# SR 167 High Occupancy Toll (HOT) Lanes Pilot Project

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AASHTO Summer Conference 2009 May 6, 2009



### Opening day: May 3, 2008

### Why HOT lanes on SR 167?

- Highly congested route
- HOV lanes underutilized
- Ability to provide drivers a new choice
- Test new technology





### **New configuration**

#### Single HOT lane in each direction

- HOT lane separated by double-white lines
- Variable message signs indicate toll rate at each entry point
- Pay a single toll to travel any distance on 10-mile route
- Free to buses and HOV 2+





Pre-HOT lanes: SR 167 had two

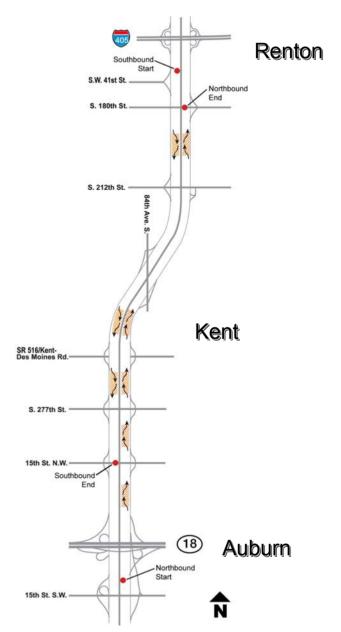
general purpose lanes and one HOV lane.



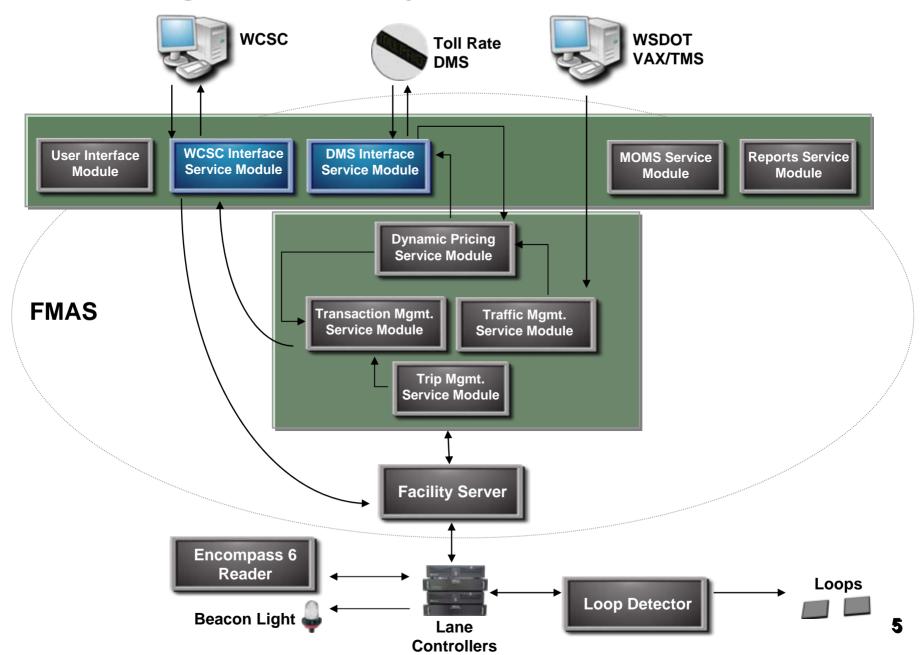
**Post HOT lanes :** HOV lanes were converted to a single HOT lane in each direction.

### **HOT lanes key features**

- Free flow operations goal for HOT lanes: at least 45 mph - 90% of the time during peak period.
- More than nine miles of HOT lanes southbound and 11 miles northbound.
- 10 access points.
- HOV 2+ and motorcycles toll-free.
- Operating during the day (typically tolled between 5 a.m. and 7 p.m.), open to all traffic at night.
- Variable tolls between 50¢ and \$9
- Revenue will be used to pay for toll and roadway operations and maintenance, increased enforcement, and added incident response.

