

I-405 Express Toll Lanes Public Meetings

Answers to questions posed by the public during the 2015 public input process

Questions from February 3, 2015 (by Topic)

Carpool Exemption

- 1) **Question: Why must we comply with federal standards regarding the performance of 45 mph 90% of peak time? Why are you forcing people (2+ carpools) out of the HOV lane to meet a federal requirement?**

Answer: The 45 miles per hour requirement is a federal requirement, and the Washington State Legislative direction which authorized express toll lanes on I-405, RCW 47.56.880, also requires that the express toll lanes operate at 45 miles per hour 90 percent of the time. Both federal and state law require WSDOT to report annually on compliance with this standard. The 45 mph requirement is based on the fact that the most efficient speed to maximize vehicle throughput in a lane is between 45 and 50 mph. If the facility does not perform to that standard, federal law requires it be brought into compliance within 180 days or the state could face “program sanctions” amounting to a loss in federal funding.

Due to the heavy use of HOV lanes, they are no longer performing to federal and state required standards. In order to conform to standards, we need to be able to change the carpool definition to 3 or more people all of the time or manage the lanes to allow 2-person carpools into them during off peak hours and allow vehicles with less than 3 persons during peak hours to buy their way into the lanes in such a way as to maintain the 45 mph speed objective. While the standards are important, they exist because of an engineering reality: when a lane operates beyond its capacity, not only are speeds reduced – but fewer vehicles per hour will get through.

WSDOT will manage the demand on the express toll lanes to meet performance standards through pricing. The rates will be set to keep vehicles and people moving through the corridor. When traffic gets to a stop and go situation, which often occurs in the HOV lanes, it takes longer to recover and get lanes moving again. By managing the demand through pricing you can regulate the number of users and keep that lane moving which will ultimately move more cars and people through the corridor. Moving more cars efficiently through the express toll lanes benefits the general purpose lane as well during the peak and shoulder periods - when you need the system to operate as efficiently as possible.

- 2) **Question: Explain how pricing 2+ carpools out of the HOV and allowing SOV's to access the lane, will improve throughput/congestion?**

See answer to questions #1, above.

- 3) **Question: Has the Commission looked at the number of 2+ HOVs that will move out of that lane and further clog the general purpose lanes?**

Answer: Yes. Extensive modeling has been done on this concept including two traffic and revenue studies by one of the few nationally recognized tolling firms. In the northern single lane section during the peak of the peak, we estimate that 150-300 two-person carpools will be shifted to the regular lanes or adjust their travel time as they choose not to pay a toll. However, during the entire peak period, we expect a much greater number of vehicles choosing to move out of the regular lanes and into the

express toll lanes for a more reliable trip, resulting in a net reduction in traffic in the regular lanes. Keep in mind that a ramp up period will occur when the lanes first open. It will take drivers at least some time to get used to the new lanes and how they work.

Studies concluded that the 2+ carpool free option did not meet traffic performance requirements or revenue requirements. Roughly half of the 17-mile express toll lane system will be one lane as the existing HOV lane between Bothell and Lynnwood will be converted to a single express toll lane to complete a 17-mile express toll lane system. WSDOT is not adding any new capacity between Bothell and Lynnwood. Keeping the 2+ carpool requirement on this portion of the system at all times would mean the express toll lane would continue to be congested like it is today. Currently, HOV lane speeds are below 45 miles per hour more than 200 days a year.

Dynamic pricing on the express toll lanes work to operate the lanes more efficiently than they are today. As the express toll lanes attract drivers for a reliable trip, space in the regular lanes opens up, making them work more efficiently, and improving the overall performance of the corridor. Per the legislative requirement authorizing tolls, express toll lanes must keep traffic moving at least 45 miles per hour 90 percent of the time and generate enough revenue to pay for operating costs. Keeping the carpool definition at 2+ would not allow WSDOT to meet this performance or revenue metric.

