Privatization Watch

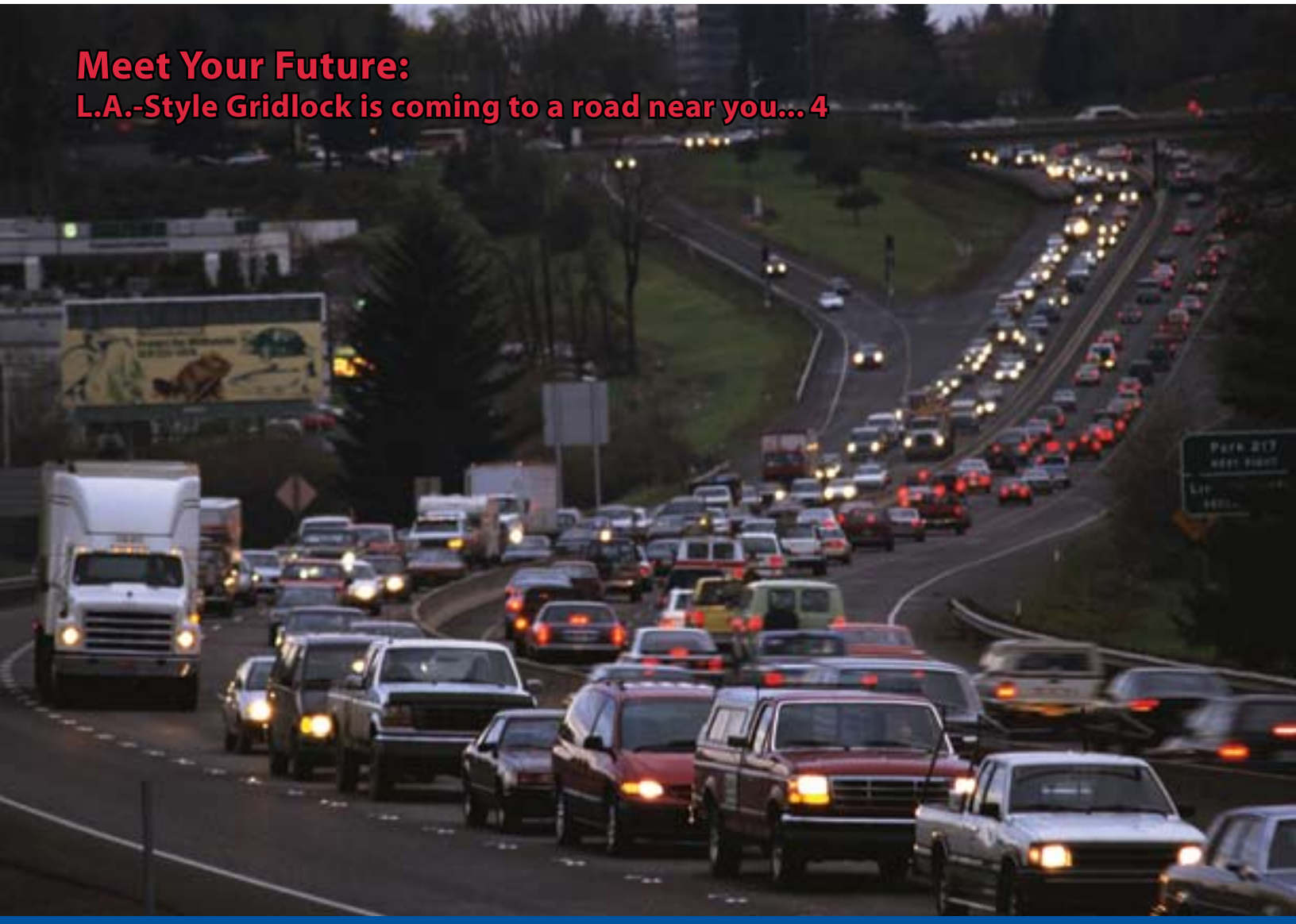
Reason

Celebrating 30 Years of Privatization and Government Reform

Vol. 30, No. 4 2006

Meet Your Future:

L.A.-Style Gridlock is coming to a road near you... 4



Contents

Privatization Watch

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The Galvin Mobility Project

Most of our great cities began as hubs for commerce, where motion was constant. But now, chronic traffic congestion slows the motion that did so much to make our cities vital in the first place.

The U.S. Department of Transportation estimates that congestion drains $168 billion from our economy each year (see "What Congestion Costs," page 3). Yet even that daunting figure overlooks what happens at the ground level (see "Why Mobility Matters," page 5). City dwellers react to congestion by doing less of everything. Companies make fewer deliveries. Entrepreneurs see fewer clients. Couples go out less often. Current policies do little more than slow the decline of our transportation system (see "Meet Your Future, page 4). If we are to reinvigorate our slowing cities, we must act boldly. Reason Foundation's Mobility Project is a major initiative to develop and implement a framework for removing congestion as an obstacle to mobility in American cities. This project is made possible by supporter Bob Galvin, former Chairman of Motorola (see p. 6).

Reason's Mobility Project is producing:

- A series of studies on vital issues regarding mobility;
- Detailed proposals for congestion reduction in individual cities across the United States, including Dallas, Atlanta, Phoenix, Denver, McAllen (TX), and Cape Coral/Ft. Meyers (FL);
- A comprehensive policy recommendation for urban mobility;
- And a book, *The Road More Traveled: Why the Congestion Crisis Matters More Than You Think, And What We Can Do About It*, by Ted Balaker and Sam Staley.

For more information, visit reason.org/mobility or contact Project Director Amy Pelletier (pelletier@reason.org) ■

Privatization Briefs

What Congestion Costs

When news accounts take note of the cost of traffic congestion, chances are they cite figures from the Texas Transportation Institute's Urban Mobility Report. The report is widely respected and is especially useful for tracking the growth of congestion over time and for comparing its intensity in different urban areas. But TTI researchers consider only our nation's largest areas and only look at the cost of wasted time and wasted fuel. In other words, the analysis overlooks much of the misery that congestion causes.

The chief economist of the U.S. Department of Transportation has provided a more complete estimate of national traffic congestion costs. In addition to the $63.1 billion in wasted time and fuel reported by TTI for the largest metro areas, add another $12.8 billion for similar costs in all other metro areas. DOT estimates $38 billion in annual costs due to productivity losses, another $38 billion due to unreliability, $3.8 billion due to cargo delay, and $12.6 billion in safety and environmental costs of congestion. So a more complete figure for the cost of congestion is $168.3 billion, more than double the widely reported TTI figure.

How much is your time worth?

