CONGESTION AND MOBILITY

(110–48)

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BEFORE THE

SUBCOMMITTEE ON
HIGHWAYS AND TRANSIT

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

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June 7, 2007

SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Highways and Transit

FROM: Subcommittee on Highways and Transit Staff

SUBJECT: Hearing on Congestion and Mobility

PURPOSE OF HEARING

The Subcommittee on Highways and Transit is scheduled to meet on Thursday, June 7, 2007 at 10:00 a.m., to receive testimony on the problem of congestion facing our nation's surface transportation system and some of the options to deal with the problem. Witnesses scheduled to testify include officials from the U.S. Department of Transportation, state departments of transportation, and an academic institution.

BACKGROUND

Transportation congestion exists when the demand for a highway facility or a transit vehicle or facility exceeds its carrying capacity, resulting in a significant decline in service quality in terms of vehicle flow speeds, travel comfort, vehicle operating cost, or driver stress.

Congestion tends to be concentrated in major metropolitan areas, especially around ports, airports, freight distribution centers, and places where major highways intersect. Because of this, not everybody experiences congestion on a daily basis and, therefore, it may not be seen as a major national problem. The U.S. surface transportation system involves a national network of facilities serving the mobility needs of the entire country. Localized congestion—whether affecting travelers trying to reach the airport to catch a flight or packages being shipped for just-in-time manufacturing—often has effects that ripple across the nation. The interconnected nature of the network and the broad nationwide impacts of regionalized congestion have led many experts to believe that a national response is warranted.

The most comprehensive report on the state of congestion and its impacts has been conducted by the Texas Transportation Institute ("TTI") at Texas A&M University. Using data collected from the U.S. Department of Transportation ("DOT") and the states, the report assesses the magnitude of our nation's congestion problem by examining congestion in 85 urban areas. TTI first issued the Urban Mobility Report in 1982. The most recent report was released in May 2005.

The 2005 Urban Mobility Report found that congestion continued to grow in the 85 regions studied. This congestion is costing the country more in wasted time and wasted fuel when vehicles and motorists are stuck in traffic. Major findings of the 2005 report include:

- Congestion has grown in urban areas of every size, with the problem being more severe in larger areas.
- Overall traffic delay totaled 3.7 billion hours in 2003—up from 700 million hours in 1982.
- An extra 2.3 billion gallon of fuel was consumed in 2003 due to congestion—up from 400 million gallons in 1982.
- The total cost of congestion in 2003 was estimated at $63.1 billion—up from $12.5 billion in 1982.
- Congestion is affecting more segments of regional road networks for longer periods of time.
  - Roadways experienced the "worse congestion levels" during 40 percent of peak travel periods, up from 12 percent in 1982.
  - Roadways experienced "severe congestion" for longer periods of time, and on more segments of regional road networks, causing the average annual delay of motorists traveling during peak hours to increase to 47 hours—up from 16 hours in 1982.
- Public transit provides a significant amount of peak period travel; had transit services been absent and riders traveled in private vehicles instead, delays in the 85 urban areas would have been 1.1 billion hours higher in 2003.

The report concludes that there is no "single solution" to addressing urban congestion. Rather, a "balanced approach" in regional efforts, and a range of policy options designed to increase travel options, are needed to mitigate congestion. This includes expanding roadway and transit capacity, improving the operational efficiency of transportation networks, better demand management, and better alignment among land use, development, and transportation planning decisions.

A 2006 report by the Victoria Transport Policy Institute ("VTPI") evaluated rail transit benefits based on a comprehensive analysis of transportation system performance in major U.S. cities. The report found that cities with large, well-established rail systems have significantly higher per capita transit ridership and less traffic congestion than otherwise comparable cities with less or no rail transit service.

POTENTIAL OPTIONS FOR ADDRESSING CONGESTION

Expand Capacity

Expanding road capacity is the common response to congestion. According to Federal Highway Administration ("FHWA") data, road capacity, as measured by paved centerline miles of

highways and streets,[1] grew at approximately the same rate as traffic demand, as measured by vehicle-miles traveled ("VMT"), from mid-1940s to early 1960s. Much of the growth in traffic was spurred on by having emerged from the Great Depression and the Second World War, with much higher available income from forced savings during the war and plentiful jobs following the war to meet the pent-up demand for consumer products including personal automobiles. Road capacity also increased rapidly during this time period due largely to the construction of Interstate highways.

Beginning in the early 1960s, roadway capacity and traffic volumes diverged, and the gap continued to widen. FHWA data show that VMT on all roads grew at an average annual rate of 3.23 percent between 1961 and 2005, while paved centerline miles only went up at half the pace—by an average annual rate of 1.64 percent—during the same period. With better information beginning in 1980, FHWA data show that VMT on arterials rose by an average of 2.98 percent a year between 1980 and 2005 while the growth in arterial lane miles lagged far behind, at an average of 0.86 percent per year in the same timeframe.

Congress substantially increased federal investment in roadway construction and maintenance activities in recent reauthorizations of the surface transportation programs. The Transportation Equity Act for the 21st Century of 1998 ("TEA 21") provided a 40 percent increase in federal funding (in nominal terms) over its predecessor, the Intermodal Surface Transportation Efficiency Act of 1991 ("ISTEA"). Guaranteed federal funding provided in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users of 2005 ("SAFETEA-LU") was further increased, on an average annual basis, by 55 percent (in nominal terms) over TEA 21. Despite this increased federal investment, roadway capacity continued to lack behind demand.

In addition, surface transportation laws contain programs designed to relieve congestion at specific targeted areas. For example, the Congestion Mitigation and Air Quality Improvement Program ("CMAQ") established in ISTEA focuses mostly on metropolitan regions that do not meet national ambient air quality standards under the Clean Air Act. The National Corridor Planning and Development Program and the Coordinated Border Infrastructure and Safety Program established in TEA 21 attempt to, respectively, smooth the traffic flow along major highway corridors and address traffic congestion and safety problems at international border crossings. Under SAFETEA-LU, these latter programs were revised and strengthened. Moreover, the Projects of National and Regional Significance program was created to provide additional assistance for high-cost projects that generate very substantial congestion relief benefits, which are dispersed over wide geographical areas and multiple political jurisdictions.

Skeptics have questioned whether building new highway capacity alone will ever solve the traffic congestion problem, not to mention the high cost of such an approach, including prolonged traffic disruption. They argue that the new capacity will be quickly filled by additional traffic induced by the temporary improvement in congestion. But over time, congestion will return—albeit at a higher level.

---

[1] Paved centerline miles of highways and streets measure only the length of roads with a bituminous surface in one direction; it does not account for the additional capacity on highways with more than one lane in each direction. As a result, total lane miles of arterials are a better measure of roadway capacity. FHWA did not begin to provide such data until 1980.

Increasing transit capacity in some areas can provide significant congestion reduction benefits, even if it only carries a small portion of total regional travel, because it offers an alternative on the most congested corridors. For example, a Transportation Research Board report found that — a 5 percent reduction in peak-hour traffic volumes on a road at 90 percent capacity can reduce delay by 20 percent or more, demonstrating that a reduction of just a few percent of vehicles on such roads can significantly reduce congestion costs. To reduce congestion, transit must attract discretionary riders (travelers who have the option of driving), which requires fast, comfortable, convenient and affordable service. When transit is faster and more comfortable than driving, a portion of travelers shift mode until congestion declines to the point that transit is no longer faster. As a result, the faster, more reliable and more comfortable the transit service, the faster the traffic speeds on parallel highways.

Both the TTI and VTPI reports found that congestion costs decline in cities with grade-separated transit systems. The TTI report found that these "Large Rail" cities have much greater transit congestion reduction benefits than other cities with smaller or no rail transit systems. Of the 50 largest cities, "Large Rail" cities average $279 savings per capita, compared with $88 "Small Rail" cities, and $41 for "Bus Only" cities. These savings total more than $14.0 billion in "Large Rail" cities, $5.4 billion in "Small Rail" cities, and $1.8 billion dollars in "Bus Only" cities (considering only the 50 largest U.S. cities), indicating that rail provides $19.4 billion annual congestion cost savings. These savings approximately equal total U.S. public transit investment.

Improve Operational Efficiency

A lower cost option to relieve congestion is to operate existing facilities more efficiently. This will enable the facilities to handle a greater volume of traffic per unit of time (such as an hour) with the fixed physical capacity. Methods of achieving greater efficiency include, among many others, providing real-time travel information and weather information, implementing incident management and event management plans, installing ramp meters, operating traffic management centers, and synchronizing traffic signals.

A 2005 FHWA report shows that 40 percent of road traffic congestion was the result of capacity problems (bottlenecks). That leaves over one-half of the congestion problem not being the result of inadequate capacity. Among these other causes are: traffic incidents (e.g., accidents, fallen debris on the roadway) (25 percent), bad weather (15 percent), work zone (roadway construction) (10 percent), poor signal timing (5 percent), and special events (e.g., sporting events, concerts) and other (5 percent). Unlike bottlenecks, these non-recurring causes of congestion cannot be effectively addressed by enhancing the physical capacity of the facility. Instead, they can be mitigated—faster and at much lower cost—by means of improved operational efficiency.

For example, when an accident causes severe traffic backup, congestion can be relieved if the accident scene is cleared up quickly. A simple way to do that is by pre-positioning tow trucks along busy highways. Another thing that can be done is to expedite accident investigation by law enforcement agencies. Methodical and thorough investigation of accidents is a primary concern of law enforcement agencies. This leads to delays in the clearing of roadways to relieve congestion.

Road construction often restricts traffic flow by removing one or more lanes from service. In addition, construction workers and equipment encroaching on the traffic lanes can cause

accidents. Finally, changing traffic pattern caused by construction and materials such as barriers placed on the roadway are traffic hazards. Congestion occurs when drivers slow down at work zones or after an accident. Traffic management at highway construction sites provides substantial benefits to congestion relief.

Manage Demand

In addition to expanding capacity or improving the throughput of existing facilities, another congestion mitigation option is to manage the demand for facility usage. Proponents of this approach argue that so long as users of highways are not required to pay the cost of using the highways, they will continue to use them without restraint. This is the traditional economic argument against "free goods", as cost-free products inevitably result in over-consumption. According to economic theory, efficiency in resource allocation (investing only sufficient resources in highways to maximize total net benefits) and consumption (having only those users on the highways whose total net personal benefits are maximized) can be achieved if the price of using a facility is set to equal to the marginal cost of providing the facility.

Congestion pricing,[2] also called value pricing, is proposed on the basis of such economic arguments. It is an aggressive form of road pricing. Unlike a flat rate charged on most toll roads, congestion pricing schemes will vary the rates throughout the day to reflect changing traffic conditions so that tolls will be higher during morning and evening rush periods and lower during the rest of the day, especially late at night when there is little traffic on the road. Like all prices, congestion pricing is basically a rationing device to make transportation facilities available to those who value the services provided by the facilities at least as much as, and can afford to pay, the price. Those who are either unwilling or unable to pay the congestion price will not be allowed to use the facilities. By eliminating those who do not pay, fewer vehicles will be using the facilities and, as a result, congestion will be reduced or eliminated on the highways.

With technology that is currently available congestion pricing can be implemented quickly, not too expensively, and with minimal interruption to traffic. Intelligent transportation system technology using infra-red readers and vehicular transponders allows cash-free transaction at highway speed. Safety issues arising from slowing down and speeding up at toll booths are eliminated.

Smooth flowing traffic can also improve air quality as engines idling in traffic jams will be reduced. Finally, state and local governments that impose congestion pricing can receive a steady stream of revenues that they can use for transportation improvements or other purposes.

Opponents of congestion pricing point to the negative impacts on low-income drivers. Tolls, like sales taxes, are regressive—that is, they adversely affect low-income individuals to a larger extent than they do high-income drivers because a much smaller proportion of high-income individuals' disposable income is spent on tolls. As congestion charges go up, particularly during rush periods, more and more low-income drivers will be "priced out of the market". This may be a particularly acute problem because low-income individuals most often do not have a choice on their

[2] Congestion pricing can be implemented in several different forms: impose tolls on selected lanes of a road, on the entire road, around a specified area such the downtown of a city, or over a wider region.

working schedules, and therefore cannot plan to drive during off-peak periods. Over time as congestion toll rates continue to rise to match worsening congestion, only very high-income individuals can afford to drive on the roads on a regular basis. Critics call this phenomenon "Lexus Lanes" or "Limo Lanes," and it reflects a sense of social unfairness.

Having been priced out of the roads by congestion pricing schemes, low-income drivers in the United States could have difficulty finding attractive or feasible transportation alternatives. Other roads in the area that do not have tolls may be congested—more so than prior to the imposition of congestion pricing due to traffic diversion—so driving may become even more difficult. Part of the argument by proponents of congestion pricing is that it will encourage users of highways to switch to public transportation. But switching to public transportation may not be any better or even possible. If public transportation is available, it will become more congested as a result of similar switch by other individuals. Service quality of public transportation is likely to suffer as a result, unless additional resources are available to maintain or improve the service. But often in the United States, convenient public transportation service is simply not available. In such a situation, low-income drivers who have been priced out of the road are left with very few options.

Finally, congestion pricing is not entirely consistent with the economic argument of equating the price (tolls charged under congestion pricing) with the cost of providing the service for an additional driver (marginal cost). Since the road capacity is basically fixed, the marginal cost of accommodating an additional driver is extremely low. Toll rates set for congestion pricing invariably are orders of magnitude higher than the marginal cost. Setting prices in such a manner discourages consumption, and society is left worse off by having too few drivers using the road. That may have been the reason why significant traffic drop-offs have been observed following the implementation of congestion pricing. The question is whether the traffic outcome is economically efficient.

U.S Department of Transportation's Congestion Initiative

In May 2006, DOT initiated an effort to reduce congestion on the nation's transportation network. The National Strategy to Reduce Congestion on America's Transportation Network (Congestion Initiative) is designed to assist state and local governments to develop and implement strategies to mitigate congestion.

Major surface transportation components of the initiative include:

- *Urban Partnership Agreements*—DOT issuing urban partnership agreements to establish partnerships with metropolitan areas willing to implement "a comprehensive policy response plan." The plans would include: congestion pricing demonstrations, development or expansion of bus rapid transit services, increased use of telecommuting and flex scheduling, and utilization of advanced technology to improve operational performance of the regional transportation system. DOT plans to support "Urban Partners" with financial resources, regulatory flexibility, and personnel.

- *Public-Private Partnerships*—As part of the initiative, DOT plans to utilize under the authority of the Value Pricing Pilot, Interstate Reconstruction Pilot, Interstate Construction Toll Pilot,

Express Lanes Demonstration Programs to incent "private sector investment in the construction, ownership, and operation of transportation facilities."

- *Corridors of the Future*—DOT is currently conducting a competition to select 3-5 corridors for inclusion in the Corridors of the Future Program (CFP). CFP is designed to assist states to accelerate the development of projects that expand capacity and improve operations along heavily congested multi-state, multi-modal travel and trade corridors. Under the CFP, DOT will work with "multi-State coalitions to identify alternative funding sources for corridors of national and regional significance in need of investment for the purpose of reducing congestion." The "primary goal of the CFP is to encourage States to explore innovative financing as a tool to reduce congestion on some of our most critical trade corridors, improve the flow of goods across our Nation, and enhance the quality of life for U.S. citizens." The CFP is designed to demonstrate "the value of applying market-based principles to transportation investment."

- *Reducing Southern California Freight Congestion*—DOT is working to bring together public- and private-sector officials to develop solutions to reduce freight congestion in Southern California.

- *Reducing Border Congestion* — DOT is working with public- and private-sector stakeholders to identify and implement solutions to congestion at border crossings that facilitate trade and travel without compromising motor vehicle safety or security.

The Administration's Fiscal Year 2008 budget proposed to fund the congestion initiative at $175 million. Included within this total is $100 million for Urban Partnership Agreements. The remaining $75 million will be divided equally among three programs: $25 million to support CFP; $25 million to support Real-Time System Management Information Programs (section 1201 of SAFETEA-LU); and $425 million to expand congestion-related research activities under the Intelligent Transportation Systems Research and Development program.

WITNESS LIST

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HEARING ON CONGESTION AND MOBILITY

Thursday, June 7, 2007

HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 2167, Rayburn House Office Building, the Honorable Peter A. DeFazio [Chairman of the Subcommittee] presiding.

Mr. BAIRD. Good morning. I want to welcome you here to this hearing of the Transportation Committee and thank our distinguished guests and my dear friend and colleague, the Ranking Member, Mr. Duncan.

Mr. DeFazio, who is the Chair of this Subcommittee, will join us in a little while. I am Congressman Brian Baird and I have the privilege of filling in until he gets here.

As you know, today's hearing is on congestion, and as we all know, anybody who drives at all knows, that many of the regions of the Nation have really what you could call a congestion crisis. The surface transportation system is a national network that serves the mobility needs of the entire Country, but localized congestion has effects that ripple across the entire Nation. Addressing this situation will require a national response and strong Federal leadership.

The most recent report by the Texas Transportation Institute found that congestion continues to grow in urban areas of every size. Congestion places a significant cost on the Nation in terms of wasted time and wasted fuels. In 2003, overall traffic delays totaled 3.7 billion hours; an extra 2.3 billion gallons of fuel was consumed due to congestion; and the total cost was estimated at $63.1 billion, up from $12.5 billion in 1982.

There is no silver bullet to solving this congestion crisis, but to begin reversing congestion, all levels of government must implement a range of strategies and policies. Solving the problem will require a multi-pronged approach involving expanding roadway and transit capacity, but—and I particularly want to emphasize this—solving this problem will require more than just additional capacity. We need to provide more travel options; we must improve the operational efficiency of transportation networks; there must be better demand management; employ new technology; and better align land use development and transportation planning. All must be part of the solution to this crisis.

I personally believe we need particularly to encourage people to try to live closer to where they work and where their kids go to

school, because a lot of folks think they are saving money on houses far outside of town, but when you factor in the cost of driving in and the time commitment, the savings is actually illusory.

Congestion is a critical issue that must be addressed by this Committee as we begin our efforts to reauthorize Federal surface transportation programs which will expire in 2009—seems like we just did them, Jim—but we must look at the structural policy needs of our surface system before our congestion crisis worsens.

I thank our witnesses for being here today. We look forward to the hearing.

I recognize Mr. Duncan for opening remarks and, I understand, a presentation of some sort.

Mr. DUNCAN. Well, thank you very much, Mr. Chairman. I know you will very ably fill the chair until Chairman DeFazio gets here, but I want to thank you and Chairman DeFazio for holding this important hearing on congestion and mobility. As you have very ably pointed out, this is an issue of great importance to not only large cities, but also our fast-growing communities around the Country.

In my own hometown of Knoxville, Tennessee, Knox County has a population of about 410,000. Even more than that, though, is that we have two interstates that meet in Knoxville and a third that comes to within 37 miles outside of the city, so we have just many millions coming through there, both going east and west and north and south. It has also become one of the most popular places in the Country to move to, so as our region continues to grow very rapidly, as it is, I am sure that our congestion problems will also continue to grow.

Across the Country, in communities large and small, congestion is choking our economy and degrading our quality of life. Congestion costs motorists. There are all sorts of different estimates, but the most usual estimates you see are 60 or 65 or 70 billion a year in wasted time and fuel costs, and this means that it costs the average person at least around $800 a year.

In addition, congestion has an impact on the cost of moving freight. Freight choke points at the Ports of Los Angeles and Long Beach, and domestic freight hubs like Chicago, tie up goods and raw materials that add to the final cost of just about every product we buy. These freight choke points and highway bottlenecks are no longer confined to our Nation's older large cities; over the past 10 years, transportation experts have seen dramatic growth in bottlenecks in fast-growing cities such as Charlotte, Phoenix, Denver, and Dallas.

Part of the congestion crisis has been caused by the fact that infrastructure investment has not kept pace with the needs of the transportation system. We need to come up with a comprehensive approach to solving this problem that includes additional highway capacity and better access to public transportation. I think the Chairman has also pointed out that we need to work on programs to encourage people to move back into some of our inner cities, and we see that happening in a lot of cities around the Country.

The success of the U.S. economy is dependent, as we all know, on a good transportation network that can move people and goods around the Country efficiently and reliably. The congestion crisis

in the U.S. is so bad that the mainstream media carries stories on this issue on a regular basis. I saw the piece that we are about to show two months ago on NBC and I think it does a pretty good job of framing this problem, so we will show that. I think it lasts a minute and 50 seconds.

Hopefully show it.

Mr. BAIRD. Look, the traffic is dead-stop.

[Laughter.]

Mr. DUNCAN. Well, can we get some sound?

Mr. BAIRD. Mr. Duncan, I think this actually shows how we can solve the congestion problem: cars are able to overlap one another.

[Video played.]

Mr. DUNCAN. Well, at any rate, thank you. Thank you very much, Mr. Chairman.

Mr. BAIRD. Thank you, Mr. Duncan. I think we all appreciate the message of that, even though it was a little bit hard to hear. Most of us probably live with this on a regular basis ourselves. When you are just driving around in this town at almost any time you experience it.

The general procedure of this particular Subcommittee is to try to limit opening comments so we can hear from our witnesses, but if someone is dying to say something important, I would be happy to recognize them; otherwise, we will hear from our witnesses.

Mr. Coble?

Mr. COBLE. Mr. Chairman, I will be very brief. You and the Ranking Member have already mentioned it, but I think vehicular congestion negatively impacts productivity, negatively impacts our quality of life, and I thank you for staging this hearing. I hate to be the eternal pessimist, but I am afraid that congestion is going to get worse before it gets better, but hopefully our panel may bring us through this maze. I thank you, Mr. Chairman.

Mr. BAIRD. Thank you, Mr. Coble. I spoke to the three panelists. Actually, we have two panels today. They promised that by the end of today they will have all the problems solved and we will be able to move forward judiciously to implement them.

[Laughter.]

Mr. BAIRD. We are privileged today to have two panels. I will read the names of all of them and then we will hear from our first panel. Our first panel is comprised of the Honorable Jeffrey N. Shane, U.S. Department of Transportation Under Secretary for Policy; accompanied by the Honorable J. Richard Capka, Federal Highway Administrator. Good to see you again, Mr. Capka. And the Honorable James S. Simpson, Federal Transit Administration.

Our second panel will be Dr. Timothy J. Lomax of the Texas Transportation Institute; Ms. Peggy Catlin, Colorado Department of Transportation, Deputy Executive Director; and Mr. Craig Stone from my home State of Washington, the Department of Transportation Deputy Administrator for Urban Corridors out of Seattle.

So we have got outstanding people who will, I promise you, solve this problem, and all we will have to do is follow their sound wisdom and implement the legislation, and everyone will drive freely ever after.

More seriously, though, I look forward to great testimony on a challenging topic. Appreciate the witnesses being here.

Mr. Shane, we will start with you and then proceed in order from right to left.

TESTIMONY OF THE HONORABLE JEFFREY N. SHANE, UNDER SECRETARY FOR POLICY, U.S. DEPARTMENT OF TRANSPORTATION, ACCOMPANIED BY: THE HONORABLE J. RICHARD CAPKA, ADMINISTRATOR, FEDERAL HIGHWAY ADMINISTRATION AND THE HONORABLE JAMES S. SIMPSON, ADMINISTRATOR, FEDERAL TRANSIT ADMINISTRATION

Mr. SHANE. In the interest of time, Mr. Chairman, what we decided we would do is I'd present the opening statement, and then you may have access to all three of us.

Thanks again, Mr. Chairman and Ranking Member Duncan, Members of the Subcommittee. We are very grateful for the opportunity to come before you today and testify about this important subject, congestion and mobility issues generally. I can't tell you how delighted I am to be accompanied by our Federal Highway Administrator, Rick Capka, and our Federal Transit Administrator, Jim Simpson.

Last May, the Department of Transportation announced a new effort to respond to the growing crisis of congestion in our transportation system, the Secretary's National Strategy to Reduce Congestion on America's Transportation Network, which we often refer to as the Congestion Initiative.

The President underscored the importance of this effort in this year's State of the Union policy initiatives in which he directed DOT to work with the States and the cities to utilize new approaches to reduce traffic congestion, save fuel, shorten commute times. This year's Economic Report of the President further amplified the importance of the issue with an entire chapter—the first time in the history of the republic—dedicated to transportation and energy.

Protecting the public interest requires policymakers and lawmakers to consider seriously the fundamental causes of the congestion crisis and to enact policy reforms that respond directly to those causes. The Congestion Initiative reflects the Bush Administration's commitment to keeping our Nation moving.

Let me talk for a moment about the real costs of congestion. Transportation system congestion is an enormous drag on our economic prosperity and way of life, as the opening statements we have heard already this morning have made clear. Transportation delay and unreliability costs America, we think, an estimated $200 billion a year and have begun to chip away at one of our Nation's most important economic assets: an efficient transportation system that allows businesses freedom of location and the ability to quickly reach customers across the Nation and around the world.

Congestion also imposes substantial costs on our Nation's families. We don't often think about this sufficiently, Mr. Chairman. Congestion forces parents to miss events with their children, limits the time that friends and families can spend together, and reduces opportunities for civic participation. While difficult to quantify, these social costs of traffic congestion are enormous and they are growing.

America isn't alone in this experience. I represented Secretary Peters at an important meeting of transport ministers from around the world last week in Sofia, Bulgaria. The entire two-day meeting was devoted to the single topic of transportation congestion. A great many countries, in addition to the United States, are taking aggressive steps to combat this problem, which they all believe has the potential to compromise economic growth significantly.

The Department's Congestion Initiative is founded on two key premises: first, we do not have to accept growing transportation congestion as a permanent feature of our national life; second, chronic congestion is the result of poor policy choices, a failure to distinguish between solutions that are effective and those that are not. The Congestion Initiative includes a broad range of activities, not all of which I will discuss today. In the short time that I have, I would like to focus on the Department's Urban Partnership program, which is arguably the most critical component of the entire Initiative.

Within that program, the Department plans to sign Urban Partnership Agreements with up to 5 metropolitan areas that agree to implement comprehensive congestion-reducing strategies that include congestion pricing, enhanced transit services, and increased emphasis on telecommuting and flex scheduling, as well as the deployment of advanced technology. In exchange for their policy commitments, the Department will support its urban partners with financial resources, using current budget authority, as well as regulatory flexibility and expertise.

The Department received applications from 27 metropolitan areas, from which we have just short-listed 9 preliminary urban partners. We will soon enter into negotiations with all of them regarding the specifics of their proposals, following which we will select up to 5 final partners. This targeting of discretionary grant funding in support of urban partners will allow the Department to strategically and intermodally focus its scarce discretionary dollars toward national priority, the national priority of congestion reduction.

In closing, let me just commend the Subcommittee for holding today's hearing. We all share enormous responsibility for ensuring that future generations can experience the freedom of an efficient and productive transportation system. It is important for Americans to understand that congestion is not an insurmountable problem, but that solutions will require a smarter approach to capacity expansion, as well as improving the productivity of existing transportation assets.

Thanks again for inviting us, and Administrators Capka, Simpson, and I all look forward to your questions.

Mr. BAIRD. Good. I appreciate that, Mr. Administrator. Thank you for your comments. We want to commend the Administration for recognizing the importance of the congestion issue. I have a few questions and then I will yield to my friend, Mr. Duncan.

One of the questions I have as I look at our whole transportation strategy, which sometimes I think it is over-complimentary to refer to it as a strategy. No comment on you folks per se, but all of us, we seem to approach things post-hoc and piecemeal. By post-hoc I mean we wait until the development or the new construction or

whatever has come into place and then our constituents come and say, gosh, development has exceeded capacity, we need you to scramble post-hoc to get the money; and even as we are chasing the money to meet the already excessive demand, the new development is going on, which will chase us on the next transportation version.

The second thing I see is for me a question of fungibility. In other words, if the real issue is getting freight and people to and from their workplace, our transportation dollars tend to be dedicated towards just putting more asphalt or bridges or whatever the remedy is.

I sometimes wonder, if we spent that money differently, could we actually address the problem more efficiently, and I will share with you what one right thinker suggested to me. He said he if we spent money on improving our urban schools, we could substantially reduce congestion in the outlying areas, and the reason was, apparently, if you ask people, why did you move from the inner city to the suburban area, oftentimes the answer is schools; and the premise being if you had a better school in the inner city, people wouldn't have to live so far away to get to the schools. So they move outside so their kids can go to better schools, and then they drive a long way into work.

So could you address those two issues, the issue of sort we are always swinging late, to use a baseball metaphor, but, secondly, fungibility? Could we spend our dollars or our resources in a more effective way than just laying down asphalt, putting up bridges?

Mr. SHANE. Thanks very much, Mr. Chairman. I don't think any of us disagree that we could be doing things smarter. The idea of comprehensive planning, looking at all sectors that affect the transportation problems, the transportation equation, it is something you really can't quarrel with. I think, within the Department of Transportation, we are necessarily slaves to the appropriations process and to the way in which our programs are defined.

