR 167 Express Toll Lanes

Presented to:



## Program Option Selection for Further Evaluation

*Gabor Debreczeni, Project Manager, WSP*

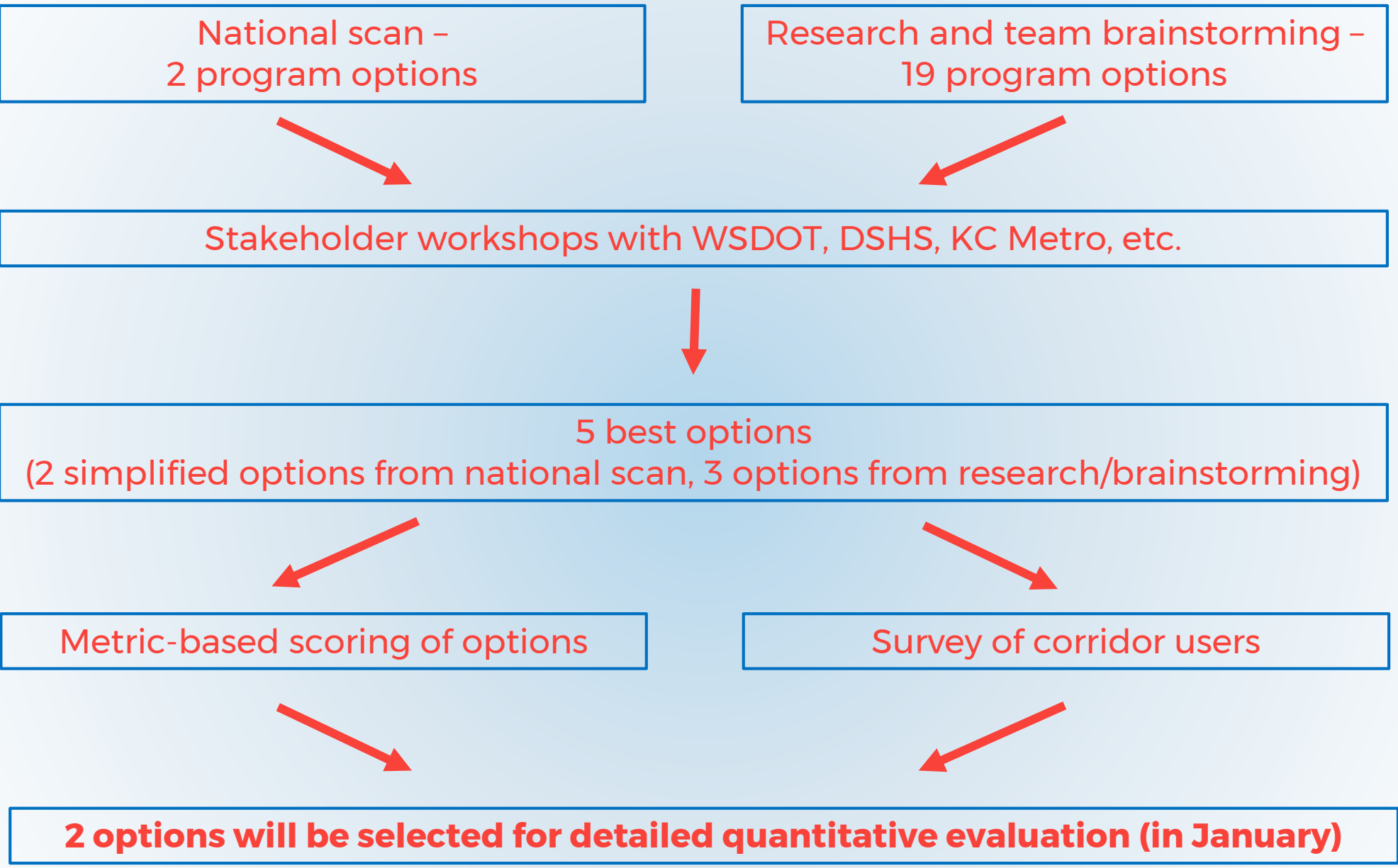
January 19<sup>th</sup>, 2021



- This study evaluates “discounted tolls and other similar programs for low-income drivers” on the I-405 and SR 167 corridors, considering the benefits and detriments of such programs to low-income drivers, other corridors users, other local residents, and the potential implementing agencies of such a program.



