

Second Report of the High-Occupancy Vehicle Enforcement Task Force

Prepared for
Secretary of Transportation Whittington W. Clement
and
Secretary of Public Safety John W. Marshall

Submitted by
Dennis C. Morrison
Virginia Department of Transportation
and
Captain Mike Counts
Virginia Department of State Police

January 4, 2005

January 4, 2005

The Honorable John W. Marshall
Secretary of Public Safety
202 North Ninth Street, Room 613
Richmond, Virginia 23219

The Honorable Whittington W. Clement
Secretary of Transportation
202 North Ninth Street, Room 523
Richmond, Virginia 23219

Gentlemen:

As new co-chairs, we present to you the second High-Occupancy Vehicle Enforcement Task Force report. The high-occupancy vehicle (HOV) system in Northern Virginia is the single most important element in the regional transportation network, carrying more peak-hour passengers than the conventional freeway lanes, bus systems, Metrorail, or Virginia Railway Express (VRE). None of these modes could properly function without the HOV network.

The HOV Task Force work from 2003 resulted in increased enforcement on our HOV lanes as well as more stringent HOV sanctions that took effect July 1, 2004. The General Assembly accepted the Governor's recommendations and:

- Increased HOV enforcement funding from \$140,000 to \$390,000 annually;
- Doubled HOV fines to a maximum of \$1,000; and
- Made repeat HOV violators subject to moving violation penalties and points.

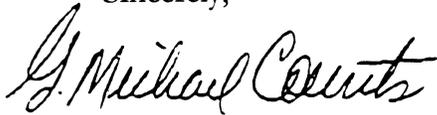
State police report some success in reducing the number and percentage of repeat offenders. However, over the past year, low occupancy vehicles have clogged the HOV lanes in Northern Virginia, minimizing their effectiveness and reducing the travel time benefits for commuters willing to rideshare. In the I-95 corridor, many of these low occupancy vehicles are hybrid vehicles.

Over the past four months, the Task Force has met and deliberated over a wide range of issues and concerns related to the efficient and effective use of the HOV lanes in Northern Virginia. This report presents a background and summary of the key issues identified by the Task Force and concludes with a series of important recommendations designed to improve the effective use of HOV lanes. These recommendations include:

- Changes that will enhance enforcement for HOV violations and ensure the number of low occupancy vehicles in HOV lanes remains limited;
- Ways to enhance the identification and protection of legitimate Dulles Airport users;
- Proposals for increasing visibility of enforcement efforts;
- Suggestions for additional enforcement resources and defined enforcement service levels;
- Recommendations to reduce or better manage the number of HOV exemptions, including those for hybrid vehicles; and
- Improvements to enforcement policy and communications strategies for all commuters in the region.

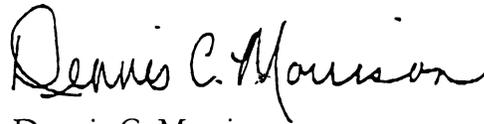
On behalf of the other members of the Task Force, we thank you for providing us with the opportunity and privilege of serving you, the Governor and, most important, the citizens of the Commonwealth.

Sincerely,



Captain Mike Counts
Virginia State Police

Sincerely,



Dennis C. Morrison
Virginia Department of Transportation

High-Occupancy Vehicle Enforcement Task Force

Members

Dennis C. Morrison
Virginia Department of Transportation

Captain Mike Counts
Virginia State Police

Young Ho Chang
Fairfax County

J. Marc Copeland
Virginia Department of Motor Vehicles

Elmer Tippett
Metropolitan Washington Airports Authority

Lon Anderson
American Automobile Association, Mid-Atlantic Chapter

Other Participants

Pierce Homer
Office of the Secretary of Transportation

James Ponticello
Virginia Department of Environmental Quality

Valerie Pardo
Virginia Department of Transportation

J. Michael Thompson, Jr.
Virginia Department of Environmental Quality

Joan Morris
Virginia Department of Transportation

Charlene "Gus" Robey
Virginia Department of Rail and Public Transportation

First Sergeant Wallace Bouldin
Virginia State Police

Jana Lynott
Northern Virginia Transportation Commission

First Sergeant James E. Deford, Sr.
Virginia State Police

Alfred Harf
Potomac Rappahannock Transportation Commission

First Sergeant Douglas Hendley
Virginia State Police

C. Patrick Zilliacus
Metropolitan Washington Council of Governments

James Sydnor
Virginia Department of Environmental Quality

Purpose of the Reconvened Task Force

The HOV Enforcement Task Force (Task Force) was originally established by the Secretary of Transportation Whittington W. Clement and Secretary of Public Safety John W. Marshall on May 15, 2003. Both Secretaries requested the Task Force reconvene in July 2004 (see **Appendix A**). The Secretaries were responding to the continuing concerns by citizens, local governments, businesses and the media about the efficient and effective use of HOV lanes in Northern Virginia.

The Task Force again included representatives from the Virginia Departments of Transportation, State Police and Motor Vehicles, Fairfax County, the Metropolitan Washington Airports Authority (MWAA) and the American Automobile Association (AAA). Other participants included representatives from the Federal Highway Administration (FHWA), the Northern Virginia Transportation Commission (NVTC), the Metropolitan Washington Council of Governments, the Potomac Rappahannock Transportation Commission, Virginia Departments of Environmental Quality (DEQ) and Rail and Public Transportation (DRPT), and the Office of the Secretary of Transportation.

The high-occupancy vehicle (HOV) system in Northern Virginia is one of the most successful in the country, and is the single most important element in the regional transportation network. The HOV system carries more peak-hour passengers than the conventional freeway lanes, bus systems, Metrorail, or Virginia Railway Express (VRE). None of these modes could properly function without the HOV network.

In order to operate successfully, HOV facilities require an effective enforcement policy and operational program. Over the past year, usage of HOV lanes in Northern Virginia by low occupancy vehicles, including occupancy violators and occupancy-exempt vehicles, has risen dramatically. These vehicles have clogged the HOV lanes in Northern Virginia, minimizing their effectiveness at moving people quickly and predictably, and thereby reducing the travel time benefits for commuters willing to rideshare. The viability of the entire Northern Virginia transportation network is directly linked to the success of the HOV lanes.

Recognizing the continuing need for efficient and effective HOV facility operations in this region in order to maintain and improve overall regional mobility and enhance clean air efforts, both Secretaries gave the Task Force an additional mandate to review and make recommendations, as necessary, related to the following:

- Current HOV trends and the implementation of new enforcement tools;
- Fiscal Year 2005 enforcement funding and its continuation;
- Communications with the law enforcement community regarding the law enforcement exemption for HOV lanes;

- HOV enforcement on the I-66 and the Dulles Access Road by State Police and Airport Police; and
- Continuation of the clean special fuel vehicle exemption and potential growth of this HOV exemption with the introduction of hybrid SUV's.

The Task Force was charged with responding to the Secretaries by the first of the year. Over the course of its three meetings (August 18th, September 23rd, and November 15th), the Task Force reviewed and discussed a number of key issues and developed various recommendations designed to improve the performance of the HOV facilities in Northern Virginia (see **Appendix B** for meeting summaries).

Role of HOV Lanes in the Northern Virginia Region

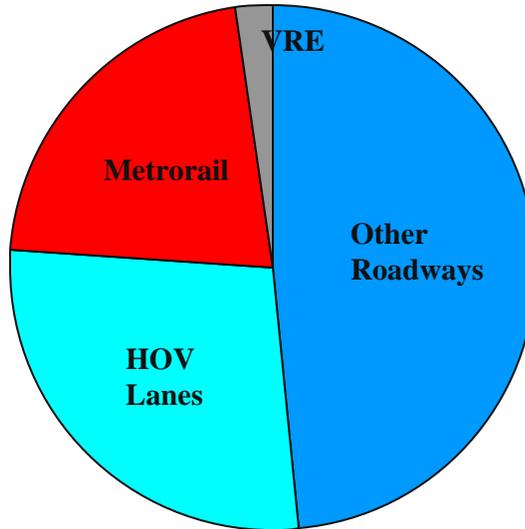
In a region seriously plagued by congestion, HOV lanes provide a faster, more dependable commute for thousands of commuters. The number of people who use these lanes to carpool, vanpool or take the bus grows every year. The benefits of HOV are clear: they help manage congestion, they help us attain our clean air goals, and they provide a time-savings incentive for people to rideshare.

The Metropolitan Washington Council of Governments (MWCOCG) collects data on Northern Virginia roadways on a yearly basis and the following information is taken from their 2002 Metro Core Cordon Counts of Vehicular and Passenger Volumes. According to MWCOCG, approximately 189,400 people travel inbound on transit or in autos to the core areas of Arlington, and District during the morning rush hours, defined as 6:30-9:30 a.m., which is slightly different from the HOV restricted times. Of these person trips, approximately one third are on transit vehicles (most of which travel on HOV lanes) and two-thirds are by automobile. The majority of trips are made in single occupant vehicles (41%) followed by carpool (26%) and Metrorail (22%).

The HOV lanes accommodate several different modes, including carpools, vanpools, buses, motorcycles, single occupant autos and some trucks. The majority of HOV lane users travel in autos and vans (75%) followed by transit buses (24%) during the 6:30-9:30 a.m. time period.

The pie chart below details the share of morning inbound person trips that are accommodated on various types of facilities that cross the cordon line into the Metro Core. The HOV lanes in the NOVA region on a typical morning carry over 52,000 people: 39,620 people in 17,530 autos and vans, 12,500 bus passengers in 450 buses, and 475 motorcycles and trucks.