We have limited resources within the Department of Transportation and they are specifically focused on infrastructure. The Congestion Initiative is an attempt, within the scope of what is available to the Transportation Department to do, to try to use that money in a smarter way, and that is why the urban partnerships that we are engendering right now are being graded on their ability to look across the board at smart solutions; not just more asphalt, as you say, but the use of technology, the use of flex scheduling for our workforce, a variety of approaches which go beyond the traditional transportation solutions and address the problem of congestion in a more holistic and societal way. But there are real limitations in that within, as you know, the transportation programs, so perhaps more intergovernmental interagency coordination with respect to transportation is something we should be focused on to a greater extent.

Mr. BAIRD. I appreciate that and understand well the limitations. I guess I would just invite you folks to feel free to share with us—we always refer to thinking outside the box; I think I would say think outside the freeway a little bit—if you feel there are options to be more efficient. The goal is to get goods and services and people to and from where they need to be in the most efficient way, and there may be a lot of ways to do that.

And if there are better ways to do it but your hands are tied, I would appreciate the feedback about we look at some of those alternatives, not only for the issue of congestion, but congestions directly related to consumption of our fossil fuels, which affects our foreign policy, which affects our environment, etc., etc. So anything we can do to not just focus on what our own stovepipe authorization or appropriation is, but on what is the most effective way to actually achieve the goal would be most welcome.

With that, I would yield five minutes to my friend and colleague, Mr. Duncan, the Ranking Member.

Mr. DUNCAN. Well, thank you very much, Mr. Chairman.

First of all, I want to commend all three of you because, while we talk about these problems here, it is pretty clear, as I travel to other countries and read about what is going on in other countries, that we have by far the best transportation system in the world; it is just that you always need to be trying to improve and get better, and we do have some of these problems that we definitely need some work on.

Mr. Shane, in the aviation sector they always say that roughly 70 percent of the delays are caused by weather. What percentage of the delays on the highways are caused by weather, accidents, work zones, things that are at least partially or totally out of your control?

Mr. SHANE. Thanks for the question. It is an excellent question. We think that what we characterize as non-recurrent delays attributable to accidents, incidents, weather, the like, represent something like 60 percent of the delays that we are dealing with today. So, therefore, we actually are focused to a great extent on trying to address some of those. Better incident management produce enormous dividends.

Federal Highway Administration has a really forward-looking program on weather as it affects our surface transportation system, something that is not recognized enough. We are doing that in close concert with NOAA and really delivering tremendous amounts of better information to communities around the Country so that they can manage their resources better. But this is a very important part of the congestion problem, no doubt.

Mr. DUNCAN. I understand that this urban partnership that you are talking about you have narrowed down from, now, I think, 27 cities to 9 cities, and you are going to narrow it down to 5 more, is that correct?

Mr. SHANE. That is correct, yes, sir.

Mr. DUNCAN. And the plan is that you are going to spend approximately $1.1 billion on that? That is the figure I have. I just figured how that money was going to be spent. How is it primarily going to be spent, is that going to be up more to the Department or is that going to be up more to the local cities, and are they going to submit proposals on what things they want to try, or how is that going to work?

Mr. SHANE. Yes, Congressman Duncan. The applications came in pursuant to our request for applications. We will end up with, we hope, 5 final urban partners. The funds that are dispersed to them will be dispersed pursuant to current statutory authority, pursuant to the programs that are currently available to us, targeted to ini-

tiatives which fit within the framework established by statute by emphasizing congestion relief through a variety of different tools.

I think the $1.1 billion—I will ask Rick Capka to talk to this a little bit, as well as Administrator Simpson—that is money that would be available to the States in any event. We are simply attempting, again, to use these programs in a smarter way. The President's budget for fiscal year 2008 includes—or, I am sorry, is it 2007?—2008, forgive me, includes $175 million of found money, we think, money that had been earmarked for other purposes but not spent, such that we actually can increase the amount of money that would otherwise have been available for this purpose. But the rest of the money is money that would have been received by the States in any event, but, Administrator Capka, perhaps you want to supplement that answer.

Mr. CAPKA. Thank you, sir.

Ranking Member Duncan, that is a great observation, a great question, and as Mr. Shane said, the Urban Partnership Agreement aspect to the Congestion Initiative is right there at the center. In addition to the funds that Mr. Shane talked about, we have discretionary funds in the Federal highway. With the 2007 appropriations process, we were given discretion that we did not have before, so it is another $300 million that we have to work with within Federal highways.

Of course, as Mr. Shane said, those dollars will first meet the statutory requirement, as they have to do, and will support the programs under which those programs were authorized and appropriated, but we will apply those to wherever they can fit best within these urban partnerships as another criteria that we would include in the process there.

Mr. DUNCAN. Mr. Simpson?

Mr. SIMPSON. Yes. I guess traditionally, in the past, the DOT was pretty much stovepipe. Highways did their thing; transit did their thing. We have got this slogan: one DOT. So, strategically, together, we are looking at where we can best—highway and transit and other modes—come together to have a synergistic relationship with our stakeholders, and a lot of that is from the implementation of SAFETEA-LU.

SAFETEA-LU said to us very early, with the MPOs and planning, we are not just going to look at building another highway; what is the problem in the corridor and is it best served with transit or is it best served with highway. Also, the flex funding that we have, the CMAC funding that allows funds to be flex and the STIP funding over to transit. So we are working as a unified, cohesive one DOT in order to get this done within the statute.

Mr. DUNCAN. Well, I want to give these others a chance to ask some questions, but let me just ask all three of you what is the initiative or what do you see for the near future that you are the most optimistic about? What proposals are out there, a proposal that you have seen that you think is going to make the most improvement in relieving some of this congestion, increasing mobility? What are you the most hopeful about?

Mr. SHANE. I will take a crack at it and then we will ask our——

Mr. DUNCAN. What is the best idea that you have seen recently?

Mr. SHANE. To my mind—and I am not sure we all have the same answer, but my answer is pricing strategies are probably the most important near-term fix we can deploy. With the advent of electronic tolling, which really reduces—and not just by virtue of not having to stop at a tollbooth makes a big difference, but being able to calibrate price and keeping with demand, really keying the cost of using the facility to the amount of congestion that is on the facility.

Not just in the United States, but around the world, this is probably the most important advance, I would say, in transportation planning that we have seen. Not without controversy, to be sure—we are all aware of that—but we see wherever this pricing strategy has been used as a new tool for congestion management, in addition, of course, to raising revenue, the public embraces it, notwithstanding the fact that we know all of the mousetraps that a pricing strategy may pose to segments of the community. Nevertheless, we see broad support for pricing strategies in those communities which have actually adopted them because of the results that they deliver.

So that would be my first answer, but, Administrator Simpson, perhaps you have an answer.

Mr. SIMPSON. Congressman, some project that I am really familiar with from my hometown in New York City, just for a moment, back in 1985 I ran a trucking company and I would send out about 100 workers a day and maybe 15 to 20 trucks from Staten Island, New York, which, in the most recent U.S. News and World Report is the number one community in the Country with gridlock. So that is where my corporate headquarters was.

We would pay these 100 workers on an hourly basis, and from my depot it was 15 miles to the center of Manhattan on one interstate, Interstate 278, which, by the way, has not expanded since the early 1960s. It would take our drivers 45 minutes, and with traffic at the time, at the most, an hour each way, from depot to job site—let's call it the Empire State Building—and back to the depot.

Three years ago and today it is taking over two hours each way. So these high-paid workers at a fully loaded cost of $25 to $30 an hour, with a $100,000 truck, you can do the math. They are spending four hours in the truck, totally unproductive, for eight hours work. So that is a 50 percent waste in productivity. These are real dollars.

Now, New York has been very bold, so they—let me first start by saying the Department has been going all over the Country—this is not a static thing, this is a dynamic thing. The Department has been going all over the Country talking about these solutions like this urban partnership. New York is really bold. What they are proposing now, which is going to take some legislation, but almost everybody is on board, to have an access fee, similar to London, south of 86th Street to Lower Manhattan to free up maybe 5 or 10 percent of the traffic so that the goods and services.

And by the way, those trucks that are traveling to Manhattan every day, people on Express Buses, which is a misnomer, stuck in the same traffic two hours each way, so the Express Buses are not the express buses. We have this limited capacity. So New York has

got this bold initiative, which includes a pricing initiative. There will be a transit component and maybe a highway component to it.

So we are looking to see how we can take our resources—our financial resources, our technological resources—and help New York with that to break this gridlock. And the beauty of this program is whatever we invest in now, Mayor Bloomberg said that this congestion pricing will throw off about $300 million a year to finance such things as a $6 billion or $7 billion 2nd Avenue subway, more Express Bus service, and all those things so the commuters and everybody else can get to work in a lot less time. That is the real problem, and that problem plays itself out, maybe not to that magnitude, but it plays itself out in probably 50 to 60 cities around the Country day in and day out.

Mr. DUNCAN. Thank you.

Administrator Capka?

Mr. CAPKA. Sir, that was a great question you asked, and I think one of the things that excites me about the Congestion Initiative is not just one piece that makes progress for us, and I would like to kind of take an example. I think you have heard the pricing piece, but there are a lot of efficiencies and innovation, and the program itself is designed to stimulate innovation; not prescribe steps that need to be taken, but really reach out and tap the creativity that is there.

In our Highways for Life program—you had asked a question about non-recurring congestion and the impact, and Mr. Shane mentioned it takes up about 60 percent of the congestion. Our Highways for Life program reaches out and looks for new construction techniques to minimize the work zone exposure time; get things in and out very quickly and have them last longer.

You have probably seen images of bridges being floated down, fully complete, on a barge, raised and put into position overnight so that the driving public did not have to go through the inconvenience and congestion associated with reconstruction onsite. These are examples that are occurring across the Nation right now, and we are trying to, rather than have them the ad hoc examples of excellence, to make them mainstream, and the Congestion Initiative is focusing on that side of the equation as well.

Mr. DUNCAN. Well, thank you very much. Very interesting answers.

Mr. Chairman, thank you.

Mr. BAIRD. The gentleman from California, Mr. McNerney, is recognized for five minutes.

Mr. MCNERNEY. Thank you, Mr. Chairman. I was definitely intrigued by some of the discussion so far. In fact, the Chairman's comment about schools being better funded in the urban areas might actually have some impact. I have also noticed that in our region school buses aren't funded, so a lot of parents are dropping their kids off, and that causes a lot of early morning and late afternoon congestion.

But in terms of Federal actions, you are talking about advanced planning being important, regional transportation authorities, things like flex schedules and telecommuting. How can we, at the Federal level, help encourage those kinds of behaviors and regional

transportation authorities to do the kind of work that is needed for future planning in congested areas?

Mr. SHANE. Thanks. We think the answer is to create incentives through programs like the urban partnership program, in other words, provide a reason why local planning organizations and State transportation departments need to think more aggressively about how to implement teleworking, for example, or encourage teleworking among businesses throughout the region.

The Urban Partnership Agreements program is designed by rewarding innovative applications to stimulate that sort of thinking, and we think that it is in fact already doing that. I am not suggesting there isn't an awful lot of creativity already there, but strong Federal leadership, the use of the bully pulpit and the use of our programs, to the extent that they make it possible, to encourage some of this innovation are probably the ways to go.

Mr. MCNERNEY. Well, in the Bay Area, which is my home area, we had an incident lately where a crash took down one of the highways, and the Caltrans had that replaced within about a month, and, boy, I would like to see some way that the Federal Government could encourage that sort of aggressive and efficient repair or planning that could get things done.

You also mentioned Bulgaria, which was interesting, because in Eastern Europe I know they don't have as many cars as we do, but they are already experiencing congestion? Is that because their infrastructure is less capable than ours, or what is the scenario going on over there?

Mr. SHANE. So many countries in Eastern Europe, particularly those that have recently joined the European Union, are experiencing unprecedented economic growth and, predictably, that is producing more real personal income, more vehicles on the roads, just as is the case in developed economies like ours. That increase in vehicular use and traffic is far outstripping the pace at which they are able to increase their infrastructure.

But the meeting was in Bulgaria not because of a unique congestion problem there, but because it just happened to be the venue for a global meeting. We had ministers of transport from around the world basically telling exactly the same story; not just in their urban areas, but across all segments of their societies.

Mr. MCNERNEY. I have one other comment. You were talking about congestion pricing. That sounds a little bit like a tax. How does that work? You said that it is acceptable to the population. How do they react to that sort of thing? Does it cause more problems by pricing? How does it work?

Mr. SHANE. Well, it can work in a variety of different ways. There are cities in other countries where they have established cordoned pricing, something that New York is beginning to think about now. Administrator Simpson was talking about Mayor Bloomberg's thinking on this front. You put a charge in place that you get charged if you want to drive your car into the inner city everyday, and that charge is at a sufficient level, maybe what economists would call a market clearing price, that it actually does drive an awful lot of traffic out of cars, personal vehicles, and onto public transportation. And if you can just reduce the vehicular use

by even 5 to 10 percent, you make a tremendous amount of difference in the flow of traffic.

We experience this in Washington every August, when we have a number of us go on vacation. Well, the actual reduction in vehicular use during August in Washington is probably not more than 5 or 10 percent, but it is a different world during that month just because of that small reduction. So cordon pricing is one approach to it.

But just variable tolls on roadways used for commuting purposes area a way of ensuring that a lot of discretionary traffic, traffic that wouldn't have to be there during rush hour, chooses a different time of day. That is the whole idea. I mean, congestion pricing is precisely what it is, it is meant to reduce the peak load on our assets such that they have a much longer and more efficient life.

With electronic tolling, of course, it is very easy to vary the level of the toll during the day, and we have seen a lot of successful examples of that, particularly in California.

Mr. MCNERNEY. Well, I understand in ancient Rome they didn't let certain vehicles on the road during the day; they had to use the roads at night. So maybe that is sort of an approach that would be useful too.

Mr. SHANE. I think we are doing that in many places. Modern Rome, Administrator Simpson said, is still doing that.

But there is no question but that rules of that kind can make a tremendous amount of difference consistent with, of course, the need for people and businesses to use those roads.

Mr. MCNERNEY. Thank you, Mr. Chairman.

Mr. BAIRD. Thank you.

Mr. Coble.

Mr. COBLE. Thank you, Mr. Chairman.

Good to have you all with us this morning, gentlemen.

Mr. Capka, let me ask you this question. The primary focus of the Congestion Mitigation and Air Quality program seems to be improving air quality, as opposed to relieving congestion. But would not relieving congestion inevitably result in air quality improvement?

Mr. CAPKA. Sir, that is an accurate observation. In fact, the CMAC program that you referred to does focus on air quality. In fact, the application of the program is designed to work in areas where the air quality has not reached standard. But the C in the CMAC program is for congestion mitigation, and in the program, as it has worked over, oh, a number of years, 73 percent of the projects—and these are State discretionary projects—focus or at least have an impact on congestion. So there is a direct application of congestion mitigation associated with the program.

I will say that it is a State administered program and the States set up the priorities for it. For our Federal Congestion Initiative, we don't have the discretion to work those dollars as effectively as some of the other discretionary programs we do have.

Mr. COBLE. I thank you. Not unlike most every district, probably, congestion is a growing issue. In my district there are two major interstates, I-85 and I-40, that are vital corridors. Furthermore, there is a third project, I-73/74, which has work progressing, which

will add another thoroughfare to hopefully reduce growing demand. I also believe it is important that we continue to promote mass transit—as I suspect you all do—as a way to reduce congestion and offer commuters an alternative.

My question is this. In light of these efforts, how do you all balance funding to add additional capacity on existing infrastructure, on the one hand, as opposed to promoting alternatives to reduce congestion?

Mr. CAPKA. Sir, we have encouraged States and local planners to take a holistic view of transportation requirements, and as was suggested earlier, early in the planning process is where these kinds of balancing decisions are taken. As Mr. Simpson mentioned earlier, we are trying to set the example with our Congestion Initiative to show how all modes of transportation can come together and seek a balance in terms of how we move freight or how we move people from point A to point B. So a major foundation piece in the Congestion Initiative is to ensure that we are looking across all modes of transportation.

Mr. SIMPSON. If I could add on, Congressman.

Mr. COBLE. Sure.

Mr. SIMPSON. Secretary Peters just had an executive one-day planning conference to come up with 21st century solutions to our problems today, and one of the questions was how do we increase capacity with existing infrastructure, because we don't have a blank check. So she challenged everybody in their mode to go back and to turn research upside down and do all those other things.

On the transit side, we are doing a lot and it has been an ongoing thing. A perfect example is rather than have a new—let's say you need more capacity on the Metro. Rather than putting in a new line, you elongate the stations so that they could accommodate more cars.

Secondly, technology has really done a lot for us not only in rail, but also in bus. But if you look on the rail side, with the signaling technology today, you can run trains closer together so you can get more throughput in the same fashion.

Those are just two examples. So we have been hammering away at that in all the modes on transit and we have been working with the stakeholders, and trying to squeeze more capacity out of existing infrastructure is the number one priority at the Department.

Mr. COBLE. I thank you.

Mr. Shane, do you want to add anything to that?

Mr. SHANE. No, sir.

Mr. COBLE. All right. Thank you.

Yield back, Mr. Chairman.

Mr. BAIRD. I thank the gentleman.

Elijah?

Mr. CUMMINGS. Thank you very much, Mr. Chairman.

Secretary Shane, can you give us an update on the state of the Highway Trust Fund?

Mr. SHANE. I would like to defer to our Federal Highway Administrator, who is in charge of writing the checks out of the Highway Trust Fund and probably can give you a much more relevant answer.

Mr. CUMMINGS. That is fine.

Mr. CAPKA. Congressman Cummings, that is one of the major topics we have going on between the Administration and the Committee here, is the status of the Trust Fund. As you know, during SAFETEA-LU, in order to reach the $286.4 billion size of the bill, we had to spend down the balance in the Trust Fund, so we consciously took a look at the Trust Fund and decided that at the end of 2009 we would not have an extra dollar in the Trust Fund.

Because we are spending down the Trust Fund, it is clear that revenues are not keeping up with the current level of expenditure. At the end of 2009, we will have to take a look at how to restructure and re-look at the financing of highways. We may or may not get to the complete end of 2009 before we have a problem, and we are looking at that very carefully. In our budget submission for 2008, we have made some recommendations in order to mitigate the potential that the Trust Fund would not be able to support full SAFETEA-LU funding before the end of the SAFETEA-LU period.

Mr. CUMMINGS. Well, in the longer term, do you believe that the gas tax can or will continue to be the primary source of transportation funding at the Federal and State level? If so, why? And, if not, what funding mechanisms do you believe are most likely to be able to supplement the gas tax?

Mr. CAPKA. Looking into the future, the interesting thing about the gas tax from the highway infrastructure perspective, the more gas we burn, the better for revenues coming into the Trust Fund. It is counter to national programs that we have, national priorities with respect to dependency on foreign oil, with respect to the greenhouse effect and the carbon loading. We certainly don't want to encourage the continued use of fossil-based fuels.

So I would say, looking into the future, we have got to find ways to weaning ourselves off of the gas tax and looking to something perhaps like vehicle miles traveled, as is being experimented with in a couple of States, Oregon being one, where vehicles are in this pilot program. They are not charged gas tax when they fill up at the fuel pump; they are charged for the miles they have traveled and the periods they have traveled, much like a taxi meter rolling up a taxi fare.

I think there are innovations like this with the technology that is emerging, with our sense that we are going to have to use some technique to help also throttle demand on our highways to work congestion, that these types of solutions are the ones we need to be experimenting with today, looking at them very carefully, and then working them into our long-range plan for the funding of the highway system.

Mr. CUMMINGS. Well, what, if any, steps is the Administration taking in its Congestion Initiative to promote improved land use planning and to create the kinds of communities that can shift people from cars to other modes of transportation?

Any of you.

Mr. SIMPSON. Congressman, on the transit side, you know, our discretionary program, which is for new fixed guideway systems like rail—and Baltimore has plenty of rails, so you understand that discretionary program—one of the things that we look at in statute and we pay very close attention to is the development around stations. In order to have sustainability, you need to have the right

density. So we look for cities in area—while it is a local decision—if they are going to get funded with the Federal dollar, to make sure that they have good land use patterns that are supportive to transit investment.

We are a big supporter of transit-oriented development and we have got, additionally, HUD and FTA have a MOU, and we just completed a report and sent, I believe, to this Committee talking about not only housing around transit, but affordable housing, as well; that the people that need transit the most have to be able to live near where transit is and have to be able to afford to live so they can access transit and have mobility.

Mr. CUMMINGS. All right, thank you.

I yield back.

Mr. DEFAZIO. [Presiding] I thank the gentleman.

Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman.

I thank the gentlemen for coming and giving us all this good information. My question is to the Under Secretary. We have heard a lot about the corridors of the future. Can you tell us a little bit more about how the Department is defining the corridors? Would it be on a case by case basis based upon the application submitted to the Department or based on need. How would that be determined?

Mr. SHANE. Thanks, Congressman Brown. Yes, we received 38 proposals under the Corridors for the Future component of the Congestion Initiative. We, so far, selected 14 of them last February. We are going to winnow that list down—we have been working on that for quite some time—to the point where we are going to finally have five that will be chosen by the middle of the summer, we expect.

Clearly, what we are attempting to do in the Corridors for the Future program is reward comprehensive planning that is designed to link together various regions of the Country in a productive transportation thoroughfare that will benefit not just one community, or even a group of communities, but a number of States, really enhancing the flow of commerce and trade in a much more effective way.

Mr. BROWN. And you will be able to identify those by the summer, those five?

Mr. SHANE. By mid-summer, I think.

If you have anything to add, Rick.

Mr. BROWN. And what will be the next step after the identification?

Mr. CAPKA. Sir, the selections will be made mid-summer. At that point an agreement will be set up with the sponsors for the Corridors of the Future, setting up the objectives and milestone deliverables, those sorts of things, and we will work then very carefully with them to provide the support resources that we have available in that program.

Mr. BROWN. I noted that there has been a lot of pressure on the Department of Transportation, I guess, since 1954, when they started the interstate system, and not much has been done about enhancing it since then other than maybe expanding the number of lanes, and that sort of thing. I think the Corridors of the Future

is certainly a great innovative thing to look at doing some new planning based upon the population shift.

I know down in my region—I represent South Carolina, which is a tourist destination, but we also have a port, which is a commerce destination, too, and I know that we have one interstate connecting Charleston. We don't have any interstates connecting Myrtle Beach, which has 14 million visitors a year coming. So you can imagine the congestion we have during the summer months. But I would hope that those criteria would be placed upon whatever selection process you might have so that those type situations would be included.

I know, Mr. Under Secretary, we talked about dealing with the shortfall of the Trust Fund, and I know that your idea about using miles driven, rather than gasoline purchased, because of the increase of the efficiency now of the new automobiles and constraints placed upon the carbon emissions, this sort of thing. How would you go about collecting miles driven? How would a user be able to tell you that?

Mr. SHANE. There are a number of technologies, Congressman, that are being experimented with right now, not the least of which is the use of GPS. You simply have a transponder on a car and it is possible to monitor the movements of the vehicle. There are ways of protecting the privacy of the owner and so forth, which obviously have to be part of the program, but which end up being metered automatically and just producing an invoice at the end of every month which goes out and is paid. That is one way of doing it. Meters in cars which could be automatically read would be another way of doing it.

There is no question that there are technologies around, and it is something that we are not experimenting with in the United States alone. I know The Netherlands is actually thinking about—and I just learned this last week—a national program for metering vehicle use and charging for that use by the kilometer, rather than a fuel tax.

The fuel tax, as my colleague said eloquently, is a way of penalizing ourselves. If we increase the fuel tax, we are, in effect, penalizing ourselves for having achieved fuel economy objectives that we all share and that we are trying to make tougher and tougher over time. There is a real conflict in the effort to reduce our reliance on fossil fuels and our reliance on those very same fuels as a source of funding for our transportation infrastructure, and that is what we are trying to de-link.

Mr. BROWN. How do you plan to fund the Corridors of the Future?

Mr. SHANE. Out of existing Highway Administration funding.

Rick, you can be more specific than I on specifically where that money is coming from.

Mr. CAPKA. We do have some discretionary dollars that have been made available to us this year. In our 2008 budget submission we have asked for $175 million to be reprogrammed from ISTEA era, 10 year old projects that have been inactive with unobligated balances, that would also be made available to support these programs.

Mr. BROWN. Very good. Thank you very much.

Mr. DEFAZIO. I thank the gentleman.

Mr. Lipinski?

Mr. LIPINSKI. Thank you, Mr. Chairman.

Thank you for your testimony here today. In Chicago land, where my district lies, is one of the most congested regions in the Country, and my constituents and millions of others in Northeastern Illinois deal with this everyday. Now, much has been done to provide resources to State and local governments, but I think that we definitely need to do more. First and foremost, we need to continue to enhance investments in surface transportation capacity expansion projects.

One of the most important in the Chicago region is CREATE, the rail modernization program, which would do a tremendous amount to help move freight in and out and through Chicago; help with the commuter rail, Amtrak lines; but also help to clear up congestion on roads by building underpasses, overpasses, you know, grades separations.

So I think there is no question that we need to continue to do more and provide more funding for projects like this, but in the short term ITS can make a real difference in fighting congestion through operational improvements and demand management. We really have the technology available—it is growing more and more everyday—to help people to get traffic information, make it easier, try to make the commutes easier for them. This is another area, though, where I think that we can do more for State and local governments.

Last year I met with former Secretary Mineta, and we talked about congestion in Chicago land and about the Congestion Initiative. We had a very productive discussion at that time.

Today I just want to ask you in specific terms, with particular emphasis on any ITS applications, how can the Initiative help reduce congestion in the Chicago area.

Mr. SHANE. Thanks very much, Congressman. Let me just, first of all, say that at the Department of Transportation we think CREATE is one of the most important projects that the Country needs to focus on. It is not just of significance to Chicago, as you know, but given Chicago's role in the national freight movement system, CREATE has a tremendous amount of potential benefit to the Country at large. So we look forward to seeing further progress on CREATE.

To your specific question about ITS, we are, through the Urban Partnership Agreements component of our Congestion Initiative, trying to encourage further deployment of ITS solutions, intelligent transportation system solutions, that really deploy technology for the benefit of reducing congestion in ways that are probably the most cost-effectively means we have of reducing the load on our existing transportation assets.

This is, again, without quarreling with the need to continue to expand capacity. That is, of course, the central point of our transportation programs. Nevertheless, we know that it takes time to do that and, therefore, the efficiencies that can be gained by the use of intelligent technologies—and they are available and on the shelf today, as we all know; what they need is greater ubiquity—the use of those technologies have huge potential for helping to address

some of the problems that we have both in our urban and rural areas.

Administrator Simpson would like to supplement that.

Mr. SIMPSON. Congressman, I have been out to Chicago a couple of times, meeting with Frank Kruesi, who I believe is no longer with the CTA, and also met with Senator Durbin, and Chicago is a great city, and the whole area, in terms of their ridership. Chicago area is actually number two in the Country for transit ridership; you are at about 12 percent. New York is 25 and Chicago is number two.

But you are also number three in the Country for congestion. So there is obviously a need to make some change, so I would encourage you to work with the local folks to take a look at what is happening in New York, because maybe if that passes, to try to implement some sort of a model like New York.

But with respect to the rail mod money, it has been doing a really good job for the Chicago Transit Authority. They are upgrading their signalization, their tracks. It is a very old system, as we know, but it seems like they are doing a great job and they are trying to get, I know, a great amount of needs, and they are looking at alternative sources for transit funding. The New York model today will spin off hundreds of millions of dollars that can go to transit projects, so I think that the folks in Chicago, if they take a look at what may be happening in New York, but what certainly has happened in London, it might help alleviate some of the extra pressure.

Mr. CAPKA. Sir, also from kind of a low tech, but high tech with respect to ITS, is providing decision-quality information to drivers; when you should get out on the road or where there is congestion, when to avoid. The 511 system is a dial-up system that links a driver up with the latest traffic information, where you can determine where there are construction problems, an incident that has occurred, or just the regular congestion that allows the driver to make some smart decisions before going out on the road. Something like that can do an awful lot to address congestion problems, particularly in Illinois.

Mr. LIPINSKI. Well, I thank you for your responses, and I want to also follow up and agree with Mr. Simpson that transit is very critical, and with the great needs right now that we face in Chicago, but certainly in other places around the Country, I think that is another place where we need to have a greater Federal commitment, because it does a great job of reducing congestion. Cutting down pollution is to support transit.

Thank you.

Mr. DEFAZIO. Thank you.

Representative Reichert.

Mr. REICHERT. Thank you, Mr. Chair. I have just one quick question, and if it has been asked already, I will get it over the telephone later, so I apologize. I was reading through the testimony and noticed that you want to establish a competitive process for designing up to five multi-State Corridors of the Future. Has that process been started and have the five corridors been identified, or where are we in that process?