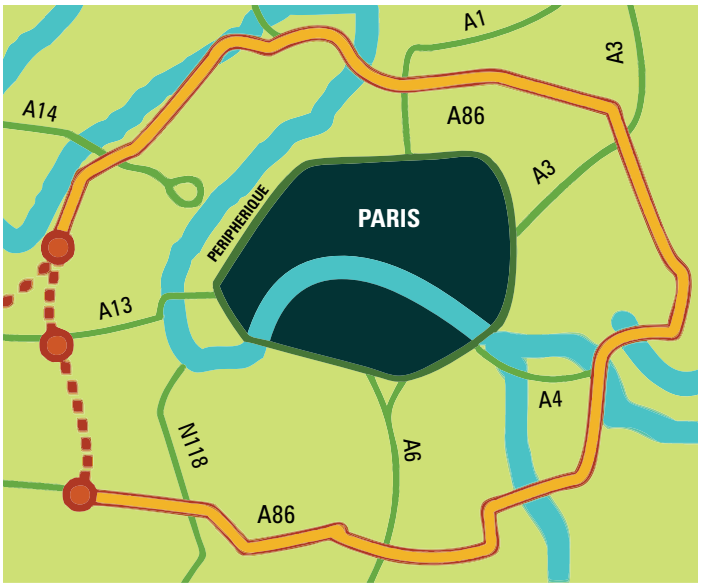
People tend to bristle at road pricing when they think of it in the abstract, but they're friendlier to it when they experience it firsthand. Why?

Part of the reason is because we value our time more than we say we do. UC Irvine economist David Brownstone examined the preferences of motorists on a stretch of San Diego's 1-15 Freeway. There drivers can use the regular lanes or pay a variable toll to escape congestion. Brownstone discovered a big gap between what people tell survey takers about the value of their time and what they actually do when they have the chance to buy some extra time. He found that motorists value their time about twice as much as they say they do in surveys.

Why does congestion keep getting worse?

Politicians often blame the sorry state of mobility on money. There just isn't enough of it to improve our transportation system, they say. It's true that our current approach to highway finance (based mostly on fuel taxes) is in deep trouble. Since fuel taxes aren't indexed to inflation, their buying power continues to shrink. Improved fuel efficiency means we get even less bang for our fuel tax buck. Lawmakers often throw up their hands because they assume motorists will never accept higher fuel taxes or toll roads.

They might be right about fuel taxes, but more and more evidence suggests that motorists are warming to the idea of tolls. In Atlanta 54 percent of survey respondents are "supportive" or "very supportive" of congestion-based tolls. In Denver, 78 percent of survey respondents support express toll lanes. Californians prefer tolls to taxes and in Washington, D.C. commuters prefer tolls to taxes by a two-to-one margin.



Learning from France

France has shown ways around (or under?) some problems that many Americans are quick to regard as insurmountable. A missing link in the A86 Paris ring road had long generated terrible congestion, yet officials were understandably hesitant to complete the road because it would have meant building through portions of historic Versailles. But the French did not just give in to congestion. They are filling in the missing link by building tunnels deep beneath the earth, thus preserving a historic space and improving mobility.

We think of France as proudly distinguishing itself from free-market America, but when it comes to transportation policy, the French are quick to make use of market-based innovations. Many of our leaders worry that there isn't enough money to fight congestion, but the French often build roads with funding from the private sector. The A86 tunnels are being built with private money and France's 5000-mile tolled motorway system is investor-owned. ■

Meet Your Future

L.A.-Style Gridlock is Coming to a Road Near You

By David T. Hartgen

Despite growing frustration, drivers, businesses, and political leaders have largely resigned themselves to a new reality: living with traffic jams. But living with it is going to become increasingly difficult.

Today, just four U.S. cities (Los Angeles, Chicago, Washington, DC, and San Francisco-Oakland) have daily congestion delays that prolong peak-hour trips by more than 50 percent. That means what should be a 30-minute commute takes 45 minutes. Over the next 25 years, 30 cities will join that club. And drivers in an unlucky 12 cities will face daily bottlenecks worse than the notorious traffic jams in today's Los Angeles—their commutes will take at least 75 percent longer than off-peak trips, according to a new report by Reason Foundation (see Table). The economic cost—lost time, inefficiency, unreliable deliveries, and snarled schedules—is immense (see "What Congestion Costs" p. 3).

Cities With 2030 Travel Time Delays Worse Than Today's Los Angeles (1.75)*	
1. Los Angeles-Long Beach	1.94
2. Chicago	1.88
3. Washington	1.87
4. San Francisco-Oakland	1.86
5. Atlanta	1.85
6. Miami	1.84
7. Denver-Aurora	1.8
8. Seattle-Tacoma	1.79
9. Las Vegas	1.79
10. Minneapolis-St. Paul	1.76
11. Baltimore	1.75
12. Portland	1.75

* The congestion index compares how much longer a trip takes at rush-hour, compared to off-peak times. For example, a score of 1.94 means that a trip would take 94 percent longer at rush-hour than off-peak times.

Before you pack up and move to Small Town USA, you should know that things are getting just as bad there. Boise, Idaho's congestion is expected to double and Albany, New York's is set to almost triple by 2030.

The federal government is spending more than $286 billion over the next six years on highway and urban transportation, and cities and states are pouring in hundreds of billions more. At least $1.3 trillion will be spent on urban transportation improvements alone over the next 25 years. So how is it possible that we'll be worse off after all that spending?

We are wasting the dollars we have. Some of it is lost in local projects deemed 'needed' like the infamous "Bridge to Nowhere" in Alaska. But most of our well-intentioned long-range transportation plans focus on the wrong things and fail to deliver congestion relief. Some cities, like San Jose and Charlotte, are crossing their fingers and praying people will embrace transit. In both cities less than 3 percent of daily commuters ride transit. Yet both are spending well over 50 percent of their money on transit projects. If massive numbers of people don't give up their cars—and there's no evidence they will—those cities and many like them will have condemned themselves to traffic purgatory. Indeed, instead of trying to reduce congestion most cities have resigned themselves to just slowing its growth a little.

How sad. For hundreds of years great cities kept up with infrastructure needs and adapted to new transportation technology. No more. Planners now say our goal is not to reduce congestion but to "provide choices" (carpools, buses, light rail) because "we can't build our way of congestion." But we haven't even tried. Over the last 30 years, vehicle-miles traveled increased by 143 percent while we added just 5 percent in new capacity.

Some planners oppose building roads because they fear we're paving over America (over 90 percent of the country is actually still open space) or that no matter how many new lanes we open or new roads we build, those too will soon be "filled up." But that is what is supposed to happen. You don't build roads hoping no one will use them. People change routes, travel times, modes, and sometimes destinations to take advantage of extra capacity. But the entire region flows better because these changes also loosen tie-ups on other freeways and streets.

A few cities have realized that gridlock is a significant economic threat and are taking steps to deal with it. Atlanta recently revised its transportation planning process, moving away from a transit focus by setting a congestion reduction goal and selecting projects that move toward it. Texas has initiated a massive mobility initiative for its largest cities, identifying specific actions, mostly new freeways, needed to

See GRIDLOCK on Page 15

Why Mobility Matters

By Ted Balaker

The following was adapted from the Reason policy brief Why Mobility Matters, *which is available online: reason.org/pb43_whymobilitymatters.pdf*

A vast metropolis has the potential to draw on the effort and talent of millions of people, but if mobility fades, the dynamism of the city fades with it. The city becomes less of a grand metropolis and more of a collection of hamlets—hamlets whose residents are increasingly isolated from each other.