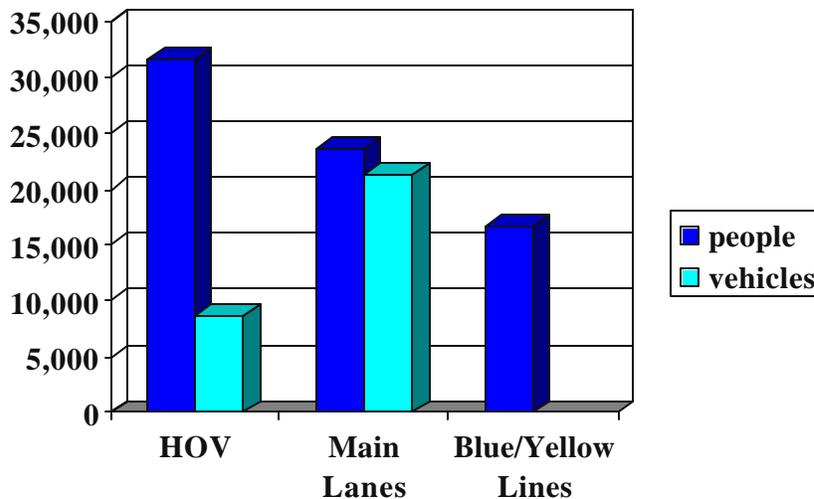
**Facility Usage to Core Areas
6:30-9:30 AM**

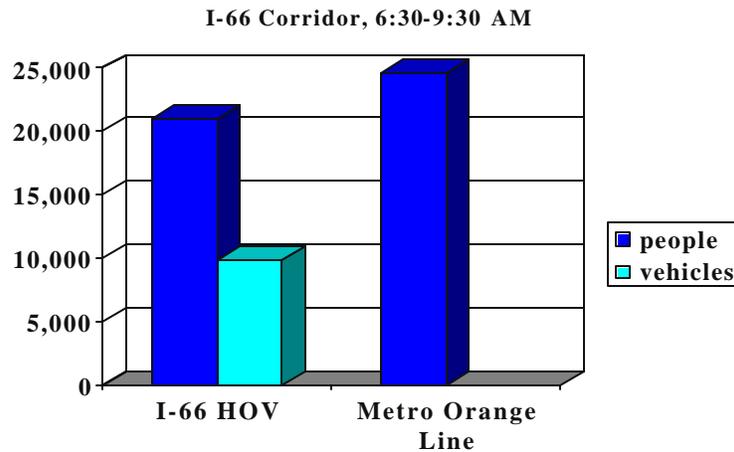


Total persons using the HOV lanes are 52,600 in the 6:30-9:30 a.m. time frame. In comparison, Metrorail carried 41,300 passengers across the cordon and VRE carried 4,310 passengers. The remaining roadways to the core area carry 87,280 people in 80,000 autos and 4,400 bus passengers during the 6:30-9:30 a.m. time period.

The Shirley Highway HOV facility is the best example in the region of a successful HOV operation. From 6:30-9:30 a.m. in 2002, the two HOV lanes carried a total of 31,650 people in 8,635 vehicles, compared to the four conventional lanes which carried 23,510 people in 21,310 vehicles. The Blue and Yellow lines of the Metrorail service in this corridor carried 16,700 people in the same time period.

I-395 Corridor, 6:30-9:30 AM





The I-66 HOV lanes carried a total of 20,940 people in 9,825 vehicles in 2002 between 6:30 and 9:30 a.m. from Virginia to the core areas. The Dulles Toll Road HOV carried 5,800 people in 3,220 vehicles, many of whom also use I-66 inside the beltway. Comparably, the Orange line of the Metrorail carried 24,600 people from Virginia to the core areas of Arlington and DC and beyond.

Avoiding congestion and saving time are the top two incentives for using the HOV lanes. Users of the Northern Virginia HOV lanes save a substantial amount of time over the same trip in the conventional lanes. Travel times from the fall of 2003 are presented below. *These travel time savings need to be preserved in order for the HOV system to work.*

Facility	Start Point	End Point	HOV Travel Time	Non-HOV Travel Time
I-95/395	Quantico Creek	14th & C Street	29 min	64 min
I-66	Route 234	23rd & Constitution	63 min	94 min
DTR	Route 28	I-66	12 min	13 min

The Northern Virginia regional bus services rely on dependable HOV lanes, as do thousands of commuters who take advantage of the enormously successful phenomenon of slugging¹. Park and ride lot usage is also an indicator of HOV lane success. Over the past five years VDOT has added nearly 5,000 park and ride spaces along I-95 south of Springfield, making it easier for commuters to park and take the bus or carpool and take advantage of the HOV lanes. Many of these lots are at capacity by 7:00 am.

¹ Slugging, or dynamic ridesharing, is a phenomenon that is observed on Northern Virginia’s HOV facilities. It refers to drivers who stop to pick up passengers at formally and informally designated locations in order to travel legally in the HOV lanes. A “slug” is an individual who accepts a ride.

Update on “No Excuses” Campaign

In July 2003, during the course of last year’s Task Force meetings, the “No Excuses” campaign for stepped-up enforcement on all HOV lanes was implemented. The campaign targets those low occupancy vehicles that enter the HOV facilities before the occupancy restrictions begin who have not exited the HOV lanes once the restricted period begins.

One of the goals of the “No Excuses” campaign was to reduce non-HOV vehicle usage of the HOV lanes during the first half hour of the morning and evening restricted periods when most HOV violations occur. Locations where this was accomplished in the morning peak period include I-95 at Newington and I-66 inside the Beltway. In the first half hour of the restrictions in the evening, almost all of the HOV facilities experienced reductions in non-HOV vehicles, except for the Dulles Toll Road.

Over 18,000 citations have been issued since this enforcement campaign began (see **Appendix C**). Over 10,000 were issued in the latter part of 2003, and over 8,000 in the first half of 2004. For the month of July 2004, 48% of the tickets were issued on I-395/95, 33% on I-66 outside the beltway, 14% on I-66 inside the beltway and 5% on the Dulles Toll Road. As a result, violation rates have dropped somewhat, but the need for continued enforcement efforts remains.

Implementation of New Enforcement Tools

A number of ideas for new enforcement tools have surfaced to help keep violators at a minimum. MWAA is looking at the use of Smart Tag for their parking facilities, which may enable the Authority to identify the cut through traffic from the back gate at Dulles Airport. Other technologies, such as thermal imaging, are being explored. This approach, and others like it, can assist enforcement efforts while greatly improving the safety of police officers patrolling HOV facilities in Northern Virginia.

VDOT also is working to ensure that HOV facilities are designed to make it easier for police officers to conduct their enforcement activities; for example, having sufficient lane space to allow for safe traffic stops. Ticketing by mail is not a viable option at this point based on past experiences.

Most important, funding for HOV enforcement will be an additional \$250,000 over the current \$140,000 for this fiscal year, for a total annual budget of \$390,000. Funding can be shared between the various enforcement agencies tasked with this responsibility. This and future funding will greatly assist HOV enforcement efforts.

Recent Trends in HOV Lane Usage: 2002 and 2003

Traffic counts were performed by the Metropolitan Washington Council of Governments in the fall of 2003 on the HOV lanes in Northern Virginia. The “No Excuses” enforcement campaign started in July 2003, and these counts reflect the impact on the number of non-HOV vehicles on the HOV lanes.

Non-HOV vehicles include vehicles that are exempt from the HOV occupancy requirements (see **Exemptions to HOV Occupancy Requirements** section below) as well as violators. This data does not reflect the impact of the increased fines and points that were passed by the General Assembly as a result of earlier Task Force recommendations (see **Appendix D** for data); however, State Police have reported a noticeable reduction in repeat HOV offenders.

Overall the number of people using the HOV lanes during the HOV restricted periods increased between 2002 and 2003, except for on I-95 south of Springfield.

For the Shirley Highway HOV lanes (I-395), the number and percent of non-HOV vehicles decreased in the morning peak hours between those same years from approximately 2,000 vehicles to about 1,660 (26% to 21%). On the I-95 HOV lanes, the percentage of non-HOV vehicles stayed the same at 35% but the total number of non-HOV vehicles dropped by about 550 vehicles (2,650 vehicles to 2,100 vehicles).

On I-66 inside the Beltway the number and percent of non-HOV vehicles dropped between 2002 and 2003. The percentage of non-HOV vehicles dropped from 38% to 29%, which equals a reduction of about 750 vehicles (25%). On I-66 outside the beltway the number and percent of non-HOV vehicles doubled in the morning peak hours.

On the Dulles Toll Road HOV lanes the number and percentage of non-HOV vehicles more than doubled. This has been attributed to the lack of congestion on this roadway; when traffic is moving at free flow speeds there is no incentive for the HOV traffic to travel in the HOV lane. All vehicles appear to travel in all lanes.

Recent Trends in HOV Lane Usage: 2004

Based on most recent traffic counts, the HOV lanes on I-95/I-395 have become overly congested this past fall. The data indicates (see **Appendix E**) that the problem stems from an increase in vehicle volumes on the facility, including HOV vehicles and those registered with clean special fuel license plates, most of which are hybrid vehicles.

Clean special fuel vehicles now comprise up to 19% of the volumes on the I-95 HOV lanes in the morning HOV restricted period and make up between 6% and 7% of the volumes on the I-395 HOV lanes in the same restricted time period. On average, violation rates have increased slightly (from 21% in 2003 to 22% in 2004) on I-395, but the rapid growth in hybrid vehicles has helped push the facility beyond the recommended operating capacity of an HOV lane, which is 1,800 vehicles per lane per hour.

Exemptions to HOV Occupancy Requirements

The current statutory exemptions from HOV occupancy requirements are, as follows:

- “1. Emergency vehicles such as fire-fighting vehicles, ambulances, and rescue squad vehicles,
2. Law-enforcement vehicles,
3. Motorcycles,
4. a. Transit and commuter buses designed to transport 16 or more passengers, including the driver,
b. Commuter buses and motor coaches operating under irregular route passenger certificates issued under § 46.2-2010 and any vehicle operating under a certificate of Public Convenience and Necessity or as a common carrier of passengers under § 46.2-2075 or § 46.2-2080,
5. Vehicles of public utility companies operating in response to an emergency call,
6. Until July 1, 2006, vehicles bearing clean special fuel vehicle license plates issued pursuant to § 46.2-749.3, or
7. Taxicabs having two or more occupants, including the driver.”

These exemptions can be categorized into vehicles that carry two or more occupants and those that do not. The exemptions that most likely involve vehicles carrying two or more occupants are:

- Emergency vehicles such as fire-fighting vehicles, ambulances, and rescue squad vehicles;
- Transit and commuter buses designed to transport 16 or more passengers, including the driver;
- Commuter buses and motor coaches operating under irregular route passenger certificates issued under § 46.2-2010 and any vehicle operating under a certificate of Public Convenience and Necessity or as a common carrier of passengers under § 46.2-2075 or § 46.2-2080;
- Vehicles of public utility companies operating in response to an emergency call; and
- Taxicabs having two or more occupants, including the driver.

The exemptions that most likely involve single occupancy vehicles (SOV's) are:

- Law-enforcement vehicles;
- Motorcycles; and
- Until July 1, 2006, vehicles bearing clean special fuel vehicle license plates issued pursuant to § 46.2-749.3 (this Code section includes provisions for issuing these plates to qualifying government-owned vehicles, which to date have not been implemented primarily because of concerns about the means of identifying these vehicles).