Mr. SHANE. Thanks, Congressman. Yes, we actually did talk about that earlier. We are well into the process. We received 38 proposals back in February. We are winnowing those down to a list of 5, which will be announced in the middle of the summer sometime.

Mr. REICHERT. Do you happen to know if the Seattle area is one of the 38 that has applied?

Mr. SHANE. I-5, Administrator Capka tells me, was certainly one of the corridors that was proposed, yes, indeed.

Mr. REICHERT. Okay, thank you.

Mr. DEFAZIO. Thank you. I want to apologize for being late. Sometimes there are imperatives that relate to one's district, and we had a meeting with our former colleague, Mr. Portman, and OMB to discuss an issue of extraordinary concern to my district, so I was unavoidably detained.

I would like to go to Mr. Shane's testimony. I guess maybe I live in a little different world or hear from different folks, but when I read today a growing course of economists, academics, transportation planners arguing that fundamental mis-pricing of highway travel must be addressed to tackle the congestion problem in a sustainable way, and prior to that you say there are there basic mechanisms available: one, rationing; two, formally allocating access rights to use the network at various times, as is done in the rail and aviation sectors; or three, using prices, as we do with most other goods and services.

I guess the question for Secretary Shane, which I posed to Mr. Duvall, when he came and waxed eloquent about the congestion problems, all things we are having, is what about investment? There is no discussion, except in the context of the private-public partnerships, about investment.

You might recall the President's own Department of Transportation, during the consideration of SAFETEA-LU, said we needed $375 billion to basically keep up. That was their estimate when we started the discussion. This Committee wanted to work toward that number, and that just couldn't happen between Congress and the White House. The President started at 250; we ended up around 280.

But it seems to me, if we are going to say there are ways to address this, number four might be significantly enhanced investment at the Federal, State, local, and, yes, even the private level. But we are talking about rationing and using prices and the growing chorus of mis-pricing of highway travel. That is not what I hear from people. They say when are you going to improve the off-ramp; when are you going to add another lane; when are you going to give me an alternative. They are not saying, gee, it is mis-priced. Granted, I come from the West Coast, and we are not as enamored of tolling as perhaps some people are here on the East Coast.

So that is sort of the first question. Does investment play a role here? Does the Administration have a position on investment? Are you looking at 2009, when the Trust Fund might be depleted, and do you have any solutions for how we might fund the existing program in that year?

Then the second question would be sort of on the whole theory of pricing people off the highways. You use the example of a doctor

and someone going shopping. But what if the doctor was going shopping? Might the doctor, because of his high discretionary income, decide, well, he is not on the way to an emergency at the hospital, so it is not time sensitive in that way, but he is going to use the HOT lane because he can afford to?

I mean, I think the thing that is being overlooked here is people don't choose when they go to work. People don't necessarily have tremendous discretion over where they live. I would use Portland, Oregon as an example. The Metro Council there is enamored of some of these ideas and being pushed by DOT, until I disabused them of the notion. Middle income, lower income people can't afford to live in the city; that is a fact. So they have to live further out. We don't happen to provide alternatives that go across the city for them to get to work. Well, I guess they are just out of luck, or maybe they have got to find a new job, or they are going to pay an extortionate amount to get to work that they can't afford on their salary.

It seems to me that we are skipping over a whole lot of issues here, and I wish you would address those, Mr. Shane, the first being investment and the second being the inequities and the problems that are potentially created when people don't have a viable mass transit option and they just happen to work one place and live another, or it is a single mom who has got to get their kid to school and get to work and pick the kid up after school and there is no transit option available for that and she can't afford 20 bucks to use the HOT lane.

Mr. SHANE. Thanks very much, Mr. Chairman. Let me just say, in response to the first part of the question, that we are talking about shades of emphasis here. There is no intention on the part of the Department of Transportation to de-emphasize investment.

Mr. DEFAZIO. Well, we just never hear any talk about it. I mean, Mr. Duvall was here; he didn't mention it. It seems to me if you say there are three ways to deal with congestion and none of them mention enhanced investment——

Mr. SHANE. Well, we do talk about enhanced investment. That was the public-private partnerships part of the Congestion Initiative. There is not any quarrel with——

Mr. DEFAZIO. That, again, would be a fraction compared to—if you have heard all the testimony from the experts, they say maybe it is a 5 percent solution, public-private partnerships. Mr. Duvall was here. So let's say it is even a 7 percent solution. What about the other 93 percent, which requires State, Federal, and local investment? We need to address those issues and I see a very unbalanced presentation.

Mr. SHANE. What we are emphasizing is what is different in our proposals today. There is not any quarreling with the existing program, and I expect that that program will continue in some form going forward. We did have, I think, a productive discussion with Congressman Cummings about whether or not an increased gas tax is necessarily a formula for future success and tying our infrastructure finance to fuel that we are trying to reduce the consumption of. There is a fundamental conflict in our policies in that regard and we have to address that conflict.

But it is not to gain, say, the notion that more investment is necessary. We happen to think that there are hundreds of billions of dollars—that is what people tell us—available in the private sector, money that is available for transportation infrastructure and that we should tap. We should do it intelligently.

I have seen the correspondence from the Committee. I don't have any quarrel with many of the points that were made in that correspondence. We do have to calibrate the use of these tools, but these tools are, nevertheless, available to us as a means of enhancing the amount of investment that we put into our infrastructure. And they are not just ideas that are brewing here.

I mentioned in my testimony that I was overseas last week. I learned that these are tools that are being embraced, in fact, far more readily in other countries than they are here. We just wonder why it is that we are having so much difficulty marching in the same direction when it seems to be producing so many successes in other countries.

So I don't want to mislead the Committee. Investment will continue to be a core objective of all of our programs. We intend to work with the Committee, and this Subcommittee in particular, on trying to find intelligent ways of doing that. What we are trying to do, however, recognizing the extent to which demand has outstripped our capacity to invest through traditional means—and that is to say at the Federal level—is find additional solutions; the use of technology, the use of pricing strategies, things that are producing real dividends and addressing congestion in lots of parts of this Country and other countries which, if we could make more ubiquitous, would produce enormous dividends in terms of the quality of life and the productivity of our economy.

Regarding the whole question of inequity, we are mindful of that and it has certainly been a source of a lot of discussion. What we do find, however, is that wherever pricing strategies have been implemented and then a referendum is taken after the fact or a survey is taken after the fact, we find that the reaction of the populations to those pricing strategies does not seem to be a function of income levels.

By and large, these strategies have been broadly embraced by the people that have been subjected to them. In Stockholm, for example, they put a pricing scheme in place in order to calibrate the use of transportation assets for getting to and from the downtown area. They did it on a temporary basis because they wanted to see what the reaction would be. They had a referendum; the referendum was a broad acceptance of the idea, so that by mid-summer they are going to put it in place on a permanent basis. They have all levels of income, of course, in the population of Stockholm.

There is not any effort here to ignore the issues that are raised by lower income elements of our population. If in fact that is a problem for our transportation system, for getting people to and from their jobs, particularly where they have no discretion, we should address that straight up. It may mean that we need to find ways of assisting lower income folks in using a transportation system more efficiently if in fact the use of that transportation system more efficiently requires a pricing strategy. We shouldn't be chasing the lowest common denominator because of a problem that we

have with some income strata in our society. We should address those problems in ways that respond to those problems, but not sacrifice the efficiency of our transportation system because of them.

Mr. DEFAZIO. So the example is Stockholm, where they have a massive investment in public transit in a region called Europe, where they are much less dependent upon automobiles and have totally different land use and development patterns, and suddenly we are going to apply things that work for the people of Stockholm to the United States and think that they are going to work and they will be popular.

You know, maybe I just have too much of a western, U.S. view of the world, but I really don't see that. And what I find is, again, a single-minded push here toward private-public partnerships—if I could, since you raised the issue of not having a problem with what the Committee has stated, because have tried to fairly state the potential benefits, small as they are, of private-public partnerships and the potential pitfalls, huge as they are, of private-public partnerships, especially when you are talking about monetizing existing assets and giving monopoly authority to an entity for up to 100 years to price an asset which is irreplaceable and which you can't compete with in many cases.

I would note that the last time I think either you were here or Mr. Duvall was here, we heard that quite soon we would have a little more balanced presentation on the DOT website other than the so-called model legislation, which really points people at the pitfalls and the wrong approach, and it still isn't posted yet. We heard that was imminent.

I do note that you could find space to post some articles critical of the Chairman and myself, yet you didn't post a number of articles that are critical of PPPs. It just seems like one-sided advocacy here, like we are making transportation policy out of the Heritage Foundation, and that is not going to be acceptable to a majority of the people either in the Congress or the United States of America.

Mr. SHANE. There is no question that there is a controversy about all of this. What I see happening across this Country and, frankly, around the world is an increasing recognition that the reliance on government funding for transportation assets is something that we are approaching the end of; it is simply not going to be possible to——

Mr. DEFAZIO. Well, excuse me, but we are only approaching the end of this because this Administration said no taxes, no user fees, no bonding, no more money; and we had to drag them kicking and screaming to a marginal number. That is why. We are talking about will. It is just like Mitch Daniels saying, gee, there was no will to raise the tolls, until he entered a monopoly agreement; then suddenly he had the will to raise the tolls and now they have absolute discretion to raise the tolls and no one can touch them, it is in a contract.

So you are saying there is no money out there, but somehow we can extract money from people through private contract agreements, which include a profit motive, but we can't just get a cost-based—which is without a profit motive—investment by the Federal Government. It goes to will at some point. I know the will isn't

downtown. Whether the will is uptown here, at the Congress, we will see in two years.

But you can't say there isn't a capability of raising more funds in the United States of America to invest in transit and roads, and I look at, and a number of people have mentioned, Washington State. Washington State just raised the gas tax. They are talking about now raising title fees. My State raised title and other fees. People are willing to accept dedicated taxes when they see a real benefit, the benefits to their transportation and their movement and the economy.

This White House and Administration has been totally unwilling to discuss that, but you are obsessed over here with the hundreds of billions of dollars of private money floating around out there. It might not be quite as much as you think if you read the most recent articles in The Wall Street Journal about Macquarie's books, which is starting to look at lot like Enron's.

Mr. SHANE. Well, Macquarie is one of a great many investment banks that are beginning to look at this new vehicle for investment.

I predict that no future administration is going to come out very differently on the issue of public financing of transportation. We know that the entitlement programs are simply overwhelming our budget. That will continue to be the case for a long time. There simply has got to be discipline on the use of government funds, and that is going to be a fact of life for every future administration, not just this one.

When in fact there are so many alternative ways of funding transportation assets which produce a calibration of the use of those assets that actually makes them more productive, it is difficult to understand why there is so much controversy about it.

Mr. DEFAZIO. Okay, thanks. We will just have to disagree. As usual, you are in your diplomatic mode here. You know, the calibration of use means we price modest and middle income and low income people off the roads, which are taking up public space, where they have no alternative. I look at this road they are going to build out here. I don't think Members of Congress are going to be able to afford the road at 20 bucks a pop, let alone modest working people So let's go to transit for a moment, and then I will turn to Mr. Duncan.

The question for Mr. Simpson, since we are talking about transit does get a minimal little nod here as part of this solution at the end, but it seems to be totally oriented toward bus rapid transit, utilizing private, for-profit HOT lanes. Is that the only vision or are we going to make some progress on new starts, small starts? Are we going to incorporate the mandated economic development and land use statutorily mandated criteria?

Because I notice that you have now included non-statutory criteria, which happen to support this privatization congestion management program, and saying, well, if you adopt those, we will give you more points, but if you did the economic development or you did the land use that is required by statute, we can't figure out how to rate that, so we will rate you up for what we want to do, which isn't authorized by law, but we won't rate you for the things required by law. Could you answer that?

Mr. SIMPSON. Could you redirect the question? I am not sure of the question.

Mr. DEFAZIO. Well, the question is when are we going to see the formulas modified to actually incorporate the statutory requirements of economic development and land use, and how is it that you can suddenly add a criteria that isn't statutorily authorized, which is to support this particular program——

Mr. SIMPSON. Right. You are talking about the Congestion Initiative?

Mr. DEFAZIO.—but you can't get to the economic development and land use. Why is that?

Mr. SIMPSON. Well, let's take the congestion piece first that we are adding to it. That is a sub-component of mobility and it is clear throughout SAFETEA-LU, at least on the transit side, that one of the things we are trying to do is free up congestion.

With respect to economic development and land use, we had a stand-alone hearing—I don't know, was it a month ago?—and I promised that the rule would be out by the end of the money, and I apologize in advance that it is not out yet. But after our long hearing we went back and had very robust conversation at the Department, and we are looking for ways to quantify economic development. We are going to be asking the stakeholder community and we do, in our project justification, we do look at land use and we do look at economic development.

But Mr. Chairman, I have to tell you it is very hard—I have been talking to economists myself; I have been dragging the folks at DOT. It is very difficult at times to define the difference between economic development and land use. And when you are looking at a national program, if we don't build a transit project, but we build a school instead, but we still have construction, you know, separate all that out. It is really a challenging——

Mr. DEFAZIO. Right. But we did have an economist sit right there who sketched out ideas for a model, and he did talk about Transportation System User Benefit and Summit Software as a really bad box that is being applied to everything that really distorts the whole system.

Mr. SIMPSON. Mr. Chairman, I spoke to him—I think that was David Lewis. Was it David Lewis?

Mr. DEFAZIO. I——

Mr. SIMPSON. Okay. Anyway, I spoke to the economist, and he has been to my facility, to the FTA, and he is welcomed back to talk about it further. But even with this cost-effectiveness issue that we talked about before, if a transit project is going to deliver good benefits, there has to be a mobility component to it. So, in a convoluted way, this cost-effectiveness is measuring economic development.

We want to get where the Congress wants us to be, but it is a huge challenge, and I promise you we are working towards that.

Mr. DEFAZIO. Okay, thank you.

Mr. Duncan.

Mr. DUNCAN. Well, thank you, Mr. Chairman. I have already asked the questions that I wanted to ask, but I will say that, Secretary Shane, you are exactly right on the runaway entitlements in future years. In fact, Dan McFeatters, who is a columnist for the

Scripps Howard newspaper chain, wrote a couple years ago and said that we are headed for a financial tsunami shortly after the baby boomers start retiring in large numbers in 2008, and that is going to cut into every department and agency in the entire Government.

But what I wanted to get at in this in just a few comments, I mentioned in my opening statement and then in my questions that I think the Congestion Initiative and the urban partnership are good things, and I pointed out that the congestion is not just confined to our older, what we traditionally think of as our larger cities, but also many of the newer, faster growing cities.

I think that is all fine, but I also mentioned my hometown of Knoxville, which, if you looked at a population book, you would see, I don't know, it might show 185,000 or something in that vicinity, and you might think, well, the problems there couldn't be that great. But what you have, as I said, you can't tell when you go from the city to the county.

Knox County has about 410,000. Then you have got the really fast growth in the counties that touch on Knox County. So you have got close to a million and a half, I think, now in the SMSA. Then you have got between 9 million and 10 million coming to the Smokies, and most of those get off the interstate there at Knoxville. Interstate 75 is the heaviest traveled north-south interstate in the whole Country, so that is many millions there going to Florida, going to Atlanta, other places.

You have got Interstate 40, one of the main east-west routes, running right through Knoxville. Then you have the heaviest traveled truck route on Interstate 81 coming to within 37 miles of Knoxville. In addition to that, we live within about 600 miles of over two-thirds of the population.

What I am getting at is this. There are some places like Knoxville—I have said in here before in other hearings I generally or many times face much more traffic in Knoxville than I do here. So there are some places whose traffic problems far exceed their populations. And I hope you take that into consideration, because it is just mega-millions there in a place like Knoxville that you wouldn't expect, and it affects all three of your departments and agencies. So I just hope you keep that in mind and take a close look at some of those places.

Thank you very much for being with us, and I appreciate your very informative answers to these questions.

Mr. DEFAZIO. Mr. Hayes.

Mr. HAYES. Thank you, Mr. Chairman.

Gentlemen, thank you for being here. I apologize for being late to the hearing, but there was an occurrence that I read about on Saturday and talked to Mr. DeFazio about. As it relates to congestion, do you all remember the situation in California where the tanker exploded? Did you read the outcome on Saturday of what happened there?

The project, if I understand correctly, was scheduled for 50 days. There was a $200,000 bonus for every day that that deadline was beat. Congestion obviously was huge. The contractor, using American steel, Mr. Chairman, and the ingenuity of the marketplace,

completed that project in 17 days. So the incentive was the bonus for early completion, as opposed to punitive liquidated damages.

I don't know as much as I should, but the results are stunning and very, very positive. What lessons have we learned from that and are there some things here that we can apply to future projects to take advantage again of American expertise, ingenuity, steel, and incentive for performance? Any comments on that would be appreciated. That was a really uplifting article.

Mr. CAPKA. Sir, we are just as excited about the innovation and creativity that was demonstrated by California Department of Transportation in the private sector there in Oakland. Some of the features that were key to that success, first of all, was everybody was focused on a goal that needed to be accomplished, the public-private sector, everybody there was focused on making sure it got done. Secondly, California Department of Transportation used a contracting technique that just unleashed the creativity and the innovation of the private sector. You hit the bonus, $5 million. The winning bid on that project was $800,000.

Mr. HAYES. Exactly.

Mr. CAPKA. Because a contractor knew, I can make that bonus, and he set up an arrangement with the steel supplier to have those beams ready to go. California Department of Transportation was calculating that it would take another 30 days, at least, to have the steel onsite, so their expectations were another month to six weeks longer. The contractor saw that incentive, probably shared a little bit of that incentive with the steel fabricator to ensure that the materials showed up onsite, and they had a winning combination. That is the kind of example we are trying to export to other parts of the Country when we see how valuable that is.

Mr. HAYES. And I think they saved $1 million. The next lowest bid was 6.8, as I recall. But the more I think about it, it kind of reminds you a little bit of the runway project down in Atlanta that was completed.

But this, again, Mr. Chairman and Members, is where we need to be headed as we work to deal with congestion. So get that word out there.

Thank you, Mr. Chairman. I yield back.

Mr. DEFAZIO. Mr. Baird, quickly.

Mr. BAIRD. Yes. I would just point out, Mr. Capka, we have spoken before about Buy America. Mr. Hayes cares deeply about this, as do I. He was only able to get that steel because he had a steel fabricator stateside. If he had been dependent on a foreign fabricator who said we don't want to provide it to you, they would have been out of luck. So we need to keep those steel fabricators domestic.

Mr. CAPKA. Sir, that was a great example of solid teamwork there, I agree with you 100 percent.

Mr. DEFAZIO. Well, and I certainly would emphasize what Mr. Baird did. Critical infrastructure materials need to be domestically produced on not just basic materials but, in my mind, obviously, hopefully more sophisticated things like streetcars, which we are trying to pioneer.

I would just, in closing, reflect that we have a dedicated funding source. We know that there are some problems with that, but the

highway program and transit program, with the exception of the potential shortfall in 2009, has been funded out of dedicated revenues; it is not like other programs which are funded from general funds. The question is can we find an enhanced revenue stream that will be dedicated to those purposes, yes or no. If there is absolutely no way to find one, sure, then we are going to have to cast a broad net for other alternatives.

But we have discussed a few of the problems that could come with private-public partnerships and congestion pricing and some of the inequities and other issues that are raised by that, but beyond that you have got to remember many of these assumptions that have gone into Macquarie's perspectives, they have said they are not going to make the money on increased efficiency on the Indiana Turnpike; they are going to make it on toll increases, plain and simple.

So you are going to extract the money from people one way or another, and you can extract it from them and include a profit component, or you can do it at cost and serve the general public, or you can have some combination thereof, and I am just saying there is no one-sided answer to this problem. It is a huge problem. The costs of congestion are massive; the waste of fuel is horrible; the loss of time weighs on many people's lives and it hurts business and our competitiveness internationally, and we have got to approach this in a way that doesn't just offer a simplistic and diversionary answer, but a comprehensive approach.

I thank you all for your time. We are going to now have two votes, and as soon as the votes are concluded we will have the next panel. With that, the Committee is in recess.

Mr. BAKER. Mr. Chairman, could I ask him one more question as we are walking out the door?

Mr. DEFAZIO. Yes, go right ahead.

Mr. BAKER. I was just think about the coordination in that California Department of Transportation project. As we look, everybody here, in their district, has probably a bypass or a highway project that has been kind of slow. If you all could help us to help you coordinate some of the different agencies that are required to line up and sign up before the Monroe Highway 74 bypass can be completed, I think that would be a very positive exercise, because the sheriff and Congressman Baird and Mr. DeFazio and others, everybody has a Highway 74 bypass project. If we could apply the technology and skills that we discussed, that would be really good.

Mr. BAIRD. We have just got to get some tanker trucks to burn up in our own districts, and we will be on our way.

[Laughter.]

Mr. DEFAZIO. Now, Mr. Baird, don't.

Just one other. I don't want to leave that we are totally at odds here. I do agree that we can attribute 50 percent of the congestion to other than capacity constraints, and I note that you say more attention needs to be paid there. I would like to know what initiatives the Administration is undertaking in those areas.

I think we ought to have some sort of clearinghouse. I mean, it seems to me there is a lot of jurisdictions out there that are doing some interesting and innovative things that other jurisdictions might not know about, and if we provided a service of sort of a

clearinghouse at the Federal level for everybody to bring in or contribute their non-congestion ideas and make them readily available through a website or something like that, I think it could be very helpful.

Mr. CAPKA. Sir, I will just comment on that very briefly. We do have a program that kind of sits right on target with what you have described, and it is the Highways for Life program. It certainly started out as a program focusing on how to reduce the exposure time of work zones; how can you get in, get out, stay out, and we have been setting up a website that gives these examples of excellence to others to consider so we make them the routine. And it is not just the construction techniques, it is the contracting techniques that we discussed earlier; it is the communications, it is the ITS aspects that goes along with it.

So we are very much in line with you on sharing the good work, the good news, the innovation that is evidenced across the Country.

Mr. DEFAZIO. Great. Well, thank you very much. Again, thank you for your testimony.

[Recess.]

TESTIMONY OF TIMOTHY J. LOMAX, RESEARCH ENGINEER, TEXAS TRANSPORTATION INSTITUTE, MOBILITY ANALYSIS PROGRAM, COLLEGE STATION, TEXAS; PEGGY CATLIN, COLORADO DEPARTMENT OF TRANSPORTATION, DEPUTY EXECUTIVE DIRECTOR; CRAIG STONE, DEPUTY ADMINISTRATOR, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, URBAN CORRIDORS

Mr. LOMAX. Thank you very much. I will try to use your time resource wisely.

Thank you very much for the opportunity to discuss the future transportation issues and some of the solutions to the problems. I want to make sure you understand from the outset that I haven't really changed any of my views from the last time I appeared before this Subcommittee. I think we have enormous challenges. I think there are some solutions and I think that congestion is only one of the challenges that we face.

I also think that Congress can play a very important role in helping Americans get to their schools, their jobs, their health facilities, shops, as well as moving toward a desirable quality of life. I appreciate the chance to appear before you today and I welcome any questions you might have.

I want to summarize my written remarks with a few observations. Number one, I think congestion problems are going to challenge the major metropolitan areas as well as the small urban areas and rural areas for many years to come. Travel delays and unpredictable times for people and freight will always be a problem. Certainly smaller cities are also seeing a problem from that as well.

I also think it is important to note that some of these solutions don't just address one issue, but safety and congestion, for example, are very integrated, congestion and air quality are very integrated. Solutions that work on one problem also provide benefits on other problems. I think if we think of these as related problems we come

very much closer to comprehensive solutions and comprehensive improvements in quality of life and economic productivity.

I think we should think about the problems, opportunities and solutions in terms of niche marketing. There isn't a problem or a solution, a problem or a solution, some problems have very clear technology or infrastructure fixes, some can only be solved with better information and some will be best addressed by different policies, programs and financial or institutional arrangements. Some problems require big solutions and big price tags, but other problems require only small change in operations or design.

Problems that agencies have found over the years create a lot of benefits for relatively little cost. Perhaps even more importantly, it is these simple ideas, obvious solutions to the public, that make a difference, that build the trust to support the bigger improvement programs. The transparent, data-driven analytical approach typically yields a variety of solutions with a range of cost, substantial benefits and good public involvement is a key to enacting these programs.

The projects, programs and policies that each region uses to solve the problems will be different. As you have identified in the past, Portland has a different take on the solutions and the problems than some other places. I think that is a reflection of the diversity that we have in our Country, and I think that is good. I think the strategies are going to be different, depending on where you are within a metropolitan area as well. The same strategies that work downtown are not going to be the same ones that work at the port or out in the suburbs.

The range of solutions obviously includes strategies to get more productivity out of this current system. I think they also require programs designed to provide travelers with a choice of travel modes, departure times, pricing and electronic options for trips, tele-commuting, for example, as well as projects to increase person movement and freight movement capacity. In our growing urban areas, we are going to need more capacity.

It is also clear that solutions need to be pursued in a comprehensive way that involves the public. In all the fast-growing areas, there is not enough funding to keep congestion levels where they are, much less make improvements. Judging from successful approaches in the past, however, comprehensive strategies that combine investments in things as well as people work very well. The solutions, therefore, I think are broadly defined and integrated in a related combination of operating and maintaining what you have to the best of the ability, providing information and options to travelers, home buyers, businesses and other interested groups so that they make choices to avoid long travel times, whether that is day to day or year to year.

Expanding the system where bottlenecks or growth make other options inadequate to meet the goals that the community has set, these are goals the community has set. Monitor the effect of the programs, policies and projects to make operational and design improvements and to provide an accountable and transparent reporting to the taxpayers. So operate it as good as you can, identify options, identify information, identify ways for people to make trips, so that they have the option of changing their trips, and then ex-

pansion. Those three things, broadly defined, I think represent a good set of policies and programs.

The final element, monitoring the programs, not only has a feedback effect of making the projects better as you go, but they also have the effect of building the public trust. The interrelationship of these factors has been clearly demonstrated. In California and Washington, only two examples have recently received significant funding increases, based on a combination of doing a good job with what they have, providing a clear plan for additional spending, that attacks the problems, and committing to a communication effort that both informs the public about the effects of the programs and is used internally to refine the next set of project designs and operating strategies. The varying amount of extra time travelers and freight shippers have to allow this reliability factor is also important. Improving that can reduce traveler frustration and taxpayer trust.

Finally, let me say, I think we know what works. We know the projects, programs, policies that work, we know that there are some institutional reactions that need to take place. Public support and funding are vital to making this work. As my son's baseball coach says, folks, this is really simple, it ain't rocket surgery. He is sort of analogy-challenged in the Yogi Berra sense.

But really, transportation is a service. We need to treat travelers and shippers as consumers of that service. Our ability to fund transportation needs rests on our ability to get the most out of what we have and communicate the costs and benefits of those options. Institutional structures, as I said, are organized around policies and programs that deliver reliable service and which prioritize spending around principles and along the lines of getting the most bang for the buck are vitally important.

Thank you for allowing me time to express my ideas.

Mr. DEFAZIO. Thank you, Doctor.

I now turn to Ms. Catlin.

Mr. CATLIN. Thank you, Mr. Chairman and Members of the Committee. It is my distinct privilege and honor to be here before you today to tell a little story about a low-cost, easy-to-implement congestion management tool that we in Colorado have utilized just to manage our infrastructure better. We are one of the fastest growing States, and a western State as well, and we are pretty proud of our ability to implement this project.

Actually, the Colorado Department of Transportation received a value pricing pilot grant in the late 1990s in order to implement such a tool. We did a study that identified I-25 from the central business district of Denver up to U.S. 36, about a seven mile stretch, as that HOV lane in the Denver Metro area that would best be suited for a conversion to an HOT lane that our general assembly mandated in legislation in 1999.

As we planned the project, we embarked upon a public process, a number of focus groups, public opinion, surveys, and processes, meeting with stakeholders, etc., in order to best convert this project and to meet the public's needs. As you can see on the map, this project, as envisioned, as from the central business district of Denver, north about seven miles to U.S. 36. It is reversible, it is barrier-separated, two-lane facility, and, quite frankly, at the time it

was greatly under-utilized. The goal was to really optimize this section of road by allowing solo drivers the ability to pay a toll and buy access to this existing facility.

Next, please.

There are many stakeholders involved. They are listed here; I won't identify them. But we very, very carefully crafted interagency agreements in order to protect the public's interest.

Next.

This is a picture of the facility. You can see that it is barrier-separated, and the general purpose lanes. It is between the general purpose lanes of I-25.

Next, please.

How does it operate? Basically, as I mentioned, solo drivers and HOV lanes can utilize either lane except as the point of toll collection; and there is only one point of toll collection, about the midpoint of the seven mile facility. And at that point, but only at that point, solo drivers must be in the dedicated express lane in order to pay an electronic toll. HOV lanes must be in the dedicated HOV lane and signs—it is pretty clear where they need to be as they maneuver through the lanes.