When mobility fades, employers are also hurt. The drag of congestion slows all kinds of businesses. Consider businesses that deliver things, from pizza to parcels. They are forced to pay workers for their unproductive time (when they're stuck in traffic) and forced to pay extra for gas and maintenance. Congestion slows businesses and decreases the number of customers they can serve. And because congestion is unpredictable, delivery schedules also grow more erratic. Because of traffic congestion a Fort Lauderdale-area cement company discovered that it could no longer make reliable deliveries to construction sites during the week. The company was forced to make Saturday deliveries and incur the extra expense of overtime pay. Often companies try to pass the cost of congestion on to customers and this makes many things, from food to furniture, more expensive than necessary.

Congestion's impact is felt by everyone from plumbers and landscapers to salespeople and realtors. Throughout the day these people try to reach as many customers as they can, but congestion stands in their way.

Businesses are only as good as the people who work for them and congestion often makes it difficult for employers to find the right person for the job. From financial companies to high-tech firms, employers need people with specialized skills, and as labor pools shrink, so do their chances of finding the best employees. In San Diego, some high-tech employers regard the infamous I-5/I-805 bottleneck as the end of their labor pool, as they are unwilling to hire those who live north of the interchange.

Congestion was once a background concern, but now it is moving to the foreground. According to recent surveys, congestion is residents' top concern in places like Austin, Atlanta, Portland, Minneapolis-St. Paul, Sacramento, San Diego, and San Francisco. Members of the U.S. Chamber of Commerce rank it among their top concerns and in certain areas the problem is particularly acute. A recent survey asked Silicon Valley CEOs about their most daunting business challenges. In the span of a single year, congestion moved from the number nine challenge to number two. Degraded mobility now joins high housing costs, taxes, and regulations as a reason why companies leave or avoid certain cities (see Box).

Companies Respond to Congestion

A small sample:

- Dell expands in Nashville instead of Austin.
- Sysco Foods expands far away from Portland.
- San Diego IT firm TalentFuse is forced to open a North County office because employees cannot make it to the city reliably.
- Washington D.C.-area's SRA International Inc. scraps plans to consolidate offices.
- IT firm Optimus leaves Silver Spring, Maryland.

Congestion prompted Dell to expand in Nashville instead of its home base, Austin. "We lost 10,000 jobs in one day," recalls a local official. That incident sobered up leaders to the importance of mobility. Since then Texas has embarked on the nation's most ambition congestion-reduction plan and recently those efforts were rewarded.

After considering many locations, Samsung decided to bring a multi-billion dollar chip manufacturing plant and 900 jobs to Austin. Transportation was one of the major reasons behind the choice. Initially, the congestion on I-35 made Samsung was wary of Austin because silicon wafers from the new plant would be trucked to Dallas before being sent by plane to South Korea for final processing. Congestion can cause costly delays, but local officials' new commitment to mobility assuaged Samsung's concerns.

Embracing Mobility

Congestion saps cities of their vitality, but improving mobility helps invigorate urban economies. Researchers Rémy Proud'homme and Chang-Woo Lee analyzed employment dynamics in 22 French cities. They discovered that when mobility increased—when people were able to increase the

See MOBILITY on Page 10

Sounding the Alarm

Bob Galvin Explains Why We Should Confront the Congestion Crisis

Interview by Ted Balaker

Reason's Galvin Mobility Project is made possible by the generous support of Bob Galvin, former CEO and Chairman of Motorola. Mr. Galvin led the company through nearly three decades of growth and was instrumental in implementing the Six Sigma quality system at Motorola. In 2005, he received the Vannevar Bush Award for giving "the Nation the benefit of his knowledge, expertise and creative wisdom while leading his company in its great contribution to the computing and telecommunications transformation of society."

In May 2006, *Reason* interviewed Mr. Galvin about urban congestion and the Galvin Mobility Project.

What got you interested in mobility issues?

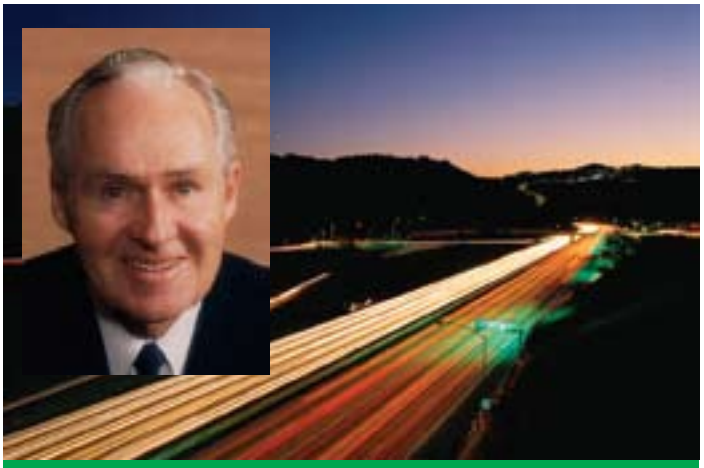
I try to think of big subjects at least once in a while and I was thinking of the jobs situation in America. And even though there's pretty good employment now there are challenges to creating enough jobs in America. To me whenever there's a need you have to have a strategy. A strategy is an application of resources and I thought, we need some new strategies in the United States in order to have employment opportunities. And two of those things I thought of were there has to be a reliable energy system and the other is we have to eliminate congestion. And I was thinking of it as a convenience and in the middle of my thinking I said wait a minute—congestion is the same thing as an arterial problem in the body. And if it gets clogged, it dies.

What do you expect the Galvin Mobility Project to accomplish?

I expect it to achieve a recognition of the principle I just described. And then someone asks, well what do you do about it? Well you have to have arteries. You put in more blood vessels and those blood vessels will come in two forms that are not currently very apparent. One is tunnels and the other is bridges.

Few government officials talk about actually cutting congestion. Most just hope to reduce congestion's rate of growth. Why have Americans accepted this surrender?

I think they're accepting it unconsciously, reluctantly because they assume nothing can be done about it. If we awaken the world, if we eliminate the problem, imagine what we will do to the dynamics of the economy.



A leader is someone who takes us elsewhere and I think my thesis will take people elsewhere if they'll follow it.

- Robert Galvin, former CEO and Chairman of Motorola

Why do you think that our political class has been so slow to address the issue of mobility and congestion?

Most leaders are not good anticipators. I've known lots and lots and lots of leaders and particularly those that are allegedly influential in Washington and they're ossified.

What about the business community?

They're oblivious to it.

Do you think that's beginning to change?

I think we have a chance to change it, but on its own it's not changing. Over the years I've watched the ordinary thinking of the people that had titles and they were just doing ordinary things. They were never attempting to anticipate the grand situation. What we have to have is a passion. This isn't just another lane on the highway or a little better timing of lights or a picking up of accidents faster. Those are what I call the "art of the possible." And that's what most leaders do, they just deal with the art of the possible and then they list four or five things that they're doing and you've done your job, and you go home.

