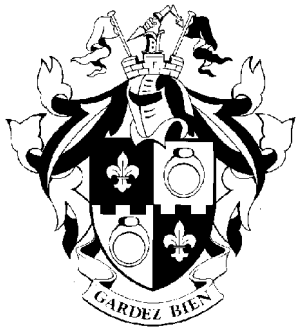
# AN OVERVIEW OF PUBLIC-PRIVATE PARTNERSHIPS IN ROAD, PARKING, AND TRANSIT PROJECTS




**OFFICE OF LEGISLATIVE OVERSIGHT**
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Kristen Latham
Aron Trombka

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**OFFICE OF LEGISLATIVE OVERSIGHT REPORT 2010-6**
**JANUARY 26, 2010**

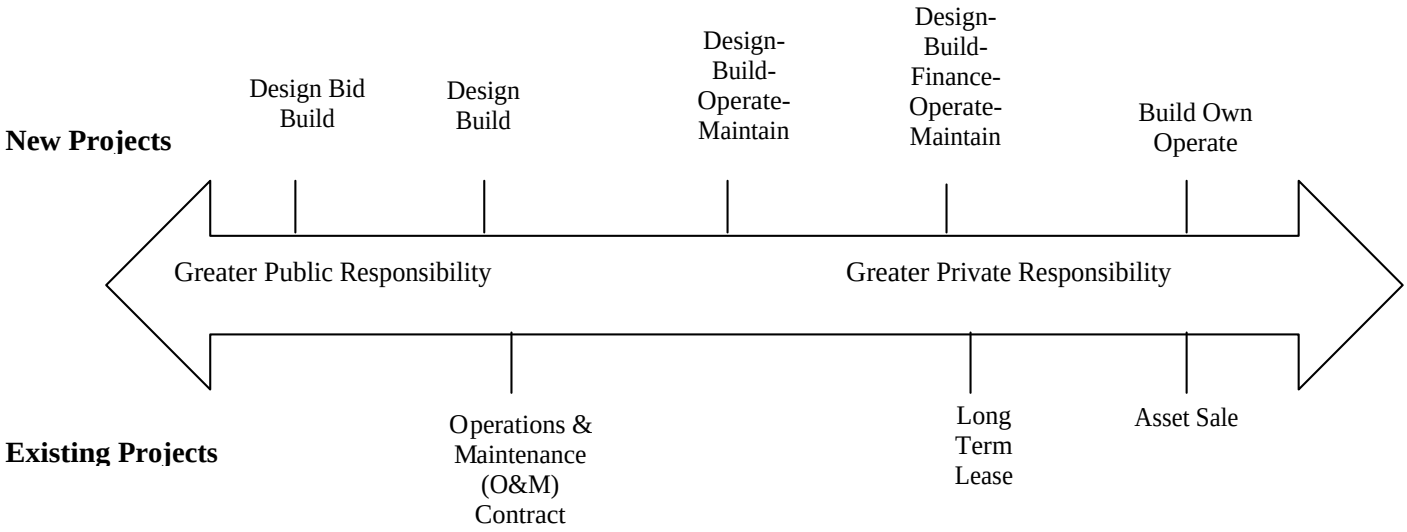
State and local governments face a widening gap between increasing transportation system costs and declining public funds. There is growing interest in exploring alternative approaches to finance and operate public assets, including public–private partnerships. This report by the Office of Legislative Oversight (OLO) responds to the Council's request to identify the benefits, risks, and challenges associated with public-private partnership agreements for transportation projects in roads, parking, and transit.

## Overview

The general accepted definition of a public-private partnership (P3) is a contractual agreement between public and private sector partners where a government agency contracts with a private entity to construct, operate, finance, maintain, and/ or manage a facility or system. While the public sector usually retains project ownership, the private sector is given additional decision rights as to how the certain tasks are completed or how the project is operated.

P3 arrangements span a continuum of public/ private responsibility. The diagram below depicts several P3 arrangements, with increasing levels of private sector responsibility from left to right. The approaches range from more traditional procurements such as *Design Bid Build* and *Operations and Maintenance (O&M) Contracts* to full privatization of a project such as *Build Own Operate* and *Asset Sale*. It is not unusual for a P3 agreement to reflect a combination of two or more of these methods. For a more detailed definition of each public-private partnership arrangement identified, see Chapter II (page 5).

**Continuum of Public-Private Partnership Arrangements**




**Public-Private Partnerships in the United States.** Recently, more interest exists in P3s for transportation projects because: (1) the transportation infrastructure is aging; (2) competition for limited public financing is increasing; and (3) the appeal among public sector decision makers is growing.

Although numerous examples of public-private partnership projects exist worldwide, the number of operational U.S. transportation partnership projects is relatively limited. Nationally as of 2008, there are only 15 private roads and a handful of transit and parking projects in operation.

## Legal Framework

The Federal government promotes the establishment of public-private partnership transportation projects with numerous laws and programs. Through these measures, the Federal government has:

- Identified the private sector as a source for funding transportation improvements;
- Increased funding flexibility and relaxed funding restrictions for toll roads;
- Allowed the private sector to own toll facilities;
- Established credit assistance programs for private sector sponsors; and
- Encouraged the use of innovative financing methods.

To further encourage P3s, 25 states (including Maryland) have adopted some form of enabling legislation for transportation-related public-private partnerships. Some of these laws only authorize individual projects whereas others broadly authorize all types of P3s.

The Code of Maryland Regulations authorizes the State to enter into P3 agreements with private entities. While the Code does not expressly authorize use of P3s for highways, the Maryland Attorney General has ruled that the law does not prohibit "a private entity from owning, constructing, operating, or maintaining a highway." The General Assembly also established the Transportation Public-Private Partnership Program to encourage the private sector's involvement in the acquisition, financing, construction, and operation of new and existing transportation facilities. The program primarily targets transit-oriented development projects.

## Financing

Historically, state and local governments financed transportation infrastructure with a combination of state and local taxes and federal grants from the Federal Highway Trust Fund (funded by a federal gasoline tax). In recent years, governments have looked into "innovative finance mechanisms" – defined as alternatives or supplements to traditional, tax- or grant-based funding strategies – to fund transportation projects. The primary types of financing used in public-private partnership development are summarized below.

**Federal Credit Assistance.** To expedite the development of state and local transportation projects, the federal government has created a financial market that gives private entities access to credit, as a loan or a federal subsidy. Specific federal programs to finance P3 projects through credit assistance include: the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program; the State Infrastructure Bank Program (SIB); and Section 129 Loans.

**Bonding and Debt Instruments.** Traditionally, the transportation bonds used to finance local highways and transit systems were municipal bonds, backed by the taxing authority of the state or local government. More recently, to access increased bond funding capacity, these governments have issued bonds backed by funding sources not previously used to secure debt. Examples of these approaches include: limited and special tax bonds; revenue bonds; private activity bonds; tax credit bonds; and anticipation notes.

**Other Mechanisms.** Some examples of other financial tools that state and local governments have used to structure the private financing and/ or ownership of transportation projects include: flexible match, pass-through tolls, and availability payments (payments based on project milestones or performance standards).

For more explanation of the financial mechanisms identified, see Chapter II (on page 12).

## Benefits, Risks and Challenges

**Benefits.** The involvement of the private sector in the development of transportation projects can provide additional financing options and operational flexibility to achieve a project's objectives. Some frequently cited benefits of P3s are:

- A Quick Influx of Cash. Contracts often stipulate a large upfront payment that local officials can use to close budget gaps or free up resources for other needs.
- Lower Project Costs. Agreements can lead to cost efficiencies based on assumptions about lower direct costs (e.g., cost saving construction methods), lower indirect costs (e.g., lower overhead expenses), and lower life-cycle costs (e.g., from minimizing long-term costs).
- Access to Non-Traditional Funding. Partnerships can include the use of private equity and federal and state financing options/programs, which promote P3s such as non-traditional bonding authority, federal credit assistance, and state infrastructure banks.
- Transferring and Sharing of Risk. Partnership arrangements may require a private firm to assume design, construction, financing, operations, and maintenance risks. If a private firm has more capacity to manage or diversify these risks, then public responsibility for these risks can be lowered.
- Increased Mobility on Roads. Because private partners are not directly accountable to the taxpaying public, a private company may have more flexibility to use financing techniques such as congestion pricing to reduce traffic congestion.
- Improved Quality. P3 arrangements can provide the flexibility to maximize the use of innovative technology and the ability to select the best materials in order to improve the quality of a project.

**Risks and Challenges**. Shifting financial and operational project risks to a private firm under a public-private partnership may result in the public getting less value or paying more compared to more traditional public financing. A P3 arrangement can also limit a local government's ability to make operational project changes or changes that would further other public policies. Some frequently cited risks and challenges of P3s for transportation projects include:

- Difficulty in Estimating Value. Determining the long-term value of a transportation project can be a complex and imprecise activity. An agreement that incorporates a forecast that underestimates a project's long term value can lock in a long-term public loss.
- Additional Costs to the Public Sector. P3s can result in extra costs to the public sector such as costs to review, select, and monitor the partnership; and the potential foregone tax revenue when tax-exempt debt is issued.
- Higher Cost of Private Financing. Generally, the borrowing costs of private debt are higher than public tax-exempt debt. This cost difference can result in these higher costs being passed through to the public in the forms of a lower up-front payment or higher user rates.
- Financial Difficulties by the Private Sector Partner. If a private sector partner can no longer finance the operations and defaults on the partnership agreement, the public partner may have to step in and identify funds to finance the operating costs.
- Higher User Rates for Transportation. Because the private sector will seek a return on its investment, toll or fare rates may be higher than they would have been with public financing.
- Loss of Policy Control. Government policies in all policy areas are interconnected; therefore a P3 agreement may have a long-term impact on future policy, particularly transportation, economic, or environmental policies.

## Case Studies

For this report, OLO reviewed ten case studies of road, parking and transit P3 agreements. In each case, the private sector had significant control over management and financing of the project.

- Lease of the Chicago Skyway
- Lease of the Indiana Toll Road
- Construction of the Dulles Greenway
- Construction of the Pocahontas Parkway
- Proposed Lease of the PA Turnpike
- Lease of Chicago Parking Garages
- Lease of Chicago Parking Meter System
- Proposed Harrisburg Parking Lot Lease
- Construction of Hudson-Bergen Light Rail
- Construction of Las Vegas Monorail

Overall, OLO found these P3 projects produced mixed results. Among the successes:

- Chicago received a large amount of revenue that it used to fund other immediate needs of the City.
- The Dulles Greenway was finished ahead of schedule and on budget.
- Almost all of the projects were funded primarily through innovative financing mechanisms, including some projects which were funded with no public dollars.

Many P3 arrangements encountered problems. Among the challenges these P3 projects faced:

- Many of the selected projects did not meet their projected revenue and traffic forecasts.
- A lack of public support led to the rejection of the PA Turnpike and Harrisburg Parking leases.
- All of the selected projects have increased user rates since implementation.
- The Las Vegas Monorail revenues are not sufficient to covering the facility's debt payments.
- According to an Inspector General report, the City of Chicago received $974 million less than the long-term value of the parking meters in its P3 lease agreement.

## Recommended Steps for Considering a Public-Private Partnership

Not all transportation projects are suitable or feasible for P3 agreements. In the midst of competing policy objectives, local/state government officials must first assess the feasibility of each P3 project proposal, and then carefully structure an agreement. The checklist below recommends steps for public decision makers to follow when they are considering whether a P3 is the best approach for delivery of a transportation project; and if so, how an agreement should be structured.

**Step 1:** **Identify project goals and funding availability.** Examine the transportation, economic development, and environmental goals of the project; determine the public funding available for a project; and identify the specific core public policies to be furthered by a P3 approach.

**Step 2:** **Evaluate whether the project is suitable for a public-private partnership.** Assess whether a project is a candidate for a P3 agreement by determining: whether the authority exists to enter into a P3 agreement; whether the government has the capacity to provide sufficient oversight or financial support, and whether the proposed private sector partners have the technical resources, management expertise, and financial capacity to enter into a partnership.

