The Funding and Financing of Managed Lanes

The term "managed lanes" encompasses a variety of facility types, including high occupancy vehicle (HOV) lanes, high occupancy toll (HOT) lanes, single occupancy vehicle (SOV) express lanes, special use lanes, and truck lanes. The premise of the managed lanes concept is to increase freeway efficiency and provide free flow operations for certain freeway users by packaging various operational and design strategies. Most of these actions offer the flexibility to be adjusted to match changing corridor and regional goals.

A critical issue facing transportation officials today is the manner in which they can fund and finance these innovative facilities. The unique operating strategies on these facilities offer opportunities for innovative financing techniques that are new and untried in the transportation arena.

Funding and Financing Methods

In addition to the traditional pay-as-you-go method of reimbursement, many new funding and financing techniques exist today. Often managed lanes projects are large, complex projects, requiring the state department of transportation (DOT) to obligate funds for several years before a project even begins. As a result other projects may be pushed back even further in the funding pipeline. To help ease this burden on transportation departments, the Federal government has made available many new techniques for financing and funding projects. These new methods can generally be divided into two categories: cash management tools, and credit enhancement and/or investment tools. Figure 1 graphically represents how some of the funding mechanisms may be used for different types of projects. The shaded area indicates that managed lanes projects can encompass each of the three broad categories of marketable revenue projects, revenue projects that require assistance, and traditional non-revenue projects.

As the pyramid indicates, most projects fall into the traditional non-revenue category, which will require typical grant funding for their implementation. Only a very small percentage of projects can be marketable revenue projects on a stand-alone basis. The middle section of the pyramid is most likely where a managed lanes project would fit. Often these projects are substantial undertakings that will require leveraging monies from every available source and need a tremendous amount of agency cooperation to guide it through the development process. Every effort should be made to include any and all interested parties from the earliest stages of project planning, thereby fostering collaboration and helping identify potential financing sources and investment opportunities.

All of these methods may be used alone or in concert with one another to finance a project. Each is designed to offer more flexibility in an effort to make projects more feasible and to get them implemented sooner. The effect of these efforts has been the ability to leverage state and federal funds.

