**Don't Miss the HOV to HOT Lanes Conversion Opportunity**

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Issue Backgrounder

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# Summary


**Issue:**

Both the U.S. Department of Transportation (USDOT) and the Colorado Department of Transportation (CDOT) can expect a dramatic reduction in highway and transportation funding from traditional sources over the next few years. Colorados highway network is already overrun with travelers, yet widened and expanded highways will not be pursued.

**Opportunity:**

There exists unused space in Colorados High Occupancy Vehicle (HOV) lanes, at locations such as I-25, Santa Fe Drive, and State Highway 82, as well as projected unused space in future HOV investments, such as North I-25 and U.S. 36. High Occupancy / Toll (HOT) lanes are a viable and desirable means of effectively using that excess space, *without*:

1. reducing the congestion-free benefit of the lanes;
2. eliminating the incentives to carpool or ride the bus; or
3. requiring large capital expenditures.

HOT lanes are a politically acceptable and financially desirable means of extending transportation finance and travel choices. Furthermore, the private sector has shown demonstrable interest in using toll financing, such as HOT lanes, as a way of improving traffic in congested corridors.[1]

**Experience:**

HOT lanes are not a new idea. They have been successfully implemented on State Route 91 (Orange County) and Interstate 15 (San Diego) in California, and Interstate 10 in Houston, Texas. HOT lanes continue to receive significant support from users and non-users alike. In fact, initial experiences with HOT lanes have been so successful that both states are moving forward with new highway capacity in San Diego, Los Angeles, Dallas, Austin and Houston to be financed, in part, with HOT lane revenue.

**Proposal:**

HOT lanes are a viable way of introducing the free marketplace to the realm of transportation infrastructure and services. The following policies are recommended:

*The full use guarantee policy.* In a time of declining transportation funding and increasing congestion, wasting space in HOV lanes should not be tolerated.

*Requiring HOT flexibility*. No Colorado agency should enter into an agreement that prohibits the flexibility of using HOT lanes.

*Incorporate HOT Lanes as a standard option with HOV facilities*. All Colorado HOV lanes should offer toll-based access to vehicles, where feasible.

*End illegal discrimination against toll road users.* Colorados constitution sets gasoline taxes aside for public highways, Thus, people who buy gasoline, thereby paying gas taxes, and who also pay tolls are being double taxed.

# Transportation Issues

While the events of September 11$^{th}$ have intensified the need to allocate transportation funding to those activities most relevant to national security (primarily associated with the Federal Aviation Administration and the newly created Transportation Security Administration), transportation funding was already projected to decline in the United States and Colorado. However, congestion continues to increase at an alarming pace,[2] overtaxing the ability of Colorados highway system to accommodate traffic. Transportation investments are needed in order to ensure the states economic health.

High Occupancy Vehicle (HOV) lanes, or carpool lanes as they are often called, currently feature unused space or as transportation planners refer to it, excess capacity. According to a recent study by CDOT, the I-25 HOV lanes achieve less than 30% peak period utility. That means that more than 70% of the capacity in HOV lanes is wasted during rush hours. Calculated over the hours that the HOV lanes are open, over 80% of the facility capacity is wasted. This means that the HOV lanes can actually accommodate several times the number of vehicles currently using the lanes, without causing any congestion or slowdown in these lanes.

The problem of excess capacity is already apparent to the public. One motorist, Dave Peterson, commented recently in the *Denver Post,*[3] They should open up the HOV lanes so everybody can use them. HOV lanes do serve a purpose, and they are successful at what they do: increasing vehicle occupancy, improving travel times for both the HOT Lane users and the fewer commuters left in the regular lanes, and reducing air emissions of vehicles in those lanes. ***All these benefits of HOV Lanes continue if the HOV Lanes become HOT Lanes.***

# Policy Definitions

High Occupancy / Toll (HOT) lanes are commonly applied as both a free market, value-added service, and as a demand-management strategy on roadways and busways. The policy is most relevant to the use of excess capacity in HOV lanes. By applying a variable toll, one that increases with increasing congestion and decreases with decreasing congestion, individual drivers make an on-the-spot decision as to whether the toll cost warrants use of the facility to receive the benefit of receiving a congestion-free trip. As demonstrated by HOT lanes elsewhere in the United States, the variable cost ensures that the demand for the facility is managed, such that congestion never occurs on the HOT lanes.