The majority of the exempt SOV's are vehicles registered with clean special fuel vehicle license plates, with a relatively small percentage of law enforcement vehicles as well (during the 6:00 to 9:00 a.m. restricted peak hours, law enforcement percentages ranged from 1% to 2.1% on various stretches of I-95; less than 1% on I-395). Anywhere from less than 1% (on the DTR) to 4% (on I-395) of the recent VDOT HOV non-compliance counts are motorcycles.

I-66 (Inside the Beltway) Exemption

As outlined in the first Task Force report, a condition of federal approval for construction of I-66 inside the Beltway, the Coleman Decision of 1977 ² required that low occupancy vehicles traveling to and from Dulles Airport for airport business be allowed to use I-66 (inside the beltway) at all hours, even during restricted periods. The Coleman Decision recognized that by allowing for this exception, enforcement of the HOV restrictions would be difficult.

The Commonwealth, the federal government and the MWAA all have authority over various aspects of airport access. However, a consensus approach as to what constitutes legitimate travel to and from Dulles Airport by a low occupancy vehicle still has not been developed at this time. The lack of this consensus approach makes consistent enforcement of HOV restrictions on I-66 virtually impossible.

The use of I-66 by low occupancy vehicles going to and from Dulles Airport during the HOV restricted time periods has increased significantly since the highway opened. Many of these low occupancy vehicles cut through the airport, stop to purchase gasoline, beverages or newspapers at the airport, and backtrack in order to use the Dulles Access Road and I-66 (inside the beltway) during the HOV restricted time periods.

Growth in Loudoun County has caused an increase in traffic to Arlington and the District of Columbia as well as an increase in HOV violations. The back gate of Dulles Airport from Loudoun County (Route 606) is open to general traffic, and hundreds of residents use this route to cut through the airport to use the Dulles Toll Road and I-66 (inside the beltway).

Police officers do make HOV violator stops at the access ramps to I-66, but since they are not visible from the main flow of traffic, the public perceives that they are not enforcing HOV restrictions.

Like the State Police, MWAA does not have the resources to provide for optimum enforcement. MWAA does enforce the backtracking and cut-through provisions one to two times per month, but ensuring the security of the airport takes precedence over HOV and Dulles access road issues.

² Former U. S. Secretary of Transportation William T. Coleman, Jr. issued this decision on January 5, 1977. No part of the decision has been codified in Virginia. Congress has since rescinded much of it.

Clean Fuel Vehicle Exemption

Virginia Code § 46.2-749.3 authorizes the issuance of clean special fuel license plates to qualifying vehicles. Vehicles registered with these plates are exempt from the HOV occupancy requirements until July 1, 2006. However, this exemption will expire anytime if and when the Governor receives a written statement from the Federal Highway Administration (FHWA) indicating the statute contravenes federal law. The statute also provides the means for any qualifying government-owned clean special fuel vehicles to take advantage of this exemption.

As defined by statute (Va. Code § 46.2-749.3), "...clean special fuel means any product or energy source used to propel a highway vehicle, the use of which, compared to conventional gasoline or reformulated gasoline, results in lower emissions of oxides of nitrogen, volatile organic compounds, carbon monoxide or particulates or any combination thereof. The term includes compressed natural gas, liquefied natural gas, liquefied petroleum gas, hydrogen, hythane (a combination of compressed natural gas and hydrogen), and electricity."

In April 2000, DMV was asked to determine if the then-new Honda Insight was eligible for clean special fuel vehicle license plates. After consultation with the Department of Environmental Quality (DEQ) and researching available information about the vehicle, it was initially determined that the Honda Insight was not eligible for the plates. Several citizens took the matter to their legislators and a second review reversed the initial determination in September 2000. The plates were allowed for both the Honda Insight and the then-new Toyota Prius. Subsequent to that second review, the Honda Civic hybrid was also allowed to be registered with the plates, again after consultation with DEQ.

Pending federal transportation reauthorizing legislation (SAFETEA) does allow for, but does not mandate, exemptions for most high-mileage hybrid vehicles. It also requires that HOV facility operators develop a monitoring program and establish minimum operating thresholds for HOV to insure that HOV facilities continue to perform at acceptable service levels. The most recent traffic counts indicate that the HOV lanes on I-95 are already operating at unacceptable levels of service at over 1,900 vehicles per lane per hour.

According to data compiled for 2003 by R. L. Polk & Co., hybrid vehicle registrations nationwide were up almost 26% over 2002. Sales of these vehicles have risen over 570% since they were introduced in 2000. In 2003, Virginia was second in the country in hybrid registrations (California was first with 11,425; Virginia had 3,376 at that time).

This year, DMV registrations of vehicles qualifying for clean special fuel license plates exploded, increasing by over 5,800 registrations through October 29, 2004 (see **Appendix F**). Of those new registrations, 97% (5,660) are hybrid vehicles and about 85% of them all (4,958) are registered in Northern Virginia jurisdictions.

There are strong indications that this rapid growth will continue -- the new hybrid Ford Escape is on the market and qualifies for clean special fuel license plates, with still other

hybrid models planned for introduction early next year. In the coming months, Lexus will offer the RX 400h hybrid SUV and Toyota will introduce the Highlander SUV hybrid. Honda also will offer the Accord hybrid in the very near future. Most other major automobile manufacturers are developing their own hybrid vehicles as well.

The November 22, 2004 issue of Newsweek published an article about the recent surge in hybrid sales. In 2003, nationwide sales had reached about 43,000. As of October 2004, nationwide sales reached over 61,000. According to the article, J. D. Power predicts there will be over 35 hybrid models to choose from by 2008; that number is expected to jump to 51 by 2012.

Many of the new hybrids are focusing on increased horsepower to go along with increases in fuel economy versus strictly increasing gas mileage. These increases in horsepower fuel the buying public's interest in hybrid vehicles, but diminish a vehicle's overall fuel economy. Current state law and previous policy determinations do not allow DMV or DEQ to discriminate between hybrids based on specific criteria, such as fuel economy.

Although they are legally exempt, these clean fuel vehicles add to the low occupancy traffic volume in HOV facilities and are a major contributor to the eroding performance of the HOV lanes on I-95. As indicated earlier, recent traffic counts indicate that clean special fuel vehicles, most of which are hybrid vehicles, now comprise up to 19% of the volumes on the I-95 HOV lanes in the morning HOV restricted period (see the **Recent Trends in HOV Lane Usage** sections).

In April 2003, FHWA notified VDOT in writing that the hybrid exemption was not a part of the existing federal authority for HOV exemptions (see **Appendix G**). FHWA also indicated that if pending federal legislation were not adopted, it would have to make a written notification to Virginia that the hybrid exemption was counter to federal law and formally request that Virginia discontinue the practice. FHWA added that if the federal requirements did not change, Virginia would be subject to sanctions if the practice were not discontinued.

FHWA sent a follow-up to its April 2003 letter to VDOT in December 2004 (see **Appendix G**) outlining its concerns about the apparent degradation of the I-95/395 HOV facilities in Northern Virginia associated with rapidly increasing single-occupant hybrid vehicle use. The letter asked VDOT to take certain actions, including providing a report to FHWA by February 28, 2005 or earlier detailing actions planned or taken to address the concerns.

Recommendations

The following are a list of recommendations (not prioritized) from the Task Force, based on the review and discussion of the key issues and other relevant materials reviewed and discussed by the Task Force:

- 1) Continue strict enforcement of HOV laws and regulations in order to maintain HOV capacity and preserve the time saving benefits HOV lanes provide while continuing to communicate and educate commuters about the rules and regulations of the HOV lanes and the benefits they provide. As part of that effort:
 - a) Create specific enforcement zones for HOV lanes by adding better lighting with easier and safer access for members of law enforcement (see **Appendix H**); and
 - b) Include additional HOV enforcement funding (\$250,000) in each year of the Six Year Program in order to achieve and maintain low violation rates (20% or below).

- 2) VDOT, DRPT and the Office of the Secretary of Transportation should immediately develop a plan detailing actions required in the event the HOV lanes reach capacity, including:
 - a) Developing and implementing real-time performance indicators to support active management of the HOV network.;
 - b) Determining the expectations of bus and HOV-3 travelers confronting the deteriorating performance of the HOV lanes as traffic in the lanes has grown;
 - c) Managing the expectation of hybrid owners and purchasers with respect to the exemption expiration date of July 2006; and
 - d) Developing specific plans based on the above to maintain adequate levels of HOV lane service.

- 3) Manage, both now and in the future, the number of clean special fuel plates issued, as follows:

For now -

 - a) DEQ should adopt the Super Low Emission Vehicle (SULEV) standard for eligible hybrids vehicles, or equivalent state or federal emission standards, in order to help determine which hybrid vehicles qualify for clean special fuel license plates, thereby maximizing the environmental benefits of such vehicles;
 - b) Oppose any extension of Virginia's clean special fuel license plate HOV occupancy exemption, which expires July 1, 2006;
 - c) Eliminate the government-owned clean special fuel vehicle exemption specified under Va. Code § 46.2-749.3; and
 - d) Allow clean special fuel vehicle license registrations to be valid for one year only (no multi-year registrations).