**Step 3:** **Identify safeguards needed to protect the public interest.** Protect the public interest by: ensuring proper project valuation; implementing project performance standards, measures and milestones; assessing how the project impacts other policies; and funding competent oversight.

**Step 4.** **Select suitable financial mechanisms for the public-private partnership.** Examine all financial aspects of the P3 agreement such as revenue forecasts, available financing options, direct and indirect project costs, assignment of financial risks, and use of revenue.

**Step 5:** **Develop a process to ensure transparency.** Ensure that detailed information about the P3 project and agreement is understandable and publicly available. Provide opportunities for public feedback, both during the selection process and after project implementation.

Determining the appropriate sharing of responsibilities, risks, and rewards in a P3 poses both a challenge and opportunity for the public sector seeking to improve their transportation system.

**OFFICE OF LEGISLATIVE REPORT 2010-6**

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# CHAPTER I: AUTHORITY, SCOPE, AND ORGANIZATION OF REPORT

## A. Authority

Council Resolution 16-1407, *FY 2010 Work Program for Office of Legislative Oversight*, adopted July 21, 2009.

## B. Purpose and Scope

In recent years, state and local governments have simultaneously faced increased demand for transportation services and severely constrained budgets. As one strategy for meeting these challenges, more jurisdictions are considering the use of public-private partnerships.

Public-private partnerships (known as "P3s") are agreements between a public agency and a private sector entity to share responsibility for the development, operations, management, and/or financing of projects. Public-private partnerships come in many different forms; for example, a P3 can be formed to accomplish a single task or to convey full ownership and operational responsibility of a facility to the private sector.

This report by the Office of Legislative Oversight (OLO) responds to the Council's request to identify the fiscal, policy, and administrative advantages and disadvantages of public-private partnerships for transportation projects. The focus is on the implementation of P3s in road, parking, and transit projects for which the private sector is given significant decision-making authority in construction, management, and/or operations. Specifically, the report:

- Summarizes the history and legal framework of public-private partnerships;
- Provides an overview of management structures and financing mechanisms available for public-private partnerships;
- Details the potential benefits, risks, and challenges associated with public-private partnership agreements; and
- Provides examples of public-private partnerships in road, parking, and transit projects from various jurisdictions across the country.

The report concludes with recommended steps that public sector decision makers should take to determine whether the use of a P3 is a viable option for the delivery of a transportation project.

## C. Organization of Report

**Chapter II, Background,** provides information on definitions, history, legal framework, and financing mechanisms related to public-private partnerships for transportation projects.

**Chapter III, Benefits, Risks, and Challenges of Public-Private Partnerships in Transportation,** identifies the commonly cited benefits and risks of public-private partnerships in transportation.

**Chapters IV through VI** contain case studies of public-private partnerships for roads, parking, and transit projects. The table below lists the projects reviewed.

| **Chapter IV: Roads** | **Chapter V: Parking** |
|---|---|
| 1. Lease of the Chicago Skyway<br>2. Lease of the Indiana Toll Road<br>3. Construction of the Dulles Greenway<br>4. Construction of the Pocahontas Parkway<br>5. Proposed Lease of the Pennsylvania Turnpike | 1. Chicago Parking Garage Lease<br>2. Chicago Parking Meter Lease<br>3. Proposed Harrisburg, Pennsylvania Parking Lot Lease<br><br>**Chapter VI: Transit**<br>1. Hudson-Bergen Light Rail<br>2. Las Vegas Monorail |

**Chapter VII** summarizes OLO's findings; and **Chapter VIII** outlines the recommended steps that public sector decision makers should take to determine whether the use of a public-private partnership is a viable option for the delivery of a transportation project.

## D. Methodology

Office of Legislative Oversight staff members Kristen Latham and Aron Trombka conducted this study. OLO gathered information through document review and Internet research. OLO also consulted with staff from the County Government Departments of Finance and Transportation, M-NCPPC, and the Maryland Transportation Authority.

## E. Definitions

The discussion of transportation public-private partnerships in this report uses some technical terms that readers may not be familiar with. OLO adopted the definitions used by the Federal Highway Administration in its "User Guidebook on Public-Private Partnerships," available online at http://www.fhwa.dot.gov/ipd/pdfs/ppp_user_guidebook_final_7-7-07.pdf.

For reference, Appendix C contains a copy of the Federal Highway Administration's glossary.

## F. Acknowledgements

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## CHAPTER II: TRANSPORTATION PUBLIC-PRIVATE PARTNERSHIP BACKGROUND

This chapter provides background information on use of public-private partnerships for transportation facilities and services.

- **Part A, Definition of Public-Private Partnership**, defines the meaning of the term public-private partnership;
- **Part B, History of Public-Private Partnerships**, presents a brief summary of the history of the use of public-private partnerships in the United States;
- **Part C, Types of Public-Private Partnerships**, outlines the most prevalent types of public-private partnerships in transportation;
- **Part D, Laws and Programs that Support Public-Private Partnerships**, summarizes the Federal and state laws and programs that promote the use of public-private partnerships in transportation; and
- **Part E, Financial Mechanisms that Support Public-Private Partnerships,** summarizes financing tools that support the implementation of public-private partnerships.

### A. Definition of Public-Private Partnership

Public-private partnerships (P3s) are agreements between a public agency and a private sector entity to share responsibility for the development, operations, management, and/or financing of facilities and services. Public-private partnerships can range from contracting out a single task to conveying facility ownership and operations responsibility to the private sector. As it relates to transportation facilities and services, the U.S. Department of Transportation's defines P3 as a:

> A public-private partnership is a contractual agreement formed between public and private sector partners, which allow more private sector participation than is traditional. The agreements usually involve a government agency contracting with a private company to renovate, construct, operate, maintain, and/or manage a facility or system. While the public sector usually retains ownership in the facility or system, the private party will be given additional decision rights in determining how the project or task will be completed.[1]

As discussed in Part C of this chapter, this report focuses on partnerships in which the private entity has management responsibility and financial liability for performing all or a significant number of functions in connection with a project.

### B. History of Public-Private Partnerships in the United States

The use of public-private partnerships is not new to transportation development in the United States. Many of the earliest major roads in the U.S. were private toll roads, including the Philadelphia and Lancaster Turnpike, the first turnpike in the nation.[2] Similarly, local and intercity coach (horse and carriage) services were some of the first privately-owned transit services.[3]

[1] United States Department of Transportation 2004
[2] National Cooperative Highway Research Program 2009
[3] United States Department of Transportation 2004

However, over the course of the 19th century and into the 20th century, private sector involvement in the development of transportation declined as states and the Federal government increased the pace of transportation construction.[4] In addition, the establishment of a national vision for transportation (including the National Highway System) further diminished the role of the private sector in transportation development.[5]

In the 1980s, the private sector re-emerged as a player in transportation as funding became more constrained while demand increased.[6] Throughout the 1980s, states began to explore the use of P3s for projects with tight timetables or high impact on the traveling public. In addition, several federal laws established a new vision for transportation, including greater state flexibility in using non-traditional procurement methods for transportation projects.[7] These laws are summarized in Part D of this chapter.

According to the Transportation Research Board, the recent convergence of several trends in transportation has lead to increased interest in public-private partnerships in the U.S.:

1. Aging of the transportation infrastructure;
2. Increased facility construction and maintenance costs;
3. Decreased availability of revenue for transportation investment; and
4. Increased demand for automobile travel.[8]

A discussion of the advantages and disadvantages of public-private partnerships appears in Chapter III.

## C. Types of Public-Private Partnerships.

Transportation public-private partnerships can take many forms, varying in the level of private sector involvement and responsibility. In addition, public-private partnerships are also characterized as either "greenfield" or "brownfield" arrangements; the former refers to partnerships associated with new infrastructure and the latter refers to agreements for existing facilities.[9]

Table 2-1 summarizes the major P3 approaches used for transportation facilities. These definitions are adapted from the National Cooperative Highway Research Programs. The types of P3s listed in the table are sorted from least to greatest private sector involvement. Often, a project is a hybrid of two or more of these methods.

**This report focuses on public-private partnerships that have significant private sector involvement such as those listed in Table 2-1 under "Greater Private Sector Responsibility" and "Full Privatization." In particular, the discussion of P3 advantages and disadvantages (Chapter III) and the P3 case studies (Chapters IV-VI) address arrangements where the private sector assumes full or partial responsibility for project operations, management, and/or financial risk.**

[4] Ibid.
[5] National Cooperative Highway Research Program 2009
[6] United States Department of Transportation 2004
[7] National Cooperative Highway Research Program 2009
[8] Ibid.
[9] General Accounting Office 2008

**Table 2-1: Approaches to Public-Private Partnerships**

| Approach | Description |
|---|---|
| **Greater Public Sector Responsibility** | |
| Design-Bid-Build | Traditional procurement in which the public sector awards design and construction to private firms. |
| Design-Build | Combines the design and construction phases into a single fixed-fee contract. The private sector assumes responsibility for design work and all construction activities. The public entity retains responsibility for financing, operating and maintaining the project. |
| Private Contract Fee Services/ Operations and Maintenance Contract | Public sector contracts with the private sector to perform services (i.e., planning and environmental studies, program and financial management, operations and maintenance, etc.). |
| **Greater Private Sector Responsibility** | |
| Design-Build-Operate-Maintain (DBOM), Build-Operate-Transfer (BOT), or Build-Transfer-Operate (BTO) | Private sector designs, constructs, operates, and maintains the facility for a specified period of time meeting specified performance requirements. The public sector retains ownership and financial risk, and compensation to the private partner can be in the form of availability payments.[10] |
| Design-Build-Finance (DBF), Design-Build-Finance-Operate (DBFO), or Design-Build-Finance-Operate-Maintain (DBFOM) | Similar to DBOM, with the addition of the private sector provides some or all of the project financing. The public sector retains ownership of the facility and the private sector compensation is often in the form of tolls. |
| Long-Term Lease Agreements/Concessions | Publicly financed existing facility is leased to the private sector for specified time. Usually the private sector pays an upfront fee in return for future generated revenue. The private sector operates and maintains the facility. |
| **Full Privatization** | |
| Build-Own-Operate (BOO), Build-Own-Operate-Transfer (BOOT) | Design, construction, operation, and maintenance of the facility are the responsibility of the private sector. The private sector owns the facility and retains all operating revenue and is responsible for all risks. The Build-Own-Operate-Transfer method is similar, but the project is transferred to the public after a specified time period. |
| Asset Sale | Ownership of a publicly financed facility is fully transferred to the private sector indefinitely. |

Source: National Cooperative Highway Research Program, based on FHWA's "User Guidebook on Implementing Public-Private Partnerships for Transportation Infrastructure Projects in the United States."

[10] Payment by a public project sponsor (a state DOT or authority, for example) based on particular project milestones or facility performance standards.

## D. Laws and Programs that Support Public-Private Partnerships

Traditionally, the Federal and state governments have built transportation projects through public sector funding. However, as interest has grown in the involvement of the private sector in transportation development, governments have implemented measures to support the creation of P3s. This section summarizes Federal and state laws and programs that enable and support the use of public-private partnerships in transportation.

### 1. Public-Private Partnership Related Laws

**Federal Law.** The United States Code sets federal policy for transportation:

- **Title 23 of the U.S. Code** is the highway code that includes many laws governing the Federal-Aid Highway Program; and
- **Title 49 of the U.S. Code** governs various transportation related programs and agencies, including the Department of Transportation, general and intermodal programs, interstate commerce, rail and motor vehicle programs, aviation programs, pipelines, and commercial space transportation.

Federal law contains provisions that support the use of alternative procurement methods for transportation projects. The Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURAA) addresses a comprehensive transportation policy including federal funding, special demonstration projects, and interstate transportation planning.[11] Three subsequent laws, summarized in Table 2-2, further expand transportation policy to include state and local flexibility, environmental protection, and the promotion of innovative procurement.