HOT lane revenue is used within the corridor that generates it; for example, HOT lane revenue can be used to pay off initial or expanded capital investment debt (such as original construction or extension of an HOV / HOT facility), maintenance of infrastructure on the facility, conversion of HOV lanes to HOT, or other upgrades within the project limits. In no currently implemented situation is HOT lane revenue seen as a general fund revenue source, nor should it be. Furthermore, current Colorado state law requires HOT lane revenue to be spent within the corridor from which it is generated.

# California and Texas

HOT lanes have already been implemented on California State Route 91 in Orange County, I-15 in San Diego, and I-10 in Houston. California and Texas have been so satisfied with their experiences that both states are well underway to implementing expanded highway facilities that are financed, in part, by the use of HOT user fees. On all of the aforementioned facilities, ***carpooling and bus use increased*****[4]** with the implementation of HOT lanes (contrary to the fears expressed by many alternative-mode advocates), ***congestion never occurred*** on the HOT lanes (again dispensing with a myth that HOT lanes might be overrun), ***congestion decreased slightly*** in the general-purpose lanes, and the ***public expressed greater satisfaction*** with these corridors than before HOT lanes. HOT lanes are a win-win proposition.

A December 2001 study by the San Diego Association of Governments regarding the existing HOT lanes on I-15 found the following results:[5]

- 66% of non-users and 88% of HOT lane users approved of the I-15 HOT lanes;
- 70% of all voters agreed with the statement, People who drive alone should be able to use the I-15 Express Lanes for a fee. ***Greater support*** was actually ***found among lower income*** voters (81% of less-than-$40,000-per-year) than higher income (71% of more-than-$100,000-per-year) voters.

- 90% of HOT lane users and 73% of non-users stated that the HOT Lanes reduce congestion on I-15.
- When asked what was the single most effective way to reduce congestion on I-15, voters stated:
    - Extend the HOT lanes (49% of HOT lane users; 37% of non-HOT lane users)
    - Add regular lanes (24% of HOT lane users; 26% of non-HOT lane users)
    - Build other roads (13% of HOT lane users; 21% of non-HOT lane users)
    - Add transit (10% of HOT lane users; 11% of non-HOT lane users)
- Over 70% of both HOT lane users and non-users stated that having single-occupant vehicle use on I-15 express lanes was fair.

In short, those who oppose HOT lanes perpetuate two myths: 1) that HOT lanes will reduce carpooling and bus riding, thereby increasing congestion, and, 2) that the public will not support HOT lanes, due to concerns of fairness and equity. Clearly, the evidence from California and Texas shows these claims to be myths.

# Previous Colorado Legislative Actions

In 1999, the Colorado state legislature passed Senate Bill 88, later adopted into law as the HOT Lane Act, and codified as Colorado Revised Statute 42-4-1012. This Act obligates the Colorado Department of Transportation (CDOT) to convert an existing HOV facility on I-25 to HOT lanes. Converting either of Colorados other two HOV facilities, State Highway 82 (Aspen corridor) and Santa Fe Drive (Denver), to HOT lanes was not technically feasible. This implied the best facility for conversion would be the I-25 Downtown Express in Denver.

As of February 2002, this had not yet occurred due to opposition from the Federal Transit Administration, and concerns cited by the City and County of Denver and the Regional Transportation District (RTD). CDOT continues negotiations for the conversion of the
I-25 Downtown Express HOV facility to HOT lanes.

# Proposed HOT Legislation

The Colorado Transportation Center of the Independence Institute recommends additional legislative actions for the pursuit of HOT lanes. Colorado should not delay efforts to bring such a successful and desirable transportation policy to fruition.