Texas Department of Transportation

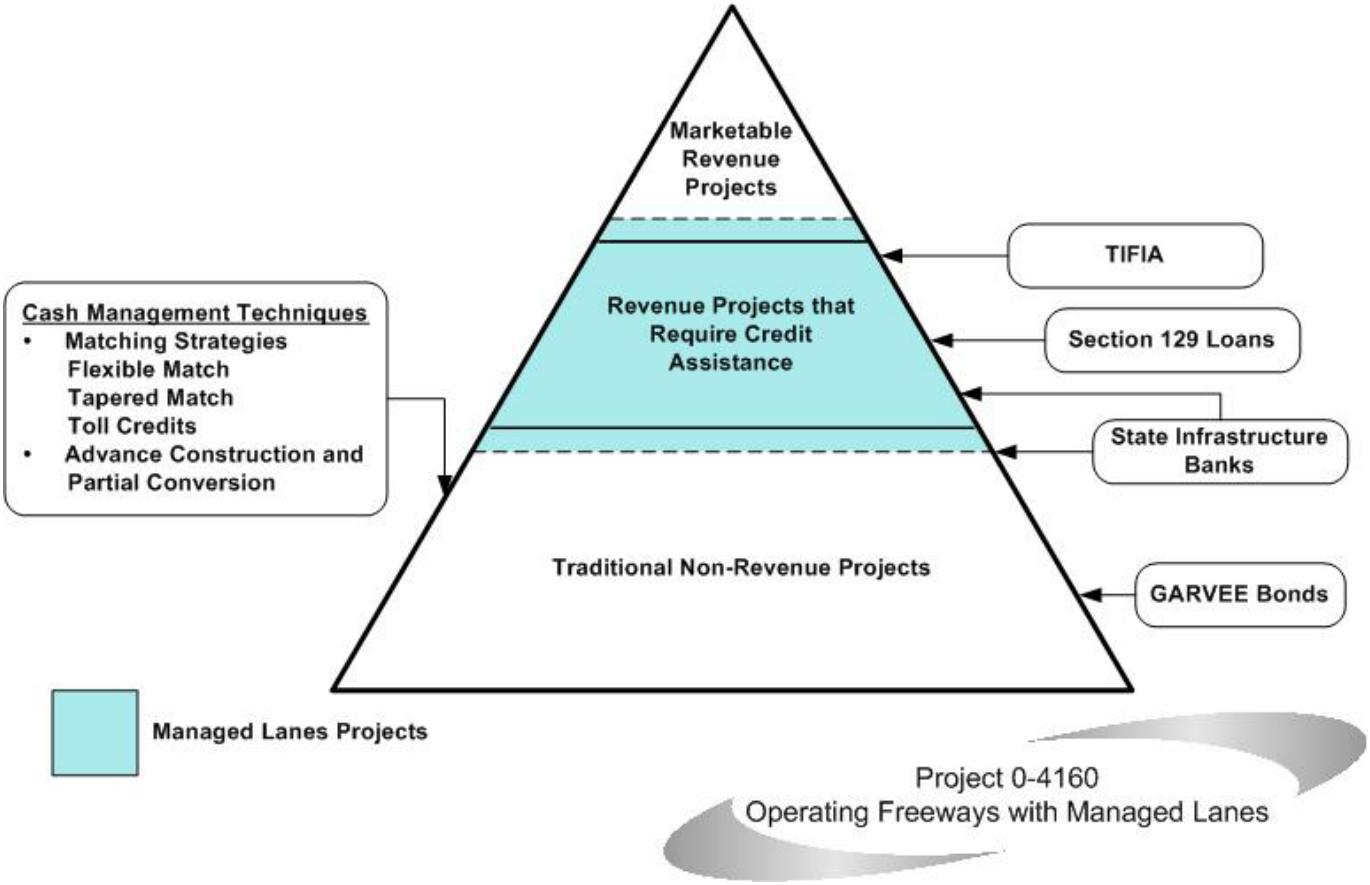

Figure 1. Funding and Financing Strategies (Adapted from *1*).

New Approaches for Developing Managed Lanes Projects

Regional Mobility Authorities

In the 2001 Texas legislative session, the legislature proposed a new law that would allow for more flexibility and control by local entities in developing projects that would meet the needs of the region. The voters approved this legislation with overwhelming support in November 2001. A Regional Mobility Authority (RMA) may be comprised of one or more counties that have agreed to the formation of the authority. The commissioners' court of each county drafts a resolution supporting the RMA, and the Texas Transportation Commission may approve the petition. An RMA would then develop, finance, construct, operate and maintain each facility.

The RMA is designed to allow projects to proceed to implementation faster than through the traditional TxDOT process. Additional legislation must be passed to give RMAs bonding authority and powers of eminent domain, but it is assumed this will be done in the next legislative session beginning in January 2003. An RMA would then have the ability to issue bonds to finance projects. Typically, these projects will be turnpike projects and thus, have a dedicated revenue stream. Most of the funding mechanisms described earlier will also be available to an RMA. Financing of certain projects through an RMA will free resources for TxDOT to devote funds to other needed transportation projects that may not be financially feasible as a toll project or, as in the case of most managed lanes projects, the available resources may be leveraged to enable a project to move forward by enhancing the financial viability of the project.

Public-Private Partnerships

Increasingly, governments are looking to the private sector for participation in these large, complex managed lanes projects. Indeed, many of the Federal programs identified in the previous chapter strive for inclusion of the private sector not only as investors but also as active participants in project development, construction, and operation.

The amount of private sector involvement spans a broad spectrum from participation in the up-front development process to nearly complete ownership, as was the case of the California Private Transportation Company (CPTC) in implementing State Route 91 (SR 91) in California. This project is often described as one of the first managed lanes projects ever implemented. There was a strong need for the project but the California Department of Transportation (CALTRANS) and the local governments lacked available funds to complete the project. The CPTC stepped in and responded to a proposal to implement the project as a congestion pricing pilot project. The franchise agreement between CPTC and CALTRANS stipulated the terms of the partnership that included:

- CPTC would be solely responsible for construction and operating costs.
- CPTC would set the toll rates for the term of the franchise agreement.
- CPTC's return on investment was restricted to a base cap of 17 percent; however, increased person throughput would add an incentive to raise the cap to 23 percent.
- A non-compete clause and other legal protections for CTPC.