Next, please.

It is all open roll tolling; it is electronic toll collection only. We were very, very fortunate to have some existing public highway authorities in the Denver Metro area with over 15 years of experience, and we capitalized on their experience and lessons learned. It is electronic toll collection only. Because they had over 400,000 toll tags or transponders in existence, we were able to capture some existing market share, and we contracted with them to do back office operations and provide all the services in terms of electronic toll collection and violation processing. In so doing, we minimized any need for additional staff, any additional government, any additional FTE and kept our overhead costs pretty low.

Next, please.

It really is the way we manage traffic congestion, we have a hierarchy of use. The primary use is transit; the second priority of use is carpoolers; and the third priority of use is solo drivers. And we manage the influx of solo drivers by managing the price of the toll that the users pay.

Next, please.

This is the initial toll rate structure. You will notice that in the peak period there is a toll rate that is paid of $3.25. We negotiated with our transit agency, our partners, and we agreed that if someone were to pay a toll, they would pay no less than the express fare for an express bus service for the same trip. We wanted transit to be very competitive, and we didn't want people to choose to pay a toll over the possibility of using transit.

Next, please.

But we also had to ensure that transit and HOV had no degradation of service, so we put together very, very strong metrics to ensure that there would be no degradation of that transit service. By doing that, we measure each and every bus trip into and out of the downtown area. There are about 6500 buses per month that make a trip on that facility. We measure the travel time as they enter and the travel time as they exit, and if they drop below a trip that

would be maintained at the posted speed limit, then we measure that. I am pleased to report that other than incidents such as snowstorms, we are operating at over a 99 percent success rate in the bus trips that are there.

Next, please.

We also developed a comprehensive incident management plan that encompasses not only our express toll lanes and our HOT lanes, but also the general purpose lanes on I-25, and we worked with incident responders, has a courtesy patrol and everything, and there are protocols that were established, so it is very effective. We also wanted to make it very onerous for cheaters, so we have a pretty high, pretty steep fine if you are caught violating in the HOV lane.

Next, please.

Some unique challenges. The challenges were very unique in implementing this, but it did require a very concerted public process: reaching out to stakeholders and a promise that we would measure performance and find out what the actual usage was.

Next, please.

Many of you mentioned that it would provide a predictable choice. It is flexible. Drivers can use any lane; they can opt for transit, HOV, or they can choose to pay a toll. It is environmentally responsible and it is sustainable.

Next, please.

Performance. We have exceeded our expectations. We are very pleased to say that not only have toll paying customers increased, but HOV performance has increased as well, and it is somewhat of a byproduct of our advertising in advance. People said, wow, I didn't even know that there was an HOV lane that I could use for free. And it is optimizing the use of the real estate in that about 16 percent of the person trips on I-25 that are taken daily are taking those lanes and they are operating at full highway speeds without congestion. They are sometimes enjoying as much as a 10 to 20 minute travel time savings, as opposed to those in the peak hour who are sitting in congestion.

Next, please.

And also, although it is not the primary purpose, it has certainly been a benefit that we have seen a much greater influx of revenues than we had predicted. It is not supposed to be a money maker, but what we did, we availed the transit agency of their obligation for maintenance on those lanes. They had previously spent about $350,000 a year in snow plowing and sweeping.

Through the collection of tolls, we are now able to cover all those expenses, and they, in turn, have an additional $350,000 to use for transit service elsewhere, or to enhance their service. Furthermore, the State had the obligation of about $700,000 in maintenance that they had to bear for pothole patching, sign replacement, striping; and we are now, through the collection of user fees, able to offset those costs. And because we are so under-funded in our maintenance activities in Colorado, we are able to use those elsewhere in the system as well.

We exceeded our first year revenue and our first year traffic by about two and a half times, and we just celebrated our first anniversary of opening on June 2nd, and we call it the little project

that could. It is not a huge—and I also want to say that it is about an $8 million investment, and that included the first two years of operating. We are going to be able to recover that, pay back that loan, as well as cover all of our operations and maintenance expenses.

Thank you.

Mr. DEFAZIO. Thank you.

Mr. Stone.

Mr. STONE. Good afternoon, Mr. Chairman. It is a pleasure to be here and testify before your Committee. I am Craig Stone with the Washington State Department of Transportation, where I am a Deputy Administrator for our Urban Corridors Office. What this is is an office in the Seattle area dealing with the seven most congested or most controversial corridors that we have there.

I provided to you written testimony, to you and your staff, as well as what we call a folio of low-cost/high-benefit congestion relief for better highway management that our secretary, Doug McDonald, has put forward and has spoken to.

If I could, I would just like to talk to a few points.

Clearly, what you have heard today, our challenge is great and it is a major issue. In Seattle, the polls constantly say congestion traffic is the number one issue for them. With that, we are trying a balanced approach. We actually have a major investment program going on that you have heard about in Washington State with our nickel and nine and a half cent gas tax. We also have a major transit component going on transit, and this November we hope to have another ballot measure. So clearly there are major investments happening.

I am here today to also say that we need to make sure that we are getting the most productivity out of those investments, and doing that is how we will operate and manage our system that we have, both where we are making improvements and where there are needs.

You have also heard today about congestion happens. About half of it is reoccurring congestion; half of it is non-reoccurring. If I could just speak quickly to the reoccurring congestion. People think of delay, but, importantly, we actually lose half of our capacity of productivity during congestion. We have Interstate 405, which is one of our beltways, and instead of moving 2,000 vehicles an hour through that, we will only move 1,000 when we need it most. So how do you get the most productivity is really my focus here.

We also need to think about the customer as getting information to them and reliability, because sometimes, an hour trip could be there, where other days it could be a 20 minute trip. Clearly, that is important.

Low-cost/high-benefit congestion relief comes through better management. We are using tried and true examples. Things have been done other ways, but for 30 years we have had rent metering in place. We have about 150 rent meters, over 150 miles of what we call data collection. Obviously, traffic signalization, synchronization is very important. You get a 40 to 1 benefit out of that investment that you make in doing that. Those are really good things.

Non-recurrent delay: incident response teams. We actually have 40 incident response trucks that then travel our facilities to then respond to incidents because one minute of congestion can give you ten minutes of delay. So there is a huge return on that, and we work closely with the State patrol and emergency responders, and even put incentives for our tow truck operators to clear the incidents quickly.

Construction work zone management I have spoken to earlier. We are doing more and more of early planning, including putting early what we call ITS out before the project, transit before the project, and not making it the last thing that we construct during a project.

And then traveler information, I think now with the web-based systems, portable devices, is extremely important and giving them accurate information so they can make good choices on their mode, where they are going to do their route, their travel time, and including one time all of our websites had 14 million hits in one day just from that. So you can see the usage of that.

Moving on, we are using the tried and true examples in Washington State and other places in the Nation, and Federal highways has been a big supporter of ITS, and we appreciate that. I have also participated with some States—Virginia, Texas, Minnesota—as well as Federal Highway staff to go to Europe. We heard a little bit about Europe here.

But we want to add on, we are right now studying how can we add some of the management systems that they have there, which are speed control, lane harmonization, kind of the end of your congestion warnings, possibly even opening up shoulders to only during your peak hours; and with that we are seeing potentially great return on safety, and then safety then means return on congestion and congestion relief. So, with that, we are looking for flexibility from the Federal Highway Administration and flexibility in our funding that we might be able to test some of those applications.

My last point comes a lot to the previous session you had also, but for our future, even with the major investments we are making in the Central Puget Sound area and across the State of Washington, we think we need bold solutions, and part of that comes to the open road tolling that you just heard about. We are opening up, on July 15th, our Tacoma Narrows Bridge, and that will include about 70 percent of the users will be using these good-to-go tags. They are the size of a credit card, put in your windshield, and then your account will be credited for that, and that is clearly for payment and payment back of the bonding for that particular project.

That same good-to-go tag will be used for what we are having as our pilot, our State Route 167 HOT lane, which will be a nine mile pilot where we are taking an HOV lane and converting it over, and we are going to test with our public, our users. But, again, one customer focus, one device so they can use our system.

Value pricing is important also to our future, and from the standpoint, as I understand today, that our State Route 520 project was part of the short list of the UPA, and in that we are looking at the opportunity to not only look at how we might be able to bond the project and be able to make tolls for a bridge replacement, but how would we vary the tolls to maximize the throughput at the same

time. So we are looking at two initiatives at the same point at that place.

Clearly, with these systems, choices is very important. The choices of the route, the mode, time of day; will I take transit today, will I go in my single car, will I go in my HOV. We hear about the soccer moms. There are great examples in San Diego of what they observed, and that is why we want to do our pilot for four years, and we will test it, we will assess it, and then we will be able to look at our performance through that.

In closing, the Federal support for enhancing ITS systems, along with this European active traffic management flexibility for the States to look at value pricing I think is important. Having a balanced approach where we are making infrastructure improvements, we are looking at how they will operate not only of year opening, but 20 years out; how they then tie in with bus rapid transit, telecommuting, all lead to the best practices, the best productivity from our systems operation and management.

Thank you for the time to be here and look forward to any questions you might have.

Mr. DEFAZIO. Thank you. Thank you all for your testimony and for sharing your ideas. I assume that you all were here during the first panel, and it seems what Colorado is doing is a very different model. You had an under-utilized asset and you priced it to bring on new users to actually more optimally utilize it, which is sort of the opposite about what most of the rest of the discussion with the first panel, particularly Mr. Shane, was about, which is we are going to keep pricing the asset until we drive enough people off it that it works more efficiently.

I don't know what exactly the question is, but I think you were probably in a fairly unique position. There probably aren't too many urban areas or urbanizing areas or heavily utilized areas where they actually have that kind of capacity that they could try—they want to induce more people onto it by having them pay to get a privilege. Are you aware of anybody else who has had this opportunity? It is almost the inverse of what we are talking about

No?

Dr. Lomax?

Mr. LOMAX. I believe Miami is pursuing a similar option with some of their HOV lanes. Again, HOV lanes that are under-utilized are a perfect analogy here. I think the key is that Colorado DOT was able to get with their partners and make sure the public understood what the benefit here is.

It is not that we are allowing a whole bunch of people into the lane and it is going to become congested, and you folks who are doing sort of the societally right thing by riding a bus or car pool are going to get penalized; it is we have got a whole bunch of extra capacity here, we can handle a lot more people, and let's take advantage of that. We don't have many under-utilized resources; let's see if we can get this one to carry more people, but at the same time not degrade the service.

Mr. DEFAZIO. Right. Do you anticipate a point at which, with the growth, where you might bump up against the capacity of that? And then would you, at that point, consider variable pricing in order to deter people?

Ms. CATLIN. Actually, we delayed implementing a dynamic pricing strategy until people got accustomed to it, but, yes, we would implement a dynamic pricing strategy that would ensure that people that were using the lanes, whether it be transit car pools or solo drivers, would have an unrestricted trip, an uncongested trip. So we will be raising the price if enough solo drivers come in to start creating delays for the buses or something.

Mr. DEFAZIO. But right now you have equity, basically, between the people that are using the bus rapid transit or the buses that are utilizing these lanes and the single occupant vehicle, is that correct?

Ms. CATLIN. That is correct. Right now, the single occupant vehicle actually pays 25 cents more than a transit trip in the same route. The transit route would stay the same. If they decide to raise their bus fares, then we would accordingly raise the peak hour trip for single occupant vehicles. But if it becomes congested, then we are required to work with our transit partners to figure out a pricing strategy that would work. But we are going to be implementing dynamic pricing in the next couple of years. But we still, when there is no congestion in the adjoining lanes, we drop the fare to 50 cents.

Mr. DEFAZIO. For any of the panelists, just given some of the concerns, societally, how is it—in your case, you have an equivalent option. I can choose to pay 25 cents more, drive my single occupant vehicle; I can take the bus rapid transit. But that is, again, a fairly unique, almost direct match. Whereas, in many cases, for someone to piece together a trip from a suburban area perhaps through an urban area to another area where they have to work, we don't provide those sorts of transit options. Then when you start pricing, how do we deal with that issue, Dr. Lomax? I mean, are we creating some—basically, what is the message to that person, change your job or move?

Mr. LOMAX. Well, I think that is what we have been telling them for 50 years.

Mr. DEFAZIO. Right.

Mr. LOMAX. We got mortgage deduction on your income tax and all kinds of policies that sort of make it easy for people to buy a house out in the suburbs. People had moved to the suburbs; the shops and the jobs had moved there as well, and how we have got this suburb-to-suburb commute that is much more difficult to handle with sort of the traditional infrastructure-based transportation systems. I think that is why you need a whole range of strategies targeted at what the problems are. California's big investment program is oriented around corridors to try to get high volume, high demand corridors to work really well; spot improvements, fixing the bottlenecks; adding transit where that makes sense.

But again, you have to recognize that transit isn't going to work everywhere. Those low-density suburbs are very difficult to serve with transit, so having either a much less intensive form of transit, combined with some flexible work hours and telecommuting possibilities and ride share, sort of day-to-day trip making ideas and making the system operate better; getting the signals coordinated, those kinds of things. They are all strategies that work; we just have to figure out where they are best suited.

Mr. DEFAZIO. Yes, Ms. Catlin.

Ms. CATLIN. As we look at maybe expanding our system a little bit further, we are looking to expand it in concert with transit, and on some of the highly congested corridors where we are looking at adding capacity with a managed lane option, we are working in concert with our transit provider. Right now, they are not necessarily providing bus service between suburb-to-suburb because their buses are sitting in congested traffic. If we were to provide a priced option for solo drivers, they would consider increasing their transit service along that corridor.

So every time we look into this or plan for this, we are trying to do it in concert with buses, and we already have a policy that we struck with our transit agency that buses would always go free. So we have tried to use this as a model if we go forward on any other corridors.

Mr. DEFAZIO. Is this a public transit agency?

Ms. CATLIN. Yes, public transit agencies.

Mr. DEFAZIO. We have been really focused on individual users, and I guess the other side of this we haven't talked much about today is freight mobility, as congestion relates to that, and I am not sure, again, that the Administration's advocacy for congestion pricing is going to be particularly applicable or help us really resolve the sort of bottleneck problems and things we have with freight movement, and I am interested in any ideas any of you have on dealing with our freight mobility problem.

Yes, Mr. Stone.

Mr. STONE. If I could, one of the observations we had overseas with Germany, they would open up their shoulders during these peak hours and actually the freight was one of the highest uses of those outside shoulders. And as we look at one of our corridors, that is one thing we are looking at and will be testing, is if you can open that up, you actually get about 25 percent increase in capacity for that period when you need it. It may be able to address some of those peaks and keep the freight moving.

So, again, a test area, something on the future. Obviously, in Atlanta, with a truck on the toll lanes—and that has been a test, trying to consider what that would be, but obviously I am not the person to speak to specifics of that.

Mr. DEFAZIO. Just on using the shoulders, I mean, the question becomes you are going to have to have some awfully well stationed and quick removal of breakdowns, or you are going to have some big problems or accidents, potentially

Mr. STONE. And that is what my message would be. Systems operations and management is everything comes together; incident response, early detection, responding to that, being able to lower the speeds in advance of a congested area so you don't have rear-end accidents that then create secondary accidents. You can do a lot if you really use the technology that we have. Our generations are growing up with technology, and that is part of the future, to put that in place. And then with that, then we look at other smaller strategies that can fit into it.

Mr. LOMAX. I would think that what Craig is talking about in terms of the best incident management program is to keep the incidents from happening, so to the extent you can keep people from

running into each other at the back of a queue or sideswipe collisions or entrance ramp traffic flows, the ramp metering really has a huge beneficial effect at just sort of spacing out the cars that get to the freeway, so you are preventing collisions.

But then very rapid response that is provided in many States to incidents when they happen. Houston has a program where tow trucks are contracted to operate on the freeways and are responsible for a six minute response time. When they get there, they pick up the car and they haul it away. They don't worry about doing minor engine repair on the side of the freeway; they get it out of the way. It has led to more than a 10 percent reduction in collisions just on the freeway.

But to your issue of the freight mobility, I think the truck only toll lanes idea is a good one. Again, it is not a ubiquitous kind of program, but if you focus toll lanes on ports or intermodal terminals or big truck volume flows, I think the trucking companies are going to find out that they are going to save these large amounts that Administrator Simpson was talking about in terms of their productivity. There is an enormous benefit there for them.

So I think that is a part of it, but I think also, as your business community in Portland has found, that the port is a vital component of travel and you are not going to put containers onto light rail trains. You have got to do something about roads that serve the port area, or the economic engine begins to die away.

Mr. DEFAZIO. Well, that is a point I would like to find a way to deal with in the next reauthorization, is sort of what I call a least cost approach to transportation investment, and we would heavily weigh factors like congestion, fuel consumption. Right now we are talking a lot about carbon footprints, all those sorts of things.

But we have a rail system that is at capacity in the West, for the most part, privately operated. We have public highways that are at capacity, and the question becomes does it make more sense to build another lane mile on I-5 or would it make more sense maybe for some sort of public-private, truly public-private partnership to enhance the railroad to double tracks so we can get some of those containers and freight off the highway. Any innovative thinking or ideas you have in that area would be welcome.

You don't have to respond now, but if you think about it and get back, because right now we have got sort of the chimney approach. Okay, this isn't the rail Subcommittee, as you noticed, so they are off doing different things, and we are not really—I mean, if we want to be truly fuel efficient and perhaps cost-efficient, it looks to me like there has got to be a lot more utilization of rail for movement of freight.

Mr. LOMAX. I think Mr. Stone talked about the flexibility as an option. I think that is really what many States in Metro regions are looking for, and even long distance regions like the Administration has heard from in their corridor plan. They are looking for ways to be able to move money and move decision making sort of out into the open and be able to invest in projects that make sense sort of no matter what stovepipe or what institutional arrangements have existed in the past. So anything that you all can do I think would be greatly appreciated and would unleash some of that creative power.

Mr. DEFAZIO. I would like to get there, so if anybody else has any thoughts about that, I would appreciate them.

I don't have any other questions and I see no other Members present. Unless any of you feel there is something you would like to comment on that has gone on during today or something else you would enlighten the Committee with? If not, then I would again thank you for your time and your testimony, and this Committee is now adjourned.

[Whereupon, at 12:30 p.m., the Subcommittee was adjourned.]

Good Morning Mr. Chairman. I want to thank you for holding this hearing today. Congestion on our nation's roadways is a growing and costly problem, and I look forward to learning about potential solutions from the panel of transportation experts you've assembled here this morning.

The citizens of northeastern and central Pennsylvania are no strangers to congestion and this is the reason why I never miss an opportunity to highlight the problem while working tirelessly to find solutions.

I am very interested in pushing for an increased commitment to passenger rail service. One such project that is being developed in my district would go, I believe, a long way to reduce commuter congestion. The rail project offers a realistic remedy to the congestion that plagues the I-80 corridor in eastern Pennsylvania and New Jersey.

Some 200,000 commuters travel daily from eastern Pennsylvania into New Jersey and New York for work and pleasure, and this number increases with each passing month. Traffic actually backs up from the Lincoln Tunnel exit in New Jersey to the Pennsylvania border each morning. Re-opening the former Lackawanna Cutoff Rail Line will dramatically ease this congestion and I am excited for this project to be completed.

I look forward to the testimony of the witnesses you've assembled, Mr. Chairman, and I am eager to learn about their views and suggestions about what we need to do to adequately address the problem.

JULIA CARSON
7th District, Indiana

COMMITTEE ON
FINANCIAL SERVICES
Subcommittee on Housing and
Community Opportunity
Subcommittee on Financial Institutions &
Consumer Credit

COMMITTEE ON
TRANSPORTATION &
INFRASTRUCTURE
Subcommittee on Highways, Transit & Pipelines
Subcommittee on Railroads

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Opening Statement of the Honorable Julia Carson
In the Subcommittee on Highways and Transit
June 7, 2007

Thank you Mr. Chairman, and good morning to our witnesses. Thank you for being with us today to discuss the problems and solutions related to traffic congestion.

Congestion on our highways is a problem which affects each and every American. Whether in the amount of time lost each day to freight delays, or in the amount of money lost to needlessly expended fuel, every American suffers when our transportation infrastructure slows to a crawl.

The people of my district, Indianapolis, know all about the frustration that comes with traffic. Interstates 65, 69, 70, and 74 all come into Indianapolis, adding tens of thousands of cars and trucks to the city's already heavily trafficked roadways. As of 2006, Indianapolis was the nation's 32nd most congested city. A GAO report estimated that in 2003, Indianapolis commuters "spent 34 percent of their travel time in congested conditions … [and] on average spent 38 hours delayed in traffic[,] costing the area about $362 million in lost wages and wasted fuel – about 14 million gallons."

How did we get into this pickle? How did this problem become so severe to not be merely a nuisance of modern living but a drain on our economic activity? The most important question to ask, however, is how do we mitigate the effects of this problem? Hopefully this hearing sheds light on answers to that question. In Indiana, we are already taking steps to alleviate the burden on our motorists.

In 2004, the Indiana Department of Transportation embarked on an intelligent transportation systems program to better monitor Indiana's roadways and inform commuters about traffic problems. Today INDOT maintains a website that gives users a real-time view of the traffic situation in Indianapolis and Northwest Indiana by providing access to traffic cameras and incident reports. The Indianapolis Metropolitan Planning Organization continues to move forward with ITS plans to further integrate Indianapolis' roadways to create safe and efficient driving conditions for the city's commuters.

I am glad and encouraged by today's panels of witnesses. In order to help mitigate the costs of traffic congestion, the federal government, state government, and academic community must work together to find the best ways to implement available technologies and develop future programs that will allow our transportation infrastructure to grow while lessening our nation's congestion problem.

I want to thank the Chairman and Ranking Member for holding this hearing, and I thank the witnesses for their attendance and for sharing their views on this matter. With that, I yield back.

Julia Carson

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COMMITTEE ON TRANSPORTATION & INFRASTRUCTURE
Subcommittee on Highways, Transit, and Pipelines

Congestion and Mobility on the Nation's Surface Transportation System

June 7, 2007
10:00 a.m.
2167 Rayburn House Office Building

Opening Statement of Congressman Elijah E. Cummings

Mr. Chairman:

Thank you for calling today's hearing, which will allow us to investigate the congestion challenges that lay on the roads before us as well as options available to us to help alleviate traffic congestion problems.

In a report on urban congestion trends from 1993 to 2003, the United States Department of Transportation concluded that peak-period trips took an average of about seven percent longer in 2003 and that the percent of freeway

mileage that is congested has grown from 51 percent to 60 percent.

A major contributing cause to this increasing congestion is simply our lack of investment in new transportation infrastructure.

According to the Federal Highway Administration, 30% of all state expenditures on roadways made in 1981 were for new construction. By 2001, expenditures on new construction had fallen to just 13% of total expenditures.

During that period, total lane miles in our nation increased by approximately 5% – which was simply insufficient to keep pace with an increase in total vehicle miles traveled estimated to be 80% during that 20-year period.

Now, however, not only are drivers facing increased congestion, they are also facing rising gas prices forcing them to pay more for the fuel they waste stuck in traffic.

The American Automobile Association (AAA) currently reports that gas in my district in Baltimore sells for an average of $3.12 per gallon. Nationwide, families are paying $3.22 per gallon on average. Last year, families paid $1,000 more for gasoline than they did in 2001.

The Texas Transportation Institute has estimated that in 2003, congestion in urban areas cost our nation about $63 billion, or an average of $800 per traveler.

Congestion has ever-increasing ramifications for our citizens that require us to create another revolution in our national transportation policy.

I agree with Under Secretary Shane when he states in his written testimony that chronic congestion is the result of poor policy choices. Indeed, I think that this Administration has made many poor transportation policy choices that have only contributed to a worsening of congestion in our nation.

Most importantly, the Administration insisted on the passage of SAFETEA-LU at the level of $286 billion – rather than the $375 billion that our own Department of Transportation told us was really needed both to maintain

our existing infrastructure and to create the infrastructure needed to meet growing demand.

Thousands of other poor policy choices have also been made at the local and state levels throughout this nation as local authorities have decided not to more closely marry land use planning and transportation planning – meaning that seemingly endless sprawl now fills previously open spaces and creates ever longer commutes.

I strongly believe it is time for our nation to again take the kind of bold policy steps we took when we decided to invest in the construction of the Interstate or to support mass transit to develop a more comprehensive national transportation policy framework that will truly support our changing mobility needs.

I applaud the work of our Chairman to address the problems of congestion we face in our nation, I look forward to hearing from today's witnesses, and I yield back the balance of my time.

Statement for the Record for Congressman Walz

June 7, 2007
Re: T & I Subcommittee on Highways and Transit: "Hearing on Congestion and Mobility"

Mr. Chairman, Ranking Member Duncan, I want to thank you for holding this hearing today on such an important topic. While the problems of congestion and mobility facing our nation's surface transportation system today are more apparent in large metropolitan areas, we need to keep in mind that the same issues affect rural communities as well.

In fact congestion and mobility may be more strongly felt at the local level as "bedroom" communities are springing up, increasing commuter traffic on what are often two-lane roads. In agricultural communities, long distance haulers frequent these same roads, increasing the demand even more. These roads frequently cross railroad tracks, presenting yet another hazard. As these small, rural communities look to increase their economies by bringing in businesses, the burden becomes even larger. Public transit is not always feasible in rural communities from both an economical and logistical standpoint. Surface transportation infrastructure is aging and no longer able to meet the demands imposed upon it. I agree this problem needs to be addressed at the national level both in metropolitan areas and in rural areas as well.

Mr. Chairman, thank you for holding this hearing and I look forward to the testimony from the panel members.

STATE OF COLORADO

COLORADO TOLLING ENTERPRISE
A Division of Colorado Department of Transportation
4201 East Arkansas Avenue, Room 262
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(303) 757-9208 Phone
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Testimony of

Peggy Catlin, Deputy Executive Director
Colorado Department of Transportation

Subcommittee on Highways and Transit
House Committee on Transportation and Infrastructure

June 7, 2007

Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to present to you today on Colorado's experience with our recently opened I-25 HOV/Tolled Express Lanes in metropolitan Denver. My name is Peggy Catlin, and I am the Deputy Executive Director of the Colorado Department of Transportation (CDOT) and the Acting Director of the Colorado Tolling Enterprise, a division within CDOT authorized by state statute to finance, design, build, operate and maintain a system of toll highways. I am pleased to share our experiences in the implementation of this significant project with the Subcommittee as I believe that our approach to this corridor has been extremely successful and can serve as a model for other states that are interested in pursuing similar options.

Background:
For more than 10 years, the Colorado Department of Transportation (CDOT) operated a reversible, high occupancy vehicle (HOV) facility along a seven-mile stretch of Interstate 25 between downtown Denver and U.S. Highway 36. The I-25 HOV lanes, as they existed, were very successful carrying more people, per lane, per hour than the adjacent general purpose lanes.

In the peak hour, the general-purpose lanes carried an estimated 1870 people per hour compared to 2050 in the HOV lanes. However, the lanes carried fewer vehicles, resulting in significant unused capacity. In fact, while the adjacent general purpose lanes served over 200,000 vehicles a day, the HOV lanes only served approximately 10,000 vehicles.

Recognizing the fact that the HOV lanes could carry more vehicles and offer more choice and convenience for all kinds of drivers with varying needs, CDOT began to explore solutions such as high occupancy toll lanes (HOT) that would require legislative action.

In 1999, legislation passed allowing CDOT to convert an existing HOV lane into an HOT lane. After evaluating potential HOV facilities, it was determined the I-25 HOV lanes were the best candidate.

As one of the 15 states in the Federal Value Pricing Pilot Program, CDOT received a Federal Value Pricing Grant of $2.8 million to begin implementing this conversion.

Partner agencies:
While CDOT and the CTE were the lead agency on this significant project, the concept could not have been successfully implemented without the collaboration and partnership of several other transportation agencies in the Denver metro area. These partner agencies include Denver's Regional Transportation District (RTD), the Denver Regional Council of Governments (DRCOG), the City and County of Denver, the Federal Highway Administration and the Federal Transit Administration.

Additionally, Colorado partnered with the two existing metro area toll facilities, E-470 and the Northwest Parkway, to ensure interoperability and seamless customer service and billings.

Cost to Implement:
The total cost of the project, including two feasibility studies, technology components, construction, and a reserve fund for two years of maintenance and operations costs was approximately $9 million. Maintenance and operations costs range from $800,000 to $1 million annually. This expense was previously paid for by the local transit agency and CDOT using taxpayer dollars. It is now covered by toll revenue. Additionally toll revenues pay for increased law enforcement of the lanes at a cost of $50,000 annually.

Implementation of the I-25 HOV/Tolled Express Lanes:
The new I-25 HOV/tolled Express Lanes opened in June 2006, marking the first time solo drivers could legally access existing HOV lanes by paying a toll. Carpools, buses and motorcycles continue to use the lanes toll-free.