For future consideration, as necessary -

 - a) Increased occupancy levels for hybrid vehicles; or
 - b) Increase the issuance fee for clean special fuel vehicle license plates from \$10 per year to at least \$500 per year (about \$2 per day per commute, assuming 250 business days each year) and share the funds with law enforcement, to further their HOV enforcement efforts, and with VDOT, to help maintain HOV facilities; or

- c) Limit the hours that vehicles registered with clean special fuel vehicle license plates can enter HOV lanes exempt from occupancy requirements; or
 - d) Limit the number of vehicles registered with clean special fuel vehicle license plates that can be exempt to a set number and register them via lottery process; or
 - e) One or more combinations of the above options.
- 4) Amend the Code of Virginia to delegate specific operational authority for decisions needed to protect the public interest (e.g., determining occupancy exemptions) to the Commonwealth Transportation Board.
 - 5) Expand HOV facility peak period hours using appropriate traffic studies and review by VDOT and NVTVA, and conduct such studies at least every two years. In addition, make HOV facility requirements uniform wherever possible. Current HOV requirements vary somewhat from facility to facility. Consistent, uniform HOV requirements are easier for commuters to follow and for police officers to enforce.
 - 6) Amend the Code of Virginia, in consultation with VDOT, MWAA and NVTC, to better determine what constitutes “airport business” for the purposes of improving enforcement efforts in and around Dulles Airport. Once that determination is made and established in Va. Code, improve HOV access and enforcement for Dulles Airport users by:
 - a) Enhancing enforcement efforts at the back entrance to Dulles via Route 606.
 - b) Having State Police and MWAA develop better long-term enforcement mechanisms for the Dulles Access Road and I-66, in part by performing a coordinated exercise designed to determine effective enforcement levels in and around Dulles Airport.
 - 7) Clarify and communicate that the law enforcement vehicle exemption is not for an officer’s personal vehicle, emphasizing to all law enforcement agencies that their law enforcement personnel cannot legally commute on the HOV lanes in their personal nonexempt vehicles without the required occupancy levels.
 - 8) Improve HOV facilities by:
 - a) Ensuring that I-495 PPTA proposal includes widened shoulders on the I-66 portion of I-66/I-495 interchange;
 - b) Providing adequate information to or the means for potential violators on I-66 inside the beltway to exit the HOV facility prior to entry;
 - c) Performing quarterly quality control on fixed and variable HOV signage; and
 - d) Limiting access to and from I-95 HOV lanes by closing or staggering breaks in guardrails.
 - 9) The Task Force should continue to meet and develop long term strategies for complying with federal requirements and meeting level-of-service standards for HOV lanes.

Appendices

- Appendix A:** Copy of Letter from Secretaries of Transportation & Public Safety
Reconvening the Task Force
- Appendix B:** Meeting Summaries
 - Appendix B.1:** August 18, 2004 Meeting
 - Appendix B.2:** September 23, 2004 Meeting
 - Appendix B.3:** November 15, 2004 Meeting
- Appendix C:** HOV Conviction Statistics
- Appendix D:** HOV Usage Data, Fall 2002/2003 Count Comparisons
- Appendix E:** HOV Usage Data, Fall 2004 Counts
- Appendix F:** Clean Special Fuel License Plate Data, January 1 - October 29, 2004
 - Appendix F.1:** Clean Fuel Plate Data by Garaged Jurisdiction/Origination Month
 - Appendix F.2:** Clean Fuel Plate Data by Garaged Jurisdiction/Fuel Type
 - Appendix F.3:** Emissions Inspection Program (EIP) Jurisdiction Percentages
- Appendix G:** Letters from Federal Highway Administration
 - Appendix G.1:** April 9, 2003 Letter
 - Appendix G.2:** December 8, 2004 Letter
- Appendix H:** Suggested Areas for HOV Enforcement Zones

Appendix A: Copy of Letter from Secretaries of Transportation & Public Safety Reconvening the Task Force



COMMONWEALTH of VIRGINIA

Office of the Governor

P.O. Box 1475
Richmond, Virginia 23218

Whittington W. Clement
Secretary of Transportation

(804) 786-8032
Fax: (804) 786-6633
TTY: (804) 786-7765

July 27, 2004

Colonel W. Steve Flaherty
Superintendent
Department of State Police
7700 Midlothian Turnpike
Richmond, Virginia 23235

Mr. Philip A. Shucet
Commissioner
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 233219

Gentlemen:

Last year, your agencies supported a joint HOV Task Force to better understand the Northern Virginia HOV system and to make recommendations on ways to improve it. The Task Force found that every day more than 37,000 commuters rely on an effective, functioning HOV system.

In addition, the General Assembly and the Commonwealth Transportation Board approved the three main recommendations of the HOV Task Force. These include a doubling of fines for second and subsequent violators, up to \$1,000 per offense; driver demerit points for third and subsequent offenses; and dedicated funding for HOV enforcement (\$250,000 in FY05).

Additional work remains. We are asking the HOV Task Force to reconvene and to consider five issues:

- Current HOV trends and the implementation of new enforcement tools
- FY05 enforcement funding and its continuation
- Communications with the law enforcement community regarding the law enforcement exemption for HOV lanes
- HOV enforcement on I-66 and the Dulles Access Road by State Police and Airport Police
- Continuation of clean fuel vehicle exemption and potential growth of this HOV exemption with the introduction of hybrid SUV's.

Colonel W. Steve Flaherty
Mr. Philip A. Shucet
July 27, 2004
Page Two

Due to personnel changes, the leadership of the Task Force will change. It will be co-chaired by Captain Mike Counts of the Virginia State Police and Mr. Gene Hull, Acting Northern Virginia District Administrator. The remainder of the Task Force membership is unchanged: Young Ho Chang of Fairfax County, Marc Copeland of the Virginia Department of Motor Vehicles, Elmer Tippett of the Metropolitan Washington Airports Authority, and Lon Anderson of the Mid-Atlantic Chapter of the American Automobile Association.

Deputy Secretary of Transportation Pierce Homer will work closely with the Task Force, and staff from VDOT, DRPT, regional transit providers, and the Department of Environmental Quality will assist the Task Force.

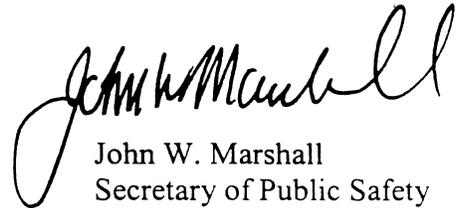
We have charged the Task Force with reporting back to us not later than October 1, 2004. We look forward to building on the success of the High Occupancy Vehicle Enforcement Task Force from last year.

Sincerely,



Whittington W. Clement
Secretary of Transportation

Sincerely,



John W. Marshall
Secretary of Public Safety

Copy:
Northern Virginia Transportation Authority Membership
Task Force Membership

Blind Copy:
Dr. Gridlock
Mr. Rick Taube, NVTC
Mr. Jim Sydnor, DEQ
Ms. Gus Robey, DRPT

Appendix B: Meeting Summaries

- **Appendix B.1:** August 18, 2004 Meeting Summary
- **Appendix B.2:** September 23, 2004 Meeting Summary
- **Appendix B.3:** November 15, 2004 Meeting Summary

Appendix B.1: August 18, 2004 Meeting Summary

**HOV Enforcement Task Force
Meeting #4 Summary**

Date: Wednesday, August 18, 2004

Attendees: Capt. Mike Counts, VSP
Gene Hull, VDOT/NOVA
Pierce Homer, Deputy Secretary of Transportation
Marc Copeland, Virginia DMV
Elmer Tippett, MWAA
First Sergeant Doug Hendley, VSP
Joan Morris, VDOT Public Affairs
Valerie Pardo, VDOT NOVA
Gus Robey, Virginia DRPT
Jana Lynott, NVTC
Sgt. Wallace Bouldin, VSP
Ho Chang, Fairfax County
J. Michael Thompson, Virginia DEQ
James Ponticello, Virginia DEQ
Jo Anne Sorenson, VDOT/NOVA
Rick Clawson, VDRPT

This was the first meeting of the reconvened Task Force to continue their efforts in addressing the enforcement problems on the HOV lanes in Northern Virginia.

The meeting opened with Pierce Homer giving a brief update on the accomplishments of the task force this past year. The main accomplishment was the increased fines and points for HOV violations, which appears to be having some impact on reducing the number of repeat offenders. He then went on to note the charge of the group in responding to the letter of July 19, 2004, from the Secretary of Transportation and the Secretary of Public Safety to Col. Flaherty and Philip Shucet. They have asked for a report back to them by October 1, 2004.

Joan Morris began the discussion with a description of the media campaign that has been underway. Topics discussed include:

- The VSP noted that the VDOT website details the exemptions for HOV, including the one for Dulles Airport users. They asked that the website reflect the Virginia Code only and is coordinated with the VSP website. They noted that the exemption for travelers to Dulles Airport makes it impossible to enforce HOV on I-66.
- The Airport Authority has been looking at the issue raised at last year's Task Force meetings of cut through traffic using the back gate off of Route 610. They

are looking at options to control this access.

- Joan is printing up cards which provide details on the new HOV regs. The police will be given 6,000 cards to distribute along with HOV tickets.

Sgt. Bouldin reported on the number of HOV tickets that they have issued since the “no excuses” campaign began. They issued 8658 tickets in the first six months and almost 20,000 since the campaign began a year ago. The backups at 6:00 am on the I-95 lanes has cleared up and they are also not seeing as many repeat offenders. Issues identified include:

- The question of the amount of funding to be provided to the VSP. They have already been granted \$140,000, but the letter from the two secretaries says that they should have been granted \$250,000. Pierce will look into this. The Airports Authority also asked that the topic of sharing these funds with them be addressed (there is language in the appropriations act that also allows this).
- Southbound signage on the I-395/95 HOV lanes is inadequate and often not working. VDOT needs to examine putting signs at every exit ramp and turning the overhead HOV messages on at 3:00 pm (especially on Fridays).
- The Code of Virginia does not include the stipulations in the Coleman Decision, namely that travelers to and from Dulles Airport can use I-66 inside the Beltway at all times without the required two person occupancy. The Police recommend that this provision be include in the Virginia Code or be eliminated since it is their job to enforce the Code of Virginia.
- Captain Counts would like to discuss HOV enforcement issues with troops in the field and report suggestions back to the group in a memo.
- The group discussed ticketing by mail since it is not generally safe to enforce HOV restrictions at many locations. The Police tried this in the past and many judges would not convict. Pierce asked that the police detail what changes in the Virginia Code may be needed to make this type of enforcement work. There was also some discussion on researching why judges are not convicting.

Valerie Pardo discussed the HOV occupancy counts taken since the “no excuses” campaign began. Things have not improved overall although selected locations show some reductions in non-HOV vehicles. The counts do not show true violators since the traffic counter can’t distinguish exempted vehicles from “true” violators. The group asked that the next set of counts be done for three consecutive days to get a clearer picture on what is the normal HOV usage for these lanes. Valerie will arrange for this.

Marc Copeland provided information on hybrid vehicles in Virginia as well as future trends in hybrid vehicle manufacturing. Last year, hybrid vehicle registrations nationwide were up almost 26% over 2002. Sales of these vehicles have risen over 570% since they were introduced in 2000. Virginia is currently second in the country in hybrid registrations (California is first with 11,425; Virginia has 3376) and the numbers are growing steadily. The vast majority of these vehicles are registered in Northern Virginia jurisdictions.

The group needs to make some recommendations on the use of hybrids on HOV lanes. The DEQ is in the process of preparing a recommendation on the criteria that should be used to determine which vehicles are eligible for the HOV exemption and which are not. They are examining the new hybrid SUV's that are coming on the market to see if they will be eligible for the clean fuel plates, since they are less fuel efficient and may not run as clean as the current hybrids. They will make this determination within the next month and bring their recommendation back to the group.