The facility is now in the process of being sold back to a public entity. CPTC and the Orange County Transportation Authority (OCTA) have signed a Memorandum of Understanding to complete the transaction. Although before the sale of the franchise agreement can transpire the OCTA needs legislative authority to collect tolls on the road. There has been controversy surrounding the project including allegations of CALTRANS not meeting its mission of providing a safe transportation system for the traveling public (see appendix). However, this first foray into a public-private partnership for a managed lanes project may be deemed a success. The project succeeded in achieving its initial goal of maintaining free-flow conditions at 50 MPH in the express lanes.

Obviously, private investment backed by public debt assurance can make a project more financially feasible. In some cases, this may be the only way to make a project feasible. However, there are risks for all parties associated with any type of partnership.

From the public perspective, risks to consider include:

- Private sector financial viability – private investors must understand that for a project to be successful it must meet the goals of that community. This may conflict with the investors' expected rate of return on their investments. Expectations from and of each participant must be clearly defined from the onset of any project.
- Price gouging – the public entity undertaking the partnership must take steps to prevent even the perception of price gouging by the private company. In areas with limited choices and overwhelming need, there may be an inclination to raise prices to unrealistic levels in an attempt to recover high start-up costs as quickly as possible.
- Higher borrowing costs – the private sector often can implement a project at a lower cost than a governmental agency. However, when assessing the project costs, in most cases, it will be necessary to account for the higher cost of borrowing because private entities are generally not tax-exempt. This means that a higher taxable interest rate will be paid on bonded debt, reducing the amount of capital costs that can be financed. The concept of tax-exempt financing for public projects will be discussed in more detail later but it is important to note that a facility that is privately owned or is considered a "private activity bond" will incur taxable debt.

- Project "ownership" – each public and private entity will have its own decision-making authority. A project runs the risk of conflicting goals and objectives if this is not agreed upon at the earliest stages of project development.

The private sector investor also has risks to contend with, including:

- Public policy – the leadership of public entities, as well as elected officials, may change in the course of project construction and even after implementation. A private investor will need assurances that agreements will be honored throughout the term of the project agreement.
- Project development – a project must receive reasonable assurances that it will move forward before private partners are likely to make a commitment and risk a substantial amount of their money. This means having necessary political support, environmental clearances, and in some instances, designated rights-of-way.
- Competition – a project must have a reasonable chance of success. Private investors will view nearby transportation enhancements as competition to the project and possibly diminished return on investment *(2)*. This was probably the most contentious issue in developing and operating the SR 91 Express Lanes. The franchise agreement between CPTC and CALTRANS prohibited CALTRANS from making improvements to any facilities within the corridor that might have negatively impacted the revenue stream. This led to considerable animosity between the traveling public and all parties associated with the project. The public saw CPTC as profiteers with no regard for the greater public good and viewed CALTRANS as a public agency failing to protect the safety of the public. Obviously, equitable terms must be negotiated by each party for a partnership to be successful.

As mentioned previously, the Federal Highway Administration and the U.S. Department of Transportation are encouraging the use of public-private partnerships to finance some of the nation's most critically needed transportation infrastructure projects. Managed lanes projects may not fall into this category even though they may be necessary to relieve regional congestion. One way to make these types of projects easier to finance on a fully privatized basis would be to offer tax-exempt investment. Currently, the United States Tax Code does not allow for private companies to develop public infrastructure facilities with tax-exempt bonds if they are privately owned or controlled. Where the tax code does allow for tax-exempt bonding, such as airports, wharf facilities, and other infrastructure facilities, state volume caps on the amount of project costs that can be financed with tax-exempt bonds force these large transportation projects into the taxable capital market *(3)*.