[11] National Cooperative Highway Research Program 2009

**Table 2-2: Significant Federal Transporation Legislation Related to Public-Private Partnerships**

| Law | Description | Key Features |
|---|---|---|
| Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). | First major law that outlined an overall intermodal approach to highway and transit funding by supporting a collaborative planning process between federal, state, and local transportation entities. | Public-Private Partnership Key Features<br>• Private sector is tapped as a source for funding transportation improvements<br>• Funding restrictions relaxed for toll roads<br>• Allowance for private sector to own toll facilities<br>• Increase in funding for research and training with private sector<br>Other Key Features<br>• National Highway System (NHS)<br>• More flexibility for state and local governments<br>• Funding of new technology<br>• Enhancement of the environment |
| Transportation Equity Act for the 21st Century 1998 (TEA-21). | Continuation of effective prior programs while implementing new initiatives to improve traffic safety, protect the environment, and promote growth through efficient and flexible transportation. | Public-Private Partnership Key Features<br>• Increasing funding flexibility<br>• Credit assistance for public-private sponsors such as TIFIA, SIB, and Flexible Matching[12]<br>Other Key Features<br>• Enhancement of the environment<br>• Assurance of a guaranteed level of federal funds for surface transportation<br>• Strengthening of safety programs<br>• Investment in transportation research |
| Safe, Accountable, Flexible, Efficient Transportation Equity Act 2005 (SAFETEA-LU)* | Continuation of a strong fundamental core transportation program. | Public-Private Partnerships Key Features<br>• Innovative financing methods such as private activity bonds and state investment banks[13]<br>• Allowance of private sector partners to be involved in the project definition process for design-build projects<br>Other Key Features<br>• Establishment Safety Improvement Program<br>• Increased flexibility for states to use road pricing<br>• Promotion of real-time traffic management<br>• Improvement of the environmental process for transportation projects |

*****SAFETEA-LU was set to expire on September 30, 2009. However, Congress extended the legislation for three months. As of this writing, SAFETEA-LU has not been reauthorized.
Source: United States Department of Transportation 2007, General Accounting Office 2008, ISTEA, TEA-21, and SAFETEA-LU Homepages

[12] These financing tools will be discussed in more detail in Part E of this Chapter.
[13] These financing tools will be discussed in more detail in Part E of this Chapter.

National Environmental Policy Act 1969 (NEPA). While NEPA does not directly involve transporation policy, the law does require that federal agencies consider environmental impacts of their proposed actions and reasonable alternatives to those actions. Transportation projects for which any portion of financing involves federal funding is required to meet NEPA guidelines. According to NEPA, those receiving federal funding must prepare a detailed statement known as an Environmental Impact Statement (EIS), which includes a summary of any short and long-term environmental impacts and alternative proposals.[14]

**Federal Transportation Public-Private Partnership Programs**. Since the 1990s, the Federal government has encouraged the use of public-private partnerships through an array of programs that provide research, funding, and programmatic supports for P3 pilot programs. Table 2-3 summarizes four federal programs to support public-private transportation partnerships.

**Table 2-3: Federal Transportation Public-Private Partnership Programs**

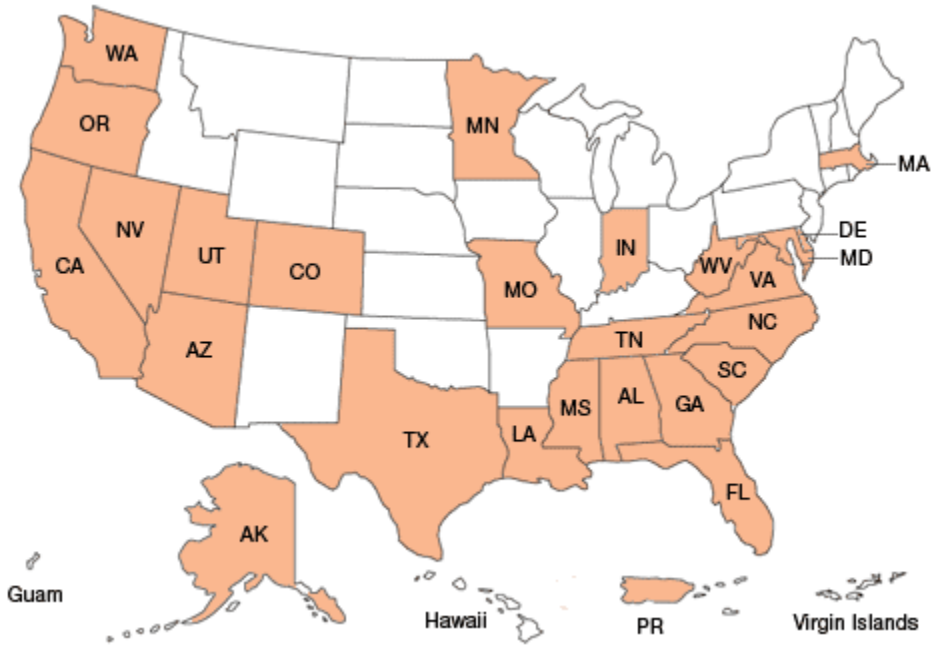
| Program | Brief Description |
|---|---|
| **Special Experimental Project – 14 (SEP-14)** | Through the Special Experimental Projects – 14, the FHWA allows states to evaluate non-traditional contracting techniques. All transportation projects receiving federal aid in which a non-traditional contracting process (a process that deviates from the competitive bidding provisions in the US Code), must receive SEP-14 approval from the FHWA. Non-traditional contracting practices include: cost-plus-time bidding, lane rental, design-build contracting, warranty clauses, life cycle cost bidding, and qualifications-based bidding.[15] |
| **Special Experimental Project – 15 (SEP-15)** | Through the Special Experimental Projects – 15, the FHWA identifies approaches for public-private partnership that advance the efficiency of transportation projects. The program allows the Secretary of Transportation to waive the requirements of the Highways section of the US Code on a case-by-case basis in order to facilitate public-private partnerships. Specifically, SEP-15 allows for innovations in the acquisition of rights-of-way and permits the use of innovative financing techniques.[16] |
| **New Starts Program** | New Starts is the Federal government's primary funding resource for supporting locally planned and operated transit capital investments. Administered by the Federal Transit Administration, the program funds new and extensions to existing transit systems including local commuter rail, light rail, heavy rail, bus rapid transit, streetcar, and ferry transit systems.[17] |
| **Public-Private Partnership Pilot Program (Penta-P)** | The US Department of Transportation Public-Private Partnership Pilot Program (Penta-P) is designed to encourage more private sector involvement and investment in new fixed guideway transit capital projects. Penta- P projects include an array of transit projects such as design build, design build operate and maintain, fixed price contracts, equity investments, and other risk sharing arrangements.[18] |

Source: See Footnotes.

[14] http://www.epa.gov/Compliance/nepa
[15] Federal Highway Administration, http://www.fhwa.dot.gov/programadmin/contracts/sep14list.cfm.
[16] Federal Highway Administration, http://www.fhwa.dot.gov/PPP/tools_sep15.htm.
[17] Federal Transit Administration, http://www.fta.dot.gov/planning/newstarts/planning_environment_217.html#.
[18] Federal Transit Administration, http://www.fta.dot.gov/planning/programs/planning_environment_7104.html

**State Laws.** According the Federal Highway Administration (FHWA), there are currently 25 states that have enabling legislation for public-private partnerships in transportation, as shown in Exhibit 2-1 below. The types of P3s vary from state to state and range from broad authorization for all types of projects to limited authorization of specific projects.[19] Further, some municipalities have implemented public private partnerships without enabling state legislation. For example, Chicago relied on its home-rule authority to lease roads and parking facilities without authorization from the State of Illinois.

**Exhibit 2-1: States with Public-Private Partnership Enabling Legislation**




Source: Federal Highway Administration Office of Innovative Program Delivery: Public-Private Partnership. January 2010.

**Public-Private Partnerships in Maryland.** The Code of Maryland Regulations (COMAR) currently allows for the State to enter in non-highway public private partnerships with private entities. Under the Code, the State established a program that allows for P3s in ports, airports, railroads, and transit facilities. However, the Code has not expressly allowed nor prohibited the use of public-private partnerships for highways.

Maryland officials recognized the use of public-private partnerships in other jurisdictions to meet growing transportation needs. In 2004, representatives from the Maryland Transportation Authority (MTA) and the State Highway Administration (SHA), in cooperation with the Federal Highway Administration, conducted a study on how other states are using P3s to improve their delivery of highway construction projects. The study, entitled "Current Practices in Public-Private Partnerships for Highways", found that the use of P3s for large projects can improve price certainty and project delivery. [20]

[19] For a more detailed description of the enabling legislation in each state, see Federal Highway Administration Website at http://www.fhwa.dot.gov/ipd/p3/state_legislation/index.htm.

[20] Available at http://www.mdta.maryland.gov/About/documents/currentpractise.pdf.

Non-Highway Public-Private Partnerships. In 1997, Maryland created the Transportation Public-Private Partnership Program to encourage the creation of public-private partnerships to supplement traditional transportation resources. The program encourages the State to work with the private sector in the acquisition, financing, construction, and operations of new and existing transportation facilities, excluding highways.

The specific goals of the project include:[21]

- Enabling private financing and development of new transportation facilities;
- Increasing economic activity; and
- Accelerating the construction of needed projects.[22]

In August of 2009, the Maryland Department of Transportation (MDOT) provided a summary of the current status of Maryland public-private partnerships to the General Assembly. The report lists the following public-private partnership projects which are under consideration: I-95 Travel Plazas, Seagirt Marine Terminal, State Center Transit Oriented Development Project, and a variety of MARC and Metro Station Transit Oriented Development Projects. For the full MDOT report, please see Appendix B.

Highway Public-Private Partnerships. While Maryland has undertaken numerous design-build highway transportation P3s, Maryland does not have a statute expressly authorizing highway P3s. However, in 1996, the Attorney General states that Maryland law does not prohibit "a private entity from owning, constructing, operating, or maintaining a highway." The Attorney General further states that the Maryland Transportation Authority (MdTA) is allowed to construct toll roads using public-private partnerships:

> There are significant legal and practical impediments to wholly private construction and operation of a toll highway. However, the MdTA, acting on behalf of MDOT, has sufficient statutory authority to enter into an agreement with a private entity relating to the supervision, financing, construction, operation, maintenance, and repair of Maryland transportation facilities projects, including toll highways.[23]

Maryland state law does not prohibit a private entity from owning, constructing, operating, or maintaining a highway, the State is solely responsible for the design, construction, and maintenance of the "State highway system." However, the Attorney General does address a county's authority to prohibit highway public private partnerships:

> Charter and code home rule counties have authority "to regulate the streets, roads, and highways within the county (other than State highways)." Exercising this authority, a home rule county might choose to regard non-State highway construction as a county function only.[24]

[21] For more information on the program, see http://www.mdta.maryland.gov/About/tp3Overview.html
[22] Source: MTA Transportation Public-Private Partnership (TP3) Program Summary @ http://www.mdta.maryland.gov/About/tp3Summary.html
[23] 81 OAG 261
[24] Ibid.

## E. Public-Private Partnership Financing Mechanisms

This section provides an overview of some innovative financing mechanisms available for transportation projects.[25] Traditionally, transportation projects have been financed primarily through a combination of state and local taxes and fees and federal grants funded by national motor fuels taxes in the Federal Highway Trust Fund. Funding is often on a "pay-as-you-go" basis, meaning that projects have often been built in phases or increments as funding become available over time.

In recent years, governments have looked into "innovative finance" mechanisms – alternatives or supplements to traditional, tax- or grant-based funding strategies – to fund transportation projects. These techniques are designed to maximize the ability of states and municipalities to leverage federal funding, attract new sources of funds including private sector funding, and to accelerate project completion dates. This section provides an overview of some of the traditional and innovative financing mechanisms available for transportation projects.

The summary of these financing tools primarily comes from the American Association of State Highway and Transportation Officials (AASHTO) Center for Excellence in Project Finance, a nonprofit, nonpartisan association representing the Federal DOT and highway and transportation departments in the 50 states.[26]

**Federal Credit Assistance**. The federal government has developed a number of financial tools to help public and private sector partners access credit in order to finance projects. These tools can allow for the borrowing of money at lower rates, reduce the amount of capital borrowed from other sources, and reduce the risk borne by other investors. The following Table 2-4 summarizes the federal credit assistance tools available for public-private partnerships.

[25] The primary source for this summary of financing tools is the American Association of State Highway and Transportation Officials (AASHTO) Center for Excellence in Project Finance.