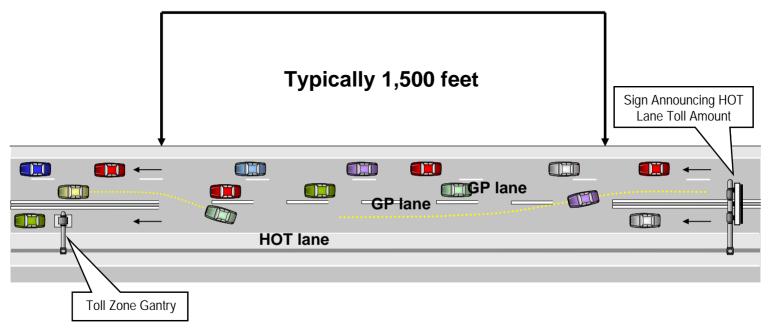


### High Level System Architecture



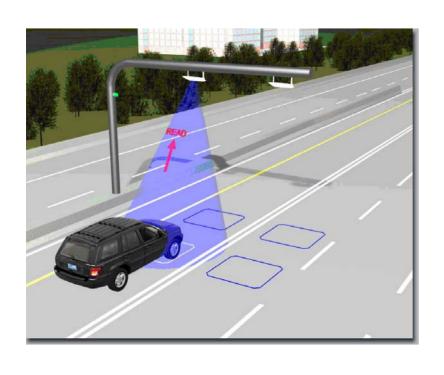
### **Access points**

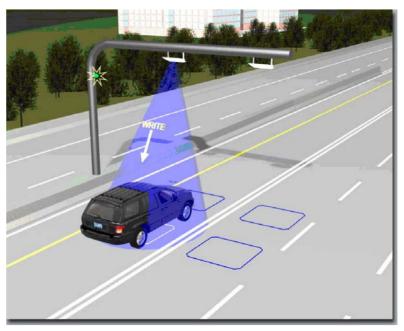
 Access points - defined locations for entering and exiting the HOT Lane.

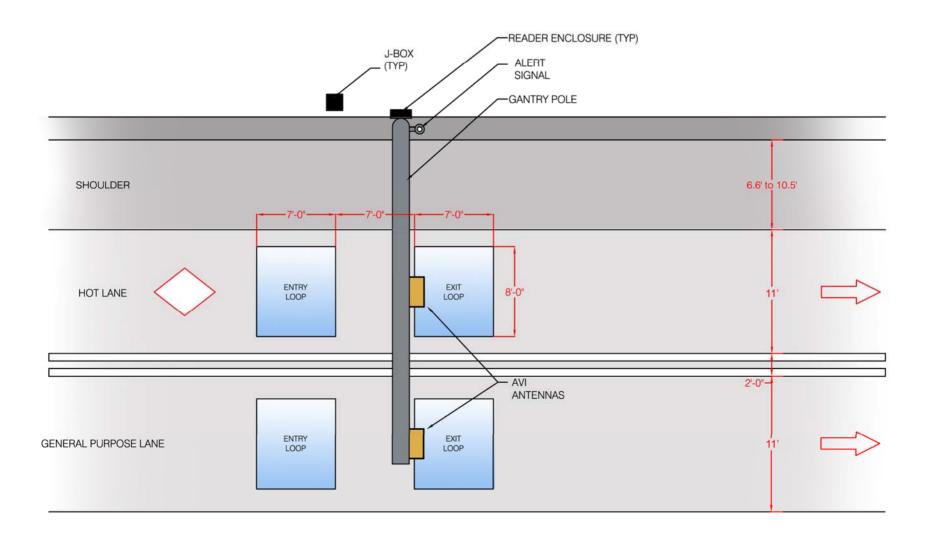


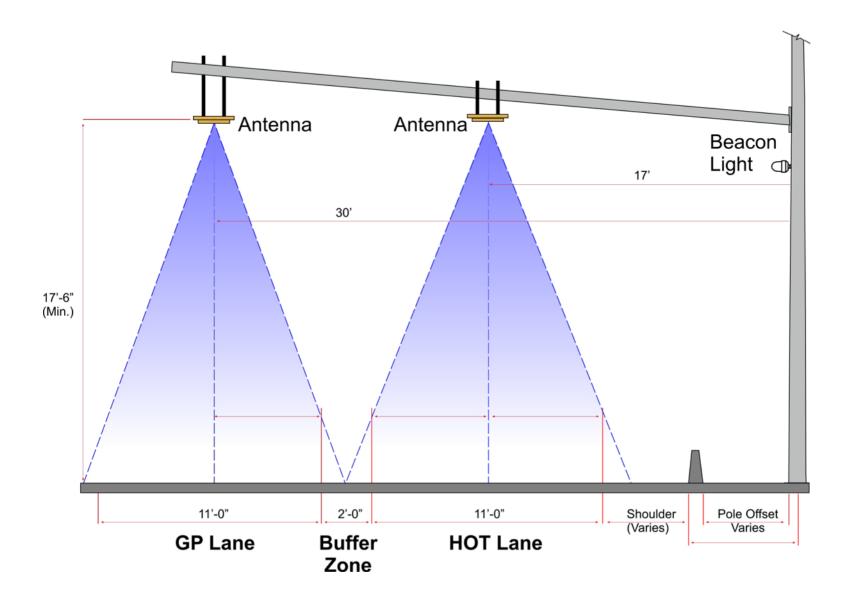
- Tolls collected by electronic system
  - No toll booths
  - Same tolling transponder and customer service center as the Tacoma Narrows Bridge.