**The Full Use Guarantee Policy**

Most people regard HOV lanes as a failure. The original purpose of HOV lanes was to reduce congestion by converting single-occupant vehicle drivers to either carpoolers or bus riders by offering a congestion-free alternative to general-purpose lanes. Since their adoption, though, growth in traffic has greatly outpaced the growth in carpooling and bus riding. Indeed, the 2000 census shows that these two modes of travel have actually declined as a percentage of all modes. As a result, HOV lanes remain underutilized while the adjacent general purpose lanes are often a virtual parking lot; at the peak, only 30% of the capacity of the I-25 HOV facility is utilized; the Santa Fe HOVs peak utilization is only 40%.

Despite the failure of these facilities, HOV lanes continue to be advanced by many interests. The U.S. 36 Major Investment Study concluded that a two-to-four lane HOV facility should be constructed along the length of U.S. 36. The North Front Range Corridor Investment Study offered a similar recommendation for I-25 north of Downtown Denver to Ft. Collins.

The Colorado General Assembly should adopt policies that benefit all taxpayers. In particular, ***all Colorado government agencies, including CDOT and RTD, must insure full use of all HOV facilities.*** Full use means that all available capacity during peak periods must be utilized, without degrading travel speeds or overall level of service within the HOV lanes. Such a policy would avoid the current public embarrassment of the I-25 HOV lanes. More than $222 million was spent on a facility that moves less than one-fifth of the vehicles it could without becoming congested. Spending millions of taxpayer dollars on an underused, unwanted facility is a poor, at best, policy.

The simplest way to ensure full use, without degrading the level of service on the corridor, is HOT Lanes. Full use also points in the direction of a more enlightened, more liberalized, less controlled and more decentralized application of many currently limited mobility alternatives that would yield both higher vehicle occupancy as well as maximum facility use.

## Require Future HOT Lane Flexibility

The General Assembly should ***prohibit CDOT, RTD or any other agency using taxpayer funds from entering into any agreement*** for HOV lanes, highway extension, or highway lane expansion projects with the U.S. Department of Transportation or another agency ***when the agreement would limit the states flexibility in fully utilizing the available capacity on a corridor***.

Such a policy would avoid the problems inherent with converting I-25s Downtown Express HOV facility to HOT lanes, wherein the Federal Transit Administration and RTD entered into a contract that prohibited the use of the facility by general-purpose vehicles. Federal Transit Administration officials have suggested that they may interpreted this clause to mean a prohibition on

toll-paying users. It is bad policy to enter into agreements that concede dictatorial powers over operating decisions to minority contributors to the project.

### Incorporate HOT Lanes as a Standard Option for HOV Facilities

The recent end result of a Minnesota legislatively required review of HOV lane use recommended that all new HOV lanes and all HOV lane conversions include the HOT lane buy-in feature.

The TREX construction project on southeast I-25 in Denver will include the use of three-person-plus HOV lanes as a traffic mitigation strategy. The contractors have stated that a two-person-plus HOV lane would be too crowded in order to provide a viable high-speed alternative for buses and high occupant vehicles. However, nationwide experience has shown that three-plus HOV lanes are grossly underutilized, creating the very underused highway space that so enrages the public.

The General Assembly should ***establish that construction mitigation activities on I-25 for the TREX project shall not allow any pavement to go underused***. Although HOT lanes controlled by overhead electronic signage would be impractical for the TREX HOV lanes, as the contractors may need to change the geography of the lanes throughout the project, a weekly permit pass or other form of buy-in to the facility may be easy to implement. This alternative has already been tested successfully in California and Texas.

## End illegal discrimination against toll road users

Article X, Section 18 of the Colorado Constitution states, the proceeds from the imposition of any excise tax on gasoline or other liquid motor fuel except aviation fuel used for aviation purposes shall, except costs of administration, be used exclusively for the construction, maintenance, and supervision of the public highways of this state

This provision is the reason that non-highway uses of gasoline, such as boating, farming and manufacturing, are credited or waived the gasoline tax. The purpose of the gasoline tax is to fund public highways. The treatment of toll road users differently is discriminatory and represents double taxation. They are being taxed for using public highways when they have instead paid separately for their highway use. Every day the State of Colorado violates the Colorado constitution by taking money unfairly from these people. Practical mechanisms to rebate these double taxes fairly should be developed and implemented soon, before irate citizens discover the abuse and seek recovery through the courts.