[26] Established in the 2005 SAFETEA-LU transportation authorization act, the mission of the AASHTO Center for Excellence in Project Finance is to provide support to State Departments of Transportation in the development of finance plans and project oversight tools and to develop and offer training and state-of-the-art finance methods to advance transportation projects and leverage funding. http://www.transportation-finance.org/

**Table 2-4: Transportation Financing Mechanisms**
**Federal Credit Assistance**

| Mechanism | Brief Description |
|---|---|
| Transportation Infrastructure Finance and Innovation Act (TIFIA) Program | Federal credit program that provides credit assistance to state departments of transportation, transit operators, special authorities, local governments, and private entities who participate in the development of surface transportation systems. The program may provide three forms of credit assistance – secured (direct) loans, loan guarantees, and standby lines of credit to eligible transportation projects such as highway, transit, rail, and freight projects. |
| State Infrastructure Bank Program (SIB) | Revolving loan program to provide infrastructure investment funds administered by a state or regional level with the ability to make loans and provide other forms of credit assistance to public and private entities to develop surface transportation projects including highway, transit capital, and bikeway/pedestrian access projects.<br><br>SIBs provides states with more flexibility and the ability to attract non-federal public and private investment through the following forms of financial assistance:<br><br>• Loans at subsidized rates and/or with flexible repayment provisions;<br>• Grant Anticipation Notes (GANs);[27]<br>• Short-term construction or long-term debt financing;<br>• Certificates of Participation;[28]<br>• Capital reserves and other security for bond or debt instrument financing;<br>• Letters of credit (direct pay or stand-by);[29]<br>• Lines of credit; and<br>• Bond insurance and loan guarantees. |
| Section 129 Loans | Loan program (established in Section 129 of US Code Title 23) that allows federal participation in a state loan to support projects with a dedicated revenue stream (including tolls, excise taxes, sales taxes, real property taxes, motor vehicle taxes, incremental property taxes, or other beneficiary fees). States may make Section 129 loans to a public or private entity to construct either a toll project that is eligible for federal-aid funding or a non-toll highway project that has a revenue source specifically dedicated to support the project. |

Source: AASHTO Center for Excellence in Project Finance

[27] Notes issued on the expectation of receiving grant money.
[28] Financing in which an individual buys a share of the lease revenues of an agreement made by a municipal or governmental entity, rather than the bond being secured by those revenues.
[29] A letter of credit is an obligation taken on by a bank to make a payment once certain criteria are met whereas as line of credit guarantees a sum of money to a beneficiary. Source: Investopedia by Forbes.

**Bonding and Debt Instruments.** Bonds are written promises to repay borrowed money on a definite schedule, usually at a fixed rate. Traditionally, government bonds are the most commonly used method to fund transportation projects. In recent years, governments have expanded bonding policies and begun to issue bonds backed by financial sources not previously used to secure debt. Table 2-5 describes different debt instruments used to finance transportation infrastructure including traditional bonds and innovative financing mechanisms.

**Table 2-5: Transportation Infrastructure Financing Mechanisms**
**Bonding and Debt Instruments**

| Mechanism | Brief Description |
|---|---|
| General Obligation Bonds | Municipal bonds issued that are backed by the "full-faith-and-credit" of the issuer, usually the "taxing power" of the issuing jurisdiction rather than the revenue from a given project. |
| Limited and Special Tax Bonds | Bonds issued on the pledge of the revenue against a specific tax such as a gasoline tax, a special assessment, incremental sales tax, or property tax levied at a fixed price. Unlike general obligation bonds, the issuer is limited by the specific source for the revenue to pay the bonds. |
| Revenue Bonds | Bonds used to finance municipal projects that generate revenue. Project revenues are used to make interest and principal payments to the bondholders. There are two primary types of revenue bonds for transportation facilities<br><br>Toll-backed Revenue Bonds: bonds backed by future toll revenues; and<br>Fare Box Revenue Bonds: bonds backed projected transit fare box revenue. |
| Private Activity Bonds (PABs) | Bonds issued by or on behalf of local or state government for the purpose of financing the highway and other transportation projects of the private sector. The law was expanded in 2005 to include the highway and freight transfer facilities to qualify for such bonds. |
| Tax Credit Bonds | Bonds in which bondholders receive federal tax credits of up to 100 percent of the interest amount in lieu of or in addition to partial interest payment over the life of the bond and full repayment of principal upon its maturity. |
| Nonprofit Financing | Incorporation of the public-private partnership as a nonprofit corporation to allow the project to be financed with tax-exempt bonds. |
| Anticipation Notes | Short-term notes issued based on the anticipation of funding from a specific source. For transportation finance, the following two anticipation notes are most commonly used:<br><br>• Grant Anticipation Notes (GANs): used by transit agencies to borrow against future grant funding.<br>• Grant Anticipation Revenue Vehicle (GARVEE): allows states to claim reimbursement for principle, interest, and issuance costs on all eligible federal-aid projects, rather than claiming construction reimbursement. |

Source: AASHTO Center for Excellence in Project Finance homepage.

**Other Financial Mechanisms P3 Financial Arrangements.** Transportation facility financial agreements between the public and private sectors can take many different forms. While many P3 agreements take the form of traditional contracts, some more innovative arrangements have developed in recent years. Often, transportation projects are funded through a combination of sources and financial tools. The following Table 2-6 summarizes three innovative types of financial arrangements used in P3 transportation projects that may be used to fund public-private partnerships, most likely in conjunction with other mechanisms mentioned previously.

**Table 2-6: Other Innovative Financing Mechanisms**

| Mechanism | Brief Description |
|---|---|
| Flexible Match | Program that allows a variety of public and private contributions (such as donations of cash, land, materials, and services) to be counted toward the non-federal funding matching requirement of federal-aid projects. |
| Pass-through Tolls | Per-vehicle or per-vehicle-mile fees paid by the public sector to the private sector concessionaire as reimbursement for the design, construction, maintenance, and/or operations of a road for an agreed period of time. |
| Availability Payments | Payments made to the private sector partner by the public sector based on project milestones or facility performance standards (such as ranging from on- time completion, or to the number/time of lane closures due to maintenance). Availability payments are often used for toll facilities that are not expected to generate adequate revenues. |

Source: AASHTO Center for Excellence in Project Finance

## CHAPTER III: COMMONLY CITED BENEFITS, RISKS, AND CHALLENGES OF PUBLIC-PRIVATE PARTNERSHIPS IN TRANSPORTATION

OLO reviewed research on transportation public-private partnerships and has identified potential benefits and risks commonly associated with these arrangements. The following table summarizes the frequently cited benefits and risks of public-private partnerships in transportation.

**Table 3-1: Commonly Cited Benefits and Risks of Transportation Public-Private Partnerships**

| **Benefits** | **Risks and Challenges** |
|---|---|
| • Quick Influx of Cash<br>• Lower Costs<br>• Transfer of Risk<br>• Increased Efficiency and Time Savings<br>• Increased Mobility on Roads<br>• Access to Supplemental Funding<br>• Improved Quality | • Higher Rates for Use of Transportation<br>• Difficulty in Estimating Long-Term Worth<br>• Costs to the Public Sector<br>• Higher Cost of Private Financing<br>• Potential Loss of Control<br>• Political Limitations<br>• Financial Difficulties by the Private Sector Partner |

The private sector's participation in transportation development can range from project delivery and maintenance to long-term responsibility for the financing and management of a facility. The benefits, risks and challenges identified in this chapter focus on public-private partnerships where the private sector assumes full or partial responsibility for project operations, management, and/or financial risk.

The remainder of this chapter provides more detail on the benefits, risks and challenges associated with transportation public-private partnerships. It is important to note that a specific P3 transportation project may not produce the benefits or risks listed in this chapter.

### A . Potential Benefits of Public-Private Partnerships

The public sector may benefit from leveraging the expertise and resources of the private sector to address growing transportation needs. This section outlines potential benefits that may result from the use of P3s.

**Quick Influx of Cash.** An immediate benefit of a public-private partnership for the public sector is the large upfront payment that may be received from the private sector. The influx of cash from a public-private partnership can be beneficial for governments seeking to close budget gaps. Further, by relying on private sector sponsorship of and investment to help build the transportation infrastructure, a government frees up public resources for other needed projects.[1]

In some cases, the private sector finances transportation projects without the use of public funding. This may benefit a jurisdiction that has legislative or administrative limits governing the amount of outstanding debt they are allowed to carry, allowing the jurisdiction to carry debt for other needs.[2]

[1] General Accounting Office 2004
[2] Ibid.

**Lower Costs.** The use of public-private partnerships in transportation may result in lower project costs, depending on the innovation, scale, and expertise of the private sector involved.[3] According to the GAO, the consolidation of responsibility for multiple project elements (such as design, construction, and operation) in one private entity can result in efficiencies that are less achievable through the public sector's often segmented approach to development.[4]

Because cost savings benefit the private partner, the private sector has incentive to limit the cost and time of a project in order to maximize benefits and potentially turn a profit.[5] There are three ways in which a public-private partnership may lower the cost of a transportation project:

- Direct Costs. Through the use of more economical design features and cost-saving construction methods, public-private partnerships may lead to lower overall direct costs of a transportation project.[6] The GAO 2004 Report on P3s indicated that such partnerships can save from 6 to 40 percent of the cost of construction and significantly limit the potential for cost overruns.

- Indirect Costs. The use of public-private partnerships can result in lower project overhead costs primarily from avoided inflation costs on building materials during a condensed project timeframe. This may eliminate exposure to the rapid rise in the price of construction commodities.[7]

- Life Cycle Costs**.** In a typical public procurement, the private sector's role is limited to immediate construction or maintenance, which can lead to the short-term economizing rather than long-term planning. By shifting the long-term maintenance and operations of a transportation project to the private sector, there is a stronger incentive for the private sector to focus on minimizing the long-term costs of the project, rather than the immediate costs.[8]

**Transfer of Risk.** The public and private sectors have different stakeholders, objectives, risks, and constraints in transportation projects.[9] Political considerations and budget constraints may impact the ability to construct or maintain public transportation infrastructure.

With the creation of public-private partnerships, risk is shared between the public and private sectors. The proper allocation of project risks to the sector (public or private) best able to manage a particular type of risk can result in lower overall risk for the project, reduced project costs and accelerated project delivery.[10] In a P3 arrangement, the private sector can receive some of the following risks from the public sector: risk of construction cost overruns or time delays, performance and operational risks, and the revenue risk of lower than anticipated user demand.[11] On the other hand, risks that are traditionally better managed by the public sector include environmental, right-of-way acquisition, statutory/regulatory and public acceptance risks.[12]

[3] United States Department of Transportation 2008
[4] Ibid.
[5] Ibid.
[6] Ibid.
[7] National Cooperative Highway Research Program 2009
[8] National Surface Transportation Infrastructure Financing Commission 2009
[9] Checherita and Gifford 2008
[10] General Accounting Office 2007
[11] National Surface Transportation Infrastructure Financing Commission 2009
[12] National Cooperative Highway Research Program 2009

A 2007 report completed for the Federal Highway Administration's Office of Policy and Governmental Affairs summarized the types of risk that are transferable to the private sector.[13] The table below is adapted for the types of P3s summarized in Chapter 2 of this report. Risks noted with a check mark may be transferred in full or partially to the private sector.

**Table 3-2: Risk Transfer Responsibilities under Different Types of Public-Private Partnerships**

| Public-Private Partnership Approach | Planning | Environmental Clearance | Land Acquisition | Finance | Preliminary Design | Final Design | Construction | Construction Inspection | Maintenance | Operations | Long-term Preservation | Traffic-Revenue | Asset Ownership |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **More Public Sector Responsibility** | | | | | | | | | | | | | |
| Design Bid Build (DBB) | | | | | | ✓ | ✓ | | | | | | |
| Design-Build (DB) | | | | | | ✓ | ✓ | ✓ | | | | | |
| Private Contract Fee Services/ Operations and Maintenance Contract | | | | | | | | | ✓ | ✓ | | | |
| **More Private Sector Responsibility** | | | | | | | | | | | | | |
| Design-Build-Operate-Maintain (DBOM) | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| Design-Build-Finance-Operate-Maintain (DBFOM) | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| Long-Term Lease Agreements/Concessions | | | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | |
| **Full Privatization** | | | | | | | | | | | | | |
| Build-Own-Operate (BOO) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Asset Sale | | | | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |

Source: National Cooperative Highway Research Program, adapted from AECOM 2007

[13] AECOM Consulting Team 2007

**Increased Efficiency and Time Savings.** In a successful public-private partnership, each partner provides the services it is best equipped to deliver. The private sector manages the project like a business, implementing the most cost-effective and efficient strategies to complete the project, which often results in on-time and on-budget completion.[14] The 2004 GAO report on public-private partnerships reported that projects "state and local governments wanted to build—and that the federal government approved for funding—were built sooner than they would have been had the private sector not become actively involved."

