

I-405/SR 167 Corridor Executive Advisory Group

Meeting # 2

February 27, 2013
Kirkland City Hall

Agenda

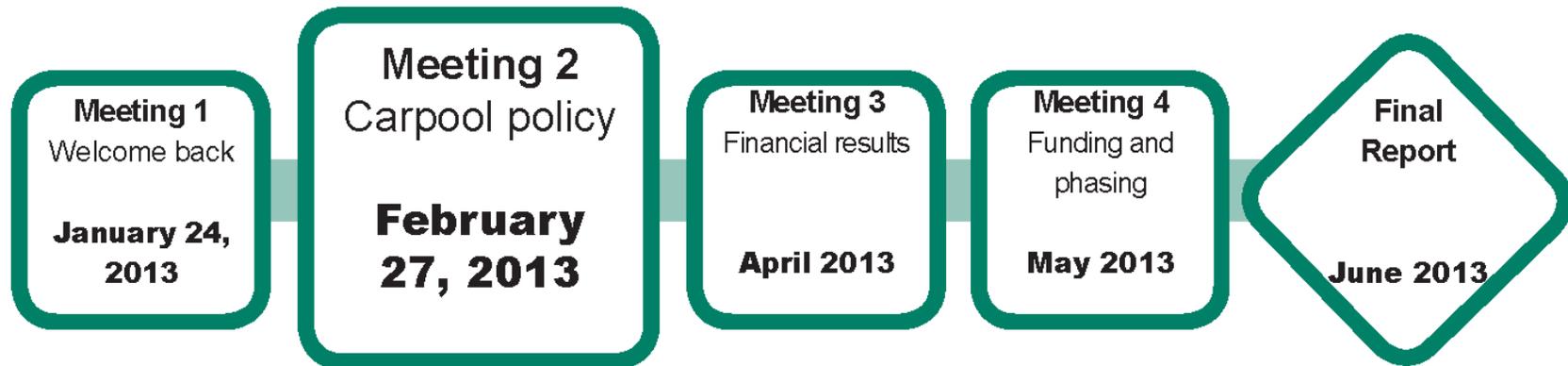
- Welcome/Introductions
- Review key study elements
- MAP 21 overview
- HOV system performance
- Carpool policy
 - Traffic performance
 - Net revenue comparison
- EAG discussion
- Introduction to finance
- EAG discussion
- Public comment

Welcome and Introductions

Craig Stone

Assistant Secretary, Toll Division

Key Study Elements



- **Phasing: What is the timing/schedule to complete the 40-mile system?**
 - Do we open Renton to Bellevue and I-405/SR 167 Direct Connector as one system/at the same time?
- **Phasing: Are there other projects, as identified in the I-405 Master Plan that need to be advanced?**
- **Funding: What are the strategies for financing capital improvements for the 40-mile system?**

Legislative study requirements:

 - Current state and federal funding contributions for I-405 and SR 167 corridor projects;
 - A potential future state or federal funding contribution to supplement toll funding; and
 - A toll funding contribution by borrowing against future toll revenues, optimizing the toll funding “available for capacity improvements including, but not limited to, using the full faith and credit of the state.”
- **Funding: Do we have a 2+ to 3+ carpool transition plan?**

Carpool policy: How does changing the carpool definition affect the following:

 - Financing
 - Performance
 - Public acceptance
 - Timing
 - Federal requirements (MAP 21)

MAP-21 Tolling and National Perspective

Dan Mathis

Division Administrator, Washington Division
Federal Highway Administration

I-405/SR 167 Executive Advisory Group Meeting
February 27, 2013



Background on HOV and HOT Facilities

- HOV facilities

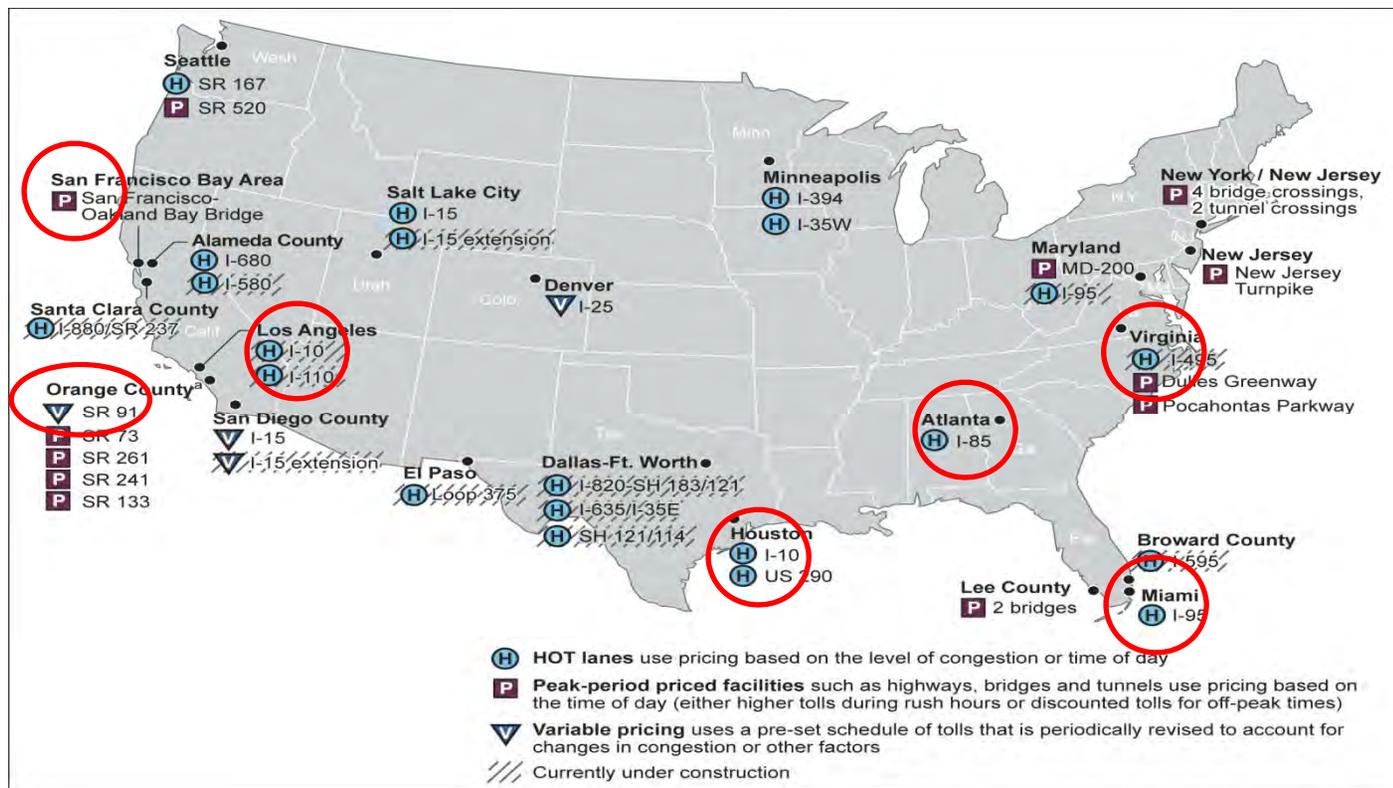
- Pioneered in the early 1970s, there are over 130 HOV facilities today
- Proven to be effective in increasing person throughput in congested metro areas