The purpose of the I-25 Express Lanes is not to generate revenue but rather to maximize the highway by allowing solo drivers access to the lanes while not impacting carpools and buses. In order to ensure the lanes don't become congested, the number of solo drivers in the lanes is managed by adjusting the toll rate at various times of the day. In the peak hour, the toll is higher than at other times of day.

Tolls are collected electronically and are deducted automatically from an active EXpressToll® account enabling motorists to use the same transponder on two other existing toll facilities in the Denver metro area. Toll enforcement is handled via license plate photo technology. On-site law enforcement officers enforce HOV violations. HOVs are not required to have a transponder.

Toll prices vary depending upon the time of day and range from 50 cents to $3.25 with higher rates during peak periods. This varying price ensures the HOV/Express Lanes remain free flowing.

Success stories and public sentiment:
The lanes have been overwhelmingly successful and are meeting first-year revenue and user projections. The CTE projected 500 toll-paying vehicles would use the Express Lanes each morning and afternoon peak period by the end of the first year and is currently averaging more than 1,000. The CTE was forecasting $800,000 in toll revenue for the first year and reached that just six months after opening. To date, more than $1.8 million has been collected.

The lanes carry approximately 33,000 people per day, representing between 10 and 15 percent of the total person trips along that stretch of I-25 and these vehicles travel at full highway speeds, as compared to congested rush hour traffic.

In order to ensure no degradation in transit service and travel speeds, bus travel-time performance is monitored. Since opening, the number of buses that have not achieved their target travel time is between one and three percent monthly. This is mostly due to incidents or weather.

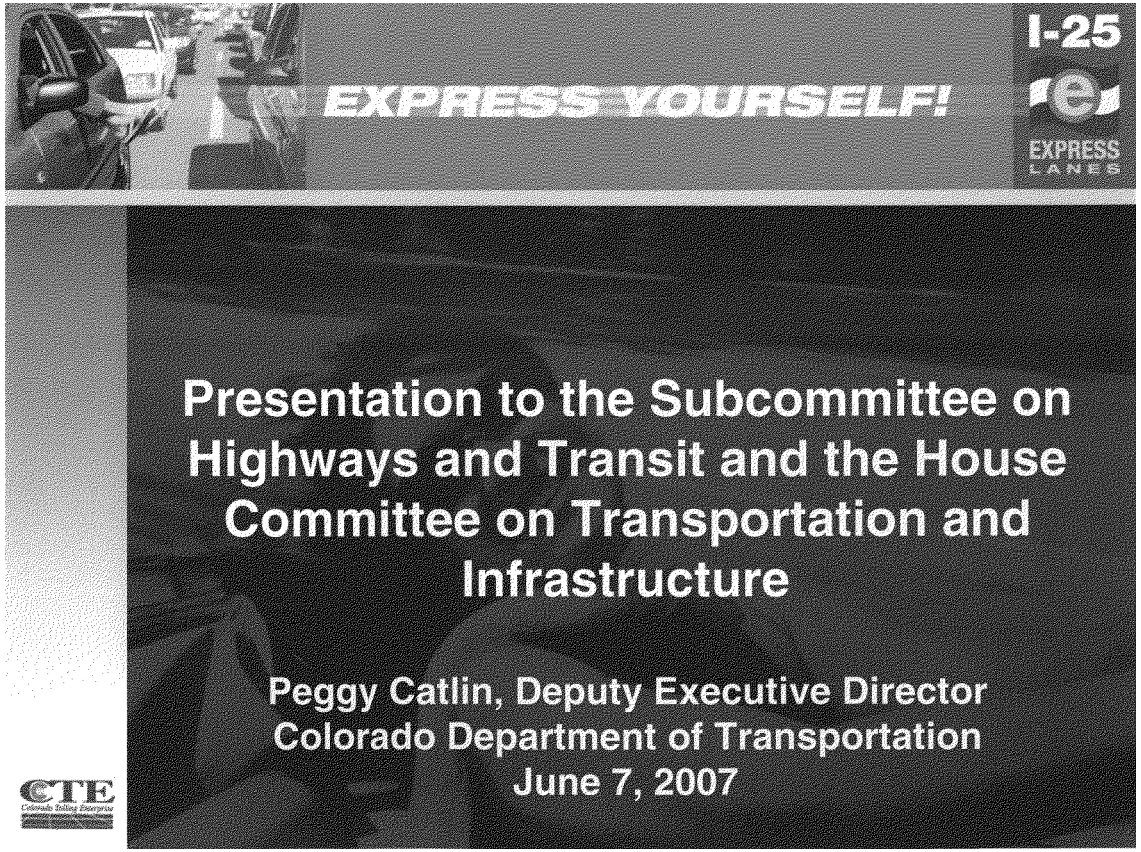
It is important to note that the goal of the project is not to generate revenue but rather to cover expenses that would previously be paid for by taxpayers. Toll revenues will cover operations, snow removal, maintenance, and a reserve for eventual reconstruction costs totaling nearly $2 million annually.

The opening of the I-25 HOV/tolled Express Lanes fell on the heels of a Denver metropolitan area resident survey that found more than two-thirds of respondents (67.9 percent) said they believe tolled Express Lanes can be a good way to pay for the addition of new highway lanes. They overwhelmingly (74.4 percent) prefer tolled Express Lanes over increasing taxes.

Conclusion:
While the project is off to a solid start and the increase in use is encouraging, the project's success has been and is still largely dependent upon public perception and partner relationships. Colorado was the fourth state in the nation to implement a HOT lanes project and while other states were invaluable in providing information and lessons learned, HOT lane projects greatly vary from state to state and each have unique challenges and issues. Tolling in general can be controversial but the added issues related to modifying an HOV facility and accommodating carpools and transit to ensure a positive outcome, limiting toll-paying vehicles due to capacity and communicating simply is difficult as there are many unknowns. Regardless, these issues are manageable.

It takes a tremendous effort to implement a HOT lane project as they are uncommon across the nation. It's easy to underestimate how a lack of understanding or coordination can negatively impact a HOT lane project. Issues such as engineering, safety, toll collection, customer service, technology, enforcement, business rules and policies must be well thought out and reflect the individual needs of a state or region. Outreach, communication and coordination must be aggressive, well planned, thorough and strategic from early planning stages through implementation and it must be continuous both before and after a facility opens.

Colorado's I-25 project clearly demonstrates that the public is receptive to these types of projects and the benefits to motorists and transit agencies are great.


EXPRESS YOURSELF!
I-25
EXPRESS LANES
Presentation to the Subcommittee on Highways and Transit and the House Committee on Transportation and Infrastructure
Peggy Catlin, Deputy Executive Director
Colorado Department of Transportation
June 7, 2007
CTE
Colorado Tolling Enterprise

History

1999 Legislation required the Colorado Department of Transportation (CDOT) to convert an existing high occupancy vehicle (HOV) lane to a high occupancy toll (HOT) lane

2000 Express Lanes Feasibility Study

Existing I-25 high occupancy vehicle (HOV) lanes

- GP lanes: 1870 people per hour, 240,000 vehicles a day
- HOV lanes: 2050 people per hour, 10,000 vehicles a day

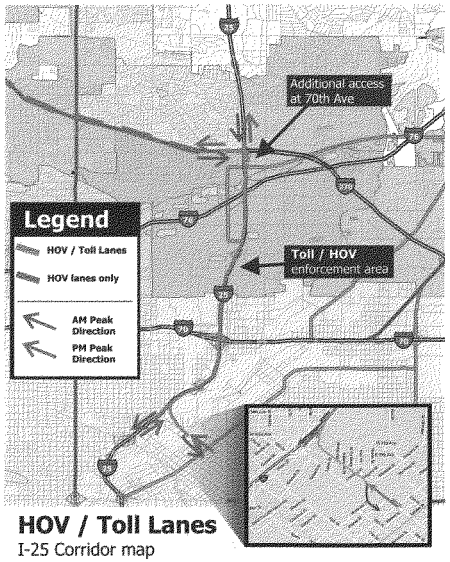
2002 Legislation established the Colorado Tolling Enterprise, a division within CDOT

I-25 EXPRESS LANES

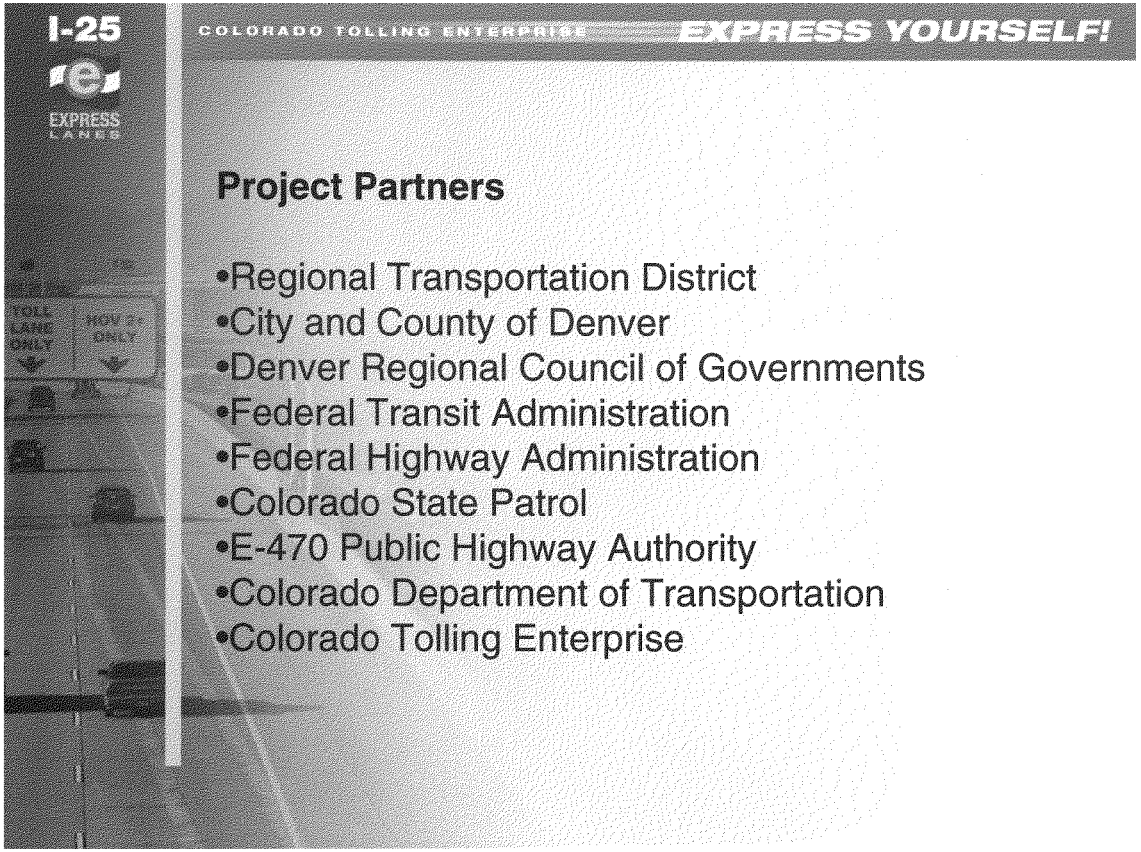
COLORADO TOLLING ENTERPRISE — EXPRESS YOURSELF!

The I-25 HOV/Express Lanes Project

- Opened June 2006
- Approximately 7 miles, reversible and barrier separated.
- I-25 from US 36 to downtown Denver
- Vehicles with only one occupant can use the I-25 HOV/*Express Lanes* if they pay a toll
  - Buses, carpoolers and motorcycles continue to use the lanes for free
- Purpose is to maximize the highway by allowing solo drivers access to the lanes



HOV / Toll Lanes
I-25 Corridor map


I-25
EXPRESS LANES
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Project Partners
•Regional Transportation District
•City and County of Denver
•Denver Regional Council of Governments
•Federal Transit Administration
•Federal Highway Administration
•Colorado State Patrol
•E-470 Public Highway Authority
•Colorado Department of Transportation
•Colorado Tolling Enterprise

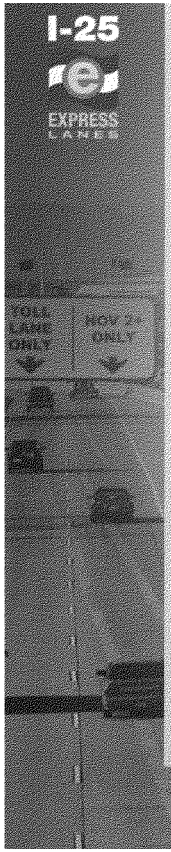
I-25

EXPRESS LANES

COLORADO TOLLING ENTERPRISE

EXPRESS YOURSELF!

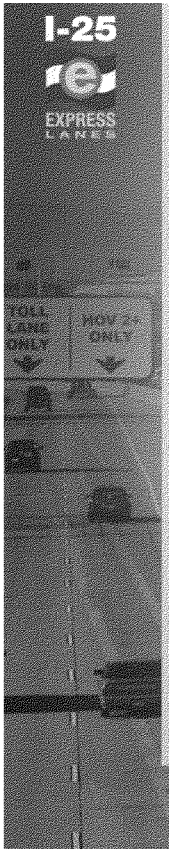
I-25 HOV/Express Lanes Project



COLORADO TOLLING ENTERPRISE **EXPRESS YOURSELF!**

Drivers Can Use Any Lane, Except at the Clearly Marked Toll Collection Zone

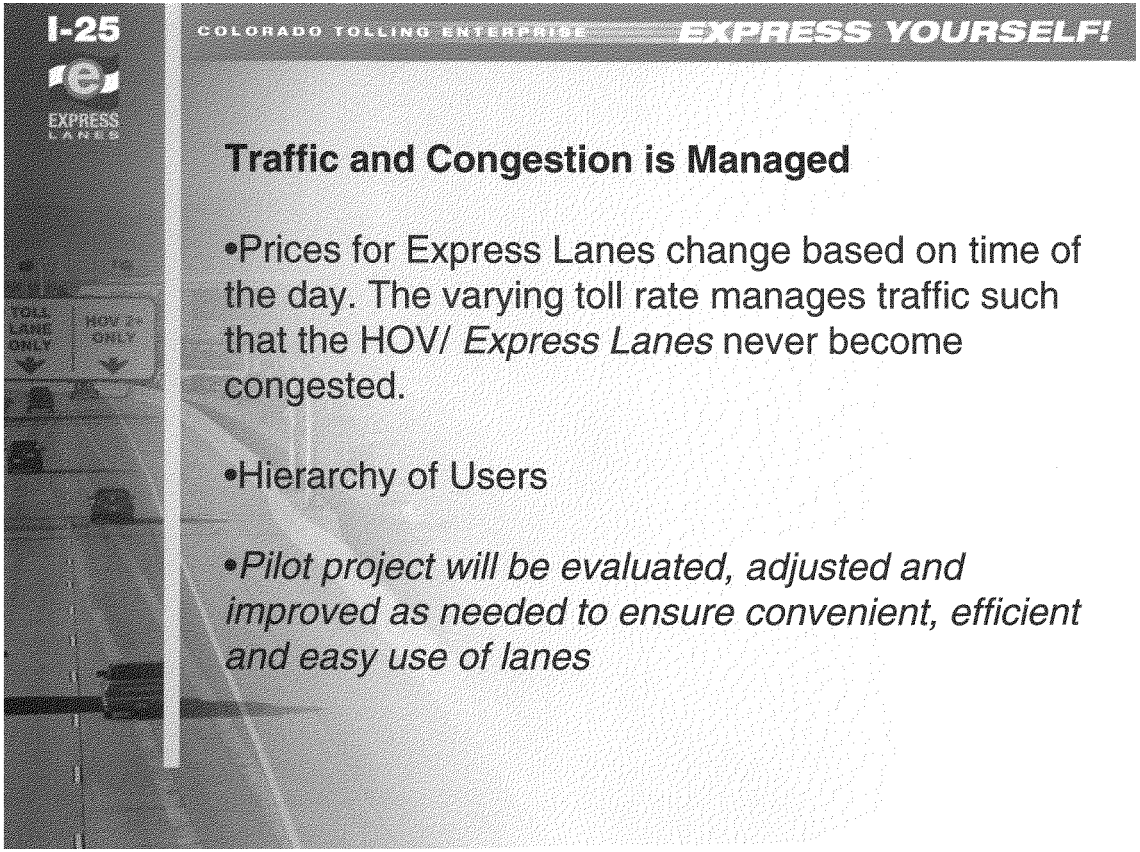
- Solo drivers and HOV vehicles can use either the *Express Lane* or the HOV Lane, except when passing through the toll collection zone.
- At that point, solo drivers must be in the *Express Lane* so their transponders are charged, and HOV vehicles must be in the HOV Lane.
- Signs designate appropriate lane for HOVs and toll-paying vehicles.



COLORADO TOLLING ENTERPRISE EXPRESS YOURSELF!

Toll Collection

- Electronic toll collection only
  - No stopping; no tollbooth congestion; and no change
- EXpressToll® Transponder
  - Same transponder used on E-470 and Northwest Parkway
  - Active accounts can use the HOV/Express Lanes immediately
- Only solo drivers required to have a transponder



COLORADO TOLLING ENTERPRISE EXPRESS YOURSELF!

Traffic and Congestion is Managed

- Prices for Express Lanes change based on time of the day. The varying toll rate manages traffic such that the HOV/ *Express Lanes* never become congested.
- Hierarchy of Users
- *Pilot project will be evaluated, adjusted and improved as needed to ensure convenient, efficient and easy use of lanes*

I-25

EXPRESS LANES

COLORADO TOLLING ENTERPRISE

EXPRESS YOURSELF!

Initial Toll Rate Schedule*

AM		PM	
5:00 – 6:00	$0.50	Noon- 3:00	$0.50
6:00 – 6:45	$1.75	3:00 – 3:30	$1.50
6:45 – 7:15	$2.75	3:30 – 4:30	$2.00
7:15 – 8:15	$3.25	4:30 – 6:00	$3.25
8:15 – 8:45	$2.75	6:00 – 7:00	$1.50
8:45 – 10:00	$1.25	7:00 – 3:00a	$0.50

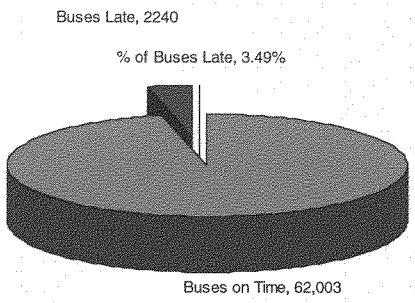
*Schedule may change to maximize congestion-reducing power of lanes. Commercial vehicles over three axles will be assessed an $18 fee in addition to base toll rate.

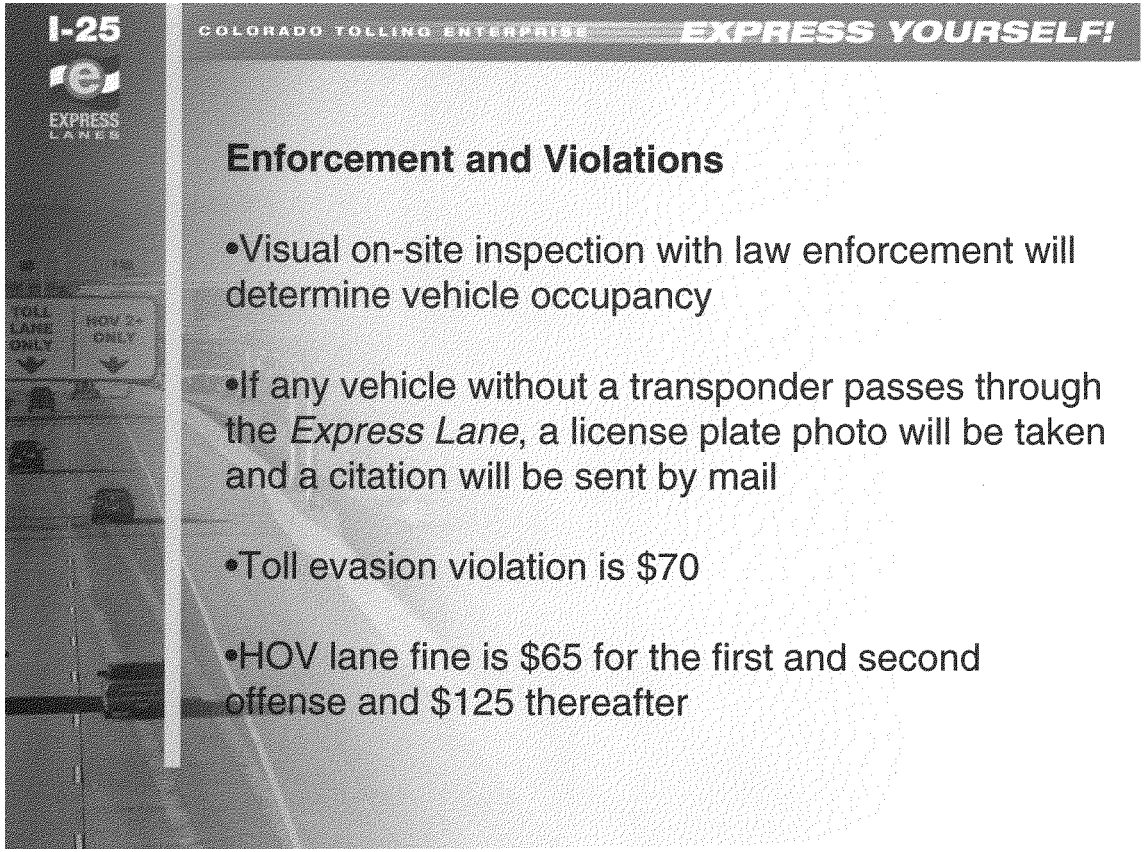
I-25 EXPRESS LANES

COLORADO TOLLING ENTERPRISE EXPRESS YOURSELF!

Performance Monitoring

Average Weekday Bus Performance June through April

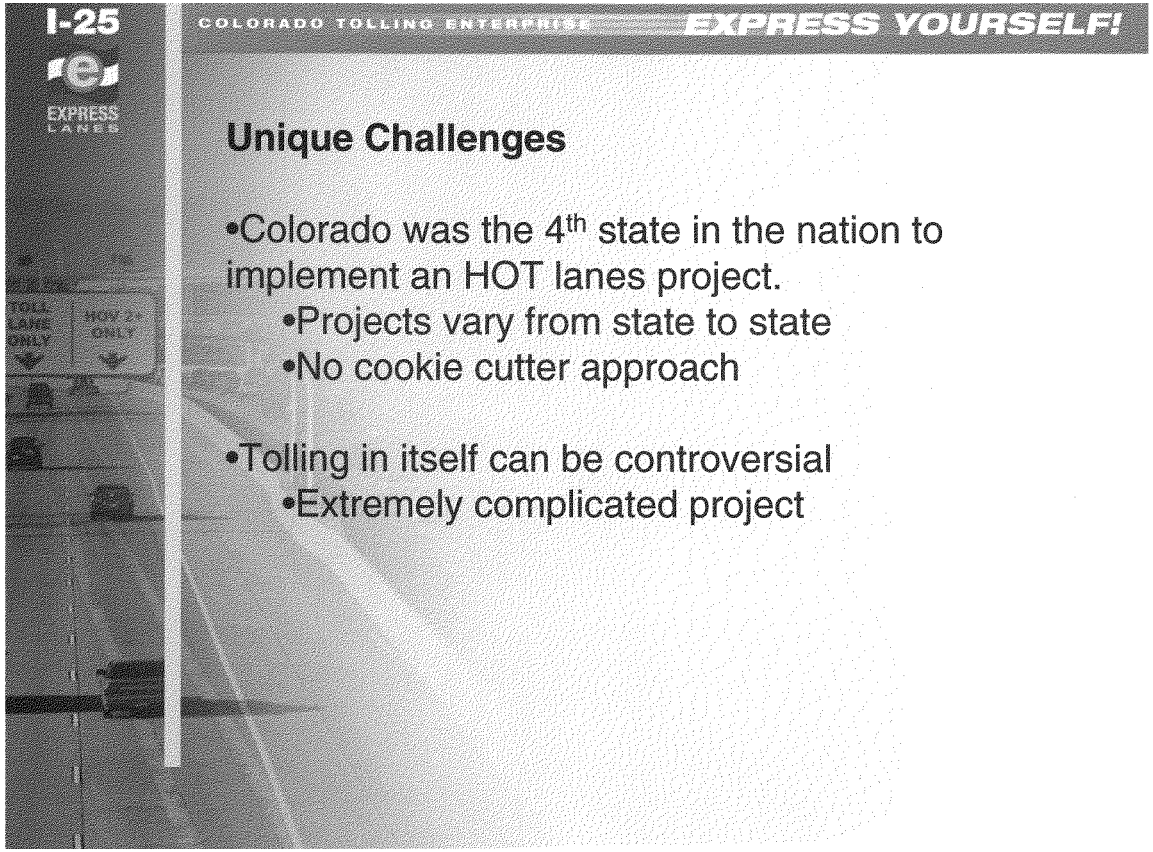


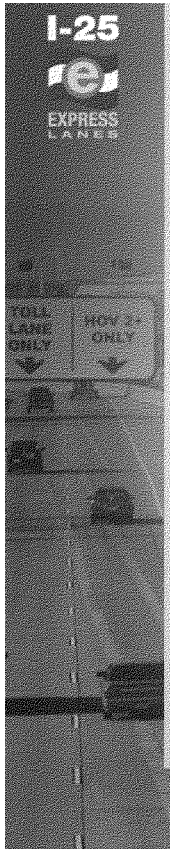


COLORADO TOLLING ENTERPRISE EXPRESS YOURSELF!

Enforcement and Violations

- Visual on-site inspection with law enforcement will determine vehicle occupancy
- If any vehicle without a transponder passes through the *Express Lane*, a license plate photo will be taken and a citation will be sent by mail
- Toll evasion violation is $70
- HOV lane fine is $65 for the first and second offense and $125 thereafter


I-25
EXPRESS LANES
COLORADO TOLLING ENTERPRISE
EXPRESS YOURSELF!
Unique Challenges
•Colorado was the 4th state in the nation to implement an HOT lanes project.
•Projects vary from state to state
•No cookie cutter approach
•Tolling in itself can be controversial
•Extremely complicated project

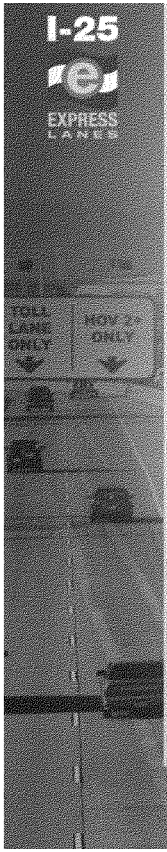


COLORADO TOLLING ENTERPRISE EXPRESS YOURSELF!

Benefits of the Project

More Choice, Less Congestion, Better Quality of Life

- Flexible, Reliable Choices Open to More People
- High-Performance Alternative to Congestion
- Drivers Can Use Any Lane, Except at the Toll Collection Zone
- Environmentally Responsible
- Highways Improved Without Increased Highway Funding
- Sustainable Transportation System



COLORADO TOLLING ENTERPRISE EXPRESS YOURSELF!

Performance

Far exceeding both usage and revenue projections.

Projected: 500 toll payers in peak hour
Actual: More than 1,400 toll payers in peak hour

Month	Toll	HOV
June	21,551	204,189
July	31,467	221,918
August	45,121	234,972
September	56,339	211,875
October	63,519	197,092
November	63,575	207,270
December	52,477	181,582
January	71,858	187,064
February	74,545	191,279
March	80,665	214,658
April	83,162	207,035

I-25 EXPRESS LANES

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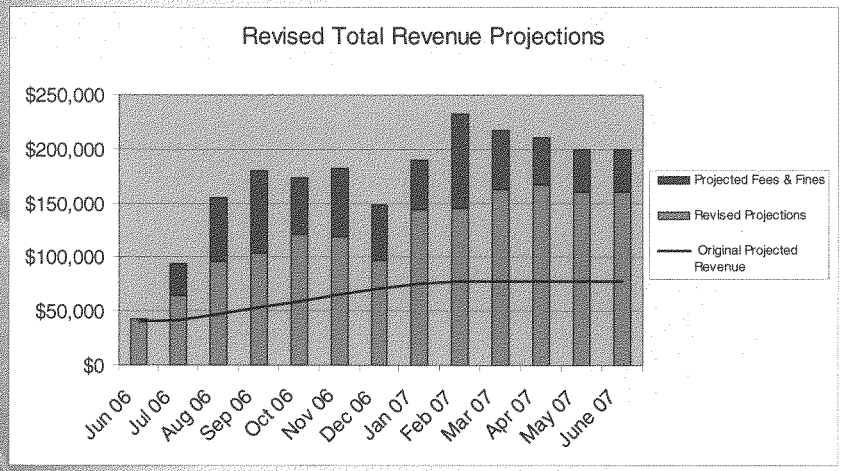
Revenues



The Many Dimensions Of America's Congestion Problem – And A Solution Framework

Testimony of
Tim Lomax
Research Engineer, Texas Transportation Institute
Researcher, University Transportation Center for Mobility
The Texas A&M University System
Mail Stop 3135
College Station, TX 77843
979-845-9960

To The
United States House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Highways and Transit

June 7, 2007

Mr. Chairman, distinguished members of the Subcommittee, thank you for the opportunity to discuss the future transportation issues and some solutions to our problems. I want to make sure you understand at the outset, that I have not changed any of my basic views since my last appearance before this Subcommittee. I still believe our transportation system faces a number of challenges – congestion among them – and that there are some solutions to what appears to be an intractable issue. The next few years will see some key opportunities with a number of transportation solution strategies. Congress can play an important role in helping Americans get to their jobs, schools, shops and health facilities, as well as moving the freight to support a desirable quality of life. I welcome your questions today, or at other times in the future.

