Eastside Transportation Association

"Dedicated to improving our quality of life and environment by reducing congestion through increased mobility"

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HOT Lanes on SR 167 – A Financial and Operational Failure

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Overview:

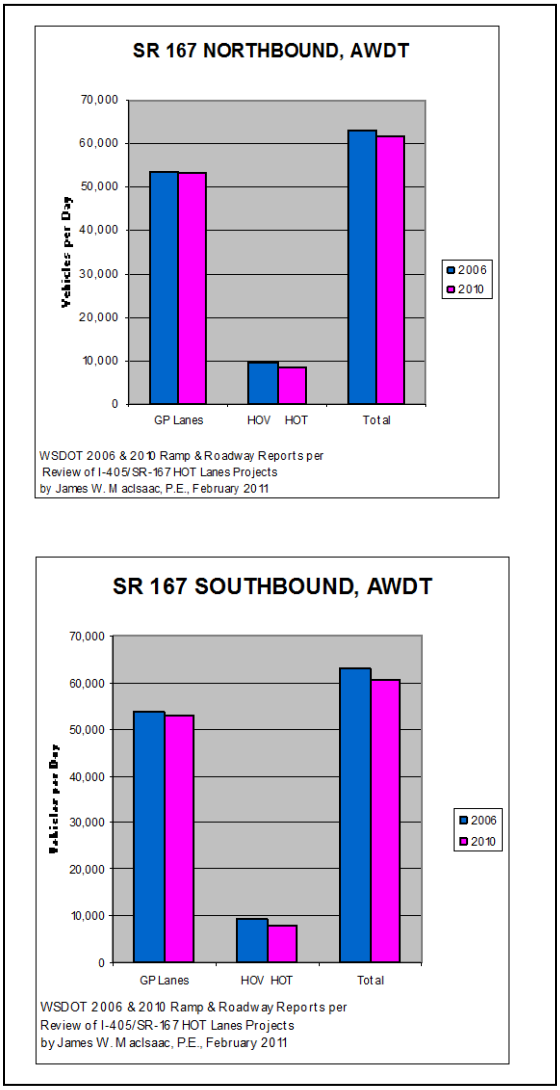
In 2007, the State of Washington legislature authorized the Department of Transportation (WSDOT) to implement a pilot project for managed lanes (HOT Lanes) on SR 167, utilizing tolls that are dynamically variable and based on traffic conditions at the time, to determine the viability of dynamic variable rate tolling.

As of this writing, the SR 167 Hot Lanes Pilot Project now has over 2 years of operational history. In the pre-project conditions, the SR 167 2+ HOV lanes had excess capacity while the General Purpose (GP) lanes were congested.

Summary of Findings:

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

- HOT Lanes do not repay the investment in construction.
- HOT Lane tolls fail to cover the on-going cost to manage and collect such tolls.
- HOT Lanes do not improve general purpose traffic flow.
- HOT Lanes do not increase overall traffic throughput.



Financial Results – Toll Revenues Do Not Exceed Operational Costs or Construction Costs

The financial results are clear; based on the first 2 years of data, HOT Lanes are a clear financial failure.

The tolls from the managed HOT Lanes on SR 167 generate revenue that is about 1/3 of the cost to collect those tolls.

Equally importantly, Hot Lane Tolls do not generate sufficient revenue to repay the costs to construct, implement and manage the toll collection infrastructure.

While it is understandable that costs can be higher for a pilot project, the results of the SR 167 Hot Lane Project clearly demonstrates that the toll revenues generated do not repay the capital invested, nor on-going operational cost. As a result, HOT Lanes are not a viable use of taxpayer resources.

Operational Results – Increase in Throughput and Average Speed Caused by Reduction in Traffic Volume Created by Recession, Not HOT Lanes

The operational results are equally clear. During the SR 167 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 investment in the HOT Pilot Project.

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 reduction in congestion on SR 167 has not been caused by the implementation of HOT lanes (as suggested by WSDOT) but rather, the results 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 reports[1]. 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 Results – HOT Lanes Reduce Use of HOV Lanes

The capacity and use of HOV lane operations have been degraded by changing the access to the HOV lane from unrestricted for 2+ vehicles to the few limited 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 high occupancy vehicle lanes has diminished.

The Effect of Hot Lanes on The Misery Index:

The "Misery Index" is a common name for the additional delay 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 impacts upon humans, society and the regional economy.

[1] Review of 1-405/SR-167 HOT Lane Project; February 2011, James W. MacIsaac, P.E.

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), HOT Lanes increase the Misery Index for each and every driver, while at the same time costing taxpayers valuable resources that could otherwise be used on increasing capacity.

Conclusions:

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 throughput 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 contraction.

In addition to 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 inadequate resources.

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

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 that do not result in a waste of taxpayer resources and documented performance/operational guidelines.

This White Paper is published by ***The Eastside Transportation Association (ETA),*** *a private sector group whose membership includes concerned citizens, business representatives and transportation professionals dedicated to improving transportation throughput, infrastructure capacity funding and informing/educating the public and elected officials on transportation issues, with the goal of improving our region's quality of life and environment by reducing congestion through increased mobility.*