But that's not real leadership. A leader is someone who takes us elsewhere and I think my thesis will take people elsewhere if they'll follow it.

France, Australia and other nations have embraced privatization, tunneling and other innovative ideas more than we have. How will that affect our competitiveness?

I hope it inspires us. The Europeans are way ahead of us. The awakening has to come from our group. We are the alarm clock. ■

Updating the Interstate System

By Samuel R. Staley

This year marks the 50th anniversary of the Interstate Highway System. It's a fitting time to consider how to update its early 20th century design to meet the transportation needs of the 21st century.

The interstate highway system was conceived prior to World War II, officially proposed in 1944, and finally funded in 1956. Initially, Congress expected the program to cost $28 billion through 1969, but this was revised upward to $42 billion in 1965. The final estimate, according to John Fischer at the Congressional Research Service writing in 21st Century Highways, was $128.9 billion.

Despite these high costs, the benefits were hard to dismiss. Brookings Institution economist Clifford Winston estimates the rate of return on highway investments in the 1970s was 15 percent as businesses took advantage of the improved and better connected road system to reduce transportation costs. Others have estimated the benefits might have been as high as 30 percent during those early years.

This was the economic heyday of the system though. Winston, for example, estimates the rate of return plummeted in the 1980s and 1990s to just 5 percent.

Understanding why is easier than one might think. In 1982, at the point the highway system was essentially completed, Los Angeles was the only urban area in the United States where travelers faced an average annual delay of 40 hours or more. By 2003, after interstate highway construction largely ceased, 25 urban areas faced congestion averaging 40 hours of delay or more each year. Almost 100 million people—one third of the national population—live in these regions, slowing life and the economy. And the trends aren't going the right way.

What's the solution? Building more capacity is one obvious need. But this is only part of the solution, and perhaps not even the most important. We need to pay a lot more attention to what kinds of roads we build, where we build them, and when they get built.

This is a bigger job than most people realize. In essence, it calls for a whole scale reconfiguration of our regional highway system.

The basic design of the current system—its DNA—was established by the federally funded Interstate Highway System laid on top of incremental expansions of local roads. This established a "hub and spoke" design, where large volume highways (spokes) would funnel people into a central employment center (the hub). Often, an outer beltway (rim) was created to connect the spokes leading to the hub.

This highway system served the needs of the mid-20th century city well when most people still worked and lived in the central city. Now, fewer than 20 percent of travelers during peak periods are commuters. Most of those trips are not even going into the central city. Suburb-to-suburb trips dominate travel patterns. Central cities are no longer the economic drivers of regional economic growth. Indeed, the growth of suburban cities and "edge cities" has created more balanced regional economies.

Our transportation system and network needs to be similarly balanced. The hub and spoke system isn't suited for a modern economy where technology and employment allows for flexibility and decentralization, and where travel decisions are based on personal needs accommodated by the customized travel flexibility offered by the automobile.

Fortunately, we have better and more effective tools than ever to address these issues. Rather than using grand highway plans to determine where the next road will be built, we can ask travelers. We can also have them pay for it.

Variable rate electronic tolling, for example, provides a fast, efficient, and effective way to gauge traveler interest in new facilities. By identifying a revenue stream—tolls—with a particular project, it also provides a mechanism for raising the capital necessary to significantly expand our nation's transportation infrastructure without raising taxes. New innovations in highway design have also expanded our ability to increase traffic flows to the point where tunnels and elevated highways make economic sense and can be self-financing.

The idea that consumers will pay for services is relatively new in transportation circles, but works in almost every other part of the economy. We need to treat roads like other economic products and services, particularly now that we have the technology to make it happen. This will be the key to attracting the billions of dollars necessary to reconfigure and rebuild our regional transportation system. The result will be a more dynamic, consumer-driven network more consistent with the needs of an urban economies and maintaining global competitiveness.

Sam Staley, Ph.D. is director of urban and land use policy at Reason Foundation and co-author of the book **The Road More Traveled: Why The Congestion Crisis Matters More Than You Think, And What We Can Do About It** *(Rowman & Littlefield).* ■

How to Tackle Atlanta's Congestion

By Robert W. Poole, Jr.

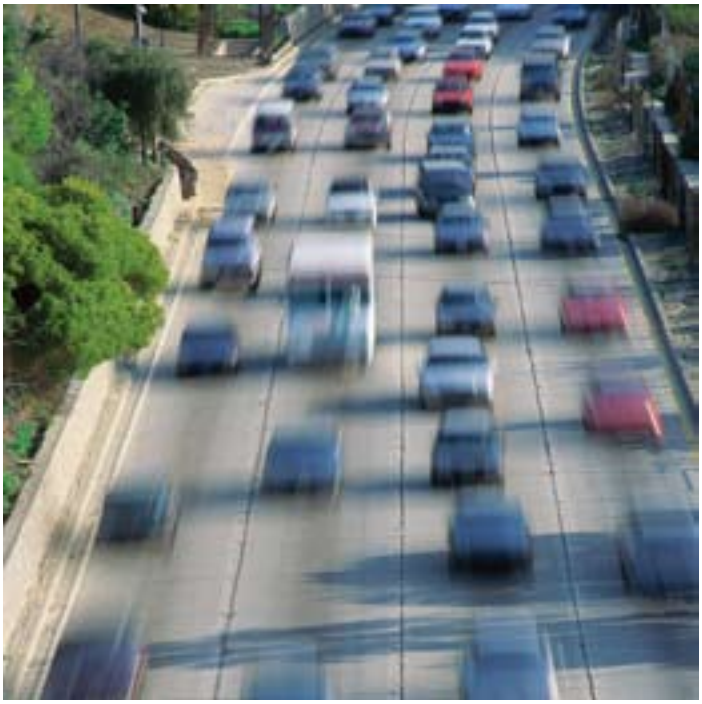
Atlanta is already plagued by serious traffic congestion, whose direct cost is estimated at $1.75 billion per year. But if the current long-range transportation plan is implemented, by 2030 congestion will be much worse. A rush-hour trip that today takes 46 percent longer than at off-hours will take 67 percent longer in 2030.

In December 2005, the Governor's Congestion Mitigation Task Force recommended a dramatic change in the focus of transportation planning, making congestion-reduction its principal focus. It set a goal of reducing Atlanta's rush hour travel time from today's 46 percent longer than at off-hours to 35 percent longer than at off-hours by 2030 (in sharp contrast to the current projected increase).

Our analysis concludes that Atlanta's current approach of investing heavily in mass transit, carpooling, and land-use changes to reduce the extent of driving is not compatible with the congestion-reduction goal. The current long-range plan, despite devoting the majority of its funding to transit and carpool lanes, would lead to no increase in the fraction of commute trips made by carpool, and a less than two percentage point increase in transit's market share—while overall congestion would soar.