- HOT facilities

- Pioneered in 1990s, there are over 14 HOT facilities operating today and about 12 under construction
- Proven to be effective in maximizing full capacity and improving travel time reliability of HOV lanes



Priced Facilities in the U.S. (2012)



Sources: GAO analysis of US DOT, state departments of transportation, and local authorities information; and Map Resources (base map).

○ = Allow some form of free/discounted access for HOV 3+ vehicles

Federal Tolling Provisions

- Under 23 U.S.C. 301, there is a general prohibition on the imposition of tolls on Federal-aid highways
- Some exceptions are allowed through special programs and provisions
- Enacted in 2012, MAP-21 makes a number of changes to these programs intended to help mainstream tolling implementation

MAP-21 Changes in Tolling Provisions

- Section 129 (general toll program)
 - Mainstreams tolling/pricing of new capacity, including Interstate (but generally requires current level of free capacity to remain unchanged)
 - Incorporates HOV to HOT conversions (from section 166)
 - In most cases, removes requirement for USDOT/State toll agreements
- Extends Value Pricing Pilot Program (congestion pricing) – but without discretionary grants
- Extends Interstate System Reconstruction and Rehabilitation Pilot Program (allows tolling of all lanes) – all 3 slots are currently taken

MAP-21 HOV Provisions

- Extends capability of States to establish programs to allow exemptions such as low-emission & energy-efficient vehicles to use HOV facilities through 2017
- **Includes specific remedies for HOV facilities that have degraded operations:**
 - increasing the occupancy requirement for HOV;
 - varying the toll charged to HOT vehicles to reduce demand;
 - discontinuing allowing non-HOV vehicles to use HOV lanes; or
 - increasing the available capacity of the HOV facility
- **Degraded facility:**
 - If vehicles are failing to maintain a minimum average operating speed of 45 mph 90% of the time over a consecutive 180-day period during morning or evening weekday peak hour periods (or both).
 - If degraded, the Secretary (FHWA) shall subject the State to appropriate program sanctions until the performance is no longer degraded.

MAP-21: Relevance to I-405

- Conversion of existing HOV to HOT facility (where HOVs, whether defined as 2+ or 3+, are free and non-HOVs pay dynamically priced toll) generally would fall under new mainstreamed Section 129
 - No federal tolling agreement needed
 - But a MOU would be recommended with FHWA Washington Division Office
 - Agreement on use of revenue, performance requirements, and annual audits
- However, if pricing scheme charged HOVs a toll (even at discounted rate), a federal tolling agreement would be needed under VPP Program

HOV System Performance

Kim Henry

I-405/SR 167 Program Director, WSDOT

Karl Westby, Ph.D.

I-405 Traffic Manager

HOV lanes designed to manage demand – currently experiencing breakdowns

- **HOV asset:** Over \$2B has been invested since the 1970's to build out a 300-mile HOV system in Central Puget Sound.
- **HOV congestion:** Lanes should operate at 45 mph 90% of the time. Many HOV lanes currently don't meet this performance standard as the 2+ HOV lanes are over utilized.
- **HOV management:** Some HOV lanes are congested, some are underused.
- **Congested lanes mean inability to guarantee transit trips:** Bus service costs increase and require more coaches when trips are slow or unreliable.

AM Peak Period



PM Peak Period



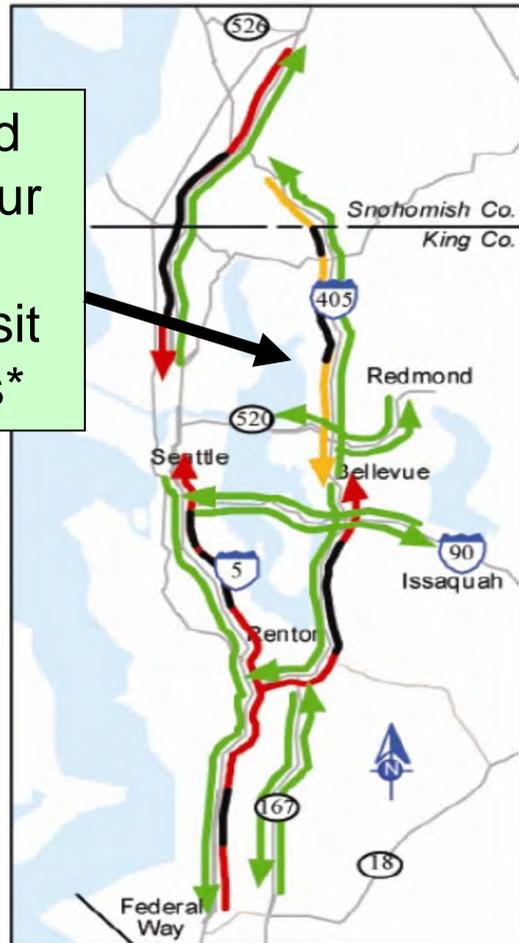
■ Congested segments not meeting performance standards.

