

*Innovation Briefs*  
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### Thinking About the Future of the Highway Program

This commentary is intended to stimulate a dialogue about the future of the nation's highway program. While a comprehensive research effort on the future of the Interstate Highway system already is underway, and AASHTO and other program stakeholders are preparing to take an active part in the ensuing debate, we believe that the broader transportation community also deserves to be heard. To this end, we invite you, our readers, to follow the lead of former Highway Administrator Mary Peters and use the pages of *Innovation Briefs* to share your thoughts about the future directions of the highway program. Your contributions will be published in the future issues of *Innovation Briefs* and shared with the members of the National Surface Transportation Infrastructure Financing Commission which is charged with developing recommendations to Congress concerning the future of the surface transportation system. We believe that exposing the Commission members to ideas and opinions from a wide cross-section of the transportation community will help the Commission arrive at decisions that reflect a broad national consensus.

The commentary below is based, in part, on our presentation before the senior staff of the Federal Highway Administration at its Spring Business Meeting on March 7, 2006. A shorter version of these remarks was delivered at the World Bank Transport Forum on March 29, 2006, at an IBTTA staff retreat and at several private briefings for the investment community. We would welcome your comments.

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### Thinking About the Future of the Highway Program

As we celebrate the 50th anniversary of the Interstate Highway System and embark upon a major reassessment of its future this year, we must not fail to take note of two emerging trends that may fundamentally affect the way we shall go about developing, financing and operating new highway facilities in the future.

The first trend is a growing acceptance of tolls and variable road pricing, as a means of augmenting existing highway revenue, financing new infrastructure and

managing highway demand;

The second trend is the private sector's increased interest and willingness to assume an active role in the financing, construction and operation of toll roads.

### Growing Use of Tolls

There no longer is any doubt that the federal fuel tax at its current level cannot adequately support our future highway investment needs. The Highway Account of the Trust Fund is expected to run dry soon after the start of the next reauthorization cycle, less than three years from now. Highway Account obligations authorized in the current surface transportation authorization (SAFETEA-LU) exceed the projected Highway Account receipts by more than \$12 billion according to a February 2006 CBO/Joint Committee on Taxation estimate. In other words, the spending levels established in SAFETEA-LU cannot be sustained beyond fiscal year 2009.

Some observers believe that the pressure to alleviate this imbalance by raising motor fuel taxes in the next Congress will prove to be irresistible. But this is by no means certain. A lot will depend on the attitude of the next administration, the political complexion of the next Congress and the degree of public concern over gas prices prevailing at the time (currently approaching \$3/gallon). It is instructive to recall that Congressional reluctance to raise the fuel tax is not exactly new. Since 1956, Congress has raised this tax only five times, with the last increase occurring 13 years ago, in 1993. Nor do States appear any more willing to raise their own fuel taxes. Many of them have not done so for years.

Eventually a mileage-based tax may replace the fuel tax and provide a more adequate source of funds. But implementing a mileage-based tax system would involve difficult problems of transition both at the state and federal levels. It is, at best, a solution for the distant future. A recent Transportation Research Board report concluded that the fuel tax will be with us for at least the next 15 years (The Fuel Tax and Alternatives for Transportation Funding, January 2006).

Hence, for the immediate and near-term future, tolls look like the most practical and logical way to supplement the eroding value of the gas tax. Electronic toll collection technology, already embraced by a majority of toll road authorities, has eliminated the chief practical objection to tolls. By the end of this decade, "open-road tolling" is expected to become near-universal.

Tolls offer another advantage. They provide a capability to manage traffic demand on the nation's highways. By varying tolls with fluctuating demand levels, highway operators can maintain free-flowing traffic conditions at all times and offer the driving public an option of congestion-free travel even in rush hours. The benefits of variable pricing are evident every day on the SR 91 Express Toll Lanes in Southern California which carry twice as many vehicles at speeds three

times faster as the adjoining toll-free lanes ("Lessons Learned from the Pilot Program," Report to Congress on the Value Pricing Pilot Program Through March 2004, Federal Highway Administration, 2004).

In the past year, tolling has gained a number of new converts. Congress has relaxed existing restrictions on tolling of the Interstates, several states have created new toll authorities, most highway interests have dropped their opposition to tolling, and federal policy has become overtly supportive of tolling and road pricing. Even the press seems to have embraced the concept of highway pricing. The term "Lexus Lanes," once used by journalists as a pejorative shorthand for HOT lanes, is gradually disappearing from usage as evidence accumulates that even drivers of modest means choose to pay a toll when they are pressed for time.

So my first conclusion is that tolling has reached the tipping point. From here on out it will play an ever growing importance in future highway investment decisions. Indeed, it is quite conceivable - even likely- that variably priced toll lanes will constitute the bulk of all future additions to this nation's highway capacity.