Other topics covered:

- HOT lanes were touched on briefly. Current legislation provides exemptions from tolls on HOT lanes for HOV-3 vehicles, transit vehicles, and on-duty law enforcement vehicles only. The code pertaining to HOT lanes was distributed.
- The Dulles Airport access issue was again brought up and Pierce will meet separately with the Airport Authority to discuss options for resolution of this issue.

The following action items were reviewed:

- 1) VSP appropriation for HOV enforcement will be resolved (**Pierce Homer**).
- 2) The VSP will provide a memo to Pierce Homer with recommendations from officers in the field to improve HOV enforcement (**Capt. Counts**).
- 3) The VDOT website needs to be examined for clarity in HOV exemptions (**Joan Morris, Valerie Pardo**).
- 4) The signage on I-395/95 southbound needs to be examined (**Gene Hull**).
- 5) Future HOV design needs to provide enforcement areas or pull outs to ensure safety of police and motoring public.
- 6) Examine ways to change the code to enable HOV ticketing by mail (**Capt. Counts, Pierce Homer**).
- 7) Look into discussing HOV enforcement issues with judges (**Pierce Homer**).
- 8) Break out ticketing statistics by roadway by month and provide to Valerie (**Sgt. Bouldin**).
- 9) Collect fall '04 data for three consecutive days at each location. Offer police assistance to counters (**Valerie Pardo**).
- 10) Provide exemption information regarding hybrids to car dealerships (**Marc Copeland**).
- 11) Discuss options for continuing the exemption for airport traffic (**Pierce Homer, Elmer Tippett**).
- 12) Turn on overhead HOV signs in the southbound direction on I-395/95 at 3:00 pm. (**Gene Hull**).

The group will reconvene in one month. Members will be contacted for available dates.

Appendix B.2: September 23, 2004 Meeting Summary

HOV Enforcement Task Force Meeting #5 Summary

Date: Thursday, Sept. 23, 2004

Attendees: Capt. Mike Counts, VSP
Gene Hull, VDOT/NOVA
Dennis Morrison, VDOT/NOVA
Pierce Homer, Deputy Secretary of Transportation
Marc Copeland, DMV
Elmer Tippet, MWAA
Young Ho Chang, Fairfax County
Lon Anderson, AAA Mid-Atlantic
Jana Lynott, NVTC
James DeFord, VSP
Susan Yates, Pulsar
Joan Morris, VDOT
Jim Ponticello, DEQ
Jim Sydnor, DEQ
Valerie Pardo, VDOT

This was the second meeting of the reconvened HOV Enforcement Task Force in 2004. A final report is due to the Secretaries in November which recommends additional improvements to the HOV lanes in Northern Virginia.

I-95 HOV Lanes

- Since the last meeting of this group, VDOT staff examined the signage on I-95 and ordered repairs on various signs. The VSP noted that they had no additional issues with the I-95 signage.
- The VSP recommended that the emergency cut throughs between the HOV lanes and the regular lanes be examined to discourage motorists from jumping from one facility to another. *Mr. Hull will ask staff to look at this.*
- There was some discussion on eliminating the exemption for non-HOV vehicles on I-395/95 southbound, south of Duke Street at Turkeycock Run. *Valerie Pardo will look at the traffic counts in this segment to determine the number of vehicles impacted and Mr. Hull will ask Larry Cloyd to examine this in relation to the construction at the Springfield Interchange.*

I-66 HOV Lanes

- The question arose concerning the signage on I-66. The signs do not indicate that the entire facility is HOV only during peak periods. *Mr. Hull will research the signage on I-66 inside the beltway and look for ways to make the HOV restrictions clearer.*

- A recommendation was made to open one lane of I-66 inside the beltway to all traffic. The current HOV figures show that there is not enough capacity to accommodate one lane of LOV traffic inside the beltway.
- It was recommended that the airport exemption on I-66 inside the beltway should be put into the Code of Virginia. It should also include wording that there is some burden of proof on the motorists that they are coming from or going to the airport.
- There was some discussion on the possibility of eliminating the airport exemption for the I-66 HOV lanes. *Valerie will look at ways to estimate how many vehicles actually traveling to the airport use I-66 inside the Beltway.*
- The recommendation was made to widen the shoulders of I-66 outside the Beltway. *Ho Chang will write up a recommendation that the I-495 PPTA includes widening I-66 shoulders to Cedar Lane.*

Hybrid Exemption

- There was some discussion on eliminating the exemption for hybrid vehicles.
- There was discussion on recommendations to tighten up the requirements for clean fuel license plates to vehicles that get over 45 mpg and have low emissions. It was noted that the new hybrid SUV's do not meet the same standards as the existing hybrids, and California is looking at adopting the same type of regulation (*it has been adopted since this meeting took place*).
- The group noted that the fees for CF plates could be raised as a method to control their distribution. *Marc Copeland will explore this option.*

Global HOV Improvements

- Pierce Homer clarified that the police funding for HOV enforcement would be and additional \$250,000 over the current \$140,000 for this fiscal year.
- Ticketing by mail is not an option at this point based on past experiences.
- The fall traffic counts are underway and will include three days counts at each location.
- The question arose as to why we do not have 24 hour HOV lanes in Northern Virginia. *Mr. Chang will write up a recommendation that this be examined.*
- Mr. Homer would like to open the discussion again about the law enforcement vehicle exemption. *Capt. Counts said that the police will recommend how to better define this exemption.*

Action Items

- 1- Examine exemption to occupancy between Turkeycock and Old Keene Mill Rd.
Gene Hull- *discuss capacity increase at interchange with Larry Cloyd*
Valerie Pardo- *provide count data on this segment; check out VDOT cameras at this location*

- 2- I-66 inside the Beltway
 - Valerie Pardo**- *look at existing volumes vs capacity for one HOV and one conventional lane*
 - Research ways of determining airport traffic using I-66 today*
 - Gene Hull**- *research signage, particularly westbound from the District of Columbia*
 - Pierce Homer**- *continue discussions with Airports on I-66 usage*

- 3- I-66 Outside the Beltway
 - Ho Chang**- *write up a recommendation to widen the shoulders on I-66 to Cedar Lane as part of the PPTA on the Beltway*
 - Write up suggestion for examining 24 hour HOV lanes*

- 4- Cut throughs on I-95
 - Gene Hull**- *look at reconfiguring the cut throughs on I-95 HOV lanes*
 - Extend guard rail south of Prince William Parkway*

- 5- Law enforcement vehicles
 - Capt. Counts**- *police will suggest modifications to code to address which law enforcement agencies have access to HOV*
 - Pierce Homer**- *re-engage this discussion at the Secretaries level*

- 6- Hybrids
 - Marc Copeland**- *suggest fee levels for purchasing a CF plate*
 - Track the federal legislation with respect to hybrids*
 - Pierce Homer**- *work with DEQ towards a policy change for defining standards for CF plates*

If needed, the group may re-convene one additional time before a final report is issued.

Appendix B.3: November 15, 2004 Meeting Summary

HOV Enforcement Task Force Meeting #6 Summary

Date: Monday, November 15, 2004

Attendees: Sgt. Wallace Bouldin, VSP
Dennis Morrison, VDOT/NOVA
Pierce Homer, Deputy Secretary of Transportation
Marc Copeland, DMV
Elmer Tippet, MWAA
Young Ho Chang, Fairfax County
Tom Jennings, FHWA
Al Harf, PRTC
JoAnne Sorenson, VDOT
Jana Lynott, NVTC
Susan Yates, Pulsar
Joan Morris, VDOT
Jim Ponticello, DEQ
Patrick Zilliagus, COG/TPB
Valerie Pardo, VDOT

This was the third meeting of the reconvened HOV Enforcement Task Force in 2004. A final report is underway and the group met to discuss the I-95 HOV lane operation and report recommendations.

I-95 HOV Lanes

- The HOV lanes on I-95/I-395 have become overly congested this past fall, and data was presented to explain the situation. The problem stems from an increase in vehicle volumes on the facility, including HOV vehicles and hybrid/CF exempt vehicles. Violation rates have declined somewhat but the rapid growth in hybrid vehicles has pushed the facility beyond its available capacity.
- DMV registrations of CF plates have doubled (4,000 to 8,000) between March and October 2004. The new hybrid Ford Escape is on the market and will be allowed access to the HOV lanes. State code does not allow us to discriminate between hybrids based on mileage or emissions.
- Virginia is currently in violation of federal law with respect to allowing hybrids on the HOV lanes. The new reauthorization bill allows states to decide on the hybrid issue, but the current legislation does not. The new bill also suggests that HOV lane operators develop a monitoring program and establish minimum operating thresholds for HOV.

The following suggestions were made by members of the group for further consideration:

- VDOT needs to develop a plan for when the lanes fill up, and this development should include the stakeholders (e.g. car dealerships);
- Need to determine the expectation of hybrid owners with respect to the expiration date of July 2006, perhaps with a survey;
- The plan/program should dovetail with HOT lane issues;
- Might consider HOV-4 as a solution;
- Look at increasing capacity on the facility;
- Look at eliminating hybrid exemption;
- Tighten up enforcement to reduce violation rates;
- Should be a multi-pronged approach to this problem;
- Some suggested getting rid of the hybrid exemption now because it will be much harder to do by 2006;
- Look at capping the number of CF plates issued;
- Limit registration for hybrid vehicles to one year;
- Raise the registration fee for CF vehicles;
- Look at increasing HOV hours;
- Address issue of judges not upholding tickets delivered by mail;
- Add additional lighting and enforcement areas to the HOV lanes;
- Shift some of the operational authority (determining exemptions) to a body other than the General Assembly.

The group reviewed a set of prepared recommendations for the Secretaries and will send additional comments on these to Pierce Homer.

I-66 to Dulles Airport

- Pierce Homer is working with MWAA to put something in the Code of Virginia to determine what is airport business.
- MWAA is looking at the use of SMARTTAG for their parking facilities, which will enable them to identify the cut through traffic from the back gate.

Marc Copeland will have a draft report ready for review in about one week.