Impact of HOV Congestion on Transit

AM Peak Period

PM Peak Period

Southbound
• 15 trips/hour
• 9 routes
• 2,900 transit passengers*



Northbound
• 11 trips/hour
• 9 routes
• 2,600 transit passengers*



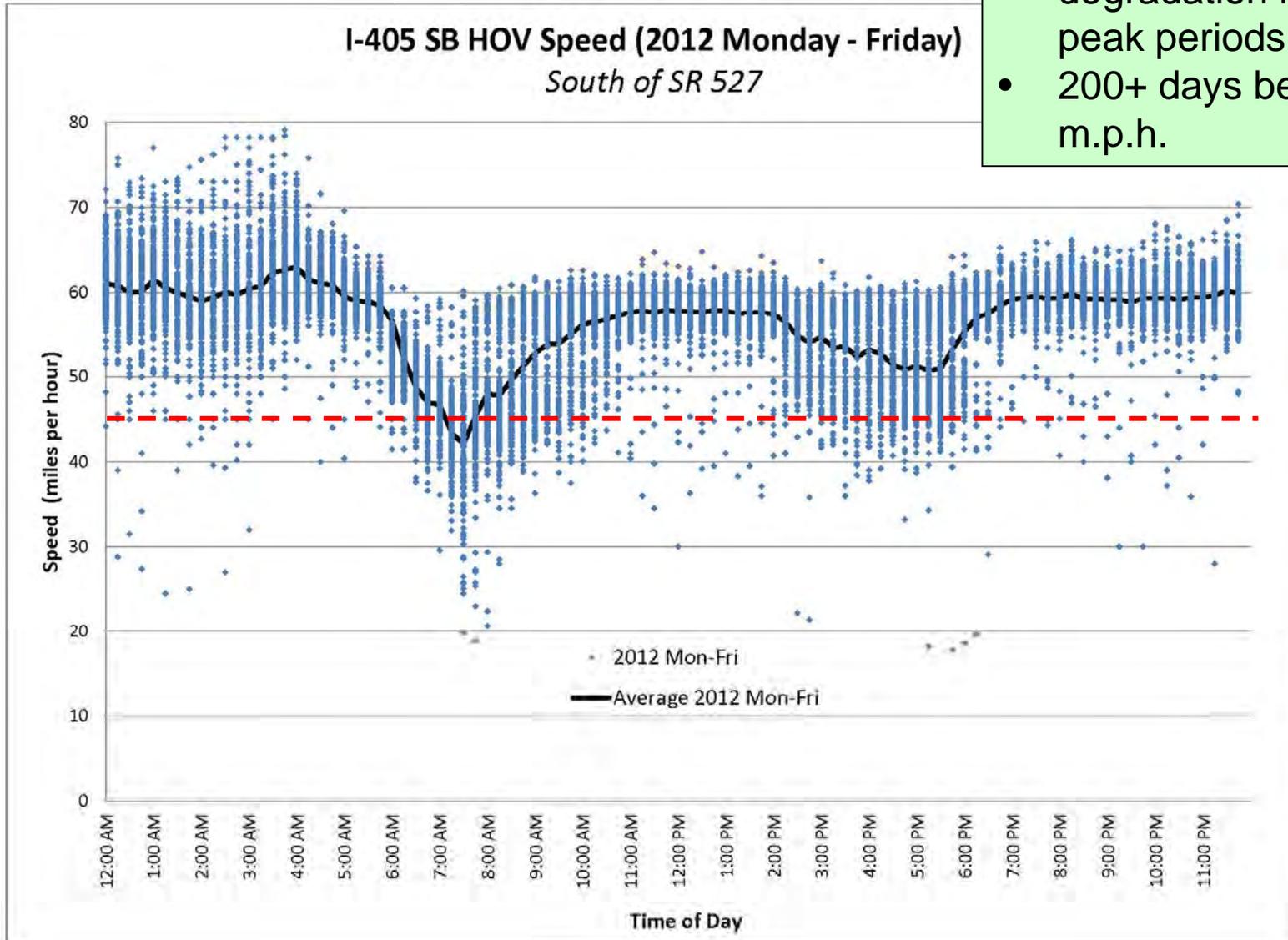
— Congested segments

*Daily King County Metro and Sound Transit figures, Spring 2012

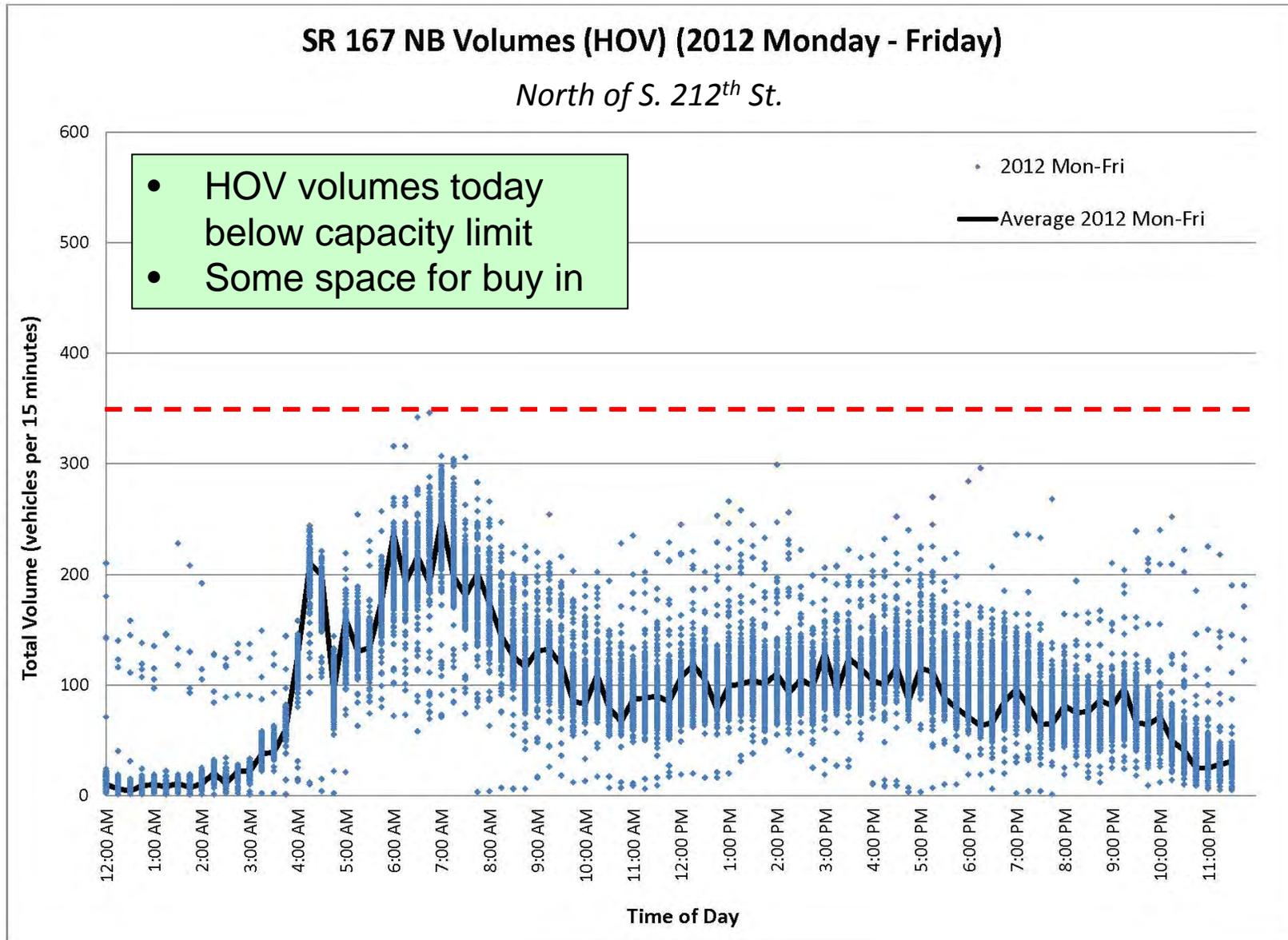
System reliability today – I-405

Performance issues

- Carpool lane speed degradation in both peak periods
- 200+ days below 45 m.p.h.