4) **Question: Why not have tiered toll rates for 2+ and for 3+ carpools?**

Answer: We discussed that alternative but it would have required a 3 position switchable transponder which isn't yet available with the *Good To Go!* technology and would have made the carpool occupancy more difficult to enforce. This new concept is being tested in Los Angeles on their express toll lanes and will be monitored and reviewed for consideration in Washington state.

5) **Question: How many transponder owners actually use SR167, as a comparison for projected use of I405?**

Answer: In FY 2014, on an average day, 15 percent of vehicles in the SR 167 HOT lanes were toll paying customers using a *Good To Go!* transponder (85 percent traveling toll free). The percentage share of transponder usage increased during peak hours with 28 percent using the HOT lane northbound in the morning and 20 percent southbound in the afternoon (72 percent and 80 percent traveling toll free, respectively).

On the I-405 express toll lanes, carpools wishing to travel toll-free will need to declare themselves in carpool status via the switchable Flex Pass transponder. Modeling predicts that more than 40 percent of users in the initial years are predicted to be toll-free carpools traveling with a Flex Pass (compared to 72-85 percent on SR 167). The remainder will be toll paying customers. Of all vehicles traveling in the express toll lanes, approximately 96 percent will have a *Good To Go!* transponder of some kind, including the Flex Pass, with the remaining approximately 4 percent of users paying the toll as Pay By Mail customers.

Enforcement

6) **Question: How will the Washington State Patrol enforce the 3+ carpool rule during peak times without creating additional congestion?**

Answer: Proper enforcement is critical to the success of express toll lanes. WSDOT has designated shoulder areas along the side of the roadway to allow officers to safely enforce the lanes. When the

project opens, there will be increased enforcement present to ensure people are using the lanes properly - i.e. checking for the right number of people in a vehicle with a Flex Pass set to the HOV mode, as well as ensuring that drivers are using the designated access points (not crossing the double white lines). A beacon above each toll point will assist the troopers in identifying vehicles that are utilizing a Flex Pass in the HOV mode. WSDOT is working with Washington State Patrol to develop specific enforcement procedures that will have least impact on traffic.

7) **Question: How will the express toll lane system control 3+ carpools?**

Answer: Occupancy requirements for HOVs using the I-405 express toll lanes will be displayed on signs above the lanes and will be enforced in the same way as it is for the SR 167 HOT Lanes. The Washington State Patrol provides enforcement for the SR 167 HOT lanes by inspecting the number of occupants in the vehicle as it passes the patrol car.

In order to be recognized by the tolling system as exempt from tolls, valid carpools will need to declare themselves as a carpool using a *Good To Go!* Flex Pass set to HOV mode. This new pass is not yet available but will be on sale later this year before the new lanes open.

Traffic Diversion

8) **Question: Is local diversion anticipated because of the 3+/2+ carpool exemptions? And, if so, what is the plan to accommodate it?**

Answer: Local diversion is not expected with the change in carpool requirement to receive a toll exemption. WSDOT will monitor the express toll lanes and local roads after the system is open to track whether diversion occurs. The express toll lanes are expected to attract rather than divert traffic from local streets by optimizing throughput with the toll varying based on real time traffic demand.

9) **Question: There appears to be a lack of ability to collect tolls on the SR 520 Bridge, reducing tolls to 1/5 of what they should be. And we have seen 60% diversion. What is being done about it?**

Answer: SR 520 toll revenue is actually right on target to providing \$1.2 billion in funding to help pay for the bridge replacement. The vast majority of toll transactions (95 percent) are paid on time and WSDOT does pursue the remaining transactions through their enforcement program. SR 520 bridge traffic is about 30 percent below pre-toll levels and is tracking well to our forecasts. Some SR 520 travelers have diverted to other routes, or modified their travel schedules to take advantage of transit, teleworking and off-peak travel times. Others have chosen not to cross the lake at all

10) **Question: How much is diversion from SR 520 to I-90 impacting congestion on I-405?**

Answer: Traffic on northbound I-405 between I-90 and SR 520 increased by one percent and southbound increased four percent in early 2012 after tolling began on SR 520. As a reminder, SR 520 tolling has been in place more than three years and in that time, we've experienced growth in population and employment. The economy is returning and that has increased traffic throughout the region, not just I-405. This is not a surprise, in the years ahead, additional population the size of the city of Portland will be added to our region.