The new approach we recommend deals with both major sources of congestion. For the half that is caused by incidents (accidents, work zones, weather, etc.), Atlanta should continue efforts under way, such as quicker identification of, response to, and clearance of incidents. On arterial streets, improvements in traffic signal coordination and access management will also help.

But for the other half of congestion—the kind that occurs every day during rush hours because demand greatly exceeds roadway capacity—there is no alternative to increasing the capacity of the roadway system. This does not mean paving over the landscape with ever more freeways, nor does it mean ignoring air quality mandates. Our modeling (using the Atlanta Regional Commission's traffic model) shows that a careful program of catch-up capacity additions over the next 25 years can substantially reduce congestion (vehicle hours of travel) without increasing total driving (vehicle miles of travel). The result would be the elimination of the worst congestion by 2030, and achievement of the Congestion Reduction Task



Force's travel time goal.

Where might the new capacity go? We recommend four major projects, as follows:

- A network of express toll lanes added to the entire freeway system instead of the currently planned (but only partially funded) set of HOV lanes. These priced lanes would also function as the guideway for regionwide express bus service.
- A double-decked tunnel linking the southern terminus of Georgia 400 with I-20 and later with the northern terminus of I-675, providing major relief to the Downtown Connector (I-75/85)—the most congested portion of the freeway system.
- Extension of the Lakewood Freeway eastward to I-20 as a tunnel, and westward to I-20 as a freeway, providing an additional east-west corridor and new access to the airport.
- A separate toll truckway system, permitting heavy trucks to bypass Atlanta's congestion in exchange for paying a toll; a portion of this system would be tunneled below downtown.

The estimated cost of these four mega-projects is $25.1 billion. By using value-priced tolling on nearly all of this new capacity, we estimate that more than 80 percent of the cost could be financed based on the projected toll revenues. And

See ATLANTA on Page 14

Thinking Bigger (and Smarter) in Texas

By Wendell Cox and Alan Pisarski

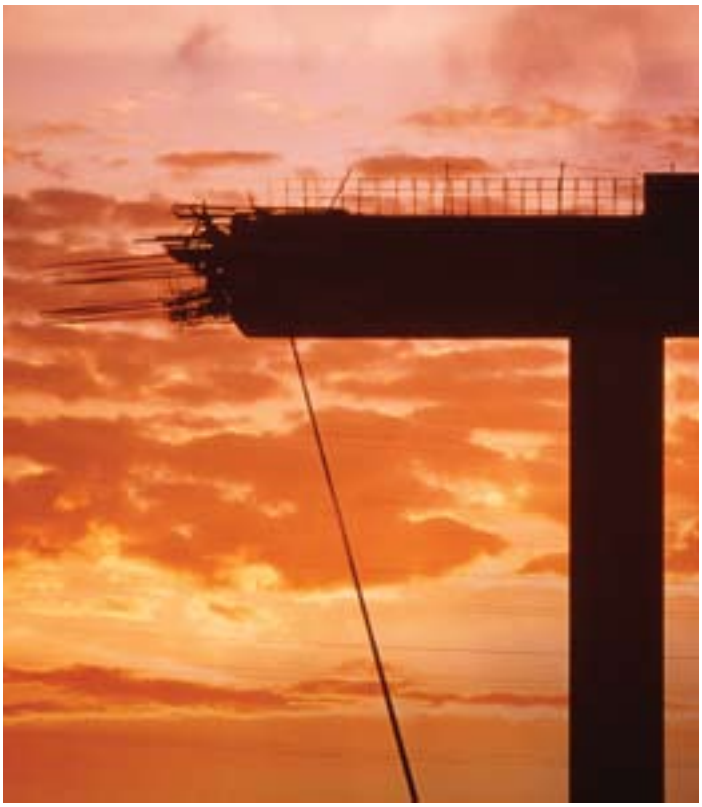
Through the Texas Metropolitan Mobility Plan (TMMP), Texas has become the first state to adopt traffic congestion reduction objectives for its urban areas. The plan emerged from the Governor's Business Council and provides a "road map" for improving traffic congestion and for maintaining and even improving the competitiveness of urban areas. The critical steps are as follows:

1. Identify potential urban area mobility goals. The GBC/TMMP process has used a maximum traffic congestion goal for this process.
2. Develop general system improvement requirements for each potential mobility goal. Alternative strategies, such as transit improvements, can be a part of the mix so long as their contribution to traffic reduction is obtained at a cost lower than alternative highway projects.
3. Identify the funding requirements to achieve each potential mobility goal. It is important to not prejudice the planning process by focusing on financing mechanisms before adopting the mobility goal and the outline of strategies required to achieve the goal. Premature attention to funding options can lead to a preference for particular projects that might be better suited to one funding option or another (such as gasoline taxes or tolling). The question of "what it will cost" should not be asked until the determination has been made with respect to "what is needed." At the same time, it is a mistake to simply presume that a particular mobility goal is too expensive. This is often the response of planners, perhaps due to legitimate doubts that sufficient funding can be obtained, or due to ideological concerns that seeking such goals is inappropriate. In fact, whether a goal is too expensive cannot be known until it has received a cost/benefit assessment. As the GBC-II experience has found, the very exercise of seriously examining aggressive mobility improvement goals can result in much less costly requirements than can be anticipated before such a process has been completed.
4. Adopt the final urban area mobility goal from the alternatives considered.

Texas's approach does not accept further decline assured by financially constrained plans, and pursues a goal that responds directly to congestion needs, raising the necessary resources through revenue strategies, including conventional finance and tolling (including public-private partnerships). It asks what is necessary, rather than what can be afforded within current funding constraints. The maximum traffic congestion goals will be different among implementing metropolitan areas, based upon the importance that regional leadership places on reducing congestion. The principal advantage of a TMMP-type process is that it is needs-driven and can thus be the mechanism for significant improvements in urban mobility, and in urban economic performance.

The GBC report was unique because of the prevailing view that we "cannot build our way out of congestion." The basic principle behind the GBC report was to ask the unthinkable: just what would it cost to "build our way out of congestion." Traditionally, once having examined the cost, it could have been deemed too expensive. The GBC process shows, however, that at least in Texas, it is by no means too expensive, and yields far more substantial benefits than its costs.

Wendell Cox is principal of Wendell Cox Consultancy and a visiting professor at the Conservatoire National des Arts et Metiers in Paris. Alan Pisarski is a transportation consultant and author of the popular book series, Commuting in America. *This piece was excerpted from a forthcoming Reason Foundation study.* ■



Can't Build Our Way Out?

Houston and Phoenix Deflate a Popular Myth

By Wendell Cox and Alan Pisarski

Traffic congestion cannot be reduced by building additional roadway capacity is a popular view. This theory holds that new roadways create or induce additional travel demand and that, as a result, there is no point to building more roadway capacity, since new roads cannot reduce traffic congestion.