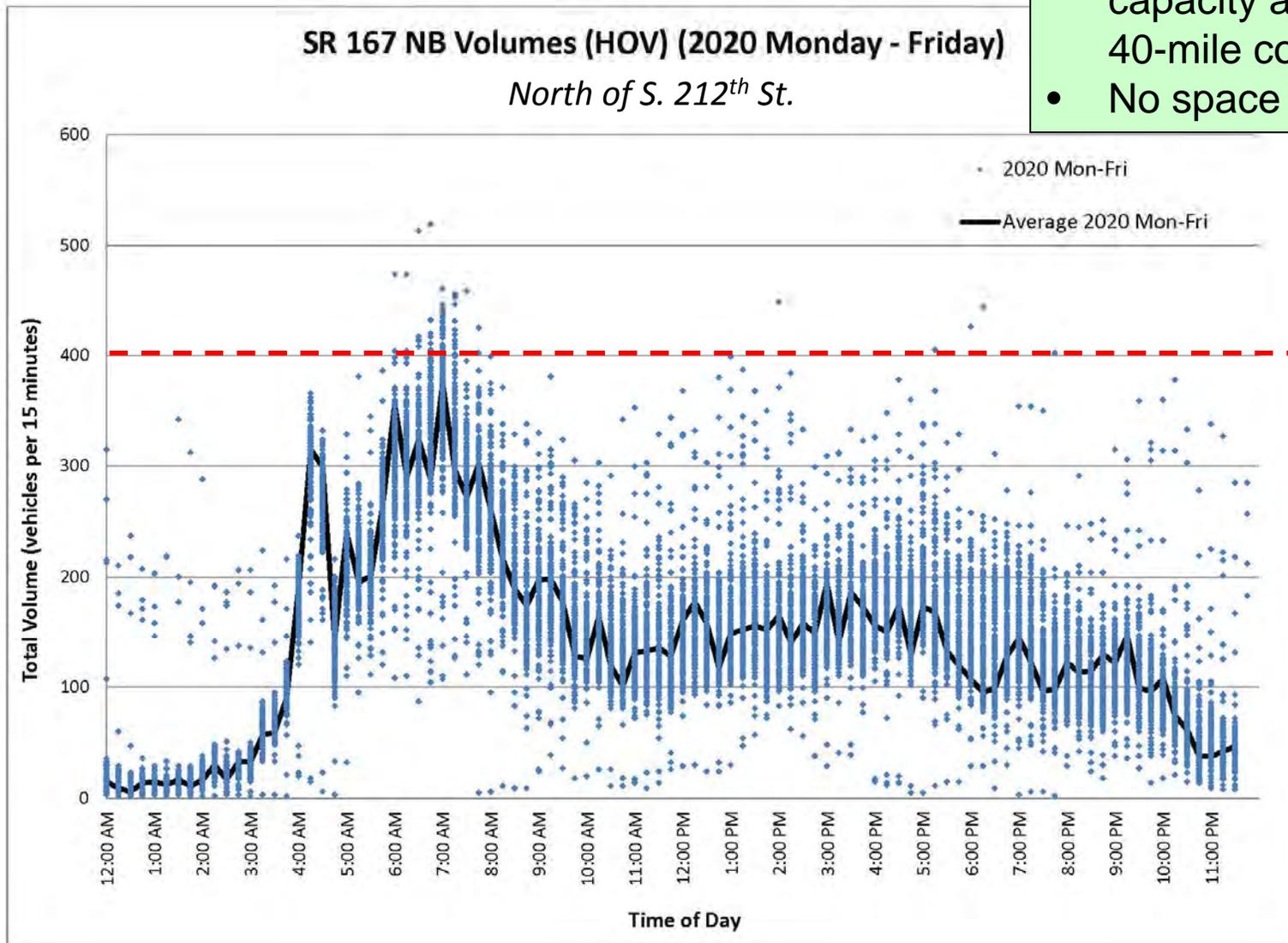
System reliability today – SR 167



Future system reliability – SR 167

2020 performance issues

- Projected 2+ HOV volumes to exceed capacity at opening of 40-mile corridor
- No space for buy in



Our direction from EHB 1382

(4) The department shall monitor the express toll lanes project and shall annually report to the transportation commission and the legislature on the impacts from the project on the following performance measures:

(a) Whether the express toll lanes maintain speeds of forty-five miles per hour at least ninety percent of the time during peak periods;

(b) Whether the average traffic speed changed in the general purpose lanes;

(c) Whether transit ridership changed;

(d) Whether the actual use of the express toll lanes is consistent with the projected use;

(e) Whether the express toll lanes generated sufficient revenue to pay for all Interstate 405 express toll lane-related operating costs;

(f) Whether travel times and volumes have increased or decreased on adjacent local streets and state highways; and

(g) Whether the actual gross revenues are consistent with projected gross revenues as identified in the fiscal note for Engrossed House Bill No. 1382 distributed by the office of financial management on March 15, 2011.

(5) If after two years of operation of the express toll lanes on Interstate 405 performance measures listed in subsection (4)(a) and (e) of this section are not being met, the express toll lanes project must be terminated as soon as practicable.

How are other states handling carpool policy in express toll lanes?

Facility		Current Carpool Definition	Previous Definition	Goal
I-495 Northern Virginia 2012		3+ (24 hours) (\$.20/mile minimum toll)	New system	Revenue
I-85 Atlanta, Ga. 2011		3+ (24 hours) (\$.01/mile minimum toll)	2+	Traffic
I-95 Miami, Fla. 2010		3+ (24 hours) (\$.25 minimum toll)	2+	Revenue
I-10 Los Angeles, Calif. 2013		3+ peak, 2+ off-peak (Opened Feb. 2013) (\$.25/mile minimum toll)	Same	Traffic
SR 91 Orange County, Calif. 1997		3+ free most periods (except eastbound 4-6 p.m. weekdays, 50% discount)	New system	Revenue

Policies affect our study scenarios

Photo tolling

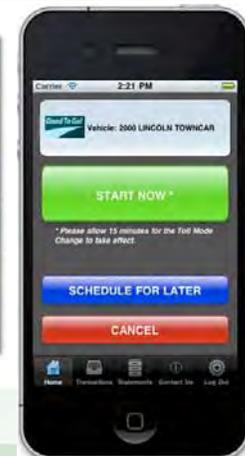
- Consistent customer experience
- Everyone can be a customer



Carpool declaration

To receive a discount or exemption, carpools will need:

- a transponder (such as in L.A., Northern Virginia, Orange County) or
- registration (Atlanta, Miami)
 - Different from current SR 167 express toll lane model



Carpool scenarios

Bookends

- 3+ carpool free
- 2+ carpool free

Transition options

- 3+ carpool free peak / 2+ carpool free off-peak
- Carpool discount

Transition option: 3+ carpool free peak / 2+ carpool free off-peak

Objective:

Maintain free flow speeds in the express toll lane system during peak while still allowing some free use by 2+ carpools in off-peak

EXPRESS TOLL LANES	
	\$2.00
NE 124 th ST	\$2.15
NE 6 th ST	\$2.35
3+ Free 5 a.m. - 10 a.m.	

