



The High Occupancy Vehicle Program

What is the program?

The High Occupancy Vehicle (HOV) system is a network of freeway lanes in the Puget Sound area that are for use by high occupancy vehicles such as transit, vanpools, and carpools. Approximately half of the lanes operate as HOV-only around the clock, and the other half are open to all traffic at night (after 7:00 pm).

The system includes direct access ramps, which allow HOVs to enter and exit HOV lanes when the HOV lane is situated on the far left side of the freeway next to the center median. Direct access to the left-side HOV lanes allows HOVs to bypass metered on-ramps and eliminates the potentially dangerous and traffic delaying weave across other freeway lanes.

In May of 2008 the HOV lanes on SR 167 were converted to high occupancy/toll or HOT lanes. When there is extra space in the HOT lane, solo drivers can pay an electronic toll using a interior car-mounted transponder for a faster, more reliable trip. Toll rates increase and decrease with the level of congestion to ensure that traffic in the HOT lane always flows freely and carpools, vanpools and transit enjoy the same reliable trip they have in HOV lanes.

The HOV system increases freeway efficiency by moving more people in fewer vehicles and by providing an additional incentive to rideshare.

The goals of the HOV system are:

- To maximize the people-carrying capacity of the freeway system by providing an incentive to use buses, vanpools and carpools.
- To provide capacity for future travel growth.
- To help reduce transportation-related pollution and dependency on fossil fuels.

HOV and transit-only lanes also exist on some arterials. These generally fall under the jurisdiction of the local municipality and are not included in this description.

How does the program help reduce VMT?

HOV lanes support carpool, transit, and vanpool traveltime savings and reliability. They have also been shown to encourage mode shift from single occupant vehicles to shared ride modes. The main reasons cited for using shared rides in the HOV lanes are travel time, convenience, saving money, and less stress.

Survey data indicates that 99 percent of system users have at least one working vehicle at home. This indicates the HOV system is succeeding in shifting people from single occupancy vehicle (SOV) to shared ride modes. HOV system mode split in 2006 was 65 percent carpools, 20 percent transit, and 4 percent vanpools. The majority of HOV system users are two-person adult carpoolers.

The current system is moving about 34 percent of peak period freeway travelers in only 19 percent of overall freeway vehicles traveling in the peak directions. Approximately 200,000 one-way trips are made on the freeway HOV system on an average weekday.

What is happening now (current status/activities)?

The first freeway HOV segment opened almost 40 years ago. Approximately 235 lane-miles of a planned 310 mile system are currently operating. Seven direct access ramps out of a planned 20 have been built.

Projects totaling another 10 lane-miles and three direct access ramps are currently under construction. Another 15 miles of funded projects and one direct access ramp have not broken ground. Funding is still required to complete the remaining 50 miles of the system and nine direct access ramps. Existing, funded, and unfunded parts of the system are shown in the map to the right.



What can we be doing with existing resources to enhance the program's ability to reduce VMT?

Freeway HOV lanes are currently congested on I-5 and I-405 during the peak periods in the peak directions. Congested HOV lanes reduce the travel time and reliability benefits of shared ride modes and thus reduce HOV lane’s effectiveness in shifting demand to HOV modes. However, raising the vehicle occupancy requirement from two or more people (2+) to three or more people (3+) would push two-person carpools into already congested general purpose lanes and diminish the incentive for two people to carpool. The loss of incentive to carpool in the general purpose lanes would probably result in a shift back to single occupant vehicles and increase total VMT.

Though the I-5 and I-405 HOV lanes have little ability to accommodate additional vehicular traffic during peak periods, there is considerable additional person-carrying capacity in the vehicles that use the HOV lanes. This suggests there may still be potential for targeted transportation demand management (TDM) programs to reduce VMT by shifting SOV travel to HOV modes. Other approaches to managing HOV system capacity are being developed, some of which could be relatively inexpensive.

What could we (or should we) be doing with additional resources? (i.e. where are the opportunities for growth/enhancement)?

- A study is being finalized which looks at both short and long-term treatments for easing congestion in the I-5 HOV lanes. This was a low-cost fast-track study which could be expanded to look at other parts of the system, in conjunction with other planning and studies, to address short-term issues. The study could be expanded to look at certain locations and applications in more depth where required.
- Completion of the HOV system (SR 16 northeast to Purdy, I-5 south to Lakewood, and SR 167 down to Puyallup and back up to Fife at the I-5/SR 167 interchange) as shown on the map is not fully funded. The remaining nine direct access ramps are also unfunded. Direct access ramps have been largely funded by Sound Transit.
- Beyond completion of the currently planned HOV system, further expansion in the Puget Sound and other metropolitan areas of the state could be studied in conjunction with tolling and other congestion management plans. Expansion of arterial HOV, transit-only and BAT (**b**usiness **a**ccess and **t**ransit) lanes could also be performed in conjunction with the appropriate municipalities.

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