### **HOT Lane Transaction**

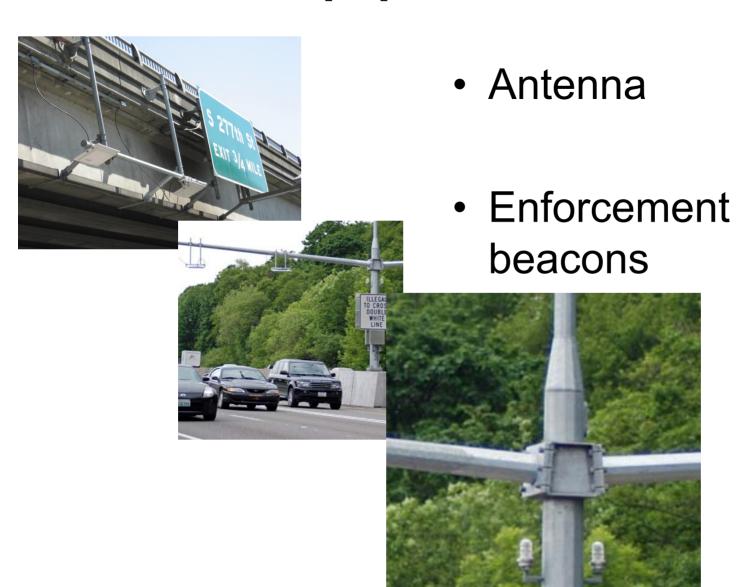








### **Roadside Equipment**



### **Roadside Cabinet**

- Readers GP and HOT
- Lane controllers
- UPS
- Communication



### **Current highlights**

## 8 months after HOT lanes opened on SR 167—

- HOT lane operates at or above 45 mph 99.4% of the time during peak hours
- More than 20,000 Good To Go! users
- No apparent safety impacts
- Increasing peak-hour toll transactions
- Decreased peak-hour travel times in both GP and HOT lanes
- Transit ridership up nearly 25 percent
- Available capacity remaining





### **Travel times**

#### **HOT and GP peak-hour travel times**

#### **HOT lane Travel Times**

- NB Avg = 10.9 minutes
- NB 95<sup>th</sup> = 11.1 minutes
- SB Avg = 7.9 minutes
- SB 95<sup>th</sup> = 9.3 minutes

#### **GP** lane travel times

- NB Avg = 20.0 minutes
- NB 95<sup>th</sup> = 29.4 minutes
- SB Avg = 13.0 minutes
- SB  $95^{th} = 24.9 \text{ minutes}$



#### **HOT lane savings**

Users paid an average of \$1.25 to save 9.1 minutes in the NB HOT lane during the peak-hour.

Users paid an average of \$1.25 to save 5.1 minutes in the SB HOT lane during the peak-hour.

### First 8 months by the numbers

#### SR 167 average daily trips

	May	June	July	August	September	October	November	December
SR 167, 2007	122,000	122,000	124,000	126,000	121,000	116,000	114,400	115,960
SR 167, 2008	118,000	119,000	121,000	120,000	118,000	115,000	114,300	99,190
Percent Change	-3%	-3%	-3%	-5%	-3%	-1%	-0%	-15%