Transit and registered vanpools ride free at all times

Transition option: 3+ carpool free peak / 2+ carpool free off-peak

Objective:

Maintain free flow speeds in the express toll lane system during peak while still allowing some free use by 2+ carpools in off-peak

EXPRESS TOLL LANES	
	\$0.75
NE 124 th ST	\$0.75
NE 6 th ST	\$0.75
2+ Free 10 a.m. - 3 p.m.	

Transit and registered vanpools ride free at all times

Transition option: Carpool discount

Sample peak period sign

Objective:

All carpools would pay but would get a discount to incentivize carpooling

EXPRESS TOLL LANES	
 522	\$2.00
NE 124 th ST	\$2.15
NE 6 th ST	\$2.35
Carpool \$1.00 discount	

Transit and registered vanpools ride free at all times

Transition option: Carpool discount

Sample off-peak period sign

Objective:

All carpools would pay but would get a discount to incentivize carpooling

EXPRESS TOLL LANES	
 522	\$0.75
NE 124 th ST	\$0.75
NE 6 th ST	\$0.75
Carpool free	

Transit and registered vanpools ride free at all times

Traffic Operations: 2012

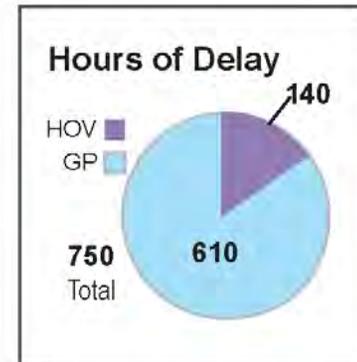
I-405 afternoon peak period north of NE 128th St

2012

- Slow speeds and delay in GP and HOV lanes today

Carpool Lane Occupancy Mix	
HOV 3+	18%
HOV 2	82%

Average Speed (mph)



Traffic Operations: 2012 vs. 2020

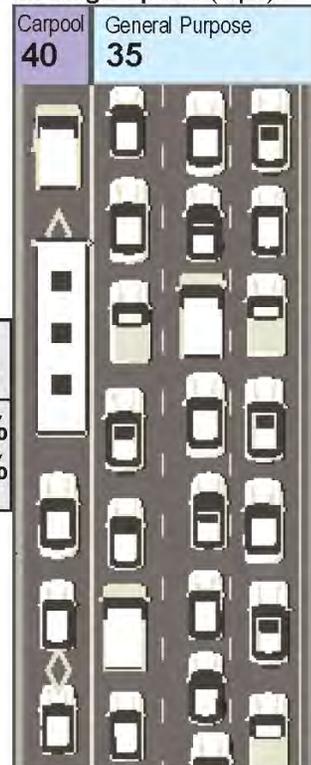
I-405 afternoon peak period north of NE 128th St

2020

- Speed increases and delay decreases in all lanes
- Lanes priced to be full in both scenarios

2012 Conditions

Average Speed (mph)



Carpool Lane Occupancy Mix	
HOV 3+	18%
HOV 2	82%



2020 3+ Carpool

Average Speed (mph)

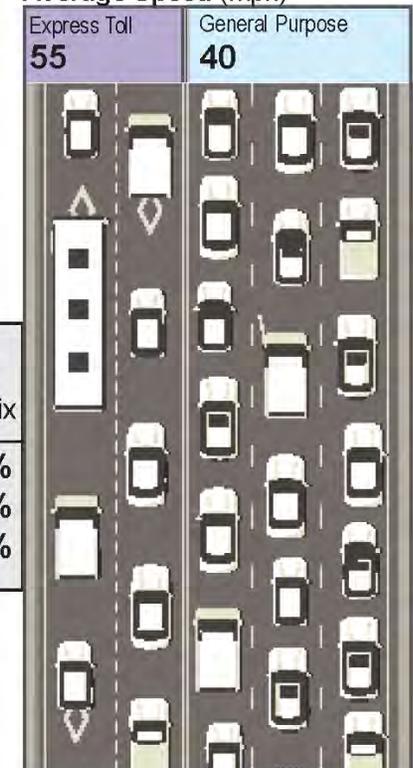


Express Toll Lane Occupancy Mix	
HOV 3+	15%
HOV 2	33%
SOV	52%



2020 Carpool Discount

Average Speed (mph)