#### A Future Scenario

What eventually may emerge in heavily congested urban areas is a two-tiered system of roads. Supplementing existing toll-free roads will be networks of new express toll lanes offering congestion-free travel for a fee. As the toll-free lanes become saturated with traffic, motorists, shippers and truck-fleet operators will switch to the free-flowing premium toll lanes in sufficient numbers to ensure their political success and financial viability.

This is not a far-fetched vision. Already today, commuters in Northern Virginia's Dulles Corridor are offered two parallel routes into Washington - one, a toll-free state route (Route 7), the other, a privately-financed and operated toll road, the Dulles Greenway. Tens of thousands of commuters are opting to pay a daily fee of \$10.80 on the free-flowing Greenway in order to avoid the stop-and-go traffic on the state route.

#### A Bigger Role for the Private Sector

As has become evident in recent months, many financially strapped states are searching for innovative new ways to finance highway infrastructure- and all of the new approaches involve the use of private capital.

One approach involves leasing existing toll roads with a proven record of stable and growing traffic to private investors in return for front-end capital. Recently, the state of Indiana has done just that, using the \$3.8 billion proceeds to fund an ambitious 10-year program of highway improvements, including construction of

an extension to Interstate 69. Several other fiscally-strapped states with profitable toll facilities are contemplating a similar move.

Some other states, such as Texas, Virginia and Oregon, are entering into partnerships with private companies to build new toll roads or add new toll lanes, using mostly private funds. In exchange, these companies obtain the right to operate the facilities and collect tolls over long periods of time. Recently, Pennsylvania also has expressed interest in such arrangements. And last month, Utah became the 23rd state to enact a law that allows private firms to finance, build and operate new toll roads.

There are several reasons for this groundswell of private sector interest in highway infrastructure. The global capital markets have discovered that public infrastructure offers attractive long-term investment opportunities - and not just in other parts of the world but in the United States as well. Foreign toll road owners and operators, notably Australia's Macquarie Infrastructure Group and Transurban, and Spain's Cintra and Abertis, are in discussions with a number of our state and toll authorities concerning possible long-term toll road concessions. "The biggest potential growth market is the U.S.," Macquarie Infrastructure Group's Chief Executive Stephen Allen, told us. His company's activities in Oregon suggest that Macquarie intends to use the concession model to develop new roads as well as invest in existing toll roads in the United States.

There are signs that our own private investment community is beginning to wake up to the challenge, spurred, no doubt, by competition from abroad. In March, the Carlyle Group, a large and respected U.S. private equity funds announced that it intends to start investing in the transport infrastructure sector. Said Carlyle's CEO, David Rubenstein, in announcing the new initiative: "The U.S. is finally starting to realize what the rest of the world has learned, that private dollars can help alleviate persistent infrastructure challenges." The possibility of significant tax depreciation benefits offered by long-term concessions has very likely played a role in Carlyle's decision (see sidebar below). So have reports of Macquarie having quintupled the value of the capital originally invested in the toll roads, generating an internal rate of return of 30 percent in the process.

### Highway Privatization Abroad

In Europe, virtually all major toll road authorities have been privatized. Italy's state-owned toll authority, Autostrade SpA, was sold to private investors in the late 1990s (and will soon be merged with Spain's Abertis, creating a vast 6,700 km (4,200 mile) network of private toll roads throughout Western Europe). In France, the three largest toll enterprises in which the government had retained controlling interest, Autoroutes Paris-Rhin-Rhone (APRR); Société du Nord et de l'Est de la France (SANEF, operator of the Autoroute du Nord and Autoroute de l'Est); and Autoroutes du Sud de la France (ASF, operator of the Autoroute du Sud), were put up for sale in late 2005; their privatization is currently in process

of being completed. By the end of the year, 8,175 km (5,109 miles) of France's toll roads will be in private hands, according to the French toll road association, AFSA. In Spain and Portugal, all major toll roads are likewise in private hands.

Macquarie's success also has not gone unnoticed by U.S. investment banks. Both Goldman Sachs and JPMorgan Chase are planning their own multibillion dollar infrastructure funds. Other investment banks are not far behind, attracted by the possibility of earning lucrative transaction fees as well as profiting from returns on equity investment. "There will be room for many participants in the market," JPMorgan's chief investment officer Mark Weisdorf, was quoted as saying ("Macquarie Spawns Copycats as it Thrives Buying Roads," Bloomberg.com, March 27, 2006). There are unconfirmed reports that several large U.S. pension funds are assessing the merits of infrastructure investments, perhaps influenced by the successful experience of Australian pension funds that have provided as much as half of the capital for the Macquarie Infrastructure Group.

From the public sector's perspective, the growing willingness of private risk capital to invest in public infrastructure is (or should be) welcome news. As a recent report by Fitch Ratings points out, states and toll road authorities should be able to obtain a higher price for their assets from equity investors than from lenders. Bondholders require the certainty to be repaid regularly on specific dates, thus constraining the size of the transaction. Equity investors, on the other hand, are willing to forego immediate rewards (and assume a larger risk) in the expectation of ultimately receiving higher returns on their investment. (U.S. Toll Road Privatization: Seeking the Right Balance, Cherian George et al, March 22, 2006).