First, let me summarize my ideas.

- Congestion problems will continue to challenge our metropolitan regions in the future. Travel delays and unpredictable travel times for people and freight will be a problem in many regions with populations below 1 million – this will not just be a big city problem.
- Safety and congestion problems are not different – and many solutions to one problem help the other. If we think of these as related problems, we are much closer to comprehensive improvements in the quality of life.
- We should think about the problems, the opportunities and the solutions in terms of niche marketing. There isn't one problem or solution. Some problems have a clear technology or infrastructure "fix", some can only be solved with better information and some will be best addressed by different policies, programs, incentives or institutional arrangements. Some problems require big solutions, but many agencies have found over the years that there are a lot of benefits that can be purchased with relatively little spending. And perhaps even more importantly, it is these simple ideas, obvious solutions that make a difference to the public, that build the trust to support bigger improvement programs. A transparent, data driven analytical approach typically yields a variety of solutions with a range of costs.
- The projects, programs and policies that each region uses to solve problems will be different. I think this is a good reflection of the creativity and diversity in our metropolitan regions. These strategies are also going to be different depending on where within a metropolitan region you are.
- This range of solutions will include strategies to get more productivity out of the current system, programs designed to provide travelers with choices of travel modes, departure times, prices and electronic options for trips and projects to increase person and freight moving capacity.
- It is also clear that the solutions need to be pursued in a comprehensive way that involves the public. In all of the fast growing areas there is not enough funding to keep congestion levels where they are, much less make improvements. Judging from successful approaches in recent years, comprehensive strategies that combine investments in "things" as well as people will be presented to the public along with a discussion about the benefits of investments in terms like quality of life and economic development, rather than traffic engineering terms.
- Finally, we know what works. Transportation is a service, and we need to treat the travelers and shippers as consumers of that service. Our ability to fund transportation needs rests on our ability to manage the system to get the most out of what we have and to communicate the benefits and costs of the service options. Institutional structures must be

organized around policies and programs that deliver reliable service and which prioritize spending around "get the most bang for the buck" principles.

I would like to expand on these ideas in five key elements: the problem, the future, solutions, benefits and principles for change.

The Problem

"Congestion" to citizens is a problem. Technically we might use words that describe elements of problems or solutions like accessibility, mobility, reliability, connectivity, seamless productivity. These are all useful distinctions and point to viable and important solutions, but the meaning of these various words may be lost on people and freight shippers who understand their congestion problem, but do not parse it in the way that experts do. People are concerned when it takes them longer to get where they want to go than they think it should. I think it is important to recognize this difference between what people call the problem and how we attack it.

Our research suggests that no matter what you call it, we've got several problems. A quick summary:

- We waste quite a lot of time – 3.7 billion hours in 85 cities in 2003
- We use more fuel than we should – 2.3 billion gallons in those 85 cities
- This has value - $63 billion in 85 cities in 2003
- We cannot reliably predict travel time very well due to several factors such as crashes, vehicle breakdowns, weather, special events and road work.
- Jobs, shops and homes are spread out for a variety of understandable reasons, many of which make transportation service more difficult to provide.
- There are fewer travel options than people say they want, but many of the existing options are underutilized.
- We have to plan around congestion during most daylight hours and on weekends.

This sounds like a transportation problem and it is. But it is also an economic problem. There are, of course, some places that wish they had more congestion because that often comes with more jobs and people. The analogy might be drawn as "congested roads are like crowded movie theaters and sold-out sporting events; everyone wants to be there." The difference, I think, is that roads and transit routes are the way we get to the crowded places, not the places that we want to go.

The reliability problem is perhaps less understood than the "average congestion" issue. Our research of traveler and business transportation choices and my understanding of how the solution strategies knit together leads me to believe we should pay more attention to the reliability aspect of congestion than we have because it clearly connects some of the public and private sector changes in operating practice and project construction with the improvements that the taxpayers, travelers and businesses demand.

When people tell us about their congestion problems, they usually overstate the amount of time they are delayed "on average". One could read this as "people just like to complain," but if you look at the detailed data on variation in travel time from day-to-day, what they are telling us is

how much travel time they have to plan around. We have only had access to this information in the last few years because of the investment in intelligent transportation systems that monitor the minute-to-minute performance of the freeways in some urban areas. A monthly report we help prepare for the Federal Highway Administration shows that in every one of the 22 regions we examine, you should plan on twice the extra travel time than normal if you have an important meeting, freight delivery or family event.

This reliability problem shows itself to be an important component of trip planning in many ways. Just-in-time manufacturing processes rely on the transportation network to provide predictable travel times to move components between factories or to final assembly plants. Rather than building a car from raw materials to a finished product in one place, for example, the parts arrive at one plant for final assembly. If this one plant can time the arrival of the pieces so that they arrive "just-in-time" to be put into the car or truck, the building will need much less space for inventory storage and can use the manufacturing space much more productively.

The same phenomenon occurs with moving people. Employers must endure workers who arrive late and harried from longer than normal trips, or those workers must time their commute so that they arrive early on most days. Travel between service calls or between jobs and school or day care must allow for this unreliability factor and typically winds up as either fewer service calls or longer "sitting around time" – neither of which benefits the travelers. Health care and other appointment-driven businesses allow for late arrivals by clients, forcing much more waiting room time (although the magazine industry probably views this as a good thing). Think how much time is wasted and frustration developed when meetings start because of "traffic".

The Future Situation

I believe I have some ideas of how the problems and solutions will look in the future, but I'd like to start with some idea of what type of land use and travel pattern we might be trying to serve. My colleague Alan Pisarski, author of "Commuting in America 3" (which should be required reading for anyone who votes on transportation improvements or funding), has identified a number of future demographic and development pattern characteristics that will exist over the next 20 to 30 years. Continued suburbanization of jobs and homes in very large metro regions will challenge the current transportation and land use planning structures that do not handle existing mega-region issues very well. As the baby-boom generation reaches retirement age, the worker-job balance will shift toward the workers, making their interest in a high quality-of-life a more significant concern of the business community. Mr. Pisarski refers to this as an "amenity-based" economy -- one where a greater percentage of workers can live in places away from their job (as decided by their weights on decision factors such as housing cost, school, health care and recreation quality) and can demand a combination of higher wages from the employer and better living conditions from their city/county/state. Providing workers several ways to get from low-cost, high-quality home locations to well-paid jobs may be even more difficult, but also much more important to regional economies, than it is now.

Many of the current homes, shops and offices will still be in place and other developments to handle the millions of new urban residents will look similar to the current mix. Suburbs will continue to grow, commuters will travel – sometimes long distances – between their home and

their job and not everyone will move into high-rise apartments or town homes. But it also appears that there will be more people with short commutes between home and job, whether that is because they move their home and job closer together, or their job involves an electronic connection to their office rather than a physical one. It is clear that people choose to live and work where they do for a variety of reasons and congestion is not at the top of that list in every case. The increase in freight movement will accentuate those concerns and provide unique difficulties at the local, regional and national level.

Today's teenagers will be key constituents, business leaders and decision-makers in less than the number of years it takes to build some major transportation improvements. They are much more active producers and consumers of information than you or I are. They are more comfortable with text messaging, producing their own videos and using the Internet to acquire what they need. They are not interested in waiting for *anything* – job satisfaction, arrival at work, access to information, etc. They want safe and secure travel, they appear to be ready to trade some job-related income and advancement possibilities for a better lifestyle and, if the high school and college students I know are any indication, they believe they will change the world just as every other generation has. I'm fairly certain they already have.

Desirable cities will have the same elements they currently do – mobility, low housing prices, good schools, recreation and entertainment opportunities, a supportive business environment and desirable quality of life. These cities can attract the 21st Century work force—a group of people who will increasingly be able to live where they want and use the Internet to make a nice living. Jobs in the service and information developing and providing sectors that can be performed from almost anywhere are likely to be a much larger part of employment growth than location-tied manufacturing sectors.

So I do not believe we can "get by" with a less than adequate transportation system. We need to aim for very well operated, cost-efficient systems that serve a wide variety of needs with exceptional reliability. I do not think that is considered an achievable vision in most regions or agencies. Congestion forecasts in Atlanta and the major metropolitan regions of California and Texas indicate a 50 percent to 100 percent increase in the problem over the next 25 years, based on expected revenues. If all the current flexible financing arrangements and creative public-private sector partnerships are used, this value will come down, but no one suggests that even today's unacceptable congestion levels are achievable by 2030 without additional funding, much less be able to improve mobility to desirable levels.

The Goal

The spread of congestion to more routes, more hours of the day, and more neighborhoods and job centers has resulted in longer travel times, less predictable arrival times, traveler frustration and business sector concerns. We've come through a period where no-toll and free-flow travel was a lofty but seemingly realistic goal for all hours of the day. I think those days are passed, but high-speed and reliable service is still an achievable target for most hours even in the largest megapolitan regions and all day for many medium and small cities. If there are going to be one to three million more people in an already congested metropolitan region, there needs to be an

expansion of roads, buses, trains, ferries, sidewalks and bike lanes. This expansion is very important.

Mobility goals have been developed in many regions and states (I am familiar with those in California, Atlanta and Texas). These are not constrained by financial resources; they are real "what do we want to become?" goals. They are a very useful component of the process that engages the customers, taxpayers and freight shippers to decide which improvement strategies are pursued and how much investment is appropriate. This is not a replacement for the financially-constrained long-range plan – it is a necessary addition that connects the projects and programs with the community aspirations.

The Solutions

To accomplish the community-developed visions, our transportation solutions cannot be a system of "or." The word "and" will be a common theme. We need to add roads *and* public transportation. We need to clear collisions quickly *and* tell riders when their bus or train will be here. We need to get workers to telecommute *and* have their employers see flexible hours, commuting mode options, transit fare subsidies and creative parking solutions as attractive employee hiring and retention factors. We need to solve local problems of access to jobs, health care and education *and* solve national problems such as port or intermodal terminal congestion that occur within a region. Cities must reduce regulatory barriers to downtown and near town development *and* recognize that many people wish to live in a nice house with a yard. And when the kids leave the house, those same people may choose to move to a condominium near their job, cultural venues or ballparks.

Our Urban Mobility Report has consistently recommended a broad set of strategies to solve congestion problems. Current private sector manufacturing and freight movement operations might be a good model for future personal travel systems – freight shippers have schedule expectations that vary by the goods being shipped, their importance and they react to incentives such as time savings and cost. But different than many current commuters, truck, ship and rail operators are also very well informed and are willing to change their trip plans, modes and routes to take advantage of time or cost incentives. Consider the commuting, safety and air quality parallels to these aspects of retailing and service delivery:

- Brick-and-mortar retailers have systems that let them know what item is sold and when, as well as the trends for each item on a daily, weekly and seasonal basis.
- Those companies have suppliers that react to trends in demand with incredible speed, changing the type of product and schedule as customer purchase patterns change.
- Delivery companies can tell where a shipment is at all times and can estimate when it will arrive or if there may be problems along a route be delivered.
- On-line merchandise companies can learn from transactions and search trends to tailor advertisements, discounts and products for each individual.

The solutions, therefore, are an integrated and related combination of:

- Operate and maintain what you have to get the most productivity from the system.
- Provide information and options to travelers, home buyers, businesses and other interested groups so that they might make choice to avoid long travel times.
- Expand the system where bottlenecks or growth make other options inadequate to meet community goals.
- Monitor the effect of the programs, projects and policies to make operational and design improvements and to provide an accountable and transparent reporting to the taxpayers.

The interrelationship of these factors has been clearly demonstrated. The California and Washington transportation programs (as only two examples) have received significant revenue increases based on a combination of:

- doing a good job with what they have,
- providing a clear plan for the additional spending that attacks problems, and
- committing to a communication effort that both informs the public about the effect of the programs and is used internally to refine the next set of project designs and operating strategies.

Expanding the systems, therefore, must be combined with efficient operations and information that allows choices to be made about current trips and about long-term investment strategies. The varying amount of extra time that travelers and freight shippers have to allow for crashes, breakdowns, weather problems and special events are a significant part of the congestion problem. Traveler frustration can be reduced (and taxpayer trust increased) if these seemingly simple issues can be dealt with. Of course the solutions are not always simple, but if we can clear collisions quickly, tell riders when their bus or train will arrive, time the traffic signals so that groups of cars move through a series of green lights and allow shoppers to get to stores without tying up traffic trying to move on major streets, we have a chance to meet expectations and convince the taxpayers their funds are being spent wisely.

Equally important, however, is the question of "who should implement the change?" There is a temptation to put the responsibility for addressing congestion, safety, air quality and other challenges on road and public transportation agencies or private sector road operators. This is a mistake. It ignores the aspects of the problems caused by poor decisions by travelers and eliminates the enormous power of employers and citizens to made choices that reduce congestion and improve safety. I do not think these choices would be made "to" reduce congestion; the objectives would be more relevant – improve profits, operational efficiency or the quality of life. But decisions to drive carefully, travel between home and office during off-peak hours or develop residential, office and commercial areas could have a range of beneficial transportation effects.

Some of the solution might also lie in modifying the expectations for transportation systems toward achievable goals. These would not represent surrender to economy-strangling congestion, but rather would recognize that there will be traffic congestion during one or two hours in both the morning and the evening peak hours in larger urban regions and near popular

rural tourist spots as a product of their desirability. This congestion does not, however, have to result in unpredictable arrival times, broken operating equipment, poor road quality, high collision rates or poor air quality.

Education can also play a role in attacking congestion. There are many available travel options and information on routes, modes, fares, tolls and travel times will be ubiquitous. The missing element may be properly motivated travelers and employers who understand that their communities and their bottom-line will benefit from a more flexible approach to commuting, working, manufacturing process and delivery processes.

Safety improvements traditionally come from a combination of design changes, education and enforcement of traffic laws. All of those elements can also benefit congestion – the Ohio DOT showed as much when their collision and congestion maps identified most of the same road links and intersections. Traffic crashes are the leading cause of death for people between 4 and 34 years of age; safety should be a significant priority in all the innovative mobility improving strategies we deploy.

The Benefits

Please do not make the mistake of thinking this issue is only about what to do and the often discussed topic of how to pay for it. I hope you also ask about the benefits of attacking the congestion problem. The fuel consumption, congestion delay, safety, air quality and other benefits are not only substantial, they are also the way to help citizens and businesses understand the reasons for doing the improvements. Transportation projects, after all, are not ultimately about faster travel, they are about supporting an economy that competes in a global market, supports families, encourages innovation and creates options that allow citizens to improve their lives.

A study for the Texas Governor's Business Council used information developed by the state's metropolitan planning organizations and the Texas DOT to estimate the benefits of improving mobility. To keep the relatively high level of congestion experienced in major Texas cities from getting worse will require an increase in spending from $108 billion to $123 billion between now and 2030. The more desirable outcome of eliminating serious congestion will increase spending to $174 billion. That $66 billion increase generates $540 billion in savings from lower travel delay, reduced fuel consumption and business efficiency, an 8 to 1 return ratio. Reductions in fuel purchases that would result from less stop-and-go driving were estimated at $37 billion alone, more than half of the cost of the program.

I'd like to suggest that benefit estimates like this are an important aspect of the challenge. Connecting projects, programs and plans to attributes that provide information for decision-makers like service quality, travel reliability, potential employee markets and quality of life should be a key component. If we focus our nation's transportation investments on programs, policies and projects that will enhance the quality of life, it will be easier to make a case for transportation investment. If all the discussion is on the cost of the program and funding mechanisms, we may be consigned to irrelevancy.

Suggested Guiding Principles for Change

I have a few suggestions on how to translate the future situation I have outlined and the challenges, we face into tangible advice for members of the Subcommittee. Many of the trends I describe exist in part because of the manner in which government at all levels has structured its decision making and how that structure has worked to produce a transportation system that enables these trends.

1. Recognize some problems are regional and interregional but many of the operating and governance structures are not. How do we make them match or work better?

Congress must recognize that the current system of decision making for transportation is based on states or metropolitan regions. States and regions examine their own boundaries when attempting to develop solutions to current transportation problems and in planning for their future transportation systems. The current federal highway program reinforces the natural inclination to stop solutions at borders, whether they are the edge of states or metropolitan regions. This results in a patchwork of solutions to large interregional problems with little to no continuity. The mismatch occurs where the current problems, and more perilously the future problems, do not track the decision-making entity boundaries. We already recognize regional and in some cases national consequences flowing from any of a number of transportation problems.

A good example of this is the consequence of rising transportation costs created by the bottlenecks at the ports along the West Coast. As congestion rises at these ports and in the inland infrastructure, costs rise. The costs are born by consumers thousands of miles away, in states other than California, Oregon and Washington. Under the current regime, downstream state transportation decision makers do not have incentives to trace back their consumer's costs to the West Coast and undertake a problem solving exercise with the West Coast states. Congress should consider ways to match the decision making and governing structure to the nature of the problems. Our problems are, and will continue to be, interregional and national.

The Ohio Turnpike and Ohio DOT created an innovative interjurisdictional arrangement that has the DOT supporting a lower toll rate on the Turnpike to keep the larger trucks off the DOT roads. This minimizes the pavement damage and operational problems on the state roads while providing the Turnpike with the funds needed to support the maintenance and capacity required to keep a key interregional highway in good condition.

This is the same kind of multi-use corridor program that sees buses, carpools and paying travelers on lanes that provide reliable high-speed service in California, Texas and Minnesota. One project, the I-10 West Freeway in Houston, will have four such "managed lanes" by 2008 that were purchased by the local toll road authority. The $237 million purchase price provided much needed cash flow to the Texas DOT and resulted in a 6-year construction schedule rather than the expected 12-year program. A savings of $2.4 billion in travel delay, fuel consumption, construction cost inflation and returns to the economy were obtained for an added cost of about $300 million for the 24-hour construction schedules, incentives and utility relocation.

2. People will react to incentives - price and time as examples - but we rarely provide them opportunities to do so. At the same time, states and regions have the responsibility to maximize the efficiency of their transportation infrastructure.

These two facts can work together to re-capture the unused, existing capacity through the use of tools that spread demand out over larger periods of time, reduce congestion and improve reliability. Concentrated travel demand is our single worst problem in highly urbanized cities. Transit, congestion pricing, car pooling, telecommuting etc, are all tools to manage concentrated travel demand. The options allow travelers and shippers the choice to say "I really need to make my destination on time and I am willing to pay or carpool or ride a bus for a reliable trip."

Congress, in past reauthorizations, however, has alternately encouraged tele-commuting or car pooling, and most recently congestion pricing and tolling. The problem with this approach is that Congress never collected these tools together in an incentive to commuters. Even the tax code changes that have been made to allow employers to underwrite public transportation service cost does not also extend to other commute alternatives such as carpooling, bicycling or walking trips to work. People react to incentives, but they also appreciate choice and when provided with it, as programs in many places including Los Angeles, Seattle and San Antonio show, they will make predictable choices to maximize their income and quality of life.

Instead of Congress elevating one choice over another, it should incentivize states to provide choices to commuters from among the many tools that make the choices as equal as possible. This empowers a commuter with choice. States and regions can also provide more options to commuters with emerging technologies and better information. If the goal is congestion reduction is there a role for a commodity market in peak period trips? Why shouldn't commuters be able to auction off their rights to travel by themselves in a car? Why shouldn't employers be able to support alternative travel modes and commute arrangements that employees desire and which improve office productivity instead of being encouraged to accept the parking offered as part of the "business as usual" office lease? Why shouldn't workers be able to declare the one day per week that they tele-work from home as a 20% share of a home office deduction? Or take a pre-tax mode-neutral commute subsidy from their employer?

3. No one is really paid for eliminating congestion. Why?

Agencies conduct many studies and evaluate options; many congested states and metro regions are managing roads and transit systems to achieve productivity improvements. But it is clear that more aggressive approaches exist. Operations and institutions that target serious problems with aggressive treatments plans usually combine technology, information, policies, regulatory changes, private sector partners and public agency operators – each element doing what it is best at, without regard for jurisdictional boundaries or "turf" issues. The federal program could reinforce these aggressive approaches with support for innovation and coordinate monitoring, reporting and performance standard development. States or regions could be rewarded for achieving and maintaining congestion and safety standards, as well as standards for reporting and communicating with their customers.

This concept could also be extended to other transportation program elements. A move away from budgets for specific programs or treatments and toward an emphasis on congestion, safety, asset value, pavement ride quality and other measurable factors could accentuate a shift from "what gets done" to a more relevant question like "how does it perform?" The *SAFEclear* towing program in Houston is a partnership between the City and towing companies that have a 6-minute response time goal for vehicle breakdowns and collisions. The program is in addition to a joint TxDOT, Harris County, Houston and Houston Metro program to assist stranded motorists. Collisions have been reduced by more than 15 percent in the two-year operation of the program and another $30 million in yearly delay and fuel savings have been realized for a $2 to $3 million per year project cost.

Focusing on the safety and congestion problems, for example, might lead to a focus on removing bottlenecks that artificially constrain travel or lead to unreliable travel times on the road or public transportation systems. Some of these projects require investments in the tens of millions of dollars, but there have been many improvements that cost less than one million dollars return twenty or thirty times their cost in crash, delay and fuel consumption savings. Short lane additions in the Dallas-Fort Worth region and several direct connection ramps between bus and carpool priority lanes and the park-and-ride lots in the Seattle area show the value of making spot improvements that solve multiple problems.

These kinds of improvements reduce the unpredictability of travel time. Many small cost improvements address problems that the public sees – lack of turn lanes, traffic signal malfunctions, collisions that take hours to clean up – and yet cannot understand why they are not solved. Fixing these problems reduces congestion, improves safety and also gives the public confidence that their tax dollars are being spent wisely.

The problems in states and metropolitan regions are similar but not the same and there's no reason to think the goals and solutions will be the same. We have much better access to monitoring data now than when the federal transportation program was begun. Emphasis could be placed on the process to develop standards and communication practices at the state and region level. Many processes and measures will result, but if every program examines the range of concerns, publicly supported improvements will happen.

4. Data driven and results-oriented approaches to problems have proven their effectiveness in many fields of government and business; we should expand them.

The analytical processes, monitoring data and communication strategies are all important for improving operations, better long-range planning and for generating the support of the public. The need for a comprehensive strategy for system and service improvement will characterize newer and more aggressive approaches to alleviating transportation problems. The cycle of planning, testing, deployment and evaluation may turn over much more rapidly in the future. As an example, agencies will need better data to both respond to customer requests for information and to change operations on an hourly or daily basis. Congressional support for data collection and analysis improvements will be returned in better service, improved communication with the public and reliable operations.

A new publication from the Transportation Research Board (Transportation Information Assets and Impacts, Electronic Circular #109) makes the case that decisions will be made with or without the data. If data is available, understandable and points to relevant to actions or decisions, it can be a critical link to improvement in many factors. One key aspect identified by the Committees and decision-maker interviews are the national datasets that form the basis for decisions that cannot be made using locally derived data. Very often the decision-makers, and sometimes the analysts themselves, are not aware of the national nature of these information sources. The methodologies and analytical procedures often form the best practices that are used to develop local datasets on subjects such as freight transportation, personal travel patterns and traffic counting. We cannot suggest that more detailed and sophisticated analyses should be conducted to make investment decisions without the information and analyses needed to make those trade-off judgments.

Providing data to individual travelers, as happens in the various 511 phone programs and traveler information websites, can also dramatically improve the service provided by the transportation system. These operations do not reduce congestion by themselves (like an added street lane would), but the information they provide helps travelers decide on their mode and route, and understand the time that might be needed for the trip in places as diverse as Ohio and Kentucky who had the first operating 511 system in the Cincinnati region, to Nebraska, Utah, Arizona and Minnesota that had statewide systems in 2002. The San Francisco-Oakland region 511 program has information on a comprehensive set of multi-modal travel options. Major metropolitan regions appear to be moving toward a single card or computer chip to pay tolls, transit fares, parking and other fees for transportation services. Centralized websites like the Bay Area's can present these options in ways that make travelers more comfortable with their choices – again, data to make decisions. Advanced applications of these systems might have your cell phone find the weather and traffic forecast for the day and automatically find your travel options based on your job and family schedule that day, your preferences for radio stations, conversation topics, job location, and then call the cell phones of possible carpool partners to see if they are interested in sharing a ride on a high-speed lane, or show you the transit map and fare info for the bus or train, or tell you how long the drive will be if you go by yourself at various times. You can think of this as a real-time combination of services like e-Harmony and traffic.com.

The real-time end of the information needs spectrum is improving with these market-based systems and the private sector data uses for both freight and passenger travel. But there are still many professionals who are faced with supervisors who say "I've been asked what sounds like a fairly logical question and we need an answer by this afternoon…." It is clear that "covered issues" with good long-term datasets – such as pavement and bridge condition – are in a better position to provide support for these types of questions, but many times the only option is to use data from older sources or other places. It is also clear that decisions will be made with whatever data are in the room when the options are considered. There are hundreds of these questions being asked each day – but no one to compile them and make a case for improving the data. No one comes to lobby their Congressman with "Better Data" as one of the 3 issues on their 8 ½ by 11 page.

Thank you for allowing me to share some ideas on the future we might be facing.

More information on mobility research at the Texas Transportation Institute can be found at: http://mobility.tamu.edu and http://tti.tamu.edu

Questions for Dr. Tim Lomax from the Honorable Julia Carson
In the Subcommittee on Highways and Transit

Dr. Lomax, in your very thorough testimony you stress the need for a comprehensive approach to the problem to include such measures as air quality improvement, telecommuting incentives, and education among others. I hope you agree with me, however, that it is unreasonable to expect all these things to happen at once, so what would you suggest should be the priorities, the first steps if you will, of the comprehensive approach you outlined?

Response From Tim Lomax
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While situations vary (and I may be drummed out of the academic community for being too uncomplicated), the first priority should be to get as much from the existing system of roads and public transportation as possible. This would involve improvements to the way that the roads and transit systems are operated, as well as incentives for travelers to move their trips to the off-peak and for businesses to support programs such as flexible work hours and telecommuting by their workers.

Your question emphasizes an important facet of transportation improvements. If agencies do not have the trust of the taxpayers, travelers and business leaders, it is difficult to engage in a public debate about the best course of action in the future. I believe the record of the past several years shows that agencies that are perceived as doing as much as they can with the resources they have are able to present a case for more resources, expanded options and a goal-oriented program. Of course, this "get the most bang for the buck" approach has to be accompanied by a transparent reporting system that provides information and accountability to the decision-makers and taxpayers.

This is not a small effort, nor an inexpensive one. But it is the best first step. The set of steps I might suggest over the long term are:

1st – Get as Much as You Can From What You Have – Operate the system as efficiently as possible and get as much traveler response to options as can be gained to move as many people to their destination in travel times they find acceptable. The specific treatments might include:

- rapidly clearing the crashes and stalled vehicles
- timing traffic signals to move groups of vehicles efficiently and to accommodate public transportation services
- providing high speed, reliable service to carpools, vanpools and buses
- flexible work hours offered by employers
- telecommuting access for more workers
- designing driveways and turn lanes to move traffic on major streets with fewer crashes
- enforcing traffic laws to improve safety

There are many others, but the goal of this program should be to identify very cost-effective actions that can be accomplished with public support in a relatively short time period (one year, rather than one decade).

2nd – Identify and Fix the Bottlenecks (both person and freight) – This would involve both minor and major construction to address problems that cause a few problem locations to degrade the service provided across a network. These might be the section of road between an entrance and exit ramp on a freeway, a major interchange, a section of railroad track, or a location that causes bus travel times to be unreliable.

3rd – Plan for Bigger Improvements -- Especially in growing regions, capacity will need to be added. We should not forget this. Many metropolitan regions will grow by a million people over the next two decades – they will need more roads and more public transportation. The precise mix of projects, policies and program will be different depending on the community, but more person and freight moving capacity will be needed. The development patterns of homes, work sites and shops can also be more mobility-friendly while at the same time addressing environmental, economic and social goals.