**Program  
Options  
Selection  
Process**



- **Helping low-income users of the corridor gain more benefit (time savings and reliability) from having the ETL infrastructure available to them**
- Supports meeting equity considerations in state tolling policy guidelines (RCW 47.56.830).
- Recommended standard program components support value by:
  - making the tolling program more accessible, more broadly understandable, and by creating a feedback loop to ensure it's working well for the users
- Discount toll options aim to achieve this value in different ways
- Scoring metrics used in part to evaluate program options consider different facets of providing this value, and broader considerations such as impact on ETL operations, program costs and feasibility

**Data  
Relevant to  
Low-Income  
User  
Behavior**

Source	Notes
Interviews with local agencies (DSHS, King County Metro, etc.)	<ul style="list-style-type: none"> <li>• Even discounted transportation costs can be a barrier to low-income users.</li> <li>• Expect more uptake for program that allows some free travel.</li> </ul>
Washington State Transportation Center study: <i>“I-405 Express Toll Lanes: Usage, Benefits, and Equity”</i>	<ul style="list-style-type: none"> <li>• Higher-income users use the facility more often, but do not make up a majority of users.</li> <li>• Low-income users disproportionately use the express lanes when tolls and time savings are high. As such, raising the minimum toll would not have a significant low-income equity impact.</li> <li>• Low-income users benefit more per trip, high-income users benefit more overall.</li> </ul>
Observed experience from existing programs and ETL corridors (CA, GA, VA, TX)	<ul style="list-style-type: none"> <li>• Greater benefit leads to greater enrollment.</li> <li>• Very limited enrollment if rewards are low.</li> <li>• Cash transactions are popular, and required account balances and automatic reloading can be significant issues for low-income users.</li> <li>• Program promotion in low-income communities (i.e. festivals, etc.) works well.</li> <li>• Most users of the corridor use the ETLs at least occasionally for high-value trips.</li> </ul>
Socioeconomic research done for this project	<ul style="list-style-type: none"> <li>• Low-income families’ residences are clustered primarily at the northern end of the I-405 ETL corridor, and through the middle of the SR 167 ETL corridor.</li> <li>• These areas also have lower transaction density on the ETLs.</li> </ul>



- Survey sent to 20,629 residents in King, Snohomish, and Pierce counties living near the ETL corridors.
  - 197 completed surveys, and 71 completed surveys from users below our income threshold (200% of the FPL).
- Most-preferred discount options: fixed number of free toll trips or lower maximum toll, then fixed toll credit.
  - Significantly helpful input into program option selection process.
- Respondents diverse in terms of how often they use the corridor, why, and when (with a lean toward peak times).
- About 20% never use the ETLs.

- The metrics were presented to the Commission in October, and were adjusted based on feedback from the Commission and various stakeholders.
- Selected from research of equity toolkits, interviews with program implementers, workshops with local stakeholders, and research of financial & operational considerations.
- Some metrics represent tradeoffs (i.e. benefits vs. costs).

<b>User Benefit</b>
Net \$ benefit per household, for low-income corridor users
Decrease in how regressive tolls are for low-income users of the ETLs
Free or very low cost availability of reliable trip for infrequent high-value trips, e.g. medical or childcare
Share of time savings by low-income travelers
Ease of payment of tolls (i.e. varying methods of payment)
Burden to low-income users due to account minimums and automatic reloading
<b>Operational Impact</b>
Increase in generalized cost of travel (tolls + time) for current non-low-income users of the ETLs
Express lanes travel speeds (for both drivers and transit vehicle performance)
Other operational impact on ETLs

<b>Other Feasibility</b>
Program sustainability
Easily explained to decision-making stakeholders and eventual participants
Are the stakeholders (legislature, implementing agencies, etc.) likely to support this option?
<b>Program Cost</b>
Reduction in total toll payments as a result of the program
Cost of program implementation (excl. toll impact and incl. temporary or permanent staff needs for enrollment)
Ease of program operation for implementing agency(s)
Operational impact re: fraud and abuse
Is the program supported by, or planned for, within current systems?