Appendix C: HOV Conviction Statistics

H.O.V. Conviction Statistics

2003		2004	
JAN	1,217	JAN	1,421
FEB	1,476	FEB	1,398
MAR	2,044	MAR	1,476
APR	1,819	APR	1,420
MAY	1,280	MAY	1,259
JUNE	1,068	JUNE	1,684
JULY	2,329	TOTAL	8,658
AUG	1,905		
SEPT	1,215		
OCT	1,939		
NOV	1,223		
DEC	1,457		
TOTAL	18,972		

SOURCE: Department of State Police

Appendix D: HOV Usage Data, Fall 2002/2003 Count Comparisons

Counts for First Half Hour of HOV Restriction

A.M.	Fall 2002		Fall 2003	
	Total Vehicles	Non-HOV Vehicles	Total Vehicles	Non-HOV Vehicles
I-395- 6:00-6:30	1420	38%	1250	59%
I-95 (at Newington)- 6:00-6:30	1920	68%	1310	54%
I-66 Inside the Beltway- 6:30-7:00	1570	55%	1070	34%
I-66 Outside the Beltway- 5:30-6:00	490	30%	460	95%
DTR at Hunter Mill Road- 6:30-7:00	560	60%	890	73%

P.M.	Fall 2002		Fall 2003	
	Total Vehicles	Non-HOV Vehicles	Total Vehicles	Non-HOV Vehicles
I-395- 3:30-4:00	755	30%	730	15%
I-95 (at Newington)- 3:30-4:00	1295	70%	890	78%
I-66 Inside the Beltway-4:00-4:30	1290	50%	1210	41%
I-66 Outside the Beltway- 3:00-3:30	570	28%	460	21%
DTR at Hunter Mill Road- 4:00-4:30	310	17%	575	63%

*Total vehicles includes cars, vans, transit buses, trucks

**non-HOV vehicles include motorists who are allowed to use the HOV lanes without the required occupancy (alternative fuel vehicles, police vehicles, taxis, Dulles Airport users) as well as violators.

Draft 6/11/04

p/pardo_vj/excel/HOV info from fall 2003 and 2002.xls

Hybrid Vehicles at Newington on HOV Lanes

	Fall 2003 Total Vehicles	Fall 2003 Hybrids	Spring 2004 Hybrids
AM restricted period (6:00-9:00)	6000	250 (4%)	480 (8%)
PM restricted period (3:30-6:00)	6060	550 (9%)	590 (10%)

Fall of 2002 and Fall of 2003 HOV One Day A.M. Counts

	Fall of 2002 HOV Counts			Fall of 2003 HOV Counts			Fall of 2003 Conventional Lanes	
	Total Vehicles	Total Persons	Non-HOV Vehicles	Total Vehicles	Total Persons	Non-HOV Vehicles	Conventional Lanes Persons	Conventional Lanes Vehicles
I-395								
Peak Period (6:00-9:00)	7700	24,260	26%	7890	29,380	21%	21,300	18,440
Peak Hour	2760	9140	6%	3270	12,110	7%	8100	7200
I-95 (at Newington)								
Peak Period (6:00-9:00)	7570	22,400	35%	6000	19,310	35%	16,460	16,060
Peak Hour	3120	10,520	13%	2470	8,370	35%	5980	5850
I-66 Inside the Beltway								
Peak Period (6:30-9:00)	7940	13,860	38%	7740	14,810	29%	n/a	
Peak Hour	3470	6370	28%	3500	6950	24%	n/a	
I-66 Outside the Beltway								
Peak Period (5:30-9:30)	4880	10,780	14%	5140	10,630	28%	15,680	14,300
Peak Hour	1580	3760	9%	1650	3820	8%	4520	4220
DTR at Hunter Mill Road								
Peak Period (6:30-9:00)	3220	5800	28%	4420	6410	55%	13,030	12,650
Peak Hour	1500	2840	20%	1860	2820	48%	6080	5850

*Total vehicles includes cars, vans, transit buses, trucks

**non-HOV vehicles include motorists who are allowed to use the HOV lanes without the required occupancy (alternative fuel vehicles, police vehicles, taxis, Dulles Airport users) as well as violators.

Appendix E: HOV Usage Data, Fall 2004 Counts

I-395 INSIDE THE BELTWAY
Glebe Road Station- northbound from 6-9 am

Date	Tot. Veh.	Speed	HOV Veh	LOV Veh	Hybrids	% Hybrids	Violators	% Violators	Peak Hour Volume
fall 2002	7700		5700	1990			1450	26%	1381/lane
fall 2003	7890		6250	1640	n/a		1640	21%	1633/lane
spring 2003									
fall 2004									
23-Sep	9958	24-70	7903	2055	552	6%	1503	15%	1755/lane
29-Sep	10,216	21-58	7104	3112	725	7%	2387	23%	1966/lane
30-Sep	8631	26-60	5693	2938	531	6%	2407	28%	1755/lane
Avg for 2004	9602		6900	2702	603	6%	2099	22%	1825/lane

I-95 OUTSIDE THE BELTWAY
Newington south of flyover- northbound from 6-9 a.m.

Date	Tot. Veh.	Speed	HOV Veh	LOV Veh	Hybrids*	% Hybrids	Violators	% Violators	Peak Hour Volume
fall 2002	7570		4910	2660			2660	35%	1560/lane
fall 2003	6000		3890	2110	250	4%	1860	31%	1234/lane
spring 2004					480				
fall 2004									
6-Oct	7994	32-67	5432	2562	844	11%	1718	21%	1749/lane
7-Oct	7961	29-68	5224	2737	998	13%	1739	22%	1816/lane
13-Oct	8455	0-68	5744	2711	1078	13%	1633	19%	1935/lane
28-Oct	8450	37-68	5357	3093	1422	17%	1671	20%	1914/lane
Avg. for Oct.	8215		5439	2776	1086	13%	1690	21%	1853/lane
9-Nov	8328		5332	2996	1369	16%	1627	20%	1967/lane

Notes:
 * Hybrids from fall 2004 are the sum of mainline plus flyover
 November counts are after daylight savings time ends
 Speeds are from PRTC bus travel times

Appendix F: Clean Special Fuel License Plate Data, January 1 - October 29, 2004

- **Appendix F.1:** Clean Special Fuel License Plate Data by Garaged Jurisdiction/Origination Month
- **Appendix F.2:** Clean Special Fuel License Plate Data by Garaged Jurisdiction/Fuel Type
- **Appendix F.3:** Emissions Inspection Program (EIP) Jurisdiction Percentages

Appendix F.1: Clean Fuel Plate Data by Garaged Jurisdiction/
Origination Month

VIRGINIA DEPARTMENT OF MOTOR VEHICLES
 CLEAN FUEL PLATE DATA
 BY GARAGED JURISDICTION / ORIGINATION MONTH
 YEAR TO DATE AS OF 10-29-04

JURISDICTION	01-04	02-04	03-04	04-04	05-04	06-04	07-04	08-04	09-04	10-04	TOTAL
* ALEXANDRIA	27	37	17	20	21	21	20	29	21	14	227
CHARLOTTESVILLE	2	1	1	1	1	0	0	0	1	0	7
CHESAPEAKE	2	3	1	3	0	4	4	1	5	3	26
COLONIAL HEIGHTS	0	0	0	0	0	0	0	0	0	0	1
COVINGTON	0	0	0	0	0	0	0	0	0	0	1
* FAIRFAX CITY	5	4	3	8	4	7	10	5	5	5	56
* FALLS CHURCH	2	2	5	0	5	1	5	1	2	4	27
FREDERICKSBURG	4	5	5	2	2	4	3	5	5	5	40
HAMPTON	0	0	0	0	1	0	0	1	0	0	2
HARRISONBURG	0	1	0	0	1	1	0	0	0	1	4
LEXINGTON	0	0	1	0	0	0	0	0	0	0	2
LYNCHBURG	1	0	0	0	0	0	0	0	1	0	2
* MANASSAS	5	6	3	6	5	3	7	6	6	1	48
* MANASSAS PARK	1	0	1	0	1	0	0	0	4	0	7
NEWPORT NEWS	1	0	0	0	3	0	0	2	0	0	6
NORFOLK	1	1	0	0	3	7	0	1	4	2	19
PORTSMOUTH	0	0	1	0	0	0	0	0	1	0	6
RICHMOND CITY	0	0	1	0	1	2	1	2	2	1	8
ROANOKE CITY	0	0	0	0	0	0	0	1	0	0	1
SALEM	0	0	0	0	0	0	0	0	0	0	1
SUFFOLK	1	1	0	1	0	1	3	1	1	0	9
VIRGINIA BEACH	3	5	2	3	9	6	10	2	9	3	52
WILLIAMSBURG	0	0	0	0	0	0	1	0	1	0	2
WINCHESTER	0	0	0	0	0	2	1	3	1	1	8
TOTAL ALL CITIES	55	67	40	45	59	60	65	61	70	40	562

The jurisdictions shown are the only ones that have vehicles registered with clean special fuel plates at this time.

* Jurisdictions that are subject to emissions inspections pursuant to Va. Code section 46.2-1178 C. Vehicles utilizing hybrid, compressed natural gas, electric, liquefied natural gas, liquefied petroleum gas and natural gas fuel types are exempt from emissions inspections as determined by the Department of Environmental Quality pursuant to Va. Code section 46.2-1177.