I appreciate the chance to add to my remarks – I hope this is helpful.
Please let me know if you have any other questions or would like more information.

STATEMENT OF
THE HONORABLE JEFFREY N. SHANE
UNDER SECRETARY FOR POLICY
U.S. DEPARTMENT OF TRANSPORTATION

BEFORE THE
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
U.S. HOUSE OF REPRESENTATIVES
JUNE 7, 2007

Chairman DeFazio, Ranking Member Duncan, and Members of the Subcommittee, I am grateful for the opportunity to come before you today to testify on congestion and mobility issues. I am also very pleased to be accompanied today by our Federal Highway Administrator, Rick Capka, and by our Federal Transit Administrator, Jim Simpson.

Last May, the Department of Transportation announced a new effort to respond to the growing crisis of traffic congestion: the Secretary's *National Strategy to Reduce Congestion on America's Transportation Network*, which we often refer to as the Congestion Initiative. The President reaffirmed the importance of this effort in this year's State of the Union policy initiatives, in which he directed the Department to work with States and cities to utilize new approaches to reduce traffic congestion, save fuel, and shorten commute times. This year's Economic Report of the President further amplified the importance of the issue with an entire chapter dedicated to transportation and energy.

When Secretary Peters was sworn in as Secretary of Transportation, she promised that the Department would do everything it could to reduce the growing costs to businesses and families attributable to transportation system failures. Protecting the public interest requires policymakers and lawmakers to seriously consider the fundamental causes of these failures and to enact policy reforms that respond directly to them. The Congestion Initiative – the implementation of Secretary Peters' promise – demonstrates the Bush Administration's commitment to keeping our nation moving. Today, I would like to explore with you how Congress and this Committee can join us in this cause.

The Costs of Congestion

Transportation system congestion is an enormous threat to our economic prosperity and way of life. Whether it takes the form of trucks stalled in traffic, cargo stuck at overwhelmed seaports, or airplanes waiting on crowded runways, congestion costs America an estimated $200 billion a year. Beyond these immediate costs, transportation delay and unreliability have begun to chip away at one of our nation's most important economic assets: an efficient transportation system that allows businesses freedom of location and the ability to quickly reach customers across the nation and around the world. Large U.S. companies that rely on the international supply chain

repeatedly tell us that growing system failures are propelling them to make inefficient decisions in the form of facility re-locations, delivery time shifts, and building in more and more expensive "buffer" time, among other costs. These trends pose a material threat to an inventory management revolution that has helped smooth business cycles and reduce economic volatility.

Congestion also imposes substantial costs on our nation's travelers. Traffic jams are increasingly stealing from busy citizens and families their single most valuable commodity: time. Last Sunday, the Washington Post Magazine ran a cover story on this very topic, entitled "Hell on Wheels: Inside the Nerve-Jangling, Marriage-Rattling Reality of Marathon Commuting." The article put names and faces to some of the statistics with which the Department is very familiar. About 10 percent of commuting Americans travel more than an hour each way to and from work, averaging 82 minutes per trip. In 2003 – the most recent year for which we have complete data – Americans wasted 3.7 billion hours and 2.3 billion gallons of fuel sitting in traffic jams. And in the nation's largest cities, each rush hour traveler spends the equivalent of almost 8 work days each year stuck in traffic, "paying" the equivalent of between $850 and $1,600 each year in lost time and fuel. Traffic forces parents to miss events with their children, limits the time that friends and families can spend together, and reduces opportunities for civic participation. While difficult to quantify, these social costs of traffic congestion are enormous and growing.

America is not alone in this experience. I represented Secretary Peters at an important meeting of transport ministers from around the world last week in Sofia, Bulgaria. The entire two-day meeting was devoted to the single topic of transportation congestion. A great many countries are taking aggressive steps to combat this problem, which they believe has the potential to compromise economic growth significantly.

The Congestion Initiative

Despite these alarming trends, the country has never had a better opportunity to reverse them. With the convergence of new technologies, a vibrant private sector ready and able to heavily invest in our nation's transportation infrastructure, a traveling public that is increasingly willing to try new approaches, and a growing consensus among transportation experts that current policy approaches are ineffective and unsustainable, this is an extremely exciting time to be in transportation.

It was this excitement and this convergence that led us to establish our Congestion Initiative. The Initiative is founded on two key premises. First, we do not have to accept growing transportation congestion as an uncontrollable or inevitable affliction. Second, chronic congestion is the result of poor policy choices – a failure to distinguish between solutions that are effective and those that are not. Our plan is an attempt to highlight the viability of new approaches that hold the potential both to reduce delay in the short term and build the foundation for successful longer-term congestion-reduction efforts.

The Congestion Initiative includes a broad range of activities, not all of which I will discuss today. As part of the Initiative, the Department will sign later this summer Urban Partnership Agreements with communities that show a willingness to pursue new strategies that respond to urban congestion. We are encouraging States to tap private sector resources and expertise to

improve customer accountability, to help focus resources on the most critical transportation projects, and to unleash innovation in transportation infrastructure that has stagnated. Our operations office at the Federal Highway Administration is working closely with States to spread the use of innovative congestion-reducing operational and technological strategies. We have established a competitive process for designating up to five new multi-State "Corridors of the Future" to meet projected long-distance passenger and freight needs. By focusing resources on the most congested and economically significant corridors, we can make substantial improvements to the overall performance of the interstate system. We are also directing Departmental attention toward congestion at key freight gateways in Southern California and along our nation's borders. And we are pursuing policies that accelerate major airport capacity projects and use the nation's airspace and airports more efficiently.

Responding to the Causes of Congestion

At its most fundamental level, congestion is caused by a supply and demand imbalance, particularly during peak periods. There are three basic mechanisms available to address this problem: 1) rationing highway space through queuing; 2) formally allocating access rights to use the network at various times, as is done in the rail and aviation sectors; or 3) using prices, as we do with most other goods and services. As long as 50 years ago, economists began advocating for the third option, championing the implementation of variable highway pricing as the single most effective and sustainable mechanism to reduce the costs of congestion.

Today, a growing chorus of economists, academics, and transportation planners is now arguing that the fundamental mis-pricing of highway travel must be addressed to tackle the congestion problem in any sustainable way. Secretary Peters agrees that the time has arrived for extensive real-world demonstrations of this concept. As the Economic Report of the President notes,

> "When there is a shortage of something – for instance, space on a ski lift, or attendants at the Department of Motor Vehicles – those willing to get in line and wait eventually receive what they want. This approach to road-use management is inefficient because it allocates road space to those with the time to wait in traffic, not necessarily to those who value its use most highly. If a roadway is priced – that is, if drivers have to pay a fee to access a particular road – then congestion can be avoided by adjusting the price up or down at different times of day to reflect changes in demand for its use. Road space is allocated to drivers who most highly value a reliable and unimpaired commute.
>
> This arrangement encourages drivers to consider the tradeoff between the price of using the road and the additional time and inconvenience of using a nonpriced, alternate route, or driving at a noncongested time. Drivers who place a high value on the predictability and reduced time of commuting, for instance, a doctor who has been called to the hospital for an emergency, have the option to pay for access to noncongested roads. Drivers with more time flexibility, for instance a person doing his or her grocery shopping, can avoid the road and the fee. They can use alternative but more congested roads, shift when they drive to nonpeak hours, or use mass transit when it provides a cheaper alternative to driving. The average cost to each driver falls because drivers have a choice in how they pay for roadway use, in time or in money."[1]

In the U.S., dedicated gas taxes are often justified on the basis that they are user charges. However, taxing fuel consumption rather than road usage disconnects the price travelers pay for using the transportation system – and thus their decisions about when and how much to use it –

[1] 2007 Economic Report of the President. pg. 139-140.

from the true of travel. Today a U.S. automobile driver pays the equivalent of about 2-3 cents per mile in Federal and State gas taxes. Yet, when that driver uses a congested roadway during rush hour, he or she imposes between 10 and 50 cents per mile – and in some cases even more – in costs upon the other drivers stuck in traffic by taking space on the highway and exacerbating congestion. Similarly, gas tax charges for off-peak travel are not adjusted to reflect the lower costs of such travel.

Moreover, the enormous cost savings potentially available from highway pricing are even closer than previously believed. Research in recent years confirms that very small reductions in the number of vehicles using a congested highway facility can produce significant increases in traffic speeds. One study in the United Kingdom estimated that just a 4-9 percent reduction in traffic at any given moment during rush hour could reduce congestion by as much as 50 percent. By substantially increasing traffic speeds and preventing gridlock, pricing can substantially increase facility throughput. Counter-intuitively, this means that an initial diversion of drivers actually allows for MORE customers to be served in a given time period. The most powerful example of this takes places every day on State Route 91 in California, where the two variably priced lanes handle as much traffic as the four "free" lanes every morning and afternoon.

The benefits of congestion pricing extend beyond simply enhancing the speed of travel and the efficiency of highways. Road pricing encourages the use of mass transit, and by reducing traffic delays it can enable the operation of high-speed, reliable commuter transit services such as bus rapid transit (BRT). Pricing will improve fuel economy and reduce greenhouse gas emissions by cutting out stop-and-go movement and idling. Pricing will encourage more sustainable land use patterns by providing transparent signals about the true costs of real estate development on the outskirts of major cities. Finally, congestion-based user charges can dramatically improve project planning processes by providing clear signals as to where and when the benefits of expanding capacity are likely to exceed the costs of providing that capacity. As prices rise, the case for adding new lanes or roads becomes increasingly obvious, to say nothing of the new supply of revenues from pricing that can be used to finance the improvements.

Congestion pricing has demonstrated powerful positive results both here in the U.S. and, as I learned last week in Sofia, around the world. Successful U.S. applications of congestion pricing are operating on California's State Route 91 in Orange County, I-15 in San Diego, I-25 in Denver, and I-394 in Minneapolis, all of which have enabled congestion-free rush-hour commuting and proven popular with drivers of all income levels. Internationally, broad-based congestion pricing has yielded dramatic reductions in traffic congestion in Singapore, London, and Stockholm.

In addition to the mis-pricing of highway travel, a large percentage of highway congestion is caused by non-recurring events, such as accidents, work zones, or weather. The Federal Highway Administration is working extensively with State and local transportation leaders to encourage a significant focus on the reduction on non-recurring congestion. We believe that this "low hanging fruit" deserves far more attention from political leaders and transportation experts. The benefit-cost ratios of investments to reduce the impacts of non-recurring congestion are often quite high, demonstrating that greater State investment in this area is warranted.

The Urban Partnership Program

While congestion pricing may independently improve the performance of our highway systems, it can be even more effective when used in combination with other complementary policies. This concept is the basis for the Department's Urban Partnership Program, which is arguably the most critical component of the Congestion Initiative. The Department plans to sign Urban Partnership Agreements (UPAs) with up to five "Urban Partners" – metro areas that agree to implement a comprehensive policy response to urban congestion that includes what we refer to as the "4 Ts": (1) a *tolling* (congestion pricing) demonstration, (b) enhanced *transit* services, (c) increased emphasis on *telecommuting* and flex scheduling, and (d) the deployment of advanced *technology*. In exchange for their policy commitments, the Department will support its Urban Partners with financial resources (using current budget authority), regulatory flexibility, and expertise.

The Department received UPA applications from twenty-seven metropolitan areas. Under the terms of the UPA process, applicants were strongly encouraged, though not required, to include in their proposals all four of the Ts (tolling, transit, telecommuting, and technology). The majority of the applications included some type of pricing proposal, ranging from studies of pricing to converting high-occupancy vehicle (HOV) lanes to high-occupancy toll (HOT) lanes to using "cordon pricing" to charge all drivers entering a central business district. Complementary transit proposals included operating bus rapid transit (BRT) service on priced highways, instituting transit-preferential priorities for downtown streets, and creating universal transportation accounts that could be used to pay for highway, rail, or bus fares. Technology proposals included systems to support the pricing and transit applications and to collect and disseminate real-time traveler information. Finally, many applications included telecommuting components, such as telework centers and results-only work environments, which focus on employees' outputs, rather than the location in which they perform their duties.

After carefully reviewing all twenty-seven applications, the Department has selected nine Preliminary Urban Partners. The Department will soon enter into negotiations with each of the nine regarding the specifics of their proposals and will select up to five final Urban Partners. In support of these selections, the Department will give preference to our Partners in awarding grant funding from a variety of Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and Research and Innovative Technology Administration (RITA) discretionary programs.

Targeting discretionary grant funding in support of Urban Partners will yield two benefits. First and foremost, it will allow the Department to strategically focus its scarce discretionary dollars toward the national priority of congestion reduction. Beyond this, it will also serve as a step away from the Federal transportation program's historical modal funding silos and toward a more coordinated and multi-modal transportation policy. Our emphasis on strategic use of discretionary resources and multi-modal coordination is repeated in the President's FY08 budget proposal, which includes a request to reprogram $175 million in unspent earmarks toward the Congestion Initiative. We seek your support for this budget request, which would allow the Department to continue our congestion-related activities.

In closing

I commend the Committee for holding today's hearing. We all share the enormous responsibility of ensuring that future generations can experience the freedom of an efficient and vital American transportation system. It is important for Americans to understand that congestion is not an insurmountable problem, but that solutions will require a smarter approach to capacity expansion and improving the productivity of existing transportation assets.

Thank you for inviting us to share these ideas. Messrs. Capka, Simpson, and I all look forward to answering your questions, and to working with the Committee to generate these solutions.

Questions for Under Secretary of Policy Jeffrey N. Shane
from Chairman Peter DeFazio
Subcommittee on Highways and Transit

1. The Administration's budget proposes $175 million for the Congestion Initiative's Urban Partnership Agreements, Corridors of the Future program, Real-Time System Management Information Programs, and expands congestion-related research activities under the Intelligent Transportation Systems Research and Development program. The funding is generated through a proposed rescission of highway contract authority. It is our understanding that the CBO has determined that the funds you have identified will not generate any new resources.

   Other than through FHWA and FTA FY 2007 discretionary funds, how does the Department plan to fund the initiative's activities?

   Answer: The $175 million to support the Congestion Initiative in the Administration's FY08 budget is not a rescission (or cancellation) of highway contract authority, but rather a "reprogramming" that would direct inactive funding to other uses. Specifically, the Administration's proposal would target unobligated balances of inactive highway demonstration and other projects authorized by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). It would take funding that has not been used in over fifteen years for the projects to which it had originally been designated, and would make such funding available to vitally important congestion relief projects. The proposal is consistent with recommendations from the Department's Inspector General and the Government Accountability Office, both of which have recommended that the Federal Highway Administration review inactive program funds and use such funds for other critical highway program needs.

2. The Department has issued solicitations for FY 2007 FHWA and FTA discretionary grant programs. We are glad the Department has the opportunity to target discretionary resources to project that can best meet the needs of the Nation's surface transportation network. This is the way this committee intended these programs to work.

   We are, however, concerned that the Department's solicitations have added evaluation criteria that are not contained in the program eligibilities contained in law. We are also concerned with your statement that "the Department will give preference to our Partners in awarding grant funding..." Clearly this is designed to incentivise specific types of local decisions.

   Doesn't this deny those States that choose not to place tolls on their transportation facilities fair treatment in the allocation of Federal program funds?

Answer: The Department has established evaluation criteria consistent with all applicable statutory requirements of each program. We believe these criteria will improve the effectiveness of these programs. In addition to complying with the statute, establishing evaluation criteria is in fact necessary for the Secretary to exercise her discretion. The Department continues to believe that to the extent discretionary resources are made available by Congress, a substantial percentage of those resources should be invested in parts of the country where the returns will be the highest. In addition, the Department believes that the high economic, social and environmental costs associated with declining system performance call for a different investment strategy, namely the targeting of a relatively small number of large scale congestion reducing projects as compared to the traditional approach of investing in a large number of relatively small grants that do little to impact system performance or demonstrate the viability of new approaches. A vast amount of economic literature produced from a wide variety of sources has concluded that pricing the costs of congestion directly is the single most effective means to reduce those costs. Because of this and the fact that pricing has worked extremely successfully around the world and in the limited areas where it has been implemented in the U.S., the Department is strongly encouraging more real world demonstrations of the concept. We fully appreciate that congestion pricing is not appropriate in all circumstances, most obviously, if the impacts of congestion are minimal. If a State can demonstrate that congestion pricing is not an appropriate policy in a particular area, despite the existence of substantial congestion that creates a compelling case for the expenditure of Federal funds, we would certainly consider making a grant to that state despite the absence of congestion pricing.

3. In the FTA's solicitation for bus discretionary funds, it was announced that the Department would consider "whether the project is part of a congestion mitigation plan that incorporates system-wide congestion pricing" in making funding determinations.

How common is it for a new rail line to have a congestion pricing element? Isn't this more compatible with highway toll and BRT projects, and if so, is the FTA stacking the deck in favor of BRT – again skewing local decisions?

Answer: The Department is attempting to improve the linkages between highway and transit policies, consistent with the goals of many in Congress to encourage better intermodal planning. Highway pricing will improve highway throughput and provide incentives for people to use either rail or bus transit. Transit investment decisions should be made on the basis of cost effectiveness, not a bias in favor of a specific mode of travel.

Congestion pricing and public transportation convey mutual benefits—road pricing benefits public transportation by improving transit speeds and the reliability of transit service, thus increasing transit ridership, lowering costs per user for transit providers, and expanding the availability of revenues that may be

used for transit, while public transportation benefits road pricing by absorbing commuters who shift their travel from automobile to bus or rail. By pricing private vehicles, transit service becomes more attractive. In this manner, additional trips will be attracted to transit, making the investment in transit more cost-effective. The Department is applying this principle to all transit investments.

4. In its recently released Guidance on New Starts and Small Starts, FTA proposes to increase a project's rating if it is "a principal element of a congestion management strategy, in general, and an auto pricing strategy, in particular."

   Doesn't this favor bus transit over rail transit? How can a fixed guideway rail transit project be part of an "auto pricing" strategy?

   Answer: The Department's proposal to increase a project's rating if it is "a principal element of a congestion management strategy, in general, and an auto pricing strategy, in particular," does not favor bus transit over rail transit. The Department recognizes that, where bus transit lines operate in mixed traffic, with private vehicles, travel times would be improved for both modes under an auto congestion-pricing strategy. However, international experience confirms that congestion pricing with any transit investment proposal will make both transit and highway systems more effective. An "auto pricing" strategy applied in the corridors in which a rail line is being considered, as well as region-wide, would make the use of transit more probable and likely increase the cost-effectiveness of the proposed transit capital investment.

5. Also in the June 4th Final Guidance, FTA continues to punt on formulating, applying and rating projects under the economic development criteria, which was added to the law nearly two years ago. And as you focus on congestion initiatives, it is clear that robust economic development adjacent to transit stops can significantly reduce congestion on the roadways because the public can use transit – rather than drive – to access the new developments. For example, if a grocery store is built next to a metro rail stop, and I'm on my way home from work on the metro, I can stop off at the grocery store and bring some things home with me rather than if that store was located somewhere else so that I could have to go home, get my car, then add to rush hour traffic in order to shop.

   Transit-oriented development clearly has a significant role in reducing congestion, and yet FTA continues to ignore that criteria in the law. Instead the agency has added additional criteria that were never authorized by the Congress to be part of the New or Small Starts programs rating process. Can you explain this?

   Answer: The Department's guidance and rules fully comply with all applicable statutes. The Department has always recognized the value of Transit-Oriented Development (TOD) and supported TOD developments in conjunction with

transit investments. However, the Department believes that most of the effects of TODs are already accounted for in the land-use and cost-effectiveness New Starts criteria. The difficulty is finding ways to measure the effects of TOD that are not already accounted for in the other two criteria. However, the Department continues to conduct research to develop an approach to adequately incorporate all aspects of economic development impacts of transit investments into the New Starts evaluation process.

Regarding the "congestion reduction" criteria, 49 USC 5309 (d)(3)(K) and 49 USC 5309 (e)(4)(E) authorize the Secretary to consider other factors that are appropriate in finding out whether a proposed major transit investment is justified. The Department believes that congestion reduction must be a prime objective in considering major public transportation investments and that congestion reduction measures such as pricing make investments in all forms of transit more cost-effective.

Questions for Under Secretary Jeffrey Shane
from the Honorable Julia Carson
Subcommittee on Highways and Transit

1. **When a public-private partnership is assessed for value, how is the baseline set and what auditing standards are used to determine long-term costs and savings, including hidden costs?**

   Answer: In general, the estimated future costs and benefits of a public-private partnership for a project would be compared with the costs and benefits of the same project using a traditional public procurement. In such an analysis, estimates of costs and benefits might be based on the performance of several similar projects, with financial information reported according to Generally Accepted Accounting Principles (GAAP).

   There are a variety of societal costs and benefits that may not be fully accounted for when conducting a purely financial valuation comparison between public-private partnerships and sole government provision or procurement. On the PPP side, those costs include the costs of not setting contractual terms and conditions (including prices, competitive facility allowances and various operational responsibilities) in an optimal way. On the sole government provision or procurement side, those costs include forgone innovation, weakened incentives for efficient project selection and forecasting and politically-based pricing and investment decisions.
   In determining the actual value that the private sector will pay to the public sector for a concession for a public-private partnership, there is no substitute for a robust competitive bidding process. This is the gold standard for market valuation. For example, although realtors and tax assessors may estimate the value of a house, the actual value of a house is not known until a transaction takes place. Giving the growing private sector interest, it is increasingly apparent that there will be robust competition for properly structured public-private partnership transactions.

2. **Sir, in your testimony you refer to non-recurring congestion events as "low-hanging fruit," but you do not elaborate on how specifically the FHWA is working with State and local transportation leaders to lessen the frequency of these incidents. Could you do so?**

   Answer: While there is a clear relationship between recurring and non-recurring congestion, a significant amount of highway congestion is caused by non-recurring events, such as accidents, work zones, or weather. While we cannot control many of the triggers that cause incidents that lead to non-recurring congestion, FHWA's Office of Operations continually works with State and local agencies to improve their prevention, mitigation, and response efforts for such events. FHWA develops and implements technology and knowledge-based solutions that enable these State and local operating agencies to better manage the highway system when these incidents occur. FHWA also provides transportation practitioners with high-quality products, tools, and information that can be used to help improve transportation operations to

ultimately reduce non-recurring congestion. Examples of transportation operations efforts that attempt to lessen the frequency and impact of the incidents that lead to non-recurring congestion include:

Road Weather Management Solutions:

- Developing and promoting the use of the Maintenance Decision Support System (MDSS), a software package that combines advanced weather prediction, road weather information, and rules of practice for winter road maintenance. This enables State and local maintenance managers to make more effective decisions on when and where to treat roads and how much material (e.g., salt) to apply on a route-by-route basis, resulting in targeted levels of service (e.g., bare pavement) with fewer resources (e.g., reduced labor and materials).
- The *Clarus* Initiative. Established in 2004, *Clarus* is a multi-year program to collect, quality check, and disseminate road weather and pavement condition observations that come from sensors installed by State and local transportation agencies. This data management system enables better information that is more timely, accurate, and relevant to transportation operators (and users), enabling them to make more effective system management decisions (e.g., providing traveler advisories, modifying signal timing, scheduling maintenance and construction activities).

Work Zone Mobility and Safety Solutions:

- Publishing the Work Zone Safety and Mobility Rule on Sept. 9, 2004, ***(69 CFR 54562)*** to update and broaden the former regulation ***(23 CFR 630 Subpart J)*** to address current issues affecting work zone safety and mobility. The revised Rule impacts all State and local governments that receive Federal-aid highway funding. This regulation will facilitate comprehensive consideration of the broader safety and mobility impacts of work zones earlier in design and throughout project development (planning, design, etc.). Agencies will consider impacts beyond the immediate work zone--the impacts not only on roadways on which work is being performed, but also on other highway corridors, other modes of transportation, and the regional transportation network. While still cognizant of traffic and worker safety, the provisions in the Rule direct agencies to include transportation operations and public information strategies as part of their work zone impacts management efforts. The Rule contains a provision to help agencies focus resources on the construction projects likely to cause the greatest levels of disruption.

Emergency Transportation Operations, including Traffic Incident Management (TIM) Solutions:

- Supporting the coordinated efforts of the National Traffic Incident Management Coalition (NTIMC) (comprised of more than 20 national organizations representing major stakeholders involved in traffic incident management in the areas of emergency medical services, fire, law enforcement, public safety communications, towing and recovery providers, and the transportation communities) to reach three major objectives: improved responder safety; safe,

quick clearance of incidents; and prompt, reliable, and interoperable communications.

- Promoting day-to-day Intelligent Transportation System (ITS) tools used by State and local transportation operations personnel to aid in preventing, mitigating, and responding to non-recurring congestion. Examples include using Traffic Management Centers, traffic cameras, electronic integration of Computer-Aided Dispatch, and Emergency Operations Centers.
- Aiding State and local transportation authorities develop performance and incident standards, such as incident clearance times.
- Supporting the top 40 metropolitan areas and their States in establishing Full-Function Service Patrols that are staffed and equipped to help clear incidents quickly.
- Providing sample language for establishing "Move It" and "Move Over" laws to help safeguard incident responders.

FHWA's Office of Operations serves as a national-level knowledge management center to aid State and local jurisdictions in better managing non-recurring congestion. This includes documentation, technical exchanges, and technical assistance. Examples include:

- Compiling ***Best Practices*** and ***State of the Practice*** documentation in the Road Weather Management, Work Zone, TIM, Planned Special Events and Evacuation areas.
- Developing ***Technical Guides*** that provide assistance and examples to State and local transportation agencies and others, including:
  - **Traffic Incident Management Handbook** (currently under revision).
  - **Full-Function Service Patrol Manual** (under production).
  - **Safe, Quick Clearance Primer Series** (under production).
  - **Evacuation Primer Series.**
  - **Assessment of Modeling Tools to Aid in Evacuations.**
  - **Computer-Assisted Dispatch (CAD)-Traffic Management Center Integration Study.**
  - **Overall Implementation Guide** for the Work Zone Rule.
  - **Work Zone Impacts Assessment**. Procedures to assess work zone impacts of projects.
  - **Work Zone Transportation Management Plans**.

- Supporting ***Technology Transfer Programs.*** One example is the Work Zone program's initiative with FHWA's Highways for Life Program to share work zone and construction innovations from one transportation agency with others across the country. Other efforts include:

- Supporting ***Peer-to-Peer programs*** that provide State and Local transportation agencies easy access to knowledgeable peers across a range of issues, at no cost to these agencies.

- Conducting ***Regional Work Zone*** and ***Evacuation Workshops*** for local, State and Federal officials to discuss issues and best practice, exchange information, and offer technical assistance.

- Aiding States in conducting ***Self-Assessments*** related to their Work Zone and Traffic Incident Management programs. Each FHWA Division Office and partner State use these self-assessments on an annual basis to measure their current state-of-practice and identify future work zone quality improvement efforts.
- Developing and offering ***Training Courses***, to help practitioners plan, design, and implement safe and effective work zones; manage traffic incidents; use the National Incident Management System's Incident Command System in organizing responses to small through large incidents; and to effectively design a transportation plan that reduces congestion caused by planned special events.
- Providing ***Information and Outreach Strategies*** to aid in communicating with the public.

As you can see, FHWA has a robust program of activities that aid State and local transportation authorities prevent or address incidents that lead to non-recurring traffic congestion. Our efforts in conjunction with our State and local partners are bearing fruit and we expect that to continue into the future. Moreover, recent research suggests that there is a high rate of return for investments in preparing for and rapidly addressing this type of congestion.

3. **In your testimony you refer to the four Ts of Urban Partnership Agreements, but what about the fifth and sixth Ts – transparency and tangibility? What is FHWA doing to make sure that the metropolitan areas you are working with are setting realistic and achievable goals, and if they fall short, how are you working with them to move forward?**

Answer: USDOT staff will be working closely with the Urban Partners on three very important levels to ensure that the projects are setting realistic and achievable goals.

First, we will provide technical assistance as they move forward in developing the cooperative agreement that will define the scope, performance measures, and significant milestones that need to be accomplished over time. We anticipate that the delivery of Federal funding will be tied to the accomplishment of these key milestones, so we want to ensure that they are indeed realistic and achievable.

Second, we will be engaged in the planning and design phases of the project. At this stage, we will provide technical assistance to ensure that the project is planned in a manner consistent with meeting all Federal requirements, including requirements in

the areas of planning, environment, and Intelligent Transportation Systems (ITS). We also expect to be engaged in the design of the project, especially as it relates to the implementation of the ITS aspects. We will ensure that the application of the technology is realistic and proven, given the scope of what is intended to be accomplished.

Finally, we anticipate conducting an independent evaluation of each project to not only identify its impacts and its benefits, but also to identify the institutional, political, and procedural lessons learned. This evaluation will serve to help other cities set realistic and achievable goals as they move forward with their efforts to reduce traffic congestion.