Electronic toll collection makes such rebates more practical than ever. The rebates can be made at the time of use, augmenting the market incentives that variable tolls offer in solving traffic congestion. At the very least, receipts for electronic-toll accounts could be used to offset individual and corporate income tax payments to the State of Colorado.

# Additional Considerations

The largest barrier to the implementation of HOT lanes is false perception. Too often, initial perception of tolls is based upon experience with large toll operators on the East Coast. These perceptions, identified in outreach activities conducted by CDOT and others, include:

Tolls should only be used to finance construction; once its paid for, then tolls should disappear. This perception runs counter to the fact that HOT lanes control congestion. As such, tolls will always be desirable and should not expire.

Only the rich will use it. Often referred to by transportation practitioners as the equity argument, the person making the statement falsely assumes only the rich are willing to pay a little extra to save time. Its no different from the individual who buys a Honda Civic by choice, yet still resents the fact his neighbor bought a Mercedes C100. Experience shows that all income levels use HOT lanes, as evidenced by user data for the existing HOT lanes in California and Texas. The rationale is simply economic a single parent understands the financial benefit of paying $3 to use the HOT lanes in order to avoid the $20 late charge at day care.

Tolls cause congestion. This perception is based upon experiences on the East Coast, where queues awaiting the payment of tolls at toll plazas can be a considerable congestion bottleneck. HOT lanes avoid these situations by providing fully electronic payment mechanisms; there are no toll plazas, no queues, no delays, and no unnecessary safety risks on HOT lanes. Throughout the years of implementation in California and Texas, congestion has never occurred because of toll payments on these HOT lane facilities.

The highways are supposed to be free tolls are un-American. This perception stems from the implicit agreement established by the federal government in the 1950s to finance creation of the interstate highway system. Tolls were seen as a second tax; after all, the public has already paid for the highways through gasoline taxes, so why should there be tolls? Means of rebating either the tolls or taxes are possible and necessary; taxpayers recall too many unkept promises of temporary taxes to have confidence that they will not end up with both. The two states with gasoline tax rebate mechanisms (Massachusetts and New York) are so bureaucratically awkward that few ever get their refunds.

# Conclusions

Evidence from the San Diego survey, cited above, dispels many falsely perceived myths about HOT lanes. Indeed, where HOT lanes are implemented, they are successful, benefiting all and supported by very large majorities. Colorado should not delay the implementation of positive transportation policies simply because a few people spread false myths. Those who oppose a HOT lane demonstration project in Colorado are not opposing a trial project because they fear that HOT lanes will fail. Rather, they oppose HOT lanes for the fear that they will, in fact, be successful. We can move more vehicles more quickly at no additional expense. Why dont we just do it? n



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ADDITIONAL RESOURCES on this subject can be found at:
http://independenceinstitute.org/Centers/Transportation/index.htm



[1] The Colorado Department of Transportation (CDOT) has already received five unsolicited bids from the private sector to construct HOT lanes and toll lanes on I-70 and C-470 in Denver.
[2] Urban Mobility Analysis, Texas Transportation Institute, 2000. Reports indicate the Denver metropolitan area has increased its percentage of extreme congestion during peak periods from 14% in 1992 to 28 % in 1996 to 37% in 1998. The percentage of lane-miles that rate as extreme congestion increased from 11% in 1992 to 34% in 1998.
[3] HOV Lanes Aside, US 36 Needs To Be Widened, Some Drivers Say, *Denver Post*, January 17, 2002, page 16A.

[4] A Report to the California Legislature: HOV Usage Increased Substantially By 49% on San Diegos I-15 during a three-year congestion pricing and transit development demonstration program, San Diego Association of Governments, pg. 17, Dec. 1999.
[5] Public Opinion Research: I-15 Managed Lanes Extension, Wilbur Smith Associates, as presented by Ed Regan, project manager, at the Annual Transportation Research Board conference on January 16, 2002. Survey of 800 (random digit dialing) users of the I-15 corridor, 600 of which are non-users of the HOT lanes, 200 are regular users of the HOT lanes. Survey has 95% confidence interval and is accurate within +/- 3.5%.