Express Toll Lane Occupancy Mix	
HOV 3+	14%
HOV 2	54%
SOV	32%

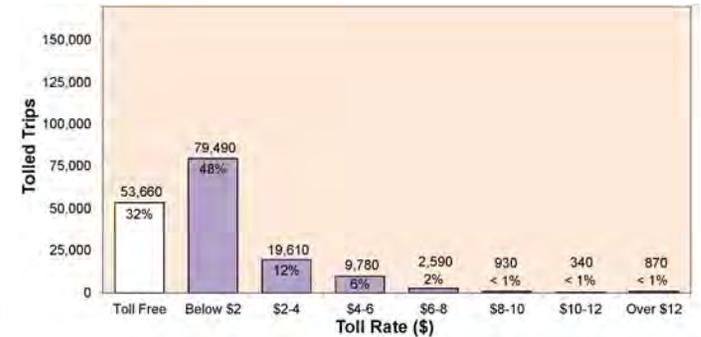


2020 weekday daily toll numbers – 40 mile corridor

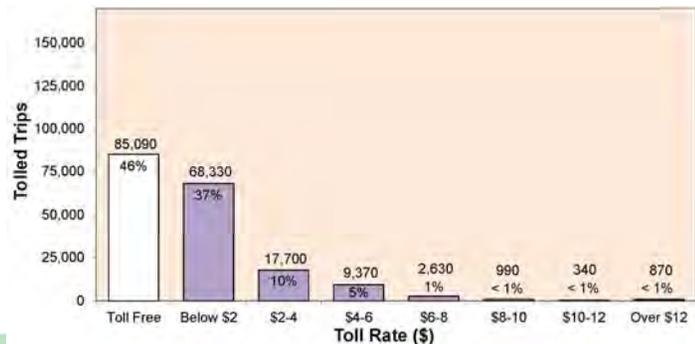
2+ Carpool Free



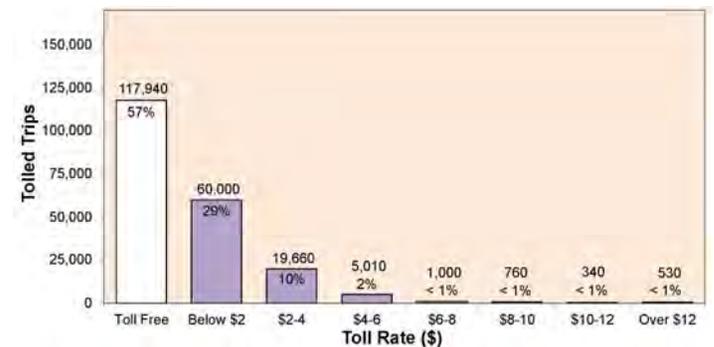
3+ Carpool Free



3+ Carpool Free Peak 2+ Carpool Free Off-Peak



Carpool Discount



Net Revenue Comparison

Brent Baker
Parsons Brinkerhoff

Our direction from EHB 1382

(4) The department shall monitor the express toll lanes project and shall annually report to the transportation commission and the legislature on the impacts from the project on the following performance measures:

- (a) Whether the express toll lanes maintain speeds of forty-five miles per hour at least ninety percent of the time during peak periods;
- (b) Whether the average traffic speed changed in the general purpose lanes;
- (c) Whether transit ridership changed;
- (d) Whether the actual use of the express toll lanes is consistent with the projected use;
- (e) Whether the express toll lanes generated sufficient revenue to pay for all Interstate 405 express toll lane-related operating costs;**
- (f) Whether travel times and volumes have increased or decreased on adjacent local streets and state highways; and
- (g) Whether the actual gross revenues are consistent with projected gross revenues as identified in the fiscal note for Engrossed House Bill No. 1382 distributed by the office of financial management on March 15, 2011.**

(5) If after two years of operation of the express toll lanes on Interstate 405 performance measures listed in subsection (4)(a) and (e) of this section are not being met, the express toll lanes project must be terminated as soon as practicable.

Current toll scenarios for financial evaluation

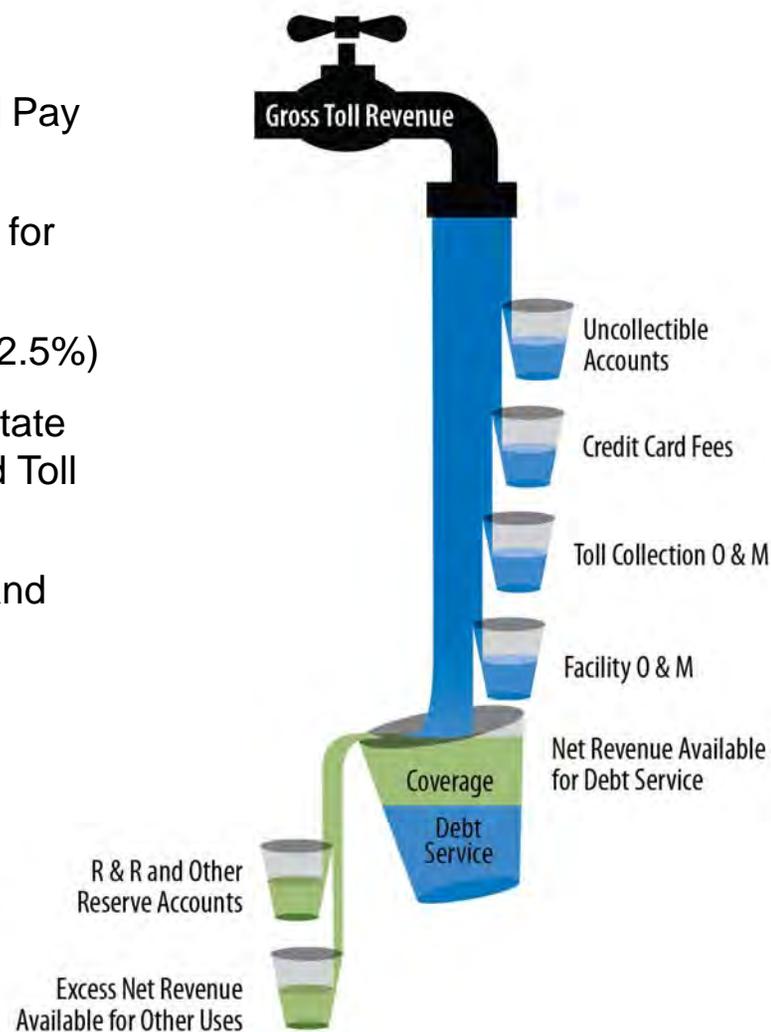
Toll Scenario	Description	Toll Payment Methods			Transponder Required for HOV Exemption / Discount?	Enforcement		South End Opening		Carpool Toll Exemption	
		Good To Go! Transponder	Good To Go! Pay By Plate	Pay By Mail		Visual	Photo	FY 2020 (1/1/2020)	FY 2022 (1/1/2022)	Weekday AM/PM Peak Periods	Off-Peak Times
CDM Smith Toll Traffic and Revenue Projections											
A	2+ Carpool Free Photo Tolling	✓	✓	✓	Yes	✓	✓		✓	2+	2+
B	Carpool Discount	✓			Yes	✓			✓	2+ with \$1 Discount	2+ with \$1 Discount
C	2+ Carpool Free Off-Peak 3+ Carpool Free Peak Photo Tolling	✓	✓	✓	Yes	✓	✓		✓	3+	2+
D	3+ Carpool Free Photo Tolling	✓	✓	✓	Yes	✓	✓	✓	✓	3+	3+
E	3+ Carpool Free	✓			No	✓			✓	3+	3+
Cambridge Systematics Toll Traffic and Revenue Projections											
F	3+ Carpool Free	✓			No	✓			✓	3+	3+

Assumptions:

- 5 a.m. to 8 p.m. hours of operation
- Peak hours 5 to 10 a.m and 3 to 8 p.m.
- 75 cent minimum toll