This is not a convincing argument to residents of the Houston area, who significantly reduced traffic congestion by building new roadway capacity. As late as 1985, Houston had the worst traffic congestion in the United States. In response Houston took steps, particularly under Texas Department of Transportation Chairman and then Mayor Robert Lanier, to expand urban roadway capacity, both freeways and non-freeway arterials. Houston's experience has demonstrated that sufficient capacity can be built to serve the demand. By 1993, traffic congestion-related delays had declined 40 percent. In more recent years, the Lanier policies have not been continued, but traffic congestion remains below the 1986 peak and similar to far smaller Portland (which had less than one-fifth Houston's traffic intensity in 1986).

Further, average roadway travel per capita increased only 10 percent in Houston from 1984 to 2002, less than one-third the national rate. If new roadway capacity routinely "induced" additional travel, then per capita driving should have increased in Houston compared to the rest of the nation.

Where metropolitan roadways have been substantially improved, virtually no "induced traffic" effect has been noted.

The emptiness of this "induced traffic" theory is further demonstrated by the experience of Phoenix. In the middle 1980s, Phoenix had a severely underdeveloped freeway system compared to other major urban areas in the United States. At that time, Phoenix undertook construction of new freeways. Phoenix has built more new urban freeways than any other major urban area in the last two decades.

Based upon the induced traffic theory, residents of the Phoenix area should have rushed out to drive even more, and overall travel volumes should have increased inordinately compared to other areas. In fact, the opposite occurred. Overall travel volumes in the Phoenix area increased 20 percent per capita from 1984 to 2002. This is well below the national urban average increase of 32 percent. Perhaps even more significantly, Portland, with its adopted anti-freeway policies, experienced a 52 percent per capita increase in car use over the same period.

In fact, where metropolitan roadways have been substantially improved, virtually no "induced traffic" effect has been noted. Of course new roads do attract new traffic. However, they attract traffic from other roads more than they "induce" it. What appears to some to be "induced" demand may be nothing more than pent-up demand for better roadways. FHWA research indicates that, even where a small, induced demand factor can be identified, it largely disappears when considered in terms of driving time (vehicle hours) instead of distance (vehicle miles). ■

Continued from Page 5

MOBILITY

area they could reach in a fixed amount of time—the economy expanded. A 10 percent increase in average travel speeds was associated with a 15 percent expansion of the labor market and a 3 percent increase in productivity. Jobseekers were able to find better jobs, and employers had access to more workers and more customers.

A U.S. analysis took a similar approach and discovered similar results. The National Cooperative Highway Research Program study examined the economies of Philadelphia and Chicago and assumed a 10 percent increase in travel speeds. The researchers estimate that each year this improvement in mobility would save Philadelphia businesses $440 million and Chicago businesses $1.3 billion. The French and American studies reveal another important point—a little mobility improvement goes a long way. Remember each analysis examines the effects of a 10 percent increase in speed. In Chicago that's the equivalent of bumping travel speeds from 33 to 36 miles per hour. If such relatively modest mobility improvements offer such hearty benefits, imagine what even greater progress might yield.

It is time to reassert the importance of mobility. Embracing the mobile society will improve life for individuals, for cities, and for our nation.

Reason Foundation's Ted Balaker is co-author (with Sam Staley) of* The Road More Traveled: Why the Congestion Crisis Matters More Than You Think, And What We Can Do About It *(Rowman & Littlefield 2006). ■

The Train Drain

Brookings Institution on Rail Transit in America

By Robert W. Poole, Jr.

The Brookings Institution is America's oldest public policy think tank. Based in Washington, DC, it is well-respected and generally considered to be moderate-liberal in orientation. As American Enterprise Institute is informally considered a place for Republican office-holders to reside when out of power, so Brookings is regarded for Democratic icons.

One of Brookings Institution's leading transportation policy experts is Clifford Winston, a well-respected economist and author of numerous books and papers dealing with transportation issues. His most recent paper is "On the Social Desirability of Urban Rail Systems," co-authored with Vikram Maheshri, an economist at the University of California at Berkeley. It appears in the *Journal of Urban Economics* and is available online at www.sciencedirect.com.

The purpose of the paper is to estimate the contribution of U.S. urban rail systems to social welfare. The authors define the net benefit of a rail transit system as the difference between its benefits, broadly measured, and its net cost to taxpayers. If this difference is positive, it means that the dollar value of the rail system's benefits is greater than its net cost to taxpayers (i.e., the difference between what the rail system's customers pay as fares and the total cost to build, operate, and maintain the rail system).

On average, rail transit systems cover about 40 percent of their operating costs from farebox revenues and none of their capital costs, according to figures in the National Transit Database. That means their net taxpayer subsidy is large.

Winston and Maheshri construct an elaborate econometric model to estimate the "consumer surplus" of 25 rail transit systems. This is economists' term for the benefits to users, over and above the fares they pay. The large systems (New York, Washington, DC, San Francisco's BART, etc.) all produce significant consumer surpluses. But most of the smaller ones do not.

Next, the authors compare the consumer surplus of each system with its net taxpayer cost. On this measure, every single one of the 25 systems has negative net benefits—i.e., the annual value of the benefits to users is much less than the annual cost to taxpayers. Surprisingly, this is true even for the massive New York City rail transit system, which by itself accounts for two-

SeeTRAIN on Page 14

How much rail drains from cities each year

City (agency)	Net Social Cost
New York (NYC Transit)	$704 million
Washington, DC (METRO)	$262 million
Chicago (CTA)	$46 million
Boston (MBTA)	$453 million
Atlanta (MARTA)	$302 million
Philadelphia (SEPTA)	$271 million
Northern New Jersey (PATH)	$87 million
Los Angeles Metro	$125 million
San Diego Trolley	$29 million
Portland, OR (TriMet)	$221 million
Baltimore (MTA Maryland)	$197 million
Miami-Dade Transit	$141 million
San Francisco (Municipal Railway)	$250 million
St. Louis (Bi-State Development Agency)	$171 million
Southern New Jersey (PATCO)	$7 million
Cleveland (GCRT)	$118 million
Dallas (DART)	$457 million
Sacramento RT	$106 million
San Jose (Santa Clara Co. Tr.)	$211 million
Pittsburgh (PA Allegheny Co.)	$135 million
Denver (RTD)	$279 million
Staten Island (SIRT)	$21 million
Buffalo (Niagara Frontier)	$57 million
Newark (NJTransit)	$59 million

Bringing Style to the Road

By Peter Samuel

Despite today's horrible traffic congestion, it is tough gaining support for expanded road capacity. Many people don't like the look or feel of many of our big highways. They have gotten so large and so bleak that they are offensive, like some kind of alien implant in our urban areas. A dislike of highways predisposes people to dislike all proposed new road projects, even those that are designed with more concern for aesthetics and better mitigation of impacts.

Others insist that "there's no space left" for adding lanes to existing expressways. If space for roads is important enough it can be manufactured by one of three methods. First, real estate can be bought, and converted to space for roadway. Or, second, space can be constructed by going up in the air—elevating the new roadway within an existing right of way. Or, third, you can make space by going underground, leaving other uses for the surface. The choice will depend on relative costs and the local context, including, importantly, community acceptance.