The current tax code, in essence, discourages equity investment in these infrastructure projects, although this is quite common in other countries. However, by granting tax-exempt status for these investments, overall project costs could be lowered by as much as 25 percent *(3)*. This lower borrowing cost translates into more leverage for the revenue sources available. Congress has tried to spur private investment in highway infrastructure by addressing this issue. The 106th Congress considered the Summary of Highway Innovation and Cost Savings Act (HICSA), which would allow private companies to issue tax-exempt bonds. The Act proposed this as part of a pilot project that would allow for tax-exempt bond financing for projects. The pilot program proposed a total of $15 billion in tax-exemptions. Ultimately, this Act did not pass but may be revisited in the next session *(4)*.

This tax issue can also impact any maintenance and operation agreements that might be negotiated, especially in the case of a managed lanes project. The current tax code places restrictions on the type and term of management contracts for even government-owned projects if it is subject to a long-term management contract. These rules include a prohibition on any compensation based on a share of net profits. This places any private investment in a build–transfer-operate scenario, whereby a private entity constructs a facility, transfers the facility to government ownership and contracts for private operation into a higher-cost taxable debt market.

Another advantage to private-public financing is the equity that is created with a private sector capital investment in a project. This can be most beneficial to a managed lanes project that might require a few years to ramp-up to its full financial viability. This transfers project risk from the public sector to the private enterprise. The capital investment is also likely to reduce the amount of debt needed to implement the project. While a true

equity investment in a project by a private investor has many benefits, it is also very expensive compared to tax-exempt financing or even taxable bond financing. Few public entities can grant the necessary level of returns on investment that will attract the private investor to make a true equity investment.

Many private enterprises are looking for ways to invest in the infrastructure market without the tax burden. Ironically, one way to do this utilizes a 1963 Internal Revenue Service (IRS) ruling, Rev. Rule 63-20, which states that state and local governments have the right to finance public projects through non-profit corporations that issue debt on behalf of the government sponsor. These non-profit corporations are known as 63-20 corporations in reference to the IRS rule number. Financing large managed lanes projects through a 63-20 corporation would allow for government sponsors to contract with private companies for development and construction of a project using many of the cost-savings measures employed by the private sector. However, in order to maintain the tax-exempt status, private companies are prohibited from making a true equity investment in the project. This lack of long-term positive potential minimizes the private sector's incentive to reduce up-front costs. The non-profit corporation may also enter into management contracts with the private sector for maintenance and operation of a facility but the IRS limits the terms *(3)*.

Public-private partnerships may be the most effective means of getting large, necessary projects implemented sooner. The ability to structure a project to obtain financing in the capital market will dictate the ultimate feasibility of a project. As more 63-20 corporations are formed, the capital markets become more accustomed to highway infrastructure investment, tax advantages are maximized, and private sector streamlining practices are utilized, perhaps the United States will see the kinds of private investment in infrastructure that have benefited other countries.

Design/Build

One concept that dovetails with public-private partnerships is the notion of design/build. The concept is not statutorily allowed in Texas but the last legislature granted the Texas Turnpike Authority (TTA) permission to develop four projects using this mechanism. It is known locally as an Exclusive Development Agreement (EDA). State Highway 130 is the first major project to utilize an EDA. By employing EDAs the state hopes to shift project risk to private project developers and, at the same time, make the project more financially feasible by implementing it sooner rather than later, thereby taking advantage of associated costs in today's dollars as opposed to future dollars. The result is to attract more private investment, bring the project to implementation quickly, and reduce overall project costs.

The concept works by combining Federal, state, and local investments to encourage a private developer or developers to fill the funding gap. Usually a consortium is formed that may include design engineers, right-of-way agents, environmental specialists, financial advisors and even legal counsel. The consortium negotiates a deal with the other parties, such as the state department of transportation or the local transportation authority, that will allow it to build, operate and lease a facility. This can happen in two different ways. A consortium may build and operate a facility for a specified time and when the debt is retired ownership will revert to the public entity. Alternatively, a developer may build a facility, transfer the ownership to the governmental entity and then lease the facility from the entity.

TTA is partnering with the consortium to do the design/build and assist in right-of-way acquisition. The authority will have ownership of the facility and will also be responsible for operations. TTA utilized several financing mechanisms to assemble the financial plan for SH 130. The use of an EDA added value to the project because the capital markets regard protections such as guaranteed price, guaranteed start date, insurance, surety bonds and other contractual requirements of the consortium as minimizing risks.