The use of private equity and efficiency is often considered inherently advantageous compared to public sector operation.[15] P3s have more flexibility to maximize the use of cost-saving innovative methods and use specialized resources that are available to the private sector which may not be available to the public sector:

- Potential integration of the design, construction, maintenance, and operation of a project provides incentives to optimize efficiency and cost effectiveness over the life of the project rather than minimizing the cost of a specific part of the project.[16]
- Involvement of the private sector allows designers and builders to take advantage of the advances in technologies and techniques relating to construction materials, equipment, and design methods.[17]
- The use of performance measures rather than administrative standards allow the contractor flexibility while maintaining the public sponsor's quality.[18]

More specifically, efficiencies of P3s can result from:[19]

- Concurrent completion of project tasks whose results are not mutually dependent;
- Greater access to capital markets;
- Lack of "procedural strings" usually used in government procurement resulting in less time delays;
- Less expensive staff resources to perform functions only when needed instead of retaining them on a full-time basis;
- Quicker access to more efficient technology;
- Introduction of competition;
- Innovative private sector approaches to financing, economies of scale, development, implementation and operation/maintenance; and
- Private sector expertise in project, operational, and risk management.

**Increased Mobility on Roads.** Throughout its history, the road network in the United States has incorporated the "user pays" concept through the use of motor fuel excise taxes and tolls. P3s developed for roads often used tolling as the primary source of revenue. This can be an efficient investment strategy, as the users who benefit from the road will likely support additional investment

[14] General Accounting Office 2008
[15] United States Department of Transportation 2004
[16] Ibid.
[17] Ibid.
[18] United States Department of Transportation 2007
[19] List from various sources included Federal Highway Administration 2004, General Accounting Office 2007, General Accounting Office 2008, National Surface Transportation Infrastructure Financing Commission 2009 and National Cooperative Highway Research Program 2009

to enhance existing infrastructure. Some travelers have an option to share rides, use transit, travel at less congested (generally off-peak) times, or travel on less congested routes to reduce their toll payments.[20]

Effective public-private partnerships, particularly in roads, can also potentially provide increased mobility. Pricing techniques can be determined by the private sector to reduce congestion and the demand for road space at peak periods, allowing the capacity of existing roads to accommodate demand with fewer delays.[21] Depending upon the agreement reached with the public sector, private partners in P3s may have more flexibility and less public debate about the use of congestion pricing.[22] In addition, the P3 agreement may include requirements to maintain specified levels of traffic flow.[23]

**Access to Supplemental Funding.** A public-private partnership may allow for more predictable project funding than available to solely publicly financed project. Due to their long-term nature, transportation projects are often subject to an annual appropriations cycle, which increases the risk that adequate funds may or may not be available. However, under a public-private partnership, the private sector may be contractually obligated to operate and maintain the project during the course of the concession.[24]

In addition, public-private partnerships offer an opportunity to supplement public sources of funding with private equity and debt. The government's borrowing capacity of government issuers is typically constrained by the market requirement that tax-exempt bonds demonstrate sufficient debt service coverage to receive an investment grade rating. A private partner's ability to draw on non-rated bank debt and investor equity can potentially allow for a higher level of debt to be incurred for transportation projects.[25]

In addition, there are federal and state financing options available to public-private partnerships that are not available for traditionally procured transportation projects. The federal government has supported and promoted the use of public-private partnerships through the numerous programs and financing mechanisms, as summarized in Chapter II of this report.

**Improved Quality.** In a report to Congress, the United States Department of Transportation stated:

> "The traditional contracting approach has limited opportunities for contractors to incorporate innovative materials and techniques in the design and construction of transportation projects. The Federal government and many State governments have constraints on their procurement methods that have the unintended result of limiting access to new technologies and techniques."[26]

Often, in government procurement, the "lowest price" bid is chosen, even when "best value" may be a more effective approach.[27]

[20] General Accounting Office 2008
[21] General Accounting Office 2008
[22] National Surface Transportation Infrastructure Financing Commission 2009
[23] General Accounting Office 2008
[24] Ibid.
[25] National Surface Transportation Infrastructure Financing Commission 2009
[26] United States Department of Transportation 2004
[27] Ibid.

With more flexibility to maximize the use of innovative technologies and the ability to chose the best materials and methods, a P3 could result in increases in the quality of a project. Because the private sector partner is seeking a return on their investment, there is more incentive for a well-maintained project in order to attract more user revenue. Further, the agreement between the public and private sectors may have clauses or incentives that require certain performance standards to be met. In fact, the GAO recently found that the concessionaires for highway projects are held to higher standards of performance than the previous public operators of those roads.[28]

## B. Risks and Challenges Associated with Public-Private Partnerships

While there are many potential benefits to the use of public-private partnerships for transportation projects, there are also risks and challenges associated with their development. Traditionally, transportation projects have struggled to be profitable due the significant risks and uncertainties associated with the construction and operations of such projects.[29] This section summarizes the risks and challenges frequently associated with public-private partnerships. Similar to the benefits listed above, the potential risks and challenges do not occur in each P3 and may be mitigated through the provisions of the partnership agreement.

**Higher User Rates for Transportation.** Public-private partnerships often involve the issuance of private debt. In order to repay the debt and make a profit off the project, a private concessionaire collects toll and fare revenues.[30] Although public-private partnership agreements may limit the extent to which private sector can raise the toll or fare rates, the GAO reports that it is likely that those rates will increase on a privately operated project to a greater extent than they would on a public project.[31]

The goal of the private sector is to realize a return on its investment. With the private sector managing the project, toll/fare rates are driven by market factors such as the demand for travel and the level of competition. As a result, when a privately-run facility or service has limited competing alternatives, there may be few constraints on rates other than the terms of the agreement with the public sector.[32]

**Difficulty in Estimating Long-Term Worth.** According to the General Accounting Office, determining the long-term economic worth of a transportation project can be an imprecise activity. As the worth of a transportation project is highly dependent upon multi-year economic trends, assessing the long-term value of these assets may be difficult. In negotiating a public-private partnership, the public sector runs a risk of under-estimating the worth of public facilities and services.[33]

In some P3s, the public sector gives up control of a facility for a long period of time. Over the term of the agreement, the value of future facility revenues may be much larger than the concession payment received. Further, even if a concession payment is properly determined, unforeseen circumstances such as a recession can dramatically alter the relative value of future revenues compared with the market value of the facility.[34]

[28] General Accounting Office 2008
[29] General Accounting Office 2004
[30] General Accounting Office 2008
[31] General Accounting Office 2007
[32] General Accounting Office 2008
[33] Ibid.
[34] Ibid.

**Costs to the Public Sector.** While the creation of a public-private partnership may result in an initial influx of money to the government, over the long-term, the public sector may incur potential additional costs as a result of the arrangement, including:[35]

- Personnel or contract costs to review and select the P3 proposals (including the cost of attorneys and financial analysts);
- Cost of contracting financial and legal advisors if there is a lack of in-house support;
- Personnel or contract cost to provide ongoing oversight and performance monitoring of the private sector partner;
- Potential foregone tax revenue when tax-exempt debt is used.

Some state and local governments may also be financially responsible for some aspects of a P3's projects costs including acquiring rights of way or performing environmental work.[36]

In some cases, a P3 agreement may shift the cost of a project to future users. Revenue from the private sector's payment for a P3 used for immediate needs may or may not provide long-term benefits to future generations who will potentially be paying progressively higher rates to the private sector as a result of the agreement.[37]

**Higher Cost of Private Financing**. The public sector generally has access to lower borrowing rates through the tax-exempt municipal bond market than private companies that issue taxable debt. Because the borrowing costs of private debt are higher than public tax-exempt debt, the difference can often lead to the higher costs being passed to the public through a lower up-front payment or higher user rates.[38] However, the introduction of tax-exempt private activity bonds and federal loan assistance to the private sector for transportation projects can narrow the differential between public and private sector borrowing costs.[39] According the National Cooperative Highway Research Program, the cost of borrowing is expected to rise in the near term because of the current credit crunch and the increases in the cost of bond insurance (the latter affects both public and private debt).[40]

**Loss of Policy Control.** The traditional method of financing and developing transportation projects was designed to protect public interest by providing substantial oversight by the public sector and by standardizing competition for contracts to avoid waste, fraud or abuse of public funds. Changing this traditional approach raised concerns that some of these protections will be less effective.[41] Under some public-private partnerships, the public sector may lose control over future transportation, economic development, and environmental policy, which can be compounded by the long-term nature of some P3 agreements.

[35] National Cooperative Highway Research Program 2009
[36] General Accounting Office 2004
[37] United States Department of Transportation 2008
[38] National Cooperative Highway Research Program 2009
[39] National Surface Transportation Infrastructure Financing Commission 2009
[40] National Cooperative Highway Research Program 2009
[41] General Accounting Office 2004

Transportation. With many P3 agreements, the public sector concedes operational and pricing control of certain transportation projects. Because a transportation system is an interconnected network, policy choices for one transportation project may have lasting impacts on another. Specifically, P3s can limit the public's policy control through the following:

- The ability to influence traffic patterns might be lost because of the inability to modify toll rates on the P3 project; and
- The use of "non-compete" or "limited compete" clauses, which prevents the construction of competing facilities in the vicinity of the P3, or allows it at a significant cost.[42]

Economic Development. Transportation improvements are seen as an important tool of economic development by increasing accessibility and facilitating economic growth. However, the goal of the private partner in a P3 is a return on investment, which may or may not reconcile with the area's economic development goals. Therefore, a private partner might not be as responsive to public economic development objectives.

Environmental. The primary goal of the private partner is to realize a return on investment, which may come into conflict with public environmental policies goals such as an improvement of air quality or the curbing of emissions. Unless the partnership agreement addresses such issues, the private partner may not be required to adhere to government environmental policies.[43]

**Political Limitations.** The support of elected officials is critical to the success of public-private partnerships, especially in the case of high-cost transportation projects. According to the National Cooperative Highway Research Program, elected officials must take responsibility to ensure that the assignment of roles, responsibilities, and risk of a P3 is done in a manner that protects the public goals.[44] However, elected officials may encounter the following potential impediments to P3s.[45]

- Goals. The public and private sectors do not share identical goals. The primary goal of the public sector is to provide infrastructure and services that adequately meets the transportation and other policy goals of the community. In contrast, the private sector's main goal is to achieve an adequate return on investment.

- Protection of Public Interests. Elected officials need to accommodate the varying interests of the public, including the general public and government employees. Elected officials are responsible for providing a safe, well-maintained, and efficient transportation for the good of the public. In addition, officials must be responsive to the effect on employees' jobs, working conditions, and wages.

- Aversion to Tolls. In general, the public is averse to paying tolls. To overcome this aversion, the road must provide enough benefit (such as saving time) to attract users.

[42] National Surface Transportation Infrastructure Financing Commission 2009
[43] National Cooperative Highway Research Program 2009
[44] Ibid.
[45] Sources for this list include: General Accounting Office 2004, National Cooperative Highway Research Program 2009, National Surface Transportation Infrastructure Financing Commission 2009, and United States Department of Transportation 2008

- Community Risk. Governments may have an incentive to minimize risk to the community by covering some of the losses of the private partner in order to ensure that the project is delivered or that infrastructure is maintained.

- Political Transition. Project supporters may enter and leave office throughout the course of a project which can create an uncertainty for private partners. Further, the direction and intensity of public oversight may change with the change of elected officials.