Overview of gross to net revenue process

- **Gross Toll Revenue:** Includes Pay By Plate and Pay By Mail incremental revenue
- **Uncollectible Accounts:** Adjustment to account for uncollectible revenue / leakage
- **Credit Card Fees:** Bank card processing costs (2.5%)
- **Toll Collection O&M:** Includes costs related to state operations, Customer Service Center (CSC), and Toll Collection Systems (TCS)
- **Facility O&M:** routine annual costs to maintain and operate the physical facility
- **Net Revenue Available for Financing:** Gross revenue less the above deductions
- **R&R and Other Reserve Accounts**
- **Excess Net Revenue Available for Other Uses**



Draft gross-to-net revenue summary – 40 years

Toll Scenario	Description	Gross Toll Revenue	Adjusted Gross Toll Revenue*	Toll Collection O&M	Facility O&M	Net Toll Revenue Available for Financing
---------------	-------------	--------------------	------------------------------	---------------------	--------------	--

40-Year Totals (FY 2016-55)

CDM Smith Toll Traffic and Revenue Projections

A	2+ Carpool Free Photo Tolling	\$3.20 B	\$2.96 B	(\$1.68 B)	(\$0.15 B)	\$1.13 B
B	Carpool Discount	\$7.96 B	\$6.76 B	(\$1.37 B)	(\$0.15 B)	\$5.24 B
C	2+ Carpool Free Off-Peak 3+ Carpool Free Peak Photo Tolling	\$7.01 B	\$6.48 B	(\$1.65 B)	(\$0.15 B)	\$4.69 B
D	3+ Carpool Free Photo Tolling	\$7.53 B	\$6.96 B	(\$1.59 B)	(\$0.15 B)	\$5.22 B
E	3+ Carpool Free	\$7.19 B	\$6.11 B	(\$1.07 B)	(\$0.15 B)	\$4.89 B

Cambridge Systematics Toll Traffic and Revenue Projections

F	3+ Carpool Free	\$8.45 B	\$7.18 B	(\$1.26 B)	(\$0.15 B)	\$5.78 B
----------	-----------------	----------	----------	------------	------------	----------

* Net of uncollectible revenues / leakage

2/25/2013

Draft net revenue projections – 8 years

Millions of Dollars — Assumes Renton to Bellevue Opens 1/1/2022

Fiscal Year	Scenario A — 2+ Carpool Free Photo Tolling*				Scenario B — Carpool Discount*				Scenario C — 2+ Carpool Free Off-Peak 3+ Carpool Free Peak Photo Tolling*			
	Potential Gross Toll Revenue ¹	Adjusted Gross Toll Revenue ²	Less: Operations & Maintenance Costs ³	Net Toll Revenue (before R&R)	Potential Gross Toll Revenue ¹	Adjusted Gross Toll Revenue ²	Less: Operations & Maintenance Costs ³	Net Toll Revenue (before R&R)	Potential Gross Toll Revenue ¹	Adjusted Gross Toll Revenue ²	Less: Operations & Maintenance Costs ³	Net Toll Revenue (before R&R)
2016	2.8	2.6	(5.6)	(3.0)	3.9	3.3	(5.1)	(1.8)	4.9	4.5	(5.4)	(0.9)
2017	4.7	4.3	(6.7)	(2.4)	5.3	4.5	(5.7)	(1.2)	8.2	7.6	(6.5)	1.1
2018	5.6	5.2	(7.3)	(2.1)	6.3	5.3	(6.0)	(0.6)	9.9	9.1	(7.1)	2.1
2019	6.1	5.6	(10.4)	(4.8)	7.0	6.0	(9.5)	(3.5)	10.8	10.0	(9.1)	0.8
2020	6.6	6.1	(10.7)	(4.6)	7.9	6.7	(10.1)	(3.4)	11.8	10.8	(9.4)	1.5
2021	7.2	6.6	(11.2)	(4.6)	8.9	7.5	(10.8)	(3.3)	12.8	11.7	(9.8)	2.0
2022	22.0	20.2	(23.4)	(3.1)	35.7	30.4	(20.0)	10.4	40.8	37.5	(22.1)	15.4
2023	44.1	40.5	(31.7)	8.8	77.7	66.0	(25.7)	40.3	83.7	76.9	(30.5)	46.4

Fiscal Year	Scenario D — 3+ Carpool Free Photo Tolling*				Scenario E — 3+ Carpool Free*				Scenario F — 3+ Carpool Free (Cambridge Systematics)†			
	Potential Gross Toll Revenue ¹	Adjusted Gross Toll Revenue ²	Less: Operations & Maintenance Costs ³	Net Toll Revenue (before R&R)	Potential Gross Toll Revenue ¹	Adjusted Gross Toll Revenue ²	Less: Operations & Maintenance Costs ³	Net Toll Revenue (before R&R)	Potential Gross Toll Revenue ¹	Adjusted Gross Toll Revenue ²	Less: Operations & Maintenance Costs ³	Net Toll Revenue (before R&R)
2016	5.3	4.9	(5.3)	(0.3)	4.8	4.1	(4.3)	(0.3)	6.3	5.4	(4.4)	0.9
2017	9.0	8.3	(6.2)	2.0	8.1	6.9	(5.0)	1.9	8.7	7.4	(4.8)	2.6
2018	10.8	9.9	(6.7)	3.2	9.7	8.3	(5.3)	3.0	11.9	10.1	(5.2)	4.9
2019	11.7	10.8	(8.1)	2.6	10.6	9.0	(6.0)	2.9	13.8	11.7	(5.7)	6.0
2020	12.6	11.6	(8.4)	3.3	11.4	9.7	(6.2)	3.5	15.7	13.3	(6.1)	7.2
2021	13.6	12.5	(8.7)	3.8	12.4	10.5	(6.4)	4.1	17.7	15.1	(6.6)	8.4
2022	44.2	40.5	(21.0)	19.6	40.1	34.1	(15.4)	18.8	54.9	46.7	(22.0)	24.7
2023	91.1	83.7	(29.2)	54.5	82.6	70.2	(20.4)	49.8	101.8	86.5	(22.6)	63.9

NOTES:

* CDM Smith traffic and revenue projections.

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

¹ Year of collection dollars, Cambridge Systematics constant dollar T&R forecast inflated to year of collection by 2.5% per year.

² Adjusted for potential uncollectible revenue.

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

2/25/2013



 Meets revenue requirement in EHB 1382
 Does not meet EHB 1382 revenue requirement

Carpool Scenario Summary

Kim Henry

I-405/SR 167 Program Director, WSDOT

Denise Cieri

I-405/SR 167 Deputy Program Director, WSDOT

Carpool policy issues to consider

- **System Reliability / Operations** – Will it manage congestion, maintain reliable speeds, and provide a choice to drivers?
- **Toll Rates** – Can traffic be managed effectively?
- **Net Revenue** – Will it help pay for completing the 40-mile system?
- **Public Acceptance** – Will the public (current HOV users, new toll customers, and stakeholders) support it?
- **Usability** – Is it simple to understand and easy to use?
- **Enforcement** – Can it be enforced credibly?
- **Regional operations/ Future decision-** Does it work systemwide; will the decision need to be revisited?