VIRGINIA DEPARTMENT OF MOTOR VEHICLES
CLEAN FUEL PLATE DATA
BY GARAGED JURISDICTION / ORIGINATION MONTH
YEAR TO DATE AS OF 10-29-04

JURISDICTION	01-04	02-04	03-04	04-04	05-04	06-04	07-04	08-04	09-04	10-04	TOTAL
* ALBEMARLE	1	0	0	0	1	0	0	3	4	1	10
ARLINGTON	32	25	27	27	29	35	32	24	34	26	289
AUGUSTA	0	0	0	0	0	0	0	0	0	0	1
BEDFORD COUNTY	0	0	1	1	0	0	0	0	0	0	1
BUCKINGHAM	0	0	0	0	0	0	0	0	0	0	1
CAROLINE	2	2	2	2	1	2	1	1	1	0	14
CHESTERFIELD	0	1	1	2	1	3	1	3	2	1	16
CLARKE	0	1	1	1	2	2	1	1	1	2	13
CULPEPER	2	0	2	2	6	5	1	5	6	5	35
* FAIRFAX COUNTY	186	145	173	179	213	199	199	224	221	193	1,932
FAUQUIER	14	8	7	7	17	19	17	20	18	7	142
FLUVANNA	0	0	0	0	0	0	0	0	2	0	2
FREDERICK	3	2	1	3	1	2	3	1	3	2	22
GOOCHLAND	0	0	1	0	0	0	0	0	1	0	2
GREENE	0	1	0	0	0	1	0	1	0	0	3
GREENSVILLE	0	0	1	0	0	0	0	0	0	0	1
HANOVER	1	1	1	1	1	1	3	1	1	1	8
HENRICO	2	1	1	1	0	1	1	1	2	3	15
HENRY	0	0	0	0	0	0	0	0	1	0	1
HIGHLAND	0	0	0	0	0	0	1	0	0	0	1
ISLE OF WIGHT	0	0	0	0	0	0	0	0	0	0	1
JAMES CITY	1	1	0	1	0	1	0	0	2	3	8
KING GEORGE	2	3	1	3	2	2	1	1	2	3	20
KING WILLIAM	1	0	0	0	0	1	0	0	0	1	3
LANCASTER	0	0	0	0	0	0	1	0	0	1	2
* LOUDOUN	50	31	36	43	51	65	38	61	47	62	484
LOUISA	1	0	2	2	0	1	0	0	0	1	5
MADISON	0	0	0	0	0	0	0	0	2	0	3
MECKLENBURG	0	0	0	0	0	0	1	0	0	0	1
MIDDLESEX	0	0	0	0	0	0	1	1	0	0	3
MONTGOMERY	0	0	0	0	0	0	0	1	0	0	1
NELSON	0	1	0	0	0	0	0	0	0	0	2
NEW KENT	0	0	0	0	0	0	0	1	0	0	1
NORTHAMPTON	0	0	0	0	0	0	0	0	0	1	1
NORTHUMBERLAND	0	0	0	0	0	0	0	0	0	0	1
ORANGE	3	1	5	5	5	4	2	1	1	2	29
PRINCE EDWARD	0	0	0	0	0	0	0	0	0	1	1
* PRINCE WILLIAM	108	101	119	92	162	145	122	147	154	92	1,242
RAPPAHANNOCK	1	0	2	2	1	0	3	0	1	1	10
ROANOKE COUNTY	0	0	0	0	0	0	0	1	0	0	1
ROCKINGHAM	0	0	0	0	0	1	0	0	1	0	2
SHENANDOAH	0	1	1	1	2	3	0	1	2	1	12
SPOTSYLVANIA	19	16	16	26	35	27	34	23	34	22	252
* STAFFORD	73	45	62	76	61	77	69	65	63	55	646
WARREN	2	1	3	3	3	2	3	3	1	4	27
WESTMORELAND	0	2	1	1	1	0	0	1	0	1	8
YORK	1	0	1	1	3	0	0	0	1	0	6

DATE: 10/29/2004
TIME: 16:04

VIRGINIA DEPARTMENT OF MOTOR VEHICLES
CLEAN FUEL PLATE DATA
BY GARAGED JURISDICTION / ORIGINATION MONTH
YEAR TO DATE AS OF 10-29-04

PROGRAM: B4244-P4
PAGE: 3

JURISDICTION	01-04	02-04	03-04	04-04	05-04	06-04	07-04	08-04	09-04	10-04	TOTAL
TOTAL ALL COUNTIES	505	390	471	489	599	599	535	592	609	492	5,281

The jurisdictions shown are the only ones that have vehicles registered with clean special fuel plates at this time.

* Jurisdictions that are subject to emissions inspections pursuant to Va. Code section 46.2-1178 C. Vehicles utilizing hybrid, compressed natural gas, electric, liquified natural gas, liquified petroleum gas and natural gas fuel types are exempt from emissions inspections as determined by the Department of Environmental Quality pursuant to Va. Code section 46.2-1177.

Appendix F.2: Clean Fuel Plate Data by Garaged Jurisdiction/Fuel Type

DATE: 10/29/2004
 TIME: 16:04

VIRGINIA DEPARTMENT OF MOTOR VEHICLES
 CLEAN FUEL PLATE DATA
 BY GARAGED JURISDICTION / FUEL TYPE
 YEAR TO DATE AS OF 10-29-04

PROGRAM: B4244-P3
 PAGE: 1

JURISDICTION	ETHANE	HYBRID	COMPRESSED			LIQUIFIED		METHANE	LIQUIFIED		NATURAL
			NATURAL GAS	ELECTRIC	HYDROGEN	NATURAL GAS	PETROLEUM GAS		NATURAL		
* ALEXANDRIA	1	224	0	0	1	0	0	0	0	1	
CHARLOTTESVILLE	0	7	0	0	0	0	0	0	0	0	
CHESAPEAKE	0	23	0	2	0	0	0	0	0	0	
COLONIAL HEIGHTS	0	0	0	1	0	0	0	0	0	0	
COVINGTON	0	0	0	0	0	0	0	0	0	1	
* FAIRFAX CITY	0	56	0	0	0	0	0	0	0	0	
* FALLS CHURCH	0	27	0	0	0	0	0	0	0	0	
FREDERICKSBURG	0	40	0	0	0	0	0	0	0	0	
HAMPTON	0	2	0	0	0	0	0	0	0	0	
HARRISONBURG	0	3	0	1	0	0	0	0	0	0	
LEXINGTON	0	2	0	0	0	0	0	0	0	0	
LYNCHBURG	0	2	0	0	0	0	0	0	0	0	
* MANASSAS PARK	0	44	1	3	0	0	0	0	0	0	
* MANASSAS	0	6	0	1	0	0	0	0	0	0	
NEWPORT NEWS	0	6	0	0	0	0	0	0	0	0	
NORFOLK	0	11	3	3	0	0	0	0	0	2	
PORTSMOUTH	0	6	0	0	0	0	0	0	0	0	
RICHMOND CITY	0	6	0	0	2	0	0	0	0	0	
ROANOKE CITY	0	1	0	0	0	0	0	0	0	0	
SALEM	0	1	0	0	0	0	0	0	0	0	
SUFFOLK	0	8	0	0	0	0	0	0	0	1	
VIRGINIA BEACH	0	45	2	3	2	0	0	0	0	0	
WILLIAMSBURG	0	2	0	0	0	0	0	0	0	0	
WINCHESTER	0	6	0	2	0	0	0	0	0	0	
TOTAL ALL CITIES	1	528	6	16	5	0	0	0	0	5	

The fuel types listed are the only ones that are associated with vehicles registered with clean special fuel plates at this time. Vehicles utilizing other fuel types are eligible for clean special fuel plates.

The jurisdictions shown are the only ones that have vehicles registered with clean special fuel plates at this time.

* Jurisdictions that are subject to emissions inspections pursuant to Va. Code section 46.2-1178 C. Vehicles utilizing hybrid, compressed natural gas, electric, liquified natural gas, liquified petroleum gas and natural gas fuel types are exempt from emissions inspections as determined by the Department of Environmental Quality pursuant to Va. Code section 46.2-1177.

NOTE: Total vehicle count for all cities should be 562 because one clean special fuel type (hythane; one vehicle registered with this fuel) is not included.

VIRGINIA DEPARTMENT OF MOTOR VEHICLES
 CLEAN FUEL PLATE DATA
 BY GARAGED JURISDICTION / FUEL TYPE
 YEAR TO DATE AS OF 10-29-04

JURISDICTION	ETHANE	HYBRID	COMPRESSED		ELECTRIC	HYDROGEN	LIQUIFIED		METHANE	LIQUIFIED		NATURAL
			NATURAL GAS	ELECTRIC			NATURAL GAS	PETROLEUM GAS				
* ALBEMARLE	0	10	0	0	0	0	0	0	0	0	0	0
ARLINGTON	1	283	2	1	1	1	0	0	1	0	0	0
AUGUSTA	0	1	0	0	0	0	0	0	0	0	0	0
BEDFORD COUNTY	0	1	0	0	0	0	0	0	0	0	0	0
BUCKINGHAM	0	1	0	0	0	0	0	0	0	0	0	0
CAROLINE	0	14	0	0	0	0	0	0	0	0	0	0
CHESTERFIELD	0	16	0	0	0	0	0	0	0	0	0	0
CLARKE	0	13	0	0	0	0	0	0	0	0	0	0
CULPEPER	0	34	0	15	1	0	0	0	0	0	0	0
* FAIRFAX COUNTY	4	1,900	6	34	15	4	2	2	0	1	1	0
FAUQUIER	0	135	0	6	6	0	0	0	0	0	0	0
FLUVANNA	0	2	0	0	0	0	0	0	0	0	0	0
FREDERICK	0	19	0	0	2	0	1	0	0	0	0	0
GOOCHLAND	0	2	0	0	0	0	0	0	0	0	0	0
GREENE	0	3	0	0	0	0	0	0	0	0	0	0
GREENSVILLE	0	1	0	0	0	0	0	0	0	0	0	0
HANOVER	0	7	0	0	0	0	0	0	0	0	0	0
HENRICO	0	13	0	1	1	0	0	0	0	0	0	1
HENRY	0	1	0	0	0	0	0	0	0	0	0	0
HIGHLAND	0	1	0	0	0	0	0	0	0	0	0	0
ISLE OF WIGHT	0	1	0	0	0	0	0	0	0	0	0	0
JAMES CITY	0	8	0	0	0	0	0	0	0	0	0	0
KING GEORGE	0	18	0	0	1	0	0	0	0	0	0	1
KING WILLIAM	0	3	0	0	0	0	0	0	0	0	0	0
LANCASTER	0	2	0	0	0	0	0	0	0	0	0	0
LOUDOUN	0	473	3	5	5	3	0	0	0	0	0	0
LOUISA	0	5	0	0	0	0	0	0	0	0	0	0
MADISON	0	3	0	0	0	0	0	0	0	0	0	0
MECKLENBURG	0	1	0	0	0	0	0	0	0	0	0	0
MIDDLESEX	0	2	1	0	0	0	0	0	0	0	0	0
MONTGOMERY	0	1	0	0	0	0	0	0	0	0	0	0
NELSON	0	1	0	0	0	1	0	0	0	0	0	0
NEW KENT	0	1	0	0	0	0	0	0	0	0	0	0
NORTHAMPTON	0	1	0	0	0	0	0	0	0	0	0	0
NORTHUMBERLAND	0	1	0	0	0	0	0	0	0	0	0	0
ORANGE	0	29	0	0	0	0	0	0	0	0	0	0
PRINCE EDWARD	0	0	0	0	1	0	0	0	0	0	0	0
PRINCE WILLIAM	6	1,192	12	26	26	2	1	0	0	2	0	1
RAPPAHANNOCK	0	9	0	1	1	0	0	0	0	0	0	0
ROANOKE COUNTY	0	1	0	0	0	0	0	0	0	0	0	0
ROCKINGHAM	0	2	0	0	0	0	0	0	0	0	0	0
SHENANDOAH	0	9	0	2	2	1	0	0	0	0	0	0

VIRGINIA DEPARTMENT OF MOTOR VEHICLES
 CLEAN FUEL PLATE DATA
 BY GARAGED JURISDICTION / FUEL TYPE
 YEAR TO DATE AS OF 10-29-04

* JURISDICTION	ETHANE	HYBRID	COMPRESSED		ELECTRIC	HYDROGEN	LIQUIFIED		LIQUIFIED	
			NATURAL GAS	NATURAL GAS			NATURAL GAS	PETROLEUM GAS	NATURAL GAS	NATURAL GAS
SPOTSYLVANIA	0	246	1	1	3	1	0	0	0	1
STAFFORD	4	629	6	0	4	0	0	0	1	2
WARREN	0	25	0	0	2	0	0	0	0	0
WESTMORELAND	0	7	1	0	0	0	0	0	0	0
YORK	0	5	1	0	0	0	0	0	0	0
TOTAL ALL COUNTIES	15	5,132	33	13	72	4	1	5	6	

The fuel types listed are the only ones that are associated with vehicles registered with clean special fuel plates at this time. Vehicles utilizing other fuel types are eligible for clean special fuel plates.