Here we examine elevated expressways, which represent just one way to address concerns about aesthetics and the perceived lack of space to build roads.

Elevateds don't have to be ugly like the first generation, which were generally built trestle-like of many steel plates or prefab concrete I-beam girders laid atop the caps on rows of closely spaced utilitarian piers—a cluttered and messy look. Concrete segmental box girder construction atop single, flared concrete piers allows longer spans with a clean, sculpted look. Best of all, the new good-looking elevated can be cheaper to build—at least on longer projects where set-up costs can be spread over a large project.

The outstanding example of a modern elevated is known as the Reversible Lanes Bridge in Tampa, Florida. The elevated structure extends five miles down the median of the Lee Roy Selman Crosstown Expressway from Brandon to downtown Tampa. It will have 218 central piers, each being six feet square and positioned about every 140 feet. The three-lane roadway atop the piers is built out of about 3,000 match cast segments, each 80 tons in weight, about nine feet long, and 60 feet wide.

Such elegant new designs meet much of the aesthetic criticism of older generation elevated roadways. But another major objection to elevated roadways has always been noise. Fortunately, there have been advances in noise mitigation for

Segmental box-girder construction looks better and saves money.

elevated highways. Most of these are custom designed to contain traffic noise where the roadway runs close to buildings. Some are quite imaginative architecturally. Melbourne City-Link, a downtown urban toll road that opened in August 1999, has 1,000 feet of "sound tube" where an elevated portion gets within some 500 feet of high-rise apartment buildings in North Melbourne. The tube is a striking architectural feature.

Land uses in the corridor will often determine whether an elevated highway is acceptable. In commercial and light industrial areas an elevated will often be found compatible with surrounding land uses. The elevated I-110 Harbor Transitway on the south side of Los Angeles was accepted because of the industrial character of that area.

Adding capacity with innovative design concepts is generally more expensive than adding lanes to mammoth freeways. But congestion and loss of mobility from not providing needed highway capacity are also hugely costly. Our productivity and quality of life depend heavily on being able to move ourselves and freight swiftly and predictably around our metropolitan areas. That way people have a wide range of opportunities for jobs, shopping, education and recreation, and employers have the widest choices to hire labor and services and get supplies and shipments handled efficiently. Areas that provide good internal mobility will thrive and prosper while others will languish. Innovative design will be essential to gaining acceptance of needed additions to highway capacity.

Peter Samuel is founder and editor of Toll Roads Newsletter *(www.tollroadsnews) and has been a contributing editor to World Highways and Intelligent Transportation Systems International. The following was adapted from the Reason study* Innovative Roadway Design: Making Highways More Likable, *which is available online: reason.org/ps348.pdf.* ■

Myths about Car-Crazy Suburbia

By Ted Balaker and Samuel R. Staley

In their new book The Road More Traveled: Why the Congestion Crisis Matters More Than You Think, And What We Can Do About It *(Rowman & Littlefield), Ted Balaker and Sam Staley examine the "10 Myths About Car-Crazy Suburbia." What follows are summaries of some of the myths.*

Myth: Americans are addicted to driving.

Journalists and politicians like to say that Americans are "addicted" to driving, but Americans are no more addicted to driving than they are to broadband Internet access. Both offer faster, more convenient service than the alternatives. For example, transit commutes are typically twice as long as car commutes. As other nations grow wealthier, their transportation habits become more like ours. In America automobiles account for about 88 percent of travel and in Europe the figure is about 78 percent. And the Europeans are gaining on us. In Europe per capita driving has been increasing more than twice as fast as in the states.

Myth: Transit can reduce traffic congestion.

In all but a few American metro areas, transit does not carry enough traffic to have a significant impact on congestion. Despite nearly a half-century of ever-increasing subsidies, transit's share of commute trips continues to slide and now stands at less than 5 percent. Examine all trips (not just work trips) and transit's impact shrinks even more. Nationwide it accounts for only 1.5 percent of trips. Some argue that traffic congestion would be much worse if it weren't for transit. But even if transit systems were shut down (something virtually no one proposes), most former transit users would not add to traffic congestion because 70 percent of them do not have access to cars. Transit use tends to decline anywhere wealth increases. Transit is sliding even in Europe where gas prices are much higher and transit service far more extensive. From 1980 to 1995, transit fell by 14 percent in London, 24 percent in Paris, 19 percent in Stockholm, and 60 percent in Frankfurt.

Myth: The suburbs are soulless and superficial.

People move to the suburbs for reasons that are hardly superficial. They seek better lives for their families: improved job prospects, safer neighborhoods, better schools, affordable housing, and a plot of land for gardening or tossing the baseball with the kids. Today's suburbs are very different from Ward and June Cleaver's suburbs. For example, many critics regard suburbia as racially segregated, but a Harvard-Tufts research team

discovered that "racial segregation is much lower in suburban census tracts than in urban census tracts." Even the stereotype of suburbia as a cultural wasteland is misleading because our nation's explosion of cultural offerings has coincided with the rise of suburbia. Indeed a National Endowment for the Arts survey found that suburbanites are slightly more likely to be readers of literature than city dwellers.

Myth: We can't cut air pollution unless we stop driving.

Although surveys often reveal that Americans think air quality is getting worse, it's actually been improving rather dramatically. More stringent regulations and better technology have allowed us to achieve what was previously unthinkable—driving more and getting cleaner. Since 1970, driving has increased 155 percent, and yet the EPA reports a dramatic decrease in every major pollutant it measures: "Since 1970 the aggregate emissions of the six principal pollutants have been cut 48 percent." And not since 1980 have ozone concentrations been so low.

But good news is hard to take. Some may think the progress we've made is fleeting. We're growing so fast, adding so many new people and new cars, won't growth soon overwhelm these air quality gains? The EPA doesn't think so. "Over the next decade, federal, state, and local regulations are expected to further reduce ozone precursor emissions, and, as a result, ozone levels are expected to drop."

There's a simple explanation for why the air we will breathe in the future will be even cleaner: we're cleaning the air faster than we're soiling it. Driving is increasing by 1 to 3 percent each year, but average vehicle emissions are dropping by about 10 percent each year. In other words, emissions are declining at about 7 to 9 percent each year. ■

Continued from Page 8

ATLANTA

to reduce the risks inherent in such mega-projects, we recommend that they be carried out under long-term concession agreements in which the private-sector partners would bear the risks of cost overruns and revenue shortfalls. Projects of this scale are being done successfully under such arrangements in Europe and Australia.

Based on conservative estimates, the time savings over 20 years would be more than $98 billion—nearly four times the $25 billion cost. But there would also be major economic benefits. By allowing employers to recruit from a wider radius (and employees to seek jobs within a wider radius), better matches of skills with needs would occur, making Atlanta's economy more productive.

Individual motorists would benefit every day, as average trip times would be shorter than today, rather than considerably longer. With a network of uncongested priced lanes on the whole freeway system, everyone who signed up for a windshield-mounted transponder would have the peace of mind of knowing that he or she had a time-saving option available whenever it was really important to get somewhere on time. And the region's transit providers would gain the virtual equivalent of a network of exclusive busways, since the priced lanes would permit reliable, uncongested bus operations at all times.