Financial

11) Question: Isn't this just another tax?

Answer: No, a toll is not a tax. Unlike taxes, which are generally applied broadly, tolls are a user fee charged only to those benefitting from the toll facility. Express toll lane users have the choice to pay the tolls if the benefits will have value to them, or to use the regular lanes for free. The I-405 express toll lanes project has two main goals: traffic management and revenue generation. Tolling is used as a method to manage traffic levels to get maximum productivity from the facility by balancing demand with capacity. Revenue from the I-405 express toll lanes will be placed in a special state treasury fund for use only on I-405 and will be able to be reinvested into future improvements to I-405.

12) Question: How many drivers does it take to use the ETL to make it break even?

Answer: There is a statutory requirement for the I-405 express toll lanes to break even at the end of two years (RCW 47.56.880). The forecasted traffic required to break even depends upon recently proposed policy decisions made by the Transportation Commission, specifically the minimum toll rate (\$0.75) and the carpool occupancy definition (3+ carpools free during peak hours, 2+ carpools free during off-peak hours). Under the current forecast reflecting these policies, the express toll lanes are expected to break even in the first year with approximately 3.7 million toll trips, or about 10,000 per day.

13) Question: How much should a driver plan to budget for using the ETL to/from work?

Answer: On the average day, peak period tolls are forecasted to vary from \$1 to \$4 per trip depending on exact time and distance traveled. On extreme traffic days, tolls will be higher.

However, I-405 express toll lanes are a choice. Drivers are not required to use them and therefore do not need to budget funds to use them. National studies have shown that most drivers do not use express toll lanes every day. They may have one trip a week where the benefits of a faster, more reliable trip for which they opt to use the express toll lanes is valuable to them. But because express toll lane use is a choice, every household will differ on when and how frequently they choose to use the lane.

SR 167 HOT lanes provide a local example of drivers choosing when they want to use the toll lane. Based on the 2014 Online User Survey Summary Report, 21 percent of drivers report using the HOT lanes at least once a week, and a third of drivers report using the lane less than once a month.

14) Question: Why does Scenario A (all carpools free) project a smaller loss (\$2.1 million) than Scenario B (\$1 carpool discount and projected loss of \$2.4 million)?

Answer: The January 2014 I-405/SR 167 Corridor Funding and Phasing Report looked at a number of different carpool scenarios on I-405 express toll lanes and the reported revenue projected for each. The difference in net revenue projections between the 2+ carpool free case (Scenario A) and carpool discount case (Scenario B) were largely attributed to the way costs are allocated to different types of trips taken on the express toll lanes. The analysis of the various tolling scenarios conducted in 2013 assigned different costs to the processing of different types of trips. Toll trips were allocated the full cost of toll collection by payment method. Toll-free HOV trips, by requiring a *Good To Go!* account and Flex Pass, were allocated less than the full cost of collection with the assumption that costs would be primarily limited to lower levels of customer service and account maintenance.