The jurisdictions shown are the only ones that have vehicles registered with clean special fuel plates at this time.

* Jurisdictions that are subject to emissions inspections pursuant to Va. Code section 46.2-1178 C. Vehicles utilizing hybrid, compressed natural gas, electric, liquified natural gas, liquified petroleum gas and natural gas fuel types are exempt from emissions inspections as determined by the Department of Environmental Quality pursuant to Va. Code section 46.2-1177.

Appendix F.3: Emissions Inspection Program (EIP) Jurisdiction Percentages

DATE: 10/29/2004
TIME: 16:04

VIRGINIA DEPARTMENT OF MOTOR VEHICLES
CLEAN FUEL PLATE DATA
EMISSIONS INSPECTION PROGRAM (EIP) JURISDICTION PERCENTAGES
YEAR TO DATE AS OF 10-29-04

PROGRAM: B4244-P4
PAGE: 1

EIP JURISDICTION	TOTAL	PERCENTAGE OF GRAND TOTAL
ALEXANDRIA	227	3.88 %
FAIRFAX CITY	56	0.95 %
FALLS CHURCH	27	0.46 %
MANASSAS	48	0.82 %
MANASSAS PARK	7	0.12 %
ARLINGTON	289	4.94 %
FAIRFAX COUNTY	1932	33.06 %
LOUDOUN	484	8.28 %
PRINCE WILLIAM	1,242	21.25 %
STAFFORD	646	11.05 %
EIP TOTAL	4,958	84.85 %

Appendix G: Letters from Federal Highway Administration

- **Appendix G.1:** April 9, 2003 Letter
- **Appendix G.2:** December 8, 2004 Letter

Appendix G.1: April 9, 2003 Letter



U.S. Department
of Transportation

**Federal Highway
Administration**

Virginia Division
(804)775-3320

P.O. Box 10249
400 N. 8th Street Rm. 750
Richmond, Virginia 23240

IN REPLY REFER TO:

April 9, 2003

High Occupancy Lanes
Clean Fuel Vehicles

Mr. Jeffrey Southard
Director of Planning and the Environment
Virginia Department of Transportation
Richmond, Virginia

Dear Mr. Southard:

The Federal Highway Administration (FHWA) has recently received a number of inquiries about existing Virginia laws and policies pertaining to the use of High Occupancy Vehicle (HOV) lanes by clean fuel vehicles, in particular hybrid vehicles. Based on discussions in the past and on a current review of Virginia's policies, we are writing to formally express our concern with Virginia's existing practice allowing hybrid clean fuel vehicles with just one person to use HOV lanes. We wish to reinforce our previous informal email and discussions that Virginia's current HOV occupancy exemption for hybrid vehicles does not comply with federal regulations. Let us explain.

Current Federal law, Title 23, USC 102 (a)(2), states that "...before September 30, 2003, a State may permit a vehicle with fewer than two (2) occupants to operate in HOV lanes if the vehicle is certified as an Inherently Low Emission Vehicle (ILEV)..."

In the early 1990's, the Environmental Protection Agency (EPA) established the ILEV classification to recognize vehicles with no fuel vapor (hydrocarbon) emissions. Only EPA has the authority to certify the ILEV class of vehicles. The hybrid (gas/electric) vehicles, currently on the market and operating in Virginia, do not meet the ILEV standards set by EPA regulations.

Although conflicts between Federal and State transportation laws and policies are cause for grave concern, we understand the U.S. Congress currently has under consideration legislation that would permit States to allow hybrid vehicles to use HOV lanes. In addition, the September 30, 2003, allowance for ILEV might be extended. In any event, we will await these results before pursuing the matters further in Virginia.

If current Federal law remains unchanged, we anticipate writing a letter indicating that Virginia State law and policies are counter to Federal law, and request that Virginia discontinue its current practice of allowing clean fuel vehicles, especially hybrid vehicles, to use HOV lanes. The State will then be subject to Federal sanctions if the current practice continues. Federal policy provides for a range of adverse actions, including withholding future Federal funds, if certain conditions regarding the operation of HOV lanes are not followed.

We would be pleased to further discuss this matter with you at your convenience.

Sincerely yours,

Roberto Fonseca-Martinez
Division Administrator

/s/ Thomas Jennings

Thomas Jennings
Transportation Management Engineer

Appendix G.2: December 8, 2004 Letter



U.S. Department
of Transportation

**Federal Highway
Administration**

Virginia Division
(804)775-3320

P.O. Box 10249
400 N. 8th Street Rm. 750
Richmond, Virginia 23240

IN REPLY REFER TO:

December 8, 2004

High Occupancy Vehicle Lanes
Clean Fuel Vehicles

Mr. Philip Shucet
Commissioner
Virginia Department of Transportation
Richmond, Virginia

Dear Mr. Shucet:

This is a follow-up to our April 9, 2003, letter (copy attached) to Mr. Jeffrey Southard of VDOT on FHWA's concerns about Virginia laws and policies pertaining to the use of High Occupancy Vehicle (HOV) lanes by clean fuel vehicles, in particular hybrid vehicles. Basically, we wrote in 2003 to formally express our concern with Virginia's practice allowing hybrid clean fuel vehicles with just one person to use HOV lanes, and to indicate that Virginia's current HOV occupancy exemption for hybrid vehicles does not comply with federal legislation.

Our April 2003, letter expressed concern over the conflict between state and Federal law, but indicated we would not take action against the state because there was transportation reauthorization legislation pending in Congress. One provision under consideration involved providing States with the option to allow low emission and energy-efficient vehicles, which might include some hybrid vehicles, to use HOV lanes under limited conditions. The intent of this proposal is to provide states more flexibility in managing HOV lanes and accommodating hybrid vehicles, so long as HOV lanes have available capacity and are operating efficiently. It is to recognize the benefits that some hybrid vehicles might provide in alleviating air pollution and increasing fuel efficiency.

It is important to note that our position in 2003 to not take action was also based on several assumptions that we had previously discussed with VDOT. These assumptions included that the number of hybrid vehicles with clean fuel plates in Virginia was small

and that the allowance of hybrid vehicles had little impact on the operation of the HOV lanes.

It has recently come to our attention that the number of hybrid vehicles using the Northern Virginia HOV lanes along Interstates 395/95 has greatly increased over the last 8 months. Also, we have learned that the operation of the HOV lanes is beginning to degrade, which could directly affect the original intent of providing a travel incentive for transit, vanpools and carpools. We are very concerned. If apparent trends of growing hybrid vehicle usage and other non-carpool usage continue, the HOV lanes may soon reach a point where congestion significantly degrades the overall mobility along the Interstate 395/95 corridor. The HOV lanes are some of the most effective HOV facilities in the country in moving people, and we should strive to continue this.

We are not only concerned about the single occupant hybrid vehicles, but also are concerned about all of the non-carpool and non-transit vehicles that may eventually degrade the corridor. With reauthorization still pending and without better information on the current situation, we are reluctant to request Virginia to immediately comply with current Federal law regarding hybrid vehicles in HOV lanes. However, it is important that action be taken to preserve the effective operation of the HOV lanes along Interstates 395/95. Accordingly, we ask that the following be accomplished for the Interstate 395/95 HOV lanes:

1. Develop and implement an enhanced, continuous monitoring and evaluation program of the HOV lanes along Interstates 395/95, which includes analyzing the impact of allowing hybrid vehicles with just one person to use HOV lanes.
2. Determine and begin addressing the possible causes of any degradation from the last 6 to 9 months. Examine the short term and medium term growth of the HOV3+ traffic and the capacity needed.
3. Consider enhanced enforcement to reduce the violation rate, and other actions to improve the effective operation of the lanes. Consider reducing the amount of single occupant commuters in unmarked, official law enforcement vehicles.
4. Examine the many options available for reducing the possibly negative impact of hybrid vehicle use on the HOV lanes. In particular, examine the impact of totally eliminating the exemption for hybrid vehicles and the impact of allowing only the highest mileage and low emission vehicles as proposed in the Federal reauthorization legislation.
5. Identify if the congestion is related to specific bottlenecks in the HOV lanes, such as the termini, and if there are any strategies or studies possibly needed.
6. Provide FHWA with a report by February 28, 2005, or earlier, indicating the actions that have been taken, evaluated or planned for implementation. Please include the initial results from the enhanced monitoring and evaluation program especially related to the impact of hybrid vehicles on the operation of the HOV lanes.

We recognize that VDOT and others are also concerned about the operation of the HOV lanes and have a number of efforts underway. After receiving the report mentioned above, we will consider whether further Federal action is needed. We would be pleased to discuss this matter with you at your convenience.

Sincerely yours,

Roberto Fonseca-Martinez
Division Administrator

/s/ Thomas A. Jennings

Thomas Jennings
Transportation Management Engineer

Attachment

Appendix H: Suggested Areas for HOV Enforcement Zones

Shirley Highway HOV Corridor

Possible "Enhanced" HOV
Monitoring Locations
"Strawman" Suggestion

**DRAFT
WORKING DOCUMENT
FOR DISCUSSION USE ONLY
NOT FOR ENGINEERING USE**

**C. P. Zilliacus
November 2004**