Private sector involvement may also benefit the public interest in other ways. Private toll road operators are likely to bring a higher standard of customer service, achieve more timely and cost-effective completion of planned improvements and introduce a higher rate of innovation into their operations. They offer access to private equity capital which can speed up project delivery by many years. And they can raise toll rates to control demand or fund needed improvements without being influenced by fear of a negative political reaction (although they will be constrained by the terms of the toll rate-setting schedule in their concession agreement).

So my second conclusion is that we may be on the verge of a fundamental change in our approach to financing highway infrastructure- an approach where private capital rather than tax dollars become the chief source of financing capacity expansion. Private investment, in turn, could lead to a new generation of market-driven, utility-type operating entities that would offer a high level of service and customer responsiveness.

Implications for Federal Transportation Policy

If I am correct in my conclusions that toll roads and private capital will assume a major role in future highway investment decisions, then two consequences are likely to follow:

First, the Highway Trust Fund, relieved of the burden of financing new roads, will find itself under less pressure because it will only have to meet the needs for maintenance, reconstruction and rehabilitation of existing federal-aid facilities.

Second, with states assuming primary responsibility for construction of new capacity, the federal-aid highway program will be able to focus primarily on the preservation and enhancement of the Interstate system- a vital mission in its own right.

That is not to say that taking care of existing highway assets is the only possible future for the federal-aid highway program. But if the federal role is to expand beyond custodianship of the existing system, the highway program must recapture a clear sense of mission- the kind of a purpose-driven consensus that inspired the Interstate Highway Program fifty years ago but has largely disappeared since the Interstate System's completion in the late 1990s.

One example of a new national transportation vision that could capture the public imagination might be the creation of urban networks of premium toll lanes to provide the option of reliable congestion-free travel to every resident of large metropolitan areas. Such a vision may, in fact, find its first embodiment in the National Capital Region, where both Virginia and Maryland are committed to implementing a network of express toll lanes, with Virginia using private funds. The governors of both states have agreed to jointly explore how to tie their projects into a unified region-wide network of congestion-free toll lanes. The Metropolitan Washington Council of Governments planners are currently conducting a study of such a network (See, "HOT Networks - One Step Nearer to Reality," Innovation Briefs, July/August 2005).

Another example might be constructing a national system of truck-only-toll (TOT) lanes in freight-intensive corridors in order to provide premium-level service to shippers and freight carriers. Here, the objective would be to enhance trucking productivity while helping to improve highway safety and decongest existing freeways. (Both ideas have been advanced in recent reports by my colleague Bob Poole and myself.)

As we look beyond the current surface transportation authorization, we will need to think in bold terms. That is the surest way of sustaining public support, justifying increased funding and ensuring the continued vitality of the nation's highway infrastructure.

Understanding the tax benefits of toll road concessions

The tax treatment of the up-front payment for a lease concession depends on the substance of the value being acquired. In the case of an existing toll road, the value consists of a long-term leasehold estate in aged tangible physical assets, and the right to impose and collect tolls, an intangible asset in the form of a license or franchise. The up-front payment is likely to be allocated first to the fair market value of the tangible physical assets; the balance, if any, would be allocated to the tolling right. A portion of the up-front payment also may be treated as pre-paid rent.

Assuming the payment is financed with equity and taxable debt, the portion of the payment allocable to the tangible physical assets may be depreciated on an accelerated basis according to each asset class under federal income tax rules. Most of the assets for a highway project are subject to accelerated depreciation over 15 years. However, this tax treatment is available only if the lessee (concessionaire) has "tax ownership" of the toll road. (Without tax ownership, this portion of the payment would have to be amortized over the full lease term.) A variety of factors determine whether a party that is not the owner of fee title will nevertheless be treated by IRS as the owner for tax purposes. The most important factor is whether the remaining design life of the asset at the time of the transaction is less than the term of the lease. If the lease term exceeds the design life at inception, barring other countervailing factors, the lessee should have "tax ownership". In the case of the Indiana Toll Road, for example, the lease term is 75 years for an aged asset. It is therefore likely that Macquarie/Cintra concluded it will have tax ownership and will be eligible for the accelerated depreciation. The portion of the payment allocable to the tolling right is amortized over 15 years on a straight line basis. Any portion of the payment treated as pre-paid rent is amortized over the full term of the lease.

In the case of greenfield concessions (which are likely to be more numerous than existing asset sales), there is no need to have tax ownership in order to obtain accelerated depreciation for capital expenditures.

In summary, toll road concessions can involve very substantial amounts of accelerated depreciation, normal depreciation and amortization. These benefits can, in turn, be transferred to institutional and other investors looking for tax depreciation shelters.

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