Questions for DOT Under Secretary Shane and Administrator Capka
Highways and Transit Subcommittee Hearing
By Rep. Grace F. Napolitano
June 7, 2007

1. Sec. Shane and Administrator Capka, I continue to hear reports from local transportation officials in my area that confliction between the Federal highway Administration and EPA on air quality studies for congestion mitigation projects has lead to delays on many projects. Jerry Wood, the Executive Director of the I-5 Joint Powers Authority (JPA), recently expressed these concerns to me as the I-5 JPA is in the environmental review process before they start construction on the $1.2 billion project to widen the I-5 in my district from 6 lanes to 10 or 12 lanes. He claims that following a public hearing on the I-5 EIR/EIS (between 605 and county line to the south), EPA, as part of their comments, asked Caltrans to do some new analysis on air dispersion models for air toxins (like benzene). This had never been done before and caused a lot of problems for Caltrans. It took them a while to find someone who could do this and the process delayed EPA's approval of the document. Further, this analysis had little to no value and did not affect the outcome of the recommendation in the EIR/EIS.

   Do you feel that this type of environmental analysis is useful for highway construction projects?

   Answer: We feel that analyses of Mobile Source Air Toxics (MSATs) are useful and have issued guidance on how and in what situations such analyses should be done. For the I-5 project, a quantitative emissions analysis was done, but dispersion modeling was not performed, i.e. no attempt was made to estimate how the concentrations of the pollutants in question diminished as they were dispersed in the environment. (The emissions analysis showed that future emissions would be relatively similar regardless of whether the project was built or not and that, regardless, emissions would be substantially lower than today.) FHWA policy for analyzing MSATs at the project level states that environmental documents should include a quantitative analysis that attempts only to estimate *emissions* of the six priority MSATs. There are several factors that make it very difficult to accurately estimate *concentrations* of MSATs at the project level. While an analysis can be conducted with existing tools, FHWA does not believe that such an analysis could offer an accurate picture of MSAT concentrations at the project location. For this reason, FHWA's policy on MSAT analysis does not at this time recommend that dispersion modeling be done on highway projects such as the I-5 project. We are currently conducting further research on dispersion of air toxics associated with highway projects.

   Comment [c1]: FHWA AQ staff spoke with Division and Resource Center staff and were told that dispersion modeling was NOT done.

   Comment [c2]: FHWA's policy on MSAT's does not recommend dispersion modeling for such projects, so it is not consistent with EPA's request on this project.

2. **Should we take into account the pollution caused by cars of the future in EIR analysis?**

Answer: Yes. The analysis should include expected emissions from cars of the future. It is important to include an examination of future vehicle emissions because emissions levels can change quite a bit as vehicles and fuels improve over time. All analyses of emissions from transportation sources generally account for current and projected future emissions levels, as informed by existing rules and regulations that will apply to future vehicles. Although rules could become more stringent than is currently known, it is not easy to predict what those standards might be.

3. **How can FHWA and EPA work together to ensure that local projects are expedited and not bogged down by disagreements within the federal government?**

   Answer: Because California has just signed a Memorandum of Understanding with the Federal Highway Administration that authorizes Caltrans to stand in FHWA's place for most environmental reviews and approvals, the interagency coordination situation in California will evolve in the coming months. FHWA will continue to coordinate with EPA on appropriately streamlined national approaches for air quality assessments for highway projects. We will work with Caltrans to ensure that they understand and implement these national approaches on upcoming projects in California.

   In addition, through work under Executive Order 13274, Environmental Stewardship and Transportation Infrastructure Project Reviews, the Department is cooperating at the National level with EPA and other Federal agencies to promote protection of the environment while meeting environmental review requirements for transportation projects in the most efficient way.

   Comment [c3]: I recommend that we not mention the I-5 priority project because Rep. Napolitano is talking about the I-5 between SR91 and I-605 in LA County, not the north San Diego I-5 segment that is the priority project.

   In the context of MSATs, FHWA coordinated development of its current, interim MSAT policy with EPA. We expect to coordinate with EPA on any future revisions to this policy.

4. **Sec. Shane and Administrator Capka, what research is DOT working on to implement alternative freight capacity projects such as elevated lanes or magnetic levitation technology?**

Answer: First and foremost, the key to making good decisions on where to improve freight capacity by making either operational improvements or adding physical capacity is good data and analysis on what freight is moving where. To this end, FHWA continues to work on its Freight Analysis Framework (FAF), which is the most comprehensive freight movement database in the country. The FAF is supported by the Commodity Flow Survey from the Bureau of Transportation Statistics and is vital to understanding freight movement throughout the country. FHWA is also two years into its Freight Performance Measures initiative which uses data from GPS transponders on commercial motor vehicles to generate speed and travel time reliability on approximately two-thirds of the Interstate system. This enables us to better understand where in the system improvements need to be made.

In conjunction with the National Cooperative Freight Research Program established in SAFETEA-LU (see attached FY2006 & 2007 Freight Research agenda), DOT is actively working with the Transportation Research Board to review numerous options for moving freight more efficiently on our transportation system. These research activities are directed to improving the efficiency of the existing infrastructure and include operational improvements, institutional arrangements, analytic capacity, and performance metrics. The Intelligent Transportation System Joint Program Office (ITS JPO) in the Research and Innovative Technology Administration (RITA) has an initiative underway with FHWA to operationally test a more efficient method for exchange of information on the physical movement of freight, an area identified by the freight movement industry as having the potential to generate large efficiency gains. In addition, FHWA is working with Kansas City to evaluate an operational change that will improve the cross town movement of freight between intermodal rail facilities in our major urban gateways. The Maritime Administration (MARAD) is actively researching what institutional, legislative or regulatory changes would be needed to generate a rebirth of coastal shipping (Short Sea Shipping) as a way to move freight along our coasts and provide some relief to our surface transportation system. The Federal Motor Carrier Safety Administration (FMCSA) is conducting the Motor Carrier Efficiency Study called for in Section 5503 of SAFETEA-LU.

5. Secretary Shane and Administrator Capka. In 1976, at the direction of the Federal Highway Administration, Congress passed the Federal Railroad Safety Authorization Act which required the railroads to pay 5 % of the cost associated with grade separation projects. The Federal Highway Administration had submitted a report to Congress in 1970 titled Railroad-Highway Safety Recommendations which said that a 5 % railroad contribution was necessary due to the benefit that railroad companies would get from grade separation projects.

   Do you think the railroad contribution for grade separation projects should be increased due to the increased railroad operations since 1970?

   Answer: The major benefits of a grade separation are reduced road congestion, improved highway safety and better quality of life for the surrounding community.

Railroads generally do not experience significant operating benefits, particularly when compared with the cost of such projects; there is no evidence that the figure of 5 percent is inconsistent with the percentage of benefits received by the railroads. However, carriers often agree to contribute a greater share when they expect to gain greater than usual operational improvements.

Do you have recommendations for user fees or public private partnerships that can produce grade separation projects?

Answer: Like other infrastructure-related costs, grade separation investments may be appropriately included as a component of highway user charges. Grade separation projects can improve highway speeds and efficiency. For this reason, a private highway operator would have a powerful incentive to make grade separation improvements and to pass those on to the users who benefit from those improvements. In the context of public-private partnership contracts, there may be an opportunity to specify specific grade separation improvements and performance requirements. In addition, specific user fees may be a suitable way of funding a separated corridor if the entity owning the right-of-way is not the railroad – this was the method used in with the Alameda Corridor, where the Alameda Corridor Transportation Authority brought the right-of-way from the Southern Pacific Railroad and now charges both the Union Pacific (the Southern Pacific's successor) and the Burlington Northern Santa Fe to operate over the line. In Reno, Nevada, the Union Pacific's line through the downtown part of the city was put into a trench, with highway overpasses. The project was paid for through State contributions, a tax on local hotels, and a contribution from the railroad, which retained ownership of the right-of-way.

U.S. House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Highways and Transit

Congestion and Mobility Hearing
June 7, 2007

Room 2167, Rayburn House Office Building
Washington, D.C.

Testimony of

Craig J. Stone
Deputy Administrator
Washington State Department of Transportation's
Urban Corridors Office

401 Second Avenue South, Suite 560
Seattle, WA 98104

Introduction

Mr. Chairman and members of the subcommittee, thank you for the opportunity to testify today on the issue of congestion and mobility. This issue continues to be one of the most important to those living and working in the Seattle-area. I have been asked to focus on low cost, high benefit congestion solutions that the Washington State Department of Transportation is using in our Puget Sound region.

Getting the highest possible performance from our transportation investments through operational strategies makes the system work better for our customers and can recover lost productivity. Several factors contribute to system inefficiencies and congestion. Nationally it is estimated that half of our congestion comes from bottlenecks and poor signal timing on our system which happens on a reoccurring daily cycle where traffic demand exceeds roadway capacity. The other half of our congestion comes from non-reoccurring events as accidents, breakdowns, work zones, weather and special events.

Congestion not only causes delay, it also causes "lost throughput productivity" for the roadway system. That is, under congested conditions, even thought the road is "full" of cars, they are moving so slowly that fewer vehicles actually pass any given point on the road. Typically, the maximum throughput of vehicles on a freeway, which is about 2,000 vehicles per lane per hour, occurs at speed of 42-51 mph, or about 70-85% of the posted speed. Yet when we need the most capacity, the throughput is cut in half on our Interstates, carrying only 1,000 vehicles per lane per hour. The goal is to manage the system to achieve maximum throughput productivity.

We have made vast investments into our highways and transportation systems. Making them as efficient and effective as possible, to meet both the reoccurring and non-reoccurring traffic congestion, is an important transportation systems management and operations goal at the local, state and federal levels.

In Washington State our Legislature and Governor have taken leadership to address congestion and mobility. Through significant investments into our highways with a 5 cent added gas tax in 2003 and an additional 9.5 gas tax in 2005. This November a possible regional transportation vote will occur for added investments in highways and transit. Even with these major capital investments, important operational systems need to be integrated with the designs to maximize the future efficiency of the urban corridors. While reductions to congestion are projected, a 37% growth in population over the next 25 years will not eliminate excessive peak period demands on our system.

We always need to consider travelers as our customers. Having trustworthy traveler information allowing the user to make informed choices as to how, when and where they will make their trip is important as well as providing travel time reliability.

Low Cost, High Benefit Congestion Relief can be obtained from Better Highway Management

WSDOT is using "tried and true" solutions to produce benefits on our highway system. These low cost strategies have been shown to produce high benefits in relieving congestion.

Traffic signal synchronization on arterials has long been recognized as one of the most effective techniques for cutting traffic congestion on arterials and arterial networks. Some studies show that the benefit of reduced delay compared to the cost of synchronization may be as high as forty to one.

Traffic signal synchronization works, but it must be constantly adjusted and refined as traffic patterns change. Very few states and cities adequately fund traffic synchronization work, in part because it provides no "ribbon-cutting" opportunities. Full funding of traffic synchronization is one of the easiest and cheapest way to help relieve traffic congestion.

Ramp Metering has been used in Washington State now for nearly thirty years and is on all of our major Seattle-area freeways. It has proven to be highly effective in maintaining and increasing freeway throughput. Past ramp meter activations have reduced accidents by over 30%. The downstream mainline flows improve and overall volumes increase.

Accidents and disabled vehicles disrupt traffic much worse than "regular" congestion. Twenty five percent of our congestion comes from incidents. The ability to have even a "reliable travel time" is destroyed with an incident. For every minute a lane is blocked, up to ten minutes of congestion may result. Quick, accurate detection of incidents is important as well as coordinated State Patrol and emergency response teams.

Washington State Department of Transportation uses roving incident response drivers to assist in highway clearance. Faster clearance not only opens travel lanes, but reduces the risk of secondary accidents (rear-enders in the back-ups) that block the roads all over again.

Highway construction and maintenance zones cause ten percent of our congestion. Lanes are narrowed, or even closed, and traffic detours and neck-downs are frequent accident locations, making matters worse. We look at strategies in our planning stages to consider how mobility impacts throughout the metropolitan area can be managed and coordinated between jurisdictions.

We use incentives for contractors to minimize traffic disruption, enhance law enforcement in work zones, schedule construction work to off peak traffic hours, and consider total corridor closures for expedited project completion. Rather than the traditional construction methods of turning on the technology components of a project as a last order of work, we are looking at advanced ITS, transit and demand management

activities before or early in our project construction to gain the most throughput and safety on our urban highways.

Web based traveler information has expanded greatly that now allows anyone at any time to check cameras on travel and road conditions, see real time flow depictions to understand where blockages and congestion are, and to have real travel time information for their trip planning. We provide real time information on 36 major travel corridors that are updated every 5 minutes. This information can greatly affect a person's choice of mode, route and time of travel. On one day in November 2006, during a storm event, we had 14 million page views in a single day.

Incorporating good solutions now being implemented overseas as "Active Traffic Management"

Many of the low cost, high benefit highway management techniques come from aggressively funding and implementing Intelligent Transportation System strategies that have been developed by the states and industry with FHWA guidance. We have made good progress in the U.S. and it remains an important priority.

Based on a 2006 international scan of European countries to review their congestion management strategies, we are studying in the central Puget Sound region how to build on our ITS work with strategies they refer to as Active Traffic Management. We observed that countries such as Germany, England, The Netherlands and Denmark are applying strategies from the U.S. such as ramp metering, HOV lanes, incident management, work zone management and traveler information. We also observed they are more aggressively applying lane control signals, variable speed limits to harmonize their traffic flow, opening up to traffic hard shoulders during the peak periods and dynamic re-routing of traffic.

Information suggests congestion related accidents can be significantly reduced on major routes, travel times can be reduced, and throughput increased. As we look forward to advances with possible active traffic management strategies we look to federal support and flexibility to test these techniques to maximize the efficiency and effectiveness of our highways.

For our Future, we need Bolder Solutions

As population and the economy grow in the Seattle-area, even with a large capital program, traffic congestion will get worse in the future. Dramatic steps will be needed to keep oua corridors safe and reliable. These future steps will not be politically easy or necessarily cheap. To best increase the efficiency of the facilities we have and the new facilities that we will build, we need to implement more HOT lanes or Express Toll Lanes, make HOV to HOT lane conversions, and price the use of highway capacity to make traffic flow smoother and faster. Similar approaches in other cities across the country have proven effective, & popular with all socio-economic groups.

After nearly two decades, WSDOT will begin tolling operations in July on the Tacoma Narrows Bridge. The project features electronic toll collection, which is new to Washington State. The "Good To Go" transponders are the size of a credit card and will allow non-stop, high speed toll collection.

Following in the spring of 2008 WSDOT will open nine miles of SR 167 HOT lanes using this same "Good To Go" technology. The pricing will vary with the traffic demand. We also project a benefit to all users, with a decrease in travel delay on the route as we make the highway more efficient.

WSDOT is examining several future projects for systems management and operations strategies that are expected to include value pricing to improve and assure roadway use efficiency. These include congestion pricing strategies on the SR 520 Floating Bridge corridor and the I-405 corridor that is supported with state legislative language from the recent 2007 session.

Analysis of the I-405 corridor is being done for two options; either a single HOV lane with four general purpose lanes, or two HOT lanes – functioning as Express Toll Lanes – with three general purpose lanes. With the same pavement area, the second option is projected to carry more vehicles and more people in the peak periods. With the current HOV lane breaking down in the peak periods traditional actions call for a raising of the occupancy rate to 3+, which then moves 80% of the vehicles in the HOV lane to the adjacent lanes, compounding congestion. The HOT lane strategy is important for reliability and to maximize the flow for all users.

Conclusion

Washington State is considered by many as a leader in traffic systems management. We want to and need to take our work further with technology into integrated Active Traffic Management and value pricing to complement aggressive transit and demand management strategies.

Optimizing the performance of our highway system can improve safety and reduce congestion. Providing the tools and flexibility at the federal level can encourage states and regions to test and apply new techniques, such as use of managed lanes and pricing to maximize throughput in the years to come.

Federal support to enhance system performance is encouraged. Advancing ITS technologies and better system management techniques need to be part of our future to reduce congestion, improve throughput, and increase highway reliability.

Mr. Chairman, thank you for the opportunity to testify before your subcommittee today. We look forward to responding to any questions you may have.

Washington State
Department of Transportation

February 2007

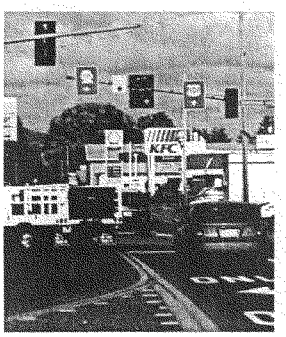
Low Cost, High Benefit Congestion Relief from Better Highway Management

Douglas B. MacDonald, Secretary of Transportation
Washington State Department of Transportation (WSDOT)

"Tried And True" Solutions Are At Hand And Can Produce More Benefits Than We Get From Them Today

Traffic Signal Timing and Synchronization

Traffic signal synchronization has long been recognized as one of the most effective techniques for cutting traffic congestion on arterials and on the arterials network. Some studies show that the cost benefit return in savings from draft delay as compared to the cost of traffic synchronization may be as high as forty to one. Traffic synchronization work, however, must be constantly performed and refined as traffic patterns change on given arterials. Very few states or cities adequately fund traffic synchronization work because it provides no "ribbon-cutting" opportunities. Full funding of traffic synchronization work is one of the easiest and cheapest ways to help relieve traffic congestion.

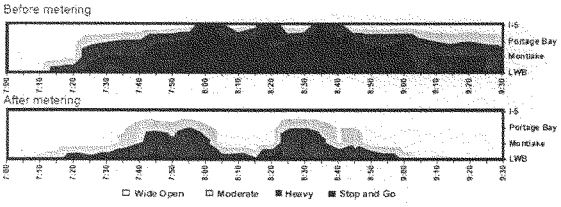


Ramp Metering

The unpaced, disorganized merging of freeway ramp traffic into freeway mainline lanes is a chronic location of traffic breakdown. Mainline flow collapses as merging vehicles try to squeeze into the flow. Braking and accelerating, no one moves easily and the situation is only worsened by frequent minor collision taps and fender benders. Ramp meters pace the incoming flow, so the merging takes on the quality of a smoothly functioning zipper. Mainline flows improve and overall volumes increase both on the mainline and the ramp. Accidents decrease.

Before and After Ramp Metering, Morning Congestion on Eastbound SR 520

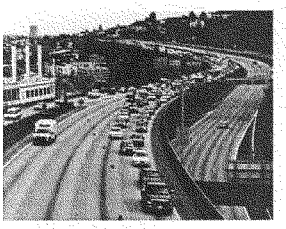
Before and after studies on SR 520 show a 20 mph speed increase a 10% increase in traffic flow due to ramp metering. The same studies show a 30% decrease in rear end and sideswipe collisions.



Transit Ridership Helps Takes Cars off the Road and Eases Congestion

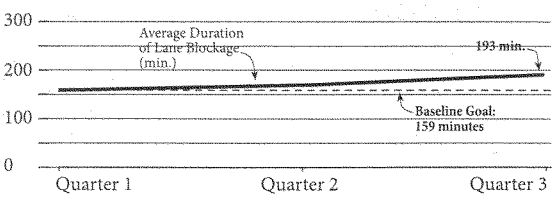
Different transit strategies work for different communities. Depending on land use and travel patterns, bus service may be useful, but many communities are exploiting van pool services to reduce drive along commuting that builds rush-hour commuting. Safe walking and bicycling routes can also provide convenient, healthy and attractive alternatives to drive alone commuting that gets cars out of rush hour commuting back ups.

Leading States Are Aggressively Pushing Highway Incident Response Programs



Incident Management On Selected Key Highway Segments*

January 2006 - September 2006 (Baseline Trend)
Average Duration of Lane Blockage in Minutes



* *Selected Key Highway Segments*--I-5 (Oregon to Canadian Border), I-90 to North Bend, I-405, SR 18 to I-90, SR 16 to Purdy, SR 167, SR 520, SR 512, and I-205.
** *Baseline Data Source:* 2005--WSDOT Incident Response Tracking System; 2006--WSP-Computer Aided Dispatch System.
Duration of Blocking Lanes is time between first recordable awareness of an incident and all travel lanes in mainline open.

Travel Time Reliability Matters

One of the most important measures is travel time reliability. Reliability and predictability is what the public cares about and what we are trying to improve on by implementing various strategies including Incident Response.

Accidents and disabled vehicles disrupt traffic. Much worse than "regular" congestion, traffic disruptions from incidents destroy "reliable travel times".

Programs like WSDOT's ***"Clearing Roads, Helping Drivers"*** are springing up everywhere.

The best programs coordinate state patrol and highway department efforts to clear highways quicker. Together, those agencies could together initiate incident management training with fire departments and other public safety agencies. State patrol and highway departments can work together to develop agreements with coroners for prompt and respectful removal of fatalities.

New technologies, such as digital photogrammetry, can also be used to take hours off accident scene investigations, reopening roads sooner.

States are starting to develop and use performance measures to assess the impact of operational strategies like Incident Response.

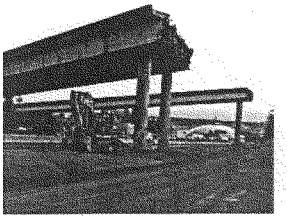
WSDOT and WSP have committed to the Governor to reduce the duration of the longer than 90 minute incidents by 5%.

This is where we can have an impact on travel time reliability. This approach seeks to harvest the low hanging fruit for improving travel time reliability. Most experts agree that travel time reliability is the measure to which the public is most responsive.

Our State Has Received Hundreds Of Comments From Motorists Commending This Program As A Good Use Of Tax Payers Funds.

"The WSDOT person above was outstanding and ensured my safety. Gladly pay taxes to ensure this service."

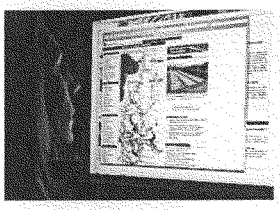
Work Zone Safety/Traffic Management Planning Can Ease Congestion In Construction Zones



It has not been that long since lane rental concepts, night work, and mobile ITS devices were considered progressive work zone strategies aimed at maintaining mobility during major construction projects. Today, program-wide impacts require strategies to be considered starting at the planning stage. In major metropolitan areas it is essential that mobility impacts of all projects be considered at a system level, including coordination between jurisdictions.

- Incentives for contractors to minimize highway traffic disruptions
- Enhanced law enforcement to reduce speed and inattentive driving
- Off peak work hours to avoid peak period traffic
- Total corridor closure for expedited project completion
- 99% of work zone fatalities are motorists, not workers

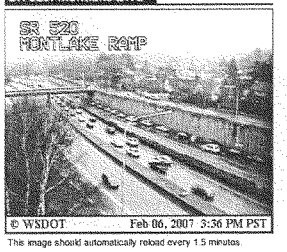
Good Information For Travelers Is A Big Help... The Opportunities Are Growing All The Time



Metropolitan traffic centers are developing sophisticated web based traffic information to help travelers anticipate traffic conditions and avoid backups. The sign board "Accident ahead, take alternate route", is a stone age application.

Nationwide there is a huge citizen interest in these tools to promote easier trips and safer travel.

SR 520: Montlake Blvd



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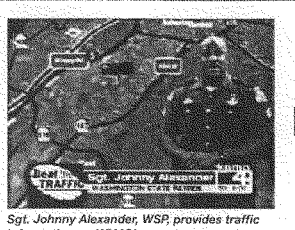
Web Based Travel Information

Use of WSDOT's web based travel information is growing exponentially. In the fourth quarter of 2006, WSDOT's website averaged five million daily page views, a new site record.

- Cameras to check on travelers conditions
- Flow maps to understand where blockages occur
- Real travel time information for trip planning



Sgt. Johnny Alexander, WSP, provides traffic information on KOMO's morning news show that is derived from WSDOT's technology.

Travel Times

Provides web site-based travel time information (**www.wsdot.wa.gov/pugetsoundtraffic/travel times**).

These active, real travel times are updated every 5 minutes to provide the public up-to-the-minute information for 36 segments of the most congested corridors in the Puget Sound region.

The popular service is widely used by commuters, either directly from WSDOT's web sites or indirectly through media that link to WSDOT's information. Television and radio stations use the information daily in their own traffic reports — television news programs scroll the travel times along the bottom of the screen. Newspaper, radio, and television web sites publish the information as well, taking a live feed direct from WSDOT's servers.

Highway Advisory Radios (HAR)

Highway advisory radio are licensed low-power AM radio stations installed along the roadway to provide alerts and general information regarding traffic and travel. The presences of a HAR transmitter is marked by a roadway sign instructing motorist to "Tune to 1610 AM".

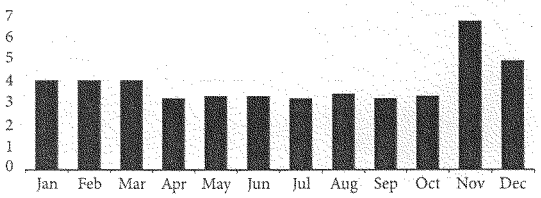
511 Service

Since its inception, the 511 has become vital in providing useful and "real time" information on how WSDOT can better serve drivers in Washington.

Weather related road conditions created higher than normal demand on the 511 system. An average day in November and December 2006 generated approximately 12,000 calls. Weather conditions on November 26 generated over 46,000 calls.

Total Page Views to WSDOT Cameras, Flow Maps and Travel Time Sites

In Millions



An Exposition Of New Technology And New Applications Is On The Way

- ***In-vehicle applications***
- ***Better and broader coverage of traffic movement***
- ***Fleet operations to optimize routings***
- ***Predictive applications***

Future Challenges Need Bolder Solutions

Things will get worse without even more dramatic solutions. They are all about making the transportation system much more efficient.

Future steps will be neither cheap nor politically easy. The best are aimed at increasing the efficiency of the facilities we already have and the new facilities that need to be built.

- HOV Lanes and HOT Lanes.
- HOV to HOT conversions.
- Pricing the use of highway capacity to make traffic flow smoother and faster.

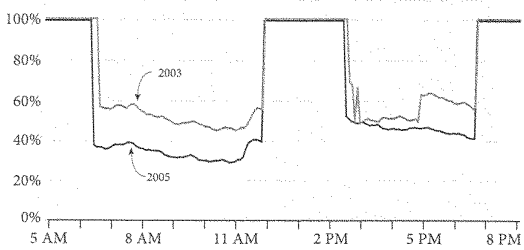
Laying the foundations today, WSDOT is exploring ways for getting more cars through the system.

Open Road Tolling Technology/New Toll Bridge

With the opening of the Tacoma Narrows Bridge in 2007, WSDOT will begin tolling operations for the first time in nearly two decades. In addition to this milestone project, WSDOT is working on the development and delivery of the SR 167 HOT Lanes project expected to open in 2008. Both feature electronic toll collection, which is new to Washington. Good To Go - transponders will link the customer's vehicle to back office accounts and allow non-stop, high speed toll collection.

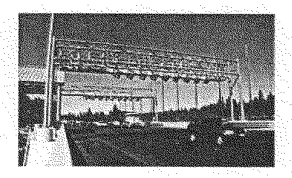
The Shocking Case of Failing Productivity for US Highway Infrastructure Investment

100% Productivity equals 2,000 vehicles per lane per hour
Near the Interstate 90 merge in Seattle



SR 167 Hot Lane Pilot Project

Were getting in the HOT Lane Business



Exploration of Value Pricing Options for Upcoming Projects

WSDOT is examining several future projects for system management strategies. This includes congestion pricing. These projects include, the Alaskan Way Viaduct, SR 520 Floating Bridge, I-405 Corridor, Columbia River Crossing and I-90 Snoqualmie Pass. These projects were also identified as part of the Washington Transportation Commission's 2006 Comprehensive Tolling Study as projects worthy of consideration within the next 10 years.

For contact WSDOT and review it's program: www.wsdot.wa.gov

Washington State Department of Transportation

Valuable information from other states can be obtained from:

AASHTO: www.transportation.org/
American Association of State Highway and Transportation Officials

NTOC: www.ite.org/selfassessment/
National Transportation Operations Center
2007 Traffic Signal Operations Self Assessment

FHWA Congestion Relief: www.fhwa.dot.gov/congestion/index.htm
Federal Highway Administration, Focus on Congestion Relief

VII: www.its.dot.gov/vii/
Vehicle Infrastructure Integration

TRB: www.trb.org/
Transportation Research Board

NCHRP: www.trb.org/CRP/About/DivD.asp
National Cooperative Highway Research Program

Victorian Competition & Efficiency Commission (Australia)
"Making the Right Choices: Options for managing transport congestion"
www.vcec.vic.gov.au/CA256EAF001C7B21/WebObj/VCECMakingtherightchoicesFullReport/$File/VCEC%20Making%20the%20right%20choices%20Full%20Report.pdf

Twin Cities Ramp Meter Evaluation
www.dot.state.mn.us/rampmeterstudy/finalreport.html

Texas Transportation Institute's 2005 Urban Mobility Study
http://mobility.tamu.edu/ums/