- Transparency. One of the primary criticisms with P3s is the quick approval of agreements without much public input or the elected officials fully understanding the implications of the partnership. In addition, the nature of the private sector lends itself to protection of intellectual property and therefore lessened transparency.

- Protectionism. Some public-private partnerships have been established with foreign-based countries and critics have expressed concerns over the foreign control of public assets. Critics believe that allowing a foreign firm to control our nation s roads may lead to national security and/or trade agreement issues.

**Financial Difficulties by the Private Sector Partner.** Even though the use of a public-private partnership limits the financial risks of the public sector, governments can be liable for costs if private entities encounter financial difficulty, especially if a project is vital to the local economy and transportation system. If the financial situation cannot be resolved, the private sector may seek assistance from the public sector to keep the project afloat.[46] If the P3 experiences severe financial difficultly or even default, the public sector has some of the following options. The impact of each of these choices on the public may vary depending upon whether the public sector partner is a local, state, or federal government entity:[47]

- Take over ownership and operations of the facility;
- Contract with another private entity;
- Allow the private sector to increase rates if not allowed by the original agreement; or
- Provide funding to avoid default.

[46] General Accounting Office 2004
[47] National Cooperative Highway Research Program 2009

## CHAPTER IV: P3 CASE STUDIES: ROADS

The use of public-private partnerships in road construction and management is the most prevalent form of transportation P3s in the United States today. Road P3s involve either long-term lease agreements on existing highways or the construction of new private toll roads. As of 2008, there were 15 private roads operating in ten states, with another 79 roads in 25 states under consideration for some form of public-private partnership.[1]

This chapter provides case study summaries of five public-private partnership road projects, four of which were implemented and one which was not:

1. Lease of the Chicago Skyway;
2. Lease of the Indiana Toll Road;
3. Construction of the Dulles Greenway;
4. Construction of the Pocahontas Parkway; and
5. Proposed Lease of the Pennsylvania Turnpike.

Because many of the P3 agreements are in early stages of implementation, it is difficult to determine the overall success or failure of each project. However, in the short-term, the use of public-private partnerships in roads has had mixed results. Many of the roads faced significant public opposition and failed to reach initial traffic projections. Nonetheless, many P3 partners express confidence that the roads will both serve public needs and turn a profit in the long-term.

[1] Baxandall 2009

## 1. Case Study: Chicago Skyway[2]

The Chicago Skyway is a highway from the Indiana Toll Road to the Dan Ryan Expressway on Chicago's South Side leading into the Chicago Loop. The Chicago Skyway was the first long-term lease of an existing toll road in the United States.

| **Lease of the Chicago Skyway Lease** | |
|---|---|
| Location | Chicago, Illinois |
| Facility Type | Toll Road |
| Type Public-Private Partnership | Long-Term Lease: the public sector retains ownership and the right to inspect the road, but the private sector is responsible for operations and maintenance. |
| Legislative Authority | Chicago City Ordinance under the City's home powers authorized by the Illinois Constitution |
| Private Partners | Skyway Concession Company, LLC (SCC): joint venture between the Macquarie Infrastructure Group and Cintra Concesiones de Infraestructuras de Transporte S.A. |
| Cost | Lease Agreement for Upfront Payment of $1.8 Billion |
| Type of Financing | Combination of equity holdings of the private companies, bank loans, capital accretion bonds, floating rate notes, and subordinated bank debt |
| Revenue Sources | Tolls |

**Facility Description.** The 7.8-mile Chicago Skyway is also known as the Chicago Skyway Toll Bridge. The elevated toll road connects I-94 (Dan Ryan Expressway) in Chicago to I-90 (Indiana Toll Road) at the Indiana border. The road includes a 3.5 mile bridge crossing the Calumet River. The road was built in 1958 and was managed and maintained by the City of Chicago Department of Streets and Sanitation until its lease.

**P3 Agreement**. The Skyway opened in 1958 and its construction was originally financed with $101 million in municipal bonds. Until 1989, the Skyway did not earn enough toll revenue to pay the interest on the bonds. In 1994, the City decided to redeem the original Skyway bonds with proceeds from a new bond issue. The new bond issue allowed the City to fund $50 million for Citywide transportation projects in 1996 as well and $139.4 million for Skyway reconstruction projects in 2001.

[2] Sources for this case study are listed in Appendix A, Page ©4.

In 1996, Chicago officials identified the Skyway as a potentially valuable asset and began to evaluate the idea of leasing the Skyway. City officials conferred with outside consultants familiar with the privatization of toll roads, who advised that the Skyway could net $400 million after paying off the outstanding bonds through a long-term lease.

The City did not require expressed State legislative authority to privatize the Chicago Skyway. State legislation (Illinois Compiled Statutes 2705) allowed the Chicago Transit Authority to execute lease-in-lease-out transactions. Some city officials believed the legislation was related to a lease-in-lease-out capital equipment transaction, not the long-term lease of the entire toll road. Nonetheless, after the legislation passed in 2000, the City began the privatization process.

In October 2004, Chicago opened bids for the right to operate the Chicago Skyway. The winning bidder was a Spanish-Australian joint venture between Cintra Concessiones de Infraestructuras de Transporte, S.A. and Macquarie Investment Holdings, otherwise known as the Skyway Concession Company (SCC). The same partners won the concession to lease the Indiana Toll Road in 2006.

The lease agreement consisted of a one-time upfront payment of $1.8 billion in exchange for the right to operate and receive revenues from the Chicago Skyway for 99 years. The private consortium had the authority to collect toll revenue, which was to be used to pay for operations and maintenance, to repay the debt that financed the $1.8 billion upfront payment, and to provide a reasonable return on its members' contribution of equity. Under the terms of the lease agreement, the Skyway Concession Company:

- Has the right to install electronic tolling;
- Must complete specific capital improvements over the course of the lease;
- Must comply with operating standards specified by the City; and
- Must pay employees a living wage.

Under the lease agreement, the operator may raise tolls by a maximum amount of 7.9 percent per year from 2008 through 2017. From 2018 until 2104, tolls can increase annually by the greatest of:

1) Two percent:
2) The Consumer Price Index rate of inflation; or
3) The increase in nominal gross domestic product per capita.

The Skyway Concession Company assumed operation and maintenance responsibility for the Chicago Skyway on January 26, 2006.

**Financing.** The upfront concession payment for the lease of the Chicago Skyway was for $1.8 billion, consisting of private equity and bank loans. More specifically, the financial structure of the payment was:

- Cintra equity:[3] $397 million;
- Macquarie equity: $485 million; and
- Bank Loans: approximately $948 million.

[3] Equity: A stock or any other security representing an ownership interest. Source: Forbes Investopedia

The bank loans, a combination of capital accretion bonds,[4] 12-year floating rate notes,[5] and subordinated bank debt,[6] were provided by a number of European banks including the Banco Bilbao Vizcaya Argentaria and Santander Central Hispano of Spain. When the Skyway Concession Company refinanced its capital structure in 2005, the equity holdings of Cintra and Macquarie were reduced to approximately $510 million. In addition, Citigroup was added as a financial partner.

Chicago used the $1.8 billion payment to: 1) pay off the existing Skyway bonds, 2) create two operating budget reserves funds, 3) fill a portion of the current operating budget deficit, and 4) retire certain City general obligation bonds. Following the implementation of the Skyway lease, Moody's Investors Service upgraded Chicago's overall bond rating from A1 to Aa3, which marked the City's highest bond rating in over 25 years.

**Toll Rates.** Over the course of the lease, toll rates have increased. Prior to the lease agreement, toll rates were $2 per passenger car and $1.20 per axle for commercial vehicles. From 2005 to 2009, tolls rates have increased 50 percent for passenger cars and between 111 and 133 percent for commercial vehicles, depending on the number of axles. Table 4-1 outlines the current toll rates for the Chicago Skyway. Toll rates do not vary by distance traveled. The next rate change is scheduled for January 2011.

**Table 4-1: Chicago Skyway Toll Rates, as of January 2010**

| Number of Axles | Peak times 4 a.m. to 8 p.m. | Off-Peak Times 8 p.m. to 4 a.m. |
|---|---|---|
| 2 | $3.00 | $3.00 |
| 3 | $7.60 | $5.40 |
| 4 | $10.10 | $7.20 |
| 5 | $12.60 | $9.00 |
| 6 | $15.20 | $10.80 |
| 7 or more | $17.70 | $12.60 |

Source: Skyway Concession Company, LLC

**Traffic and Revenues.** While traffic on the Chicago Skyway has remained relatively consistent from 2004-2007, revenues have increased over 35 percent, as shown in the table on the next page.

[4] Accretion: Asset growth through addition or expansion. In reference to discount bonds, it describes the accumulation of value until maturity. Source: Forbes Investopedia.
[5] Floating Rate Note: A note with a variable interest rate. The adjustments to the interest rate are usually made every six months and are tied to a certain money-market index. Source: Forbes Investopedia.
[6] Subordinated Debt: A loan (or security) that ranks below other loans (or securities) with regard to claims on assets or earnings. Source: Forbes Investopedia.

**Table 4-2: Average Daily Revenue and Traffic for Chicago Skyway, 2004-2007**

| Year | Average Daily Revenue ($) | Average Daily Traffic | | |
|---|---|---|---|---|
| | | Workdays | Weekends | All Days |
| 2004 | 113,903 | 48,121 | 49,483 | 48,544 |
| 2005 | 143,466 | 48,165 | 49,909 | 49,483 |
| 2006 | 153,970 | 50,217 | 51,287 | 50,551 |
| 2007 | 153,934 | 48,948 | 50,835 | 49,537 |

Source: Macquarie Annual Reports

**Current Status.** According to Bloomberg News, as of July 2009, the Macquarie Infrastructure Group (MIG) is looking to sell the leases on the Chicago Skyway and Indiana Toll Road. A July 8th statement by MIG states the company now owes more on its debt than its assets may be worth, and "it is reviewing options which seek to enhance security holder value." This prompted speculation that the Skyway may be part of the company's divestiture plans.

## 2. Case Study: Indiana Toll Road[7]

The Indiana Toll Road, officially the Indiana East-West Toll Road, runs across northern Indiana from the Illinois to the Ohio state lines. With this agreement in 2006, Indiana became the first state to lease a major highway to a private entity.

| **Lease of the Indiana Toll Road** | |
|---|---|
| **Location** | **Northern Indiana** |
| Facility Type | Toll Road |
| Type Public-Private Partnership | Long-Term Lease: the public sector retains ownership of the road and has oversight capability. The private sector is responsible for the operations and maintenance, along with the collection of revenues. |
| Legislative Authority | Indiana State Law[8] |
| Private Partners | Statewide Mobility Partners Consortium: joint venture between the Macquarie Infrastructure Group and Cintra Concesiones de Infraestructuras de Transporte S.A. |
| Cost | Lease Agreement for Upfront Payment of $3.8 Billion |
| Type of Financing | Private Partner Equity and Bank Loans |
| Revenue Sources | Tolls |

**Facility Description.** The 157-mile Indiana Toll Road is one of the country's most heavily trafficked trucking routes, with about 60 percent of its annual toll revenue coming from commercial traffic. The road crosses across the northernmost part of Indiana from its border with Ohio to the Illinois State Line. Opened in 1956, the road had been operated by the Indiana Department of Transportation prior to its lease.

**P3 Agreement.** In 2005, the State of Indiana estimated that the cost of necessary road improvements over the next decade at $1.8 million. As a result, Governor Mitch Daniels tasked the Indiana Finance Authority (IFA) to explore the feasibility of leasing the Indiana Toll Road (ITR) to a private entity. After a revenue analysis and financial advice from Goldman Sachs, the IFA released a Request for Toll Road Concessionaire Proposals on September 28, 2005.

[7] Sources for this case study are listed in Appendix A, Page ©5.
[8] Indiana House Enrolled Act 1008

On January 23, 2006, Statewide Mobility Partners LLC (SMP), a limited liability company between Cintra Concesiones de Infraestructuras de Transporte SA (Cintra) and Macquarie Infrastructure Group (MIG), was tentatively awarded the project with a bid of $3.8 billion. The agreement to lease the ITR required authorization from the Indiana State Legislature. The State Legislature approved the lease as part of House

Enrolled Act 1008 (HEA 1008), popularly known as "Major Moves." The Governor signed the law in March 2006. On April 12, 2006, the IFA executed the "Indiana Toll Road Concession and Lease Agreement" providing for a 75-year lease of the ITR.