Design/build arrangements lend themselves to large, complex projects, like a managed lanes project. Most often these projects include a toll operation that allows a private investor to see a return on investment and usually this can be accomplished sooner when using a design/build technique.

The South Carolina Department of Transportation tried a slightly different approach for one of its "27 in 7" projects. The department identified a need for a project and rather than doing the original design work in-house, the department identified the available funding and issued a requests for proposal that asked the developers what they could build for the amount of money that was available. The result is the $232 million Carolina Bays Parkway *(5)*.

Design/build also encourages innovation on the part of the consortium. This is critical to managed lanes projects. Managed lanes are a fairly new concept that will require new technologies. Private companies will now have an incentive to invest in developing new technologies that can be used in this arena. Allowing the private sector to invest in the project will have added benefits by taking advantage of more efficient management and operations.

Other Considerations

Shadow Tolls

A shadow toll is a per-vehicle payment made to a private project developer. It is essentially a toll but in the absence of tollbooths and the fact that motorists do not directly pay a toll, the term shadow tolling was coined *(4)*. In the case of shadow tolling, an entity, usually a government entity, awards a concession to a private developer to build, operate, and maintain a facility. The government then makes payments to the private developer. The payments may be based on vehicle type, traffic volume and service or distance traveled. This shifts some of the risk associated with revenue from traffic volume to the developer and encourages expeditious project implementation. The faster a roadway is open the sooner a developer can start collecting payments.

The payments may come from many different sources, such as a supplemental tax or the general revenue fund. They can also be subordinated debt to other revenue streams. Pledging shadow tolls may also encourage private investment in start-up projects that have uncertain traffic projections. Typically traffic is easier to predict on a "free" road as opposed to a tollroad. Where gaps may occur, a government entity can pledge a guaranteed amount to make up any losses. A cap on profits can also be negotiated to prevent any real or perceived windfall by the developer.

Shadow tolls may be especially useful in areas where transportation improvements are needed but tolling is politically or socially unacceptable. This concept is also useful for reconstruction or upgrading of projects. This technique is better at attracting private capital investment in reconstruction because historical data on traffic volumes is available. Shadow tolls can also be linked to road maintenance thereby providing an incentive for the private investor to build a high quality project *(6)*.

Lastly, shadow tolls may be an appropriate method to maximize the efficiency of a managed lanes project. Many toll authorities face social pressures to alter their operations to achieve environmental or social objectives or to better manage demand. These pressures may include reducing tolls for high-occupancy vehicles, reduction of tolls for off-peak travel, or construction of other special use lanes. However, where this is introduced after project financing, bond covenants will prohibit any actions that would cause toll revenues to drop below specific levels. Shadow tolling may be a mechanism for supplementing any calculated revenue loss per vehicle should these measures be implemented.

Special Assessment Districts

Another concept, similar to shadow tolling is the notion of special transportation assessment districts. This mechanism of financing may be a key to managed lanes. Special assessments can take a two-pronged approach. In this scenario the recipient of the project benefits pays for a proportional cost of the project. For instance, a special assessment district could be created and a tax levied on the property owners in the district if a project was of substantial and primary benefit to this particular district. This mechanism may be useful for a managed lanes project that includes a transit component. For instance, a Bus Rapid Transit (BRT) line and station could be part of a transportation network. The rail station may influence land use that results in a high-density development. This

development would receive a substantial benefit from being part of the network, therefore businesses or residents in the district could be charged a special assessment.

Tax Increment Financing

Similar to special assessment districts is Tax Increment Financing (TIF). In this approach, a special district is created and improvements are made within the district. Usually the improvements stimulate private sector development. Before development begins or improvements are made, the tax rate is frozen. The taxes continue to be paid but the difference between the original assessed tax and the tax on assessed value after the improvements (the increment) is deposited into a special account that is used to pay off the bonds that were sold to finance the improvements. This money can also be leveraged for more improvements in the district *(4)*.