- User benefit: generally higher scores for higher benefit levels, research and interviews conducted early in project useful for determining user benefit expectations
- Operational impact: generally lower scores for more users expected, especially at max-toll times
- Other Feasibility: a variety of metrics under this category so each metric considered independently
- Program cost: used input from stakeholder workshop and financial/operational research to understand expectations of the cost of implementing different options

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Program sustainability
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<b>Program Cost</b>
Reduction in total toll payments as a result of the program
Cost of program implementation (excl. toll impact and incl. temporary or permanent staff needs for enrollment)
Ease of program operation for implementing agency(s)
Operational impact re: fraud and abuse
Is the program supported by, or planned for, within current systems?

## **Legislative Direction on Study Elements**

The transportation commission shall, at a minimum, consider the following issues when conducting the study of discounted tolls and other similar programs for low-income drivers:

- (i) The benefits, requirements, and any potential detriments to the users of a program;
- (ii) The most cost-effective way to implement a program given existing financial commitments, shared cost requirements across facilities, and technical requirements to execute and maintain a program;
- (iii) The implications of a program for tolling policies, revenues, costs, operations, and enforcement; and
- (iv) Any implications to tolled facilities based on the type of tolling implemented on a particular facility.

**Metrics Alignment with Study Elements**

Legislatively Required Study Elements	Study Metrics Assessment & Anticipated Follow-Up
<p>The benefits, requirements, and any potential detriments to the users of a program</p>	<ul style="list-style-type: none"> <li>• <b>User Benefit:</b> assessment of potential user benefits from program.</li> <li>• <i>Follow-up: Additional engagement opportunities will be sought as study continues.</i></li> </ul>
<p>The most cost-effective way to implement a program given existing financial commitments, shared cost requirements across facilities, and technical requirements to execute and maintain a program</p>	<ul style="list-style-type: none"> <li>• <b>Program Cost:</b> assessment of program implementation and operations costs.</li> <li>• <i>Follow-up: Further comparison of cost-effectiveness for final two options.</i></li> </ul>
<p>The implications of a program for tolling policies, revenues, costs, operations, and enforcement</p>	<ul style="list-style-type: none"> <li>• <b>Operational Impact:</b> assessment of impacts on toll rates, travel time and other operational impacts.</li> <li>• <b>Program Costs:</b> assessment of program implementation and operations costs.</li> <li>• <i>Follow-up: Deeper assessment of traffic and revenues and costs for final two options</i></li> </ul>
<p>Any implications to tolled facilities based on the type of tolling implemented on a particular facility.</p>	<ul style="list-style-type: none"> <li>• <b>Other Feasibility:</b> included assessment of program sustainability and stakeholder understanding</li> <li>• <i>Follow-up: Discussion on capacity to expand to other facilities included in final report.</i></li> </ul>



## **Standard Program Components - Proposed Recommendation**

- We recommend that beyond the discount component being chosen, the low-income toll program contain the following:

### **Proposed Standard Program Components**

Provide a **free Good To Go! pass** to program users

The program to have an **advisory panel**, including low-income users of the program, that is diverse with regard to race, geography of residence, age and gender

The program documentation to be available in all primary languages for the region, with live **translation** available for other languages used in region

Program information to be shown in **visual formats** as much as possible

The entire enrollment process (physical and remote) to be **accommodating for users with disabilities**

Physical program enrollment locations to be broadly **geographically accessible**

## Toll Discount Component of Program

### Options

Type	Benefit	Objective
<b>Percentage discount</b>	<ul style="list-style-type: none"> <li>• 25% discount</li> <li>• 50% discount</li> <li>• 75% discount</li> </ul>	Mostly benefit low-income users who are regular commuters during peak times.
<b>Fixed discount</b>	<ul style="list-style-type: none"> <li>• \$0.50 discount per trip</li> <li>• \$2.00 discount per trip</li> <li>• \$5.00 discount per trip</li> </ul>	Mostly benefit low-income users who travel at off-peak times, and those who make short ETL trips.
<b>Fixed toll credit (per month, etc.)</b>	<ul style="list-style-type: none"> <li>• 50% of average amount spent on ETLs by all users</li> <li>• 100% of average</li> <li>• 150% of average</li> </ul>	Allows users choice of whether they would use program for occasional high-cost trips, or a larger number of low-cost trips.
<b>Fixed number of free toll trips (per month, etc.)</b>	<ul style="list-style-type: none"> <li>• Three free trips monthly</li> <li>• Ten free trips monthly</li> <li>• Twenty free trips monthly</li> </ul>	Program would encourage use of ETLs for infrequent high-value trips (medical, childcare, late to work, etc.)
<b>Lower maximum toll</b>	<ul style="list-style-type: none"> <li>• 25% lower maximum</li> <li>• 50% lower maximum</li> <li>• 75% lower maximum</li> </ul>	Allows low-income users to plan to use ETLs with greater frequency during peak times.