SMP formed the ITR Concession Company LLC (ITRCC) to operate and manage the ITR during the 75-year lease term. A ten-member board of directors, appointed by the Governor, oversees ITRCC and its operations of the Indiana Toll Road. Consisting of State employees and private citizens, the Board assures that the ITRCC complies with the provisions of the lease agreement.

The Cintra-Macquarie joint-venture assumed operation of the Toll Road on June 30, 2006. The non-revenue sharing lease agreement includes the following key features:

- Annual toll increases cap at the greatest of:
  1) Two percent:
  2) The Consumer Price Index rate of inflation; or
  3) The per capita increase in gross domestic product;
- Implementation of planned upgrades including: adding a lane in each direction, the reconstruction of existing pavement and bridge structures, and implementation of electronic tolling collection;
- Maintenance of the road to standards set forth by state and federal law;
- Guarantee that employee pay and benefits would not be reduced if they took a job with the concessionaire;
- No union requirements;
- Requirement that at least 90 percent of the concessionaire expenses be awarded to companies in Indiana;,
- Goals for participation of minority and women business enterprises;
- A non-compete clause that requires that if a new highway is built within ten miles of the ITR, the State must compensate the private sector for its lost revenue.

**Financing.** The upfront concession payment for the lease of the ITR was for $3.8 billion, consisting of private equity and bank loans. More specifically, the financial structure of the payment was:

- Cintra Equity: $374 million;
- Macquarie Equity: $374 million; and
- Bank Loans: $3,030 million.

The bank loans were provided by seven European banks: Banco Bilbao Vizcaya Argentaria SA (Spain), Banco Santander Central Hispano SA (Spain), and Caja de Ahorros y Monte de Piedad de Madrid (Spain), BNP Paribas (France), DEPFA Bank (Germany), RBS Securities Corporation (Scotland), and Dexia Credit Local (Belgium/France).

The State of Indiana used funds from the ITR lease to construct road projects; pay off existing toll road bonds; and established two transportation project funds, including a ten-year statewide "Major Moves" transportation plan.

**Challenges.** The proposal to lease the Indiana Toll Road engendered great debate both before and after completion of the agreement. Conflicting reports arose about how well the public was informed about the proposal – some State legislators claimed the lease agreement was completed in secrecy, while representatives from the Indiana Department of Transportation and the Indiana Finance Authority (both Executive Branch agencies) asserted that all public hearings were easily accessible. The State Legislature was a strict party line vote – Republicans in favor of the lease, with Democrats against it. Opponents raised concerns about:

- The impact on residential and commercial property near the road;
- The potential loss of jobs;
- Toll rate increases; and
- The imprecise valuation of the road's worth.

In addition, a citizen advocacy group filed a lawsuit in April 2006 seeking a declaratory judgment and a permanent injunction invalidating the enabling legislation (HEA 1008). The lawsuit claimed that the State Constitution requires that revenue from the sale of any public works be used to pay off debt and that the exemption of the Toll Road from property taxes violates the requirement that the system of taxation be "uniform and equal" subject only to exemptions for specified purposes. The Indiana Supreme Court ruled that the lease agreement did not violate the Indiana Constitution.

**Toll Rates.** ITR tolls vary by travel distance and vehicle type. After the lease agreement, toll rates increased to 5.1 cents per mile, a 9.7 percent increase for passenger cars, which continues to be the rate for passenger cars. The current toll for a passenger car is $4.65 to travel the full length of the ITR when the vehicle is equipped with a transponder for automated toll collection. Cash customers in a passenger car pay $8.00 to travel the length of the ITR.

For commercial vehicles, rates increased to 11.4 cents per mile after the lease agreement, a 22.5 percent increase. Since April 2006, the toll rates for commercial vehicles have increased to 20.4 cents a mile, a 79 percent increase from April 2006. To travel the full length of the ITR, commercial vehicles pay a rate that varies, from $11.75 for three axles to $69.75 for seven axles.

Both the passenger and commercial vehicle rates are expected to increase in June 2010.

**Traffic.** Average daily ITR traffic remained nearly constant from 2005 through and 2008, without much change after the private sector assumed control of the facility (see Table 4-3 on the next page). However, due to annual toll rate increases, average daily revenue increased significantly (80 percent) from 2005 to 2008.

**Table 4-3: Average Daily Revenue and Traffic, Indiana Toll Road 2005-2008**

| Year | Revenue ($) | Full Length Equivalent Trips | Toll Generating Transactions |
|---|---|---|---|
| 2005 | 242,434 | 24,350 | 92,936 |
| 2006 | 360,140 | 24,773 | 93,661 |
| 2007 | 392,186 | 25,176 | 94,089 |
| 2008* | 436,617 | 25,887 | 73,942 |

*July-December
Source: Macquarie Infrastructure Group Asset Portfolio

**Current Status.** As of July 2009, the Macquarie Infrastructure Group is reported to be looking to sell the leases on the Chicago Skyway and Indiana Toll Road. The company now owes more on its debt that its assets may be worth, and a July statement by the company states "it is reviewing options which seek to enhance security holder value." This prompted speculation that the two roads may be part of the company's divestiture plans.

### 3. Case Study: Dulles Greenway[9]

The Dulles Greenway is a toll road that connects the Dulles Airport area with Leesburg, Virginia. The Greenway, opened in 1995, is the first private toll road in Virginia since 1816.

| Construction of the Dulles Greenway | |
|---|---|
| Location | Northern Virginia |
| Facility Type | Toll Road |
| Type Public-Private Partnership | Design, Build, Finance, Operate and Maintain: The private sector is responsible for the design, construction, operations and maintenance of the road. The public sector owns the road, regulates the road through the Virginia State Corporation Commission (SCC) and will assume operational control of the road in 2056. |
| Legislative Authority | Virginia Highway Act of 1988 |
| Private Partners | TRIP II, a fully owned subsidiary of Macquarie Infrastructure Group and Macquarie Infrastructure Partners |
| Cost | Original Construction Cost - $350 million<br>Cost of Lease to Macquarie - $617 million |
| Type of Financing | Original Construction:<br>• Current pay interest only bonds<br>• Zero coupon bonds<br>• Long-term, fixed-rate notes<br>• Revolving credit<br>Macquarie lease:<br>• Private stocks<br>• Sale of shares in the Macquarie Global Infrastructure Total Return Fund |
| Revenue Sources | Tolls |

**Facility Description.** The Dulles Greenway is a 12.5-mile privately-owned toll road in Loudoun County, Virginia. The Dulles Greenway connects with the Dulles Toll Road and is designated as part of Virginia State Road 267 (SR 267). SR 267 consists of three parts – the Dulles Greenway, the Dulles Toll Road, and the Dulles Access Road. The three sections of SR 267 are operated by separate agencies: the Dulles Toll Road by the Virginia Department of Transportation, the Dulles

[9] Sources for this case study are listed in Appendix A, Page ©6.

Greenway by a private consortium, and the Dulles Access Road by the Metropolitan Washington Airports Authority.

**P3 Agreement.** Discussion about the development of a highway through Loudoun County, Virginia began in the 1970s. In 1987, State officials held a number of public hearings and commissioned several studies to evaluate options to connect the Dulles area with Leesburg. In 1988, Virginia lawmakers authorized the construction of the State's first private highway through the Virginia Highway Act. Under this act, a private entity was allowed to increase tolls above the rate of inflation if three conditions were met: the new fee would not "significantly discourage" drivers from using the road; the private operator would not make an "undue profit" from the increase; and the road's benefits justifies its cost.

In 1989, the Toll Road Corporation of Virginia (TRCV) submitted an application to the Virginia Department of Transportation (VDOT) to build the Greenway. As Virginia lacked funds to build the project, VDOT announced in May 1990 that it would approve the TRCV proposal rather than use public funds to build the Greenway. After approval, the authority was transferred to a limited partnership that was created solely to manage the Greenway, Toll Road Investors Partnership II (TRIP II), a joint venture between Bryant/Crane Family LLC, and Kellogg Brown & Root. Construction of the Greenway occurred from 1993 to 1995 as a design-build-finance-operate project (see Chapter II). The State of Virginia will assume operational responsibility for the Greenway in 2056.

The Dulles Greenway opened on September 29, 1995 ahead of schedule and on budget. However, traffic fell short of projected levels. After an increase in tolls and an increase in speed limits, revenues were still less than projected. Facing financial challenges, TRIP II restructured its debt in 1999 and agreed to an extension of the project. In 2001, the Virginia SCC extended TRIP II's concession period for an additional 20 years to 2056. In September 2004, variable peak and discounted off-peak point-to-point rates were introduced to better manage peak period congestion.

In September 2005, the Macquarie Infrastructure Group (MIG) acquired 87 percent of TRIP II for $533 million. In December of 2006, MIG paid an additional $84.5 million for the remaining 13 percent share of company. In December 2006, MIG completed the sale of 50 percent of its economic interest in the Dulles Greenway to Macquarie Infrastructure Partners (MIP) and subsequently MIG holds a 50 percent economic interest in the Dulles Greenway. TRIP II, as part of MIG, continues to have day to day responsibility for the management and operation of the Greenway.

**Financing.** The financing of the Dulles Greenway includes $350 million for the original construction of the road and later, $617 million for a corporate buyout of the Greenway ownership. To initially finance the Greenway, TRIP II used a combination of equity and private debt. Specifically, the financial structure of the construction the Greenway was:

- TRIP II equity: $40 million;
- Long term fixed-rate notes:[10] $258 million provided by ten investors including CIGNA Investments, Prudential Power Funding Associates, and John Hancock Mutual Life Insurance Company; and
- Construction funding and revolving credit:[11] $52 million from three banks - Barclays, NationsBank, and Deutsche Bank AG.

[10]Fixed Rate Note: Fixed rate note is a bond with predetermined interest rate. The interest is payable at specified dates before bond maturity. Source: Forbes Investopedia.

[11] Revolving Credit: A line of credit where the customer pays a commitment fee and is then allowed to use the funds when they are needed. Source: Forbes Investopedia.

In 1999, TRIP II refinanced its debt as follows: $35 million of current pay interest only bonds[12] and $297 million zero coupon bonds.[13]

In 2005, the Macquarie Infrastructure Group (MIG) agreed to purchase TRIP II for $617.5 million through the placement of private stock in Australia and the float[14] of $425 million worth of shares in the closed-end Macquarie Global Infrastructure Total Return Fund.

**Toll Rates.** The road's toll rates vary by distance traveled and vehicle type. As of January 2009, the base toll collected for two-axle vehicles ranges from $2.25 to $3.90, depending on distance traveled. The maximum toll rises to $4.50 during "congestion pricing" hours (6:30 a.m. to 9:00 a.m. eastbound and 4:00 p.m. to 6:30 p.m. westbound). Toll payment is accepted by cash, credit card, or Smart-Tag/EZ Pass. Users paying by cash or credit card pay higher tolls for certain segments of the road. For every toll transaction, the contract operator pays a fee to the Virginia Department of Transportation who owns and operates the Smart-Tag/EZ Pass system.

**Traffic**. When the Greenway opened to traffic in September 1995, traffic fell short of projected levels. Through 2005, traffic increased steadily as the population of Loudoun County grew. However, beginning in 2006, average daily traffic has decreased in each subsequent year. The table below shows the average daily revenue and traffic on the Dulles Greenway from 2004 through 2008.

**Table 4-4: Average Daily Revenue and Traffic for the Dulles Greenway**

| Year | Average Daily Revenue ($) | Average Daily Traffic | | |
|---|---|---|---|---|
| | | Workdays | Weekends | All Days |
| 2004 | 110,599 | 70,679 | 37,720 | 60,742 |
| 2005 | 125,473 | 71,666 | 38,492 | 61,634 |
| 2006 | 151,381 | 67,403 | 35,520 | 57,445 |
| 2007 | 153,198 | 64,265 | 35,229 | 55,276 |
| 2008* | 152,435 | 60,443 | 33,003 | 52,092 |

*July-December

Source: Macquarie Infrastructure Group Asset Portfolio

**Current Status**. More recently, the average daily traffic on the road has continued to decrease. The Chief Executive Officer of the Toll Road Investors claims the decline is due to the "recent increase in rates, layoffs, AOL's downsizing and the rising price of gasoline." Nonetheless, the Greenway recently posted a 15 percent quarterly revenue gain despite the decline in traffic.