Development Impact Fees

These fees function in much the same way as special assessment districts. In this case, new infrastructure is built or improved with money that developers pay. The term developers, in this instance, refer to business developers or land developers rather than a project developer. Developers may pay the required fees in cash or by donating rights-of-way or anything else that the developer and the project sponsor may have negotiated. This infusion of cash and/or equity can greatly increase the financial viability of a project. The amount of development impact fees that will be collected over a period of time can be projected and the proceeds can be pledged to pay off bonds that may be issued to finance the project. Both the San Joaquin Hill and Foothill/Eastern Tollroads were implemented with development impact fees *(7)*.

Special Assessment Districts, Tax Increment Financing and Development Impact Fees are complicated methods for financing managed lanes. Consideration should be given to goals of the project. Often these mechanisms may be more appropriate for a reconstruction project or to finance maintenance and operations of a facility. The ability of a new or added capacity project to stimulate economic development is a hotly debated issue. Often developers will recognize this opportunity and will make an equity investment in the project. Concession or franchise leases operate in much the same manner. The private sector beneficiary makes an investment in the project and increases the financial viability of the project.

Other

There are many other innovative mechanisms that may provide financial support for a managed lanes project. These might include road branding, utility franchise agreements, corporate sponsorship, or privatization of rest areas. Again, a successful project will match the financial package to the project goals.

It is also important to explore every possible source of funding. Managed lanes that include an HOV or BRT component are eligible for funding from the Federal Transit Administration using Section 5309 funds.

Recommendations

Funding and financing mechanisms available today reflect a shift from the traditional means of grant-based funding and address the realities of certain funding shortfalls. Federal and state governments, as well as state departments of transportation, are working collaboratively with other local entities and the private sector to maximize the effectiveness of every transportation improvement. Managed lanes are an innovative approach that seeks to balance the fiscal constraints of building new infrastructure, the demand for socially responsible development and the gridlock that stifles drivers on the most congested roadways.

The key to developing a successful project is to identify the project goals and match the financing to the purpose. Managed lanes that involve a toll component are typically using it as a demand management tool, more so than a financing mechanism. Because managed lanes utilize various operating scenarios in a flexible way to maximize the operational efficiency of a facility, they are inherently more risky to investors. As such, tolling

exclusively for financing purposes can be a challenge in a managed lane situation, depending upon other goals of the project that may be at odds with generating revenue.

Typically, investors will want to have some assurances that the debt service will be paid and that rate covenants will be maintained. Therefore, the question becomes, "what is being managed?" Again, this relates to the goal of the project. Is the facility being managed to increase high-occupancy vehicle usage? Is the facility being managed to increase transit use? Is the facility being managed to decrease single-occupant vehicle use? Is the facility being managed to provide an incentive to alternate fuel vehicles? Or is the facility being managed to maximize revenue generation?

Each of these questions must be answered when considering the financing for a managed lanes facility. Additionally, the relative importance of each answer must be weighed because the project goals may seek to do all of these things and more. The answers and the weight of each will determine the best route of financing. Each facet must work together to assemble a financing package that will result in a financially feasible project. The goals of the project will determine the type of cost-benefit analysis used in assessing the potential performance of a project.

Each of the financing mechanisms described here attempts to enhance the financial feasibility of a particular project. They can be combined and structured to receive the most possible benefits in the most cost-effective manner.

The U.S. Department of Transportation has achieved tremendous advances in making large, complex projects, such as managed lanes projects, more feasible. It has developed numerous programs to capitalize on all available resources. It has made leveraging Federal monies more accessible. Now, however, policy makers should make a concerted effort to change or update other laws and regulations that inhibit project development. Specific items to be addressed are:

- allowing for tax-exempt financing for "public good" projects,
- limiting personal liability of board members of "63-20 corporations,"
- modifying the limitations in the management contracts of tax-exempt financing,
- allowing for private equity investments in a project being developed with tax-exempt financing,
- clarifying conflicting rules among agencies on what monies can be used for which types of projects, such as Federal Transit Administration restrictions on tolling SOVs on HOV lanes, and
- passage of tax law that allows for lenders to receive tax credits rather than forcing them to rely on tax-exempt debt.

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For More Details . . .

Related Reports:
Report 4160-9, *The Funding and Financing of Managed Lanes*

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