# Metric Scoring and Survey Results

## Comparison of score results and survey results for each discount toll option

Metric Type:		Score	Score Level	Survey Preference		User Benefit	Operational Impact	Other Feasibility	Program Cost
Metric Weight:						35%	9%	26%	30%
Program Type	Benefit Level								
Percentage discount	25%	50%	Medium	Low		Low	Medium	High	Medium
	50%	57%				Medium	Large	High	Medium
	75%	53%				High	Large	High	Large
Fixed discount	Up to \$0.50 per trip	58%	Medium	Low		Low	Small	High	Small
	Up to \$2.00 per trip	59%				Medium	Small	High	Small
	Up to \$5.00 per trip	56%				High	Large	High	Medium
Fixed toll credit	50% of avg.	62%	High	Medium		Medium	Small	High	Small
	100% of avg.	67%				High	Medium	High	Medium
	150% of avg.	63%				High	Large	High	Large
Fixed number of free toll trips	3 per month	64%	High	High		Medium	Small	High	Small
	10 per month	66%				High	Medium	High	Small
	20 per month	66%				High	Large	High	Medium
Lower maximum toll	25% lower	35%	Low	High		Low	Medium	Medium	Medium
	50% lower	30%				Low	Medium	Medium	Medium
	75% lower	33%				Medium	Large	Medium	Large

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Percentage discount	25%	50%	Medium	Low		Low	Medium	High	Medium
	50%	57%				Medium	Large	High	Medium
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Fixed discount	Up to \$0.50 per trip	58%	Medium	Low		Low	Small	High	Small
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	Up to \$5.00 per trip	56%				High	Large	High	Medium
Fixed toll credit	50% of avg.	62%				Medium	Small	High	Small
	100% of avg.	67%	High	Medium		High	Medium	High	Medium
	150% of avg.	63%				High	Large	High	Large
Fixed number of free toll trips	3 per month	64%				Medium	Small	High	Small
	10 per month	66%	High	High		High	Medium	High	Small
	20 per month	66%				High	Large	High	Medium
Lower maximum toll	25% lower	35%	Low	High		Low	Medium	Medium	Medium
	50% lower	30%				Low	Medium	Medium	Medium
	75% lower	33%				Medium	Large	Medium	Large

- We recommend the Commission approve moving forward with a detailed quantitative evaluation of the following two discount toll options paired with the standard program components:
  - **A toll credit equal to the tolls paid by the average ETL user**
    - Highest-scoring option via the scoring metrics
    - Very flexible: allows users choice of whether they would use program for occasional high-cost trips, or a larger number of low-cost trips
    - Some precedent for this: MnDOT selected option for their prospective program
  - **10 free ETL trips per month**
    - Most-preferred option in the survey
    - Program would encourage use of ETLs for infrequent high-value trips (medical, childcare, late to work, etc.)
    - The University of Washington study found that only 3.3% of ETL users used the ETLs more than 10 times per month
    - Would not include HOV trips that are already free

**The Value  
We're  
Seeking to  
Provide**

- **Helping low-income users of the corridor gain more benefit (time savings and reliability) from having the ETL infrastructure available to them**
- Both recommended discount toll options provide the benefit of being able to use the lanes for free a certain number of times – they just count differently
  - A toll credit equal to the tolls paid by the average ETL user
  - 10 free ETL trips per month
- A powerful feature of both is that ***the users can make the decision of when the ETLs are most valuable for them – they know their own lives and needs best***
- The suggested standard program components (free transponders, advisory board, etc.) also support the value goal listed above
- **Now: Commission discussion and decision.**

- The forthcoming quantitative evaluation will encompass, for each selected option:
  - Estimation of the number of program users
  - Estimation of costs (toll revenue and otherwise)
    - Incl. continued coordination with WSDOT
  - Operational impacts to ETLs

Thank you! Questions or comments?

WSP USA