Robert W. Poole, Jr. is Reason's director of transportation studies. He has advised the last four presidential administrations on transportation policy. ■

Continued from Page 11

TRAIN

thirds of the nation's rail transit passenger miles.

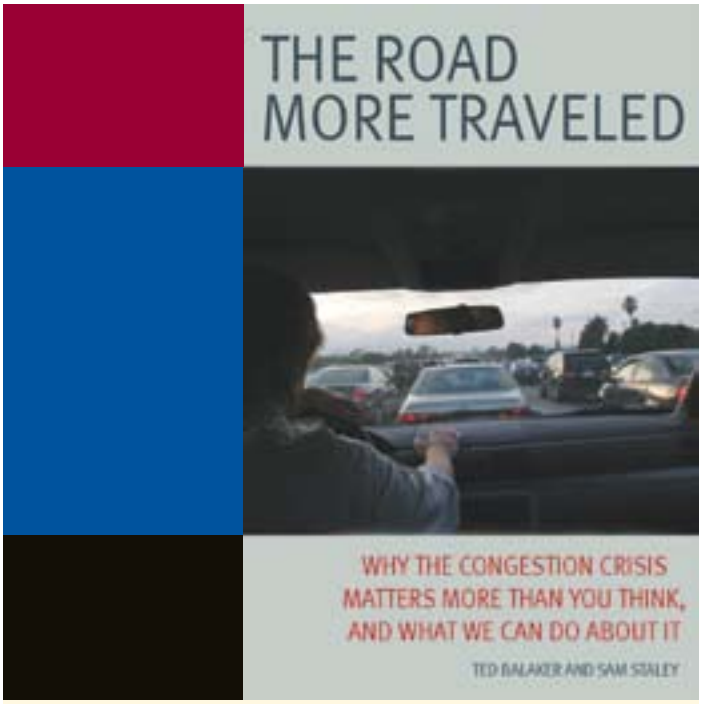
But what about larger benefits to the metro area? Rail systems are advocated not just to benefit their riders, but because they are expected to reduce traffic congestion, reduce air pollution, save energy, etc. So the final step in Winston and Maheshri's analysis was to estimate the value of these "externality" benefits. They first conclude that the only one of these purported benefits large enough to make any difference is congestion relief. Adding the congestion savings to road users to the consumer surplus gives the total benefits of rail transit. When this total is compared with the net taxpayer costs, only San Francisco's BART produces net social benefits. Each year the system improves social welfare by an estimated $36 million. All 23 other U.S. rail transit systems are net losers. This means that each of those urban areas is made poorer by many millions of dollars each year (see Box on page 11).

Supporters have sold [rail systems] as an antidote to the social costs associated with automobile travel, in spite of strong evidence to the contrary.

Winston and Maheshri anticipate that some advocates of rail transit will protest that these systems offer other benefits that are not accounted for in their calculations. For example, rail supposedly stimulates development around rail stations: "But case studies have yet to show that after their construction transit systems have had a significant effect on employment or land use close to stations and that such benefits greatly exceed the benefits from commercial development that would have occurred elsewhere in the absence of rail construction."

And there is also the claim that rail systems increase the mobility of low-income residents. But the authors point out that the median annual income of rail users in 2001 exceeded $50,000, which was greater than the median income of the general population in that year. So rail's primary market is not the poor (unlike bus transit).

Overall, then, the authors conclude that rail transit is erroneously believed by the public to be socially desirable, because "supporters have sold [rail systems] as an antidote to the social costs associated with automobile travel, in spite of strong evidence to the contrary." They conclude that, in fact, rail transit is "an increasing drain on social welfare." ■



The Road More Traveled provides a thoughtful analysis on the causes of congestion and offers detailed suggestions for relieving it in America's cities. Balaker and Staley clearly debunk the myth that there is nothing we can do about congestion."

thoughtful

—Mary E. Peters, Secretary of U.S. Department of Transportation

"*The Road More Traveled* should be required reading not only for planners and their students, but for anyone who loves cities and wants them to thrive as real places, not merely as museums, in the 21st century."

—Joel Kotkin, Irvine Senior Fellow, New America Foundation, and author of *The City: A Global History*

"Buy their book, read it, and then send it on to your favorite political representative."

—Peter Gordon, School of Policy, Planning and Development, University of Southern California ■

bright and readable persuasive solutions

Continued from Page 4

GRIDLOCK

reduce congestion significantly.

The good news in the Reason study is that reducing traffic congestion is neither particularly difficult nor costly. If extended nationwide, a mobility project focused on relieving congestion primarily through added road capacity would cost about $21 billion per year over 25 years. It may sound like a huge sum, but it represents only 28 percent of funds currently in urban transportation plans.

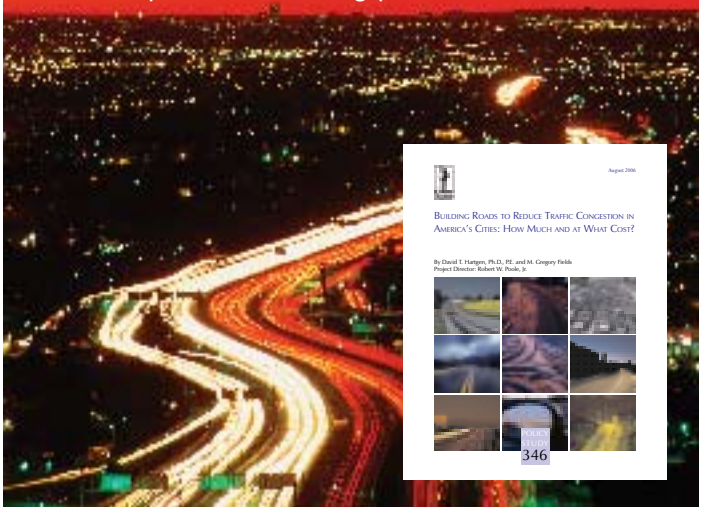
The payback in terms of saved travel time and more reliable travel would be huge—7.7 billion hours saved each year. We need the political will to re-address continuing traffic congestion issues as we have dealt with them for hundreds of years: by providing needed capacity. Cities that figure this out will move out ahead of the pack economically while others will slowly strangle.

David T. Hartgen, Ph.D., is professor of transportation studies at the University of North Carolina at Charlotte and author of the Reason Foundation study "Building Roads to Reduce Traffic Congestion in America's Cities." *A version of this piece was distributed by Knight Ridder/McClatchy News Wire.* ■

Building Roads to Reduce Traffic Congestion in America's Cities: How Much and at What Cost?

By David T. Hartgen, Ph.D., P.E. and M. Gregory Fields
Project Director: Robert W. Poole, Jr.

Policy Study No. 346 is available online:
http://www.reason.org/ps346/index.shtml



Who, What, Where

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