



What you need to know about HOT Lanes

Overview

In 2007, the State legislature authorized the Department of Transportation (WSDOT) to implement a pilot project for “*managed lanes*” (HOT Lanes) on SR-167 to determine the viability of variable rate tolling. Variable tolls change periodically based on traffic conditions. The higher the volume of traffic, the higher the toll.

As of this writing, the SR-167 HOT Lanes Pilot Project has over 3 years of operational history. Historically, prior to the pilot project, the SR-167 - 2+ (2 *person per vehicle*) HOV lanes were under-utilized, while the General Purpose (GP) lanes were congested.

HOT = High Occupancy Tolloed “Managed Lanes”

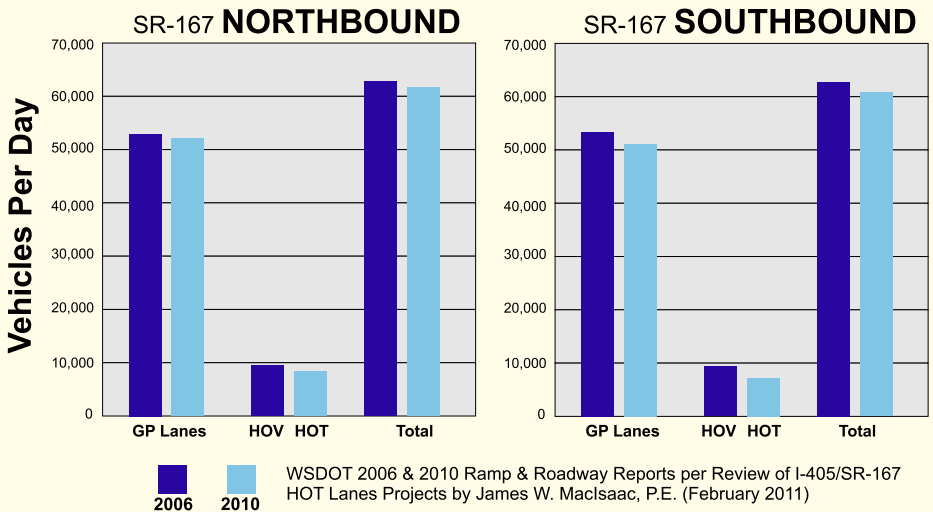
**HOT lanes are simply HOV (Diamond lanes) that will now require a toll.
The 2+ people per vehicle requirement will also soon change to 3+.
HOT lanes are being planned for 300 lane miles in the Seattle area.**

Summary of Findings

When examined, the SR-167 HOT Lane experiment has been a failure from both a financial and traffic operations perspective:

- ✓ HOT Lanes have not repaid any investment in construction.
- ✓ HOT Lane tolls have not covered the on-going costs to manage and collect such tolls.
- ✓ HOT Lanes do not improve general purpose traffic flow.
- ✓ HOT Lanes do not increase overall traffic throughput (*total vehicles passing per hour*).





Financial Result: Toll Revenues Are Not Meeting Operational Costs or Construction Costs

SR-167 HOT lanes are clearly a financial failure. Over the first 3 years, HOT lanes on SR 167 have generated revenue that is less than half the costs to collect those tolls resulting in accumulated operating deficits of \$2.4 million. When added to the original \$18 million cost to build the toll collection infrastructure for just this project, WSDOT has spent over \$20 million that can almost certainly never be recovered from any realistic toll revenue scenario.

While it is understandable that costs can be higher for a pilot project, the SR-167 experience shows that these HOT lanes are not a productive use of taxpayer resources and will likely never produce net revenue to repay the HOT lane infrastructure and operating costs, let alone provide funding for other projects.

Operational Result #1: Increase in Throughput and Average Speed Are Caused by a Reduction in Traffic Volume Created by the Recession, Not by HOT Lanes

It is well documented that during periods of cyclical economic recession, overall traffic volumes on urban highway corridors decrease. When traffic volumes go down, available capacity increases and roads work better.

The operational pilot results of SR-167 clearly support this reality. In the HOT Lane study period, traffic volume within the SR-167 corridor has gone down due to the national recession; as a result of lower total traffic volume, average speed has increased, irrespective of DOT's \$18 million investment in the HOT Lane Pilot Project.

The small reduction in congestion on SR-167 has not been caused by the implementation of HOT lanes (as suggested by WSDOT), but is the result of lower overall traffic volumes during the 2-year study period.

Total traffic volume in both the SR-167 HOV lanes and the GP lanes were reduced between 2006 and 2010, according to WSDOT's published Ramp and Roadway Volume reports¹. The data provided by WSDOT clearly demonstrates that (a) the 2010 HOT lane volumes are less than the 2006 HOV lane volumes, and (b) the 2010 general purpose lane traffic volumes were also down from the 2006 volume.

Therefore, the slight improvement in the SR-167 corridor traffic operations cannot be attributed to the SR-167 HOT Lane experiment, and it is not rational to draw a conclusion that recent throughput and average speed improvements are attributable to the HOT Lane program.

Operational Result #2: HOT Lanes Reduce Use of HOV Lanes

Use of the HOV lane has been degraded by changing the unrestricted access to the HOV lane for 2+ vehicles to the few limited access locations created by the HOT Lane Pilot Project. Due to access restriction, shorter HOV trips can not use the HOT Lanes, contributing in part to the overall reduction in HOT lane volumes in 2010, when compared to the 2006 HOV lane volumes. As a result, use of HOV lanes has diminished.



Southbound SR-167. Note: underutilized HOT Lanes.

The Effect of Hot Lanes on *The Misery Index*

The "*Misery Index*" is a commonly used term for additional delays in commute times caused by increasing congestion in highway general purpose lanes. As traffic volume increases in general purpose lanes, commute times increase, creating negative effects on not only throughput, but the "*misery*" impact on people, society, freight movement and the regional economy.

HOT Lanes increase the *Misery Index* for each and every driver by restricting the number of general purpose lanes available to total traffic volume (and thus concentrating a higher percentage of total volume into fewer general purpose lanes). Meanwhile, HOT Lanes cost taxpayers valuable resources that could otherwise be used for increasing vehicle capacity.

¹ Review of I-405/SR-167 HOT Lane Project; by James W. MacIassac, P.E (February 2011)

Conclusions

✓ To avoid wasting taxpayer resources, any further endorsement of HOT Lane technology or extension of existing HOT Lane pilot projects should be viewed with earned skepticism and should be conditioned upon both adherence to financial performance criteria and documented performance/operational standards.

✓ Based upon WSDOT's own data, the SR-167 HOT Lanes Pilot Project is both a failed experiment in social engineering of traffic volumes and a financial failure.

✓ Traffic speed increases on SR-167 during the 2-year study period can not be attributed to WSDOT's investment in HOT Lane infrastructure, but rather to a cyclical reduction in traffic volumes resulting from severe regional economic downturn.

✓ Besides failing to increase traffic throughput, the SR-167 HOT Lane Pilot Project has not repaid either its investment cost, nor covered its operational costs, and has resulted in significant financial losses for the state during a time of budget shortfalls.

✓ Given the documented financial and performance failure of the SR-167 HOT Lane Project, it is prudent for state, regional, county and local government elected representatives to use extreme caution in further considering or endorsing future use of taxpayer funds towards the use of HOT Lane technology.



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