Comparison of Scenarios

	A.  2+ Carpool Free	B.  3+ Carpool Discount	C.  3+ Peak Free 2+ Off-Peak Free	D.  3+ Carpool Free
System reliability/Operations	ETL overcrowded; Doesn't meet MAP 21 or EHB 1382 requirements			
Toll Rates/Pricing	Less buy-in opportunity, so toll rates are higher; 200 days/year HOV only			
Net Revenue	Doesn't meet two-year revenue requirements; low revenue			
Public acceptance	Easy – Early acceptance but decreasing benefits in future			
Usability	Easy to understand – Consistent throughout the day			
Enforcement	Somewhat easy – Large number of carpools to monitor but easier to detect			
Regional operations/Future decision	Not effective regional solution; does not address performance			

Comparison of Scenarios

	A.  2+ Carpool Free	B.  3+ Carpool Discount	C.  3+ Peak Free 2+ Off-Peak Free	D.  3+ Carpool Free
System reliability/Operations	ETL overcrowded; Doesn't meet MAP 21 or EHB 1382 requirements			ETL managed to allow maximum throughput; Meets MAP 21 and EHB 1382
Toll Rates/Pricing	Less buy-in opportunity, so toll rates are higher; 200 days/year HOV only			Rates are low with more buy-in opportunity, more people at lower rates
Net Revenue	Doesn't meet two-year revenue requirements; low revenue			Should meet two-year requirements; long-term high revenue
Public acceptance	Easy – Early acceptance but decreasing benefits in future			Hard – initial acceptance hard but benefits better understood over time
Usability	Easy to understand – Consistent throughout the day			Easy to understand – Consistent throughout the day
Enforcement	Somewhat easy – Large number of carpools to monitor but easier to detect			Somewhat hard – Harder to detect but smaller number to check
Regional operations/Future decision	Not effective regional solution; does not address performance			Regional solution; no future decisions needed

Comparison of Scenarios

	A.  2+ Carpool Free	B.  3+ Carpool Discount	C.  3+ Peak Free 2+ Off-Peak Free	D.  3+ Carpool Free
System reliability/Operations	ETL overcrowded; Doesn't meet MAP 21 or EHB 1382 requirements	ETL managed to allow maximum throughput; Meets MAP 21 and EHB 1382		ETL managed to allow maximum throughput; Meets MAP 21 and EHB 1382
Toll Rates/Pricing	Less buy-in opportunity, so toll rates are higher; 200 days/year HOV only	Rates are low with more buy-in opportunity, more people at lower rates		Rates are low with more buy-in opportunity, more people at lower rates
Net Revenue	Doesn't meet two-year revenue requirements; low revenue	May not meet two-year revenue requirements; depends on discount; long-term high revenue		Should meet two-year revenue requirements; long-term high revenue
Public acceptance	Easy – Early acceptance but decreasing benefits in future	Hard – all carpools pay (3+ and 2+); no free rides during congested times; prices will increase over time		Hard – initial acceptance hard but benefits better understood over time
Usability	Easy to understand – Consistent throughout the day	Somewhat easy to understand – Consistent throughout the day		Easy to understand – Consistent throughout the day
Enforcement	Somewhat easy – Large number of carpools to monitor but easier to detect	Somewhat easy – Large number of carpools to monitor but easier to detect		Somewhat hard – Harder to detect but smaller number to check
Regional operations/Future decision	Not effective regional solution; does not address performance	Regional solution; potentially no future decision needed		Regional solution; no future decisions needed

Comparison of Scenarios

	A.  2+ Carpool Free	B.  3+ Carpool Discount	C.  3+ Peak Free 2+ Off-Peak Free	D.  3+ Carpool Free
System reliability/Operations	ETL overcrowded; Doesn't meet MAP 21 or EHB 1382 requirements	ETL managed to allow maximum throughput; Meets MAP 21 and EHB 1382	ETL managed to allow maximum throughput; Meets MAP 21 and EHB 1382	ETL managed to allow maximum throughput; Meets MAP 21 and EHB 1382
Toll Rates/Pricing	Less buy-in opportunity, so toll rates are higher; 200 days/year HOV only	Rates are low with more buy-in opportunity, more people at lower rates	Rates are low with more buy-in opportunity, more people at lower rates	Rates are low with more buy-in opportunity, more people at lower rates
Net Revenue	Doesn't meet two-year revenue requirements; low revenue	May not meet two-year revenue requirements; depends on discount; long-term high revenue	May meet two-year revenue requirements; similar to 3+ carpool; long-term high revenue	Should meet two-year revenue requirements; long-term high revenue
Public acceptance	Easy – Early acceptance but decreasing benefits in future	Hard – all carpools pay (3+ and 2+); no free rides during congested times; prices will increase over time	Somewhat easy – Requires education as to benefit during peak, but 2+ can still get free ride during off-peak hours	Hard – initial acceptance hard but benefits better understood over time
Usability	Easy to understand – Consistent throughout the day	Somewhat easy to understand – Consistent throughout the day	Somewhat easy to understand	Easy to understand – Consistent throughout the day
Enforcement	Somewhat easy – Large number of carpools to monitor but easier to detect	Somewhat easy – Large number of carpools to monitor but easier to detect	Somewhat hard - Harder to detect during peak but smaller number to check; transition period issues	Somewhat hard – Harder to detect but smaller number to check
Regional operations/Future decision	Not effective regional solution; does not address performance	Regional solution; potentially no future decision needed	Harder to apply consistently on a regional basis; may require future change in peak period definitions	Regional solution; no future decisions needed

Comparison of Scenarios

	 Good/ Easy	 Ok/ Somewhat easy/hard	 Poor/ Hard	A.  Carpool Free	B.  Carpool Discount	C.  Peak Free  Off-Peak Free	D.  Carpool Free
System reliability/ Operations							
Toll Rates/Pricing							
Net Revenue							
Public acceptance							
Usability							
Enforcement							
Regional operations/Future decision							

EAG Comments

Office of the State Treasurer

EAG Comments

Public Comment

Wrap Up and Next Steps

Next steps



More information:

Denise Cieri

I-405 / SR 167 Corridor Program Deputy Director

(425) 456-8509

CieriD@wsdot.wa.gov

Amy Danberg

I-405 / SR 167 Corridor Communications

(425) 456-8566

Danbera@consultant.wsdot.wa.gov