In Millions of dollars – Assumes Renton to Bellevue opens 1/1/2022

Fiscal Year	Scenario A — 2+ Carpool Free Photo Tolling*						Scenario B — \$1.00 Carpool Discount*					
	Toll Trips	Toll-Free Trips	Potential Gross Toll Revenue ¹	Adjusted Gross Toll Revenue ²	Less: Operations & Maintenance Costs ³	Net Toll Revenue (before R&R)	Full Toll Trips	Discount Toll Trips	Potential Gross Toll Revenue ¹	Adjusted Gross Toll Revenue ²	Less: Operations & Maintenance Costs ³	Net Toll Revenue (before R&R)
2016	2.4 M	7.8 M	\$2.8 M	\$2.6 M	(\$5.0 M)	(\$2.4 M)	3.1 M	10.2 M	\$3.9 M	\$3.3 M	(\$6.2 M)	(\$2.8 M)
2017	3.9	12.2	4.7	4.3	(6.4)	(2.1)	3.9	12.7	5.3	4.5	(6.9)	(2.4)
2018	4.5	13.7	5.6	5.2	(7.1)	(2.0)	4.3	14.1	6.3	5.3	(7.4)	(2.1)
2019	4.7	14.0	6.1	5.6	(7.3)	(1.7)	4.5	15.4	7.0	6.0	(7.8)	(1.8)
2020	4.9	14.1	6.6	6.1	(7.6)	(1.5)	4.6	16.8	7.9	6.7	(8.3)	(1.6)
2021	5.2	14.3	7.2	6.6	(8.0)	(1.4)	4.8	18.4	8.9	7.5	(9.0)	(1.5)
2022	10.4	28.3	22.0	20.2	(19.4)	0.9	10.5	28.5	35.7	30.4	(19.1)	11.3
2023	18.3	50.9	44.1	40.5	(27.5)	13.0	19.1	45.7	77.7	66.0	(25.9)	40.1

NOTES:

* CDM Smith traffic and revenue projections.

† Cambridge Systematics "50th Percentile" traffic and revenue projections.

¹ Year of collection dollars.

² Adjusted for potential uncollectible revenue. Excludes rebilling fees.

³ Includes facility O&M costs starting in FY 2022, plus toll collection costs and credit card fees in all years.

In the first year, the 2+ carpool free case (Scenario A) would have many more of the toll-free HOV trips (7.8 million) with lower processing costs, and fewer toll trips (2.4 million) with higher processing costs. In contrast, for the carpool discount case (Scenario B), all of the forecasted 14.3 million trips would be full or discounted toll trips with the higher toll trip processing cost. Higher toll collection costs in Scenario B would result in the larger projected loss of \$2.4 million.

The second factor contributing to a lower net revenue projection for Scenario B is attributed to the anticipated toll rate for the majority of trips in relation to the \$1.00 carpool discount. Many of the 10.2 million HOV trips were expected to occur when the toll is either at the \$0.75 minimum level or at \$1.00. These trips would effectively become toll-free, but would still be processed for toll payment like any other trip, generating no revenue but still having the full processing costs.

Other

15) Question: What is being done to reduce congestion using light rail, transit and park-n-ride lots?

Answer: In addition to adding express toll lanes, as part of the Bellevue to Lynnwood Widening and Express Toll Lane project, WSDOT is adding two special use transit shoulders to give buses more efficient service on southbound I-405 during peak periods. We're also building a braided ramp system at NE 160th and SR 522 to ease congestion around that interchange.

WSDOT in collaboration with local and federal agencies, seven cities and two counties developed a multi-modal, balanced strategy for transportation solutions along the I-405 corridor. The I-405 Master Plan vision for the corridor, adopted in 2002, included Bus Rapid Transit as the transit component. Implementation of this phased approach is the shared responsibility of the involved collaborating agencies which includes the following:

- Expanding transit centers
- Building 5,000 new park and ride spaces (4800 new spaces are funded to date)
- Adding 1,700 new vanpools on I-405 (which is 60 percent of all vanpools in the Metro and Community Transit System)
- Building direct access ramps so that transit, vanpools and carpools can merge directly to I-405 from local streets

- Increasing transit service by 50 percent
- Installing bus rapid transit infrastructure
- Upgrading local arterial streets to support transit and rideshare users
- Constructing a variety of bicycle and pedestrian improvements (including supporting conversion of the Eastside Rail Corridor to a multiuse trail)

So far, we're more than halfway finished with planned transit center expansions, park and ride enhancements and BRT infrastructure, but we know there's still a great deal more work to do, especially on transit service increases and bicycle and pedestrian improvements. WSDOT and our partners are delivering a multimodal approach to relieve traffic congestion on I-405.