Average Daily Trips, Tuesday – Thursday at South 277<sup>th</sup> Street



### **Traffic impacts**

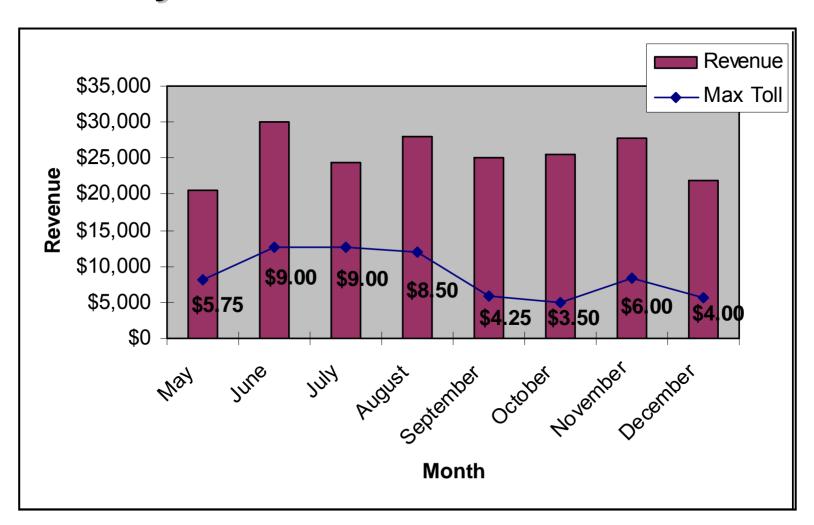
#### **Average daily traffic**

	May	June	July	August	Sept	Oct	Nov	Dec	Average
HOT Lane									
Total	17,210	17,710	19,030	18,500	16,900	15,200	16,200	14,200	16,869
Non-tolled	16,160	16,630	17,820	17,250	15,650	13,930	14,690	13,040	15,646
Tolled	1,050	1,080	1,210	1,250	1,250	1,270	1,510	1,160	1,223
Percent									
Tolled	6%	6%	6%	7%	7%	8%	9%	8%	7%
Data: Northwest Region Traffic Office, Tuesday - Thursday, May-December 2008									





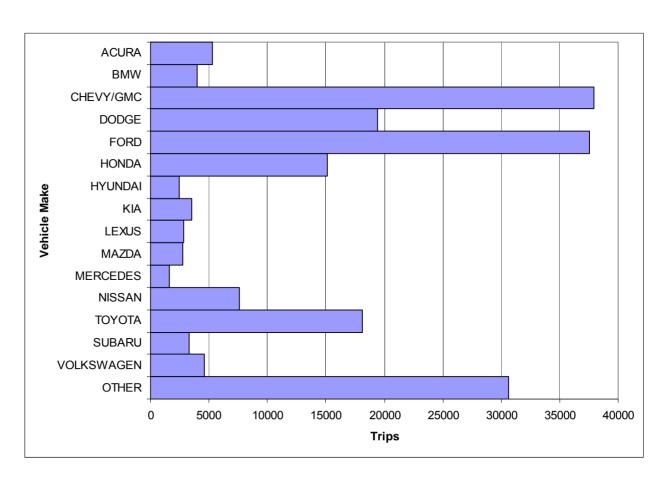
### Monthly Revenue and Maximum Toll



### Type of vehicles using the lanes

## Ten most frequently tolled vehicles in HOT lanes:

- 1. Chevrolet
- 2. Ford
- 3. Dodge
- 4. Toyota
- 5. Honda
- 6. Nissan
- 7. Acura
- 8. Volkswagen
- 9. BMW
- 10. Kia





### **HOT lane enforcement**

#### **Washington State Patrol**

- · Detection light effective
- 1,750 traffic stops
- 416 citations for HOV violations
- 209 crossing the double-white lines
- Compliance rate is estimated at 95 to 97 percent
- Violation revenue distributed amongst court, city, county, WSP

#### **HERO program**

- HERO reports involving SR 167 averaged:
  - 321 calls per month in 2007
  - 58 calls per month in 2008







### Focus group results – January 2009

- Strong support for extension of HOT lanes
- Traffic level and price point were the main HOT lane use decision factors
- Avoiding traffic is more important than the cost of the transponder/tolls
- Toll rates are fair
- There are traffic problems entering and exiting the HOT lanes, as well as on the on and off-ramps
- More signage and project education needed





### **Issue resolution**

Issue

**Access locations** 

Resolution

Increased length of access Added informational signing

Double white lines

WSP educational effort Additional signing added

Carpool shields

Evaluating new technology

**Education & Outreach** 

Informational campaign Additional signing

ILLEGAL TO CROSS DOUBLE WHITE LINE

'I'd give up all my lattes to use the HOT lanes.'

- SR 167 commuter





### **Next steps**

- Education and outreach
  - Addition of five educational signs
  - New phone number 1-888-G2G-WSDOT
  - 8 week campaign at service station
    - gas pump handles
- Continued monitoring
  - Comprehensive reports every 6 months
  - User survey planned May 2009
- Future stages













# For more information on HOT lanes please contact

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Good To Go! wsdot.wa.gov/goodtogo

Pilot project Web page: wsdot.wa.gov/Projects/SR167/HOTLanes