[12] Pay Interest Only Bond: A bond in which only interest is paid on the bond until maturity. Source: Forbes Investopedia.

[13] Zero Coupon Bond: A debt security that doesn't pay interest (a coupon) but is traded at a deep discount, rendering profit at maturity when the bond is redeemed for its full face value. Source: Forbes Investopedia.

[14] Float: The total number of shares publicly owned and available for trading. The float is calculated by subtracting restricted shares from outstanding shares. Source: Forbes Investopedia.

## 4. Case Study: Pocahontas Parkway[15]

Completed in 2002, the Pocahontas Parkway (also known as Virginia State Highway 895) is a toll road south of Richmond, Virginia. It was the first public-private partnership created in Virginia under the Virginia Public-Private Transportation Act 1995.

| Construction of the Pocahontas Parkway | |
|---|---|
| **Location** | Richmond, Virginia |
| **Facility Type** | Toll Road |
| **Type Public-Private Partnership** | In the original development of the road, the State entered into a design-build contract for the private sector to build and maintain the road. Currently, the road is leased out to the private sector. The private sector manages and operates the road, but the public sector maintains ownership. |
| **Legislative Authority** | Virginia Public-Private Transportation Act 1995 |
| **Private Partners** | Original partner was Fluor Daniel/Morrison Knudsen.<br>Road later leased to Transurban LLC. |
| **Cost** | Cost of original construction: $314 million<br>Payment of Long-Term Lease Agreement: $611 million |
| **Type of Financing** | Original Financing (Design Build):<br>• Tax exempt toll revenue bonds<br>• Federal grants<br>• State Infrastructure Bank Loans<br><br>Concession:<br>• Equity, subordinated, and senior debt provided by private banks<br>• Transportation Infrastructure Finance and Innovation Act (TIFIA) Funding |
| **Revenue Sources** | Tolls |

**Facility Description**. The Pocahontas Parkway is an 8.8-mile toll road located outside of Richmond, Virginia that includes a bridge over the James River. The Parkway is a four-lane, limited access toll road that provides a direct connection between Chesterfield County and eastern Henrico County.

[15] Sources for this case study are listed in Appendix A, Page ©7.

**P3 Agreement**. In 1995 the Virginia State legislature passed the Public-Private Transportation Act to allow private entities to enter into agreements to construct, improve, maintain and operate transportation facilities. Virginia Department of Transportation (VDOT) officials considered the use of a public-private partnership to develop a connection between I-95 and I-295 south of Richmond. VDOT determined that the road construction and operation should be financed through tolls because:

- The road would have high construction costs due, in part, to the requirement for a bridge across the James River;
- The primary users of the road would not reside where the road was constructed;
- The road would save considerable time for users, making the use of tolls more acceptable; and
- Toll collection technology available to the private sector would reduce operating costs.

VDOT moved forward with the I-95 and I-295 connector, named the Pocahontas Parkway (or State Road 895), with the project designed and built by a private company, Fluor Daniel/Morrison Knudsen. Construction began in 1998 on the Pocahontas Parkway, the first project completed under the Virginia Public-Private Transportation Act. The road was built under a single $314 million design-build contract and it was completed on budget.

In order to issue tax-exempt debt for the project on behalf of Knudsen, the Pocahontas Parkway Association (PPA) was formed. The PPA is a private, non-stock, not-for-profit corporation without members, organized under provisions of Chapter 10 of the 1950 Virginia Code. The Association was incorporated in 1997 for the limited purpose of financing, constructing and operating the Parkway project.

A conflict arose during project construction. During the last stages of design, City of Richmond officials protested the lack of access to and from I-95 in the direction of the City. The City of Richmond and the PPA reached a compromise which included the addition of a ramp for traffic headed toward the city (but not one for return traffic) completed at the cost of the PPA.

The first section of the road opened in May of 2002, with the remainder opening in September 2002. However, traffic volume on the road reached only about half of forecasted estimates and was insufficient to meet debt obligations.

In 2006, VDOT terminated the contract with Knudsen and offered to lease the road to another private sector entity. In June 2006, VDOT and the Pocahontas Parkway Association agreed to a 99-year, $611 million lease with the Transurban Group to manage the Pocahontas Parkway. Under the agreement, Transurban assumed responsibility for the management of operations and maintenance of the Parkway. In addition, Transurban agreed to:

- Upgrade to electronic tolling;
- Set limits on toll rates;
- Repay PPA and VDOT's debt and incurred operational costs; and
- Finance and build a connector between the Parkway and Richmond International Airport.

The 99-year lease includes an upfront concession fee of $611 million in addition to revenue sharing if the facility exceeds expectations. Under the terms of the lease, Transurban will provide the State with 40 percent of gross revenues once net cash flow yields an internal rate of return of 6.5 percent. When the rate of return increases to eight percent, the State will receive 80 percent of gross revenues.

The State also has the right to end the agreement "for public convenience", as long as it makes a fair market-value payment, provides a guaranteed 10.5 percent rate of return to its contractor, and pays any outstanding debt.

**Financing.** The financing of the Pocahontas Parkway includes both the original construction costs of the road ($314 million) and the subsequent lease of the parkway ($611 million). To construct the road, the Pocahontas Parkway Association, a non-profit entity was formed which enabled the group to use tax exempt toll revenue bonds for a majority of the funding. Specifically, the original financing package for the Parkway was comprised of:

- $354 million 63-20 non-profit corporation tax exempt toll revenue bonds;[16]
- $9 million in federal funds for design costs; and
- $18 million in state infrastructure bank (SIB) loans.

In 2006, the Parkway was leased to Transurban, a private company for $611 million. The financing structure for the lease payment was:

- Transurban equity and subordinated debt: $195 million;
- Senior debt: $420 million, provided by European banks including DEPFA Bank of Ireland, Banco Espirito Santo de Investimento of Spain, and Bayerische Hypo-Vereins Bank of Germany; and
- Transportation Infrastructure Finance and Innovation Act (TIFIA) funding: $150 million.

**Toll Rates**. Tolls are collected both in cash and electronically with pre-determined toll increases as follows:

**Table 4-5: Pocahontas Parkway Toll Rates**

| Exit | Current Cash Toll Price | Toll Price Jan. 2011 |
|---|---|---|
| Main Plaza* | $2.75 | $3.00 |
| Laburnum Ave. | $1.00 | $1.25 |
| Airport Connector | -- | $1.25 |

*One dollar is added per each axle over two.
Source: Pocahontas Parkway Homepage

**Traffic.** Table 4-6 compares the average daily traffic in the September quarter (July-September) for 2006-2009. The workday traffic is traffic on Monday-Friday, while the daily traffic is the average daily traffic for all days. The data show that the September quarter showed an 11 percent decrease in daily traffic and 17 percent decrease in workday traffic between 2008 and 2009. The Macquarie Infrastructure Group has stated that its "subdued traffic results" were a consequence of "the continuing weak global economic conditions."

[16] Revenue Bond: A municipal bond supported by the revenue from a specific project. Source: Forbes Investopedia.

**Table 4-6: Average Daily Traffic on Pocahontas Parkway, 2006-2009**

| Year | Daily Traffic | Workday Traffic |
|---|---|---|
| 2006 | 16,173 | 17,640 |
| 2007 | 17,620 | 19,239 |
| 2008 | 15,966 | 17,434 |
| 2009 | 14,100 | 14,490 |

Source: Transurban Traffic and Revenue Reports[17]

**Current Status.** In July 2007, Transurban secures Transportation Infrastructure Finance and Innovation Act (TIFIA) funding to construct the Airport Connector Road and refinance a portion of existing project debt. Construction on the airport connector is expected to be completed in 2010.

[17] http://www.transurban.com.au/transurban_online/tu_nav_black.nsf/alltitle/investors-ASX%20releases-2009?open

## 5. Case Study: Pennsylvania Turnpike Lease Proposal[18]

The Pennsylvania Turnpike is a 532-mile toll highway operated by the Pennsylvania Turnpike Commission, a public agency. The Turnpike extends along southern Pennsylvania from the Ohio state line to the New Jersey state line. The Northeast Extension connects the Philadelphia and Scranton areas. As detailed below, a proposal to lease the Turnpike to a private entity did not come to fruition.

| **Proposed Lease of the Pennsylvania Turnpike** | |
|---|---|
| Location | Pennsylvania |
| Facility Type | Toll Road |
| Type Public-Private Partnership | Long-Term Lease |
| Proposed Private Partners | Pennsylvania Transportation Partners: joint venture between Abertis Infraestructuras, SA and Citi Infrastructure Investors |
| Proposed Cost | Proposed lease for $12.8 billion |
| Type of Financing | Private Partner Equity and Bank Loans |
| Revenue Sources | Tolls |

**Turnpike Lease Proposal**. In 2006, Pennsylvania Governor Edward Rendell created the Transportation Funding and Reform Commission to evaluate the State's transportation system. The Commission determined that in order to maintain the current transportation infrastructure, the State would need $1.7 billion in additional annual transportation funding. In addition, the report recommended that the State make smarter use of existing funds, increase taxes and fees, and explore innovative funding mechanisms, including the use of public-private partnerships. The Governor suggested the use of a long-term lease of the Turnpike to the private sector in order to raise money to improve other transportation infrastructure.

In 2007, the Governor proposed leasing the Pennsylvania Turnpike and the collection of tolls on Interstate 80 in order to raise additional funds for transportation. In order to seek bids for the private sector lease of the Turnpike, the Governor needed approval from the Pennsylvania legislature. In support of the proposal, the Governor submitted a report that estimated that a 99-year lease could generate a bid of near $20 billion.

The Pennsylvania State Legislature did not approve leasing of the Turnpike to address funding shortfalls in transportation infrastructure. Instead, in July 2007, the Legislature approved Act 44 authorizing a 50-year partnership between the Pennsylvania Turnpike Commission (PTC) and Pennsylvania Department of Transportation (PennDOT) and included a provision to collect tolls on

[18] Sources for this case study are listed in Appendix A, Page ©8.

Interstate 80, subject to Federal Highway Administration approval. State officials estimated that the Act would generate $116 billion, with $83.3 billion turned over to PennDOT for roads, bridges, and public transit; up to $8 billion to be reinvested in I-80 for capacity and safety improvements; and up to $24.8 billion to be dedicated to unspecified transportation projects.

In February 2008, the Governor announced his support of a State bill that would authorize the lease of the Turnpike and repeal the authority to toll on I-80. While the Legislature considered the bill, the Governor solicited bids for the lease of the Turnpike. In May 2008, the Spanish firm Abertis Infraestructuras, SA and Citi Infrastructure Investors of New York City (collectively called Pennsylvania Transportation Partners) won the bid with a $12.8 billion upfront payment. The 75-year lease proposal would include:

- No non-compete clause;
- Limits on the toll rate caps;
- Compliance with all State safety standards;
- Completion of capital improvements planned by the Turnpike Commission;
- State access, inspection and auditing rights;
- A requirement to honor labor contracts;
- Continuation of policing levels; and
- Transfer of service plazas to the concessionaire.

According to local newspapers, few legislators supported the idea of the lease for reasons that included:

- Loss of control of maintenance and toll collection for a major highway;
- Potential underestimation of the value of the lease;
- The loss of Turnpike Commission jobs;
- Increased toll rates; and
- Insufficient State oversight of Turnpike policies and operations.

The above concerns stemmed, in part, from the findings of a report prepared by a team of Pennsylvania State University and Harvard University professors. The report found that leasing of Turnpike would result in large increases in toll rates and would not generate funds to repair state roads and bridges as efficiently as through public management or through issuance of state-backed bonds.

After months of legislative debate, Pennsylvania Transportation Partners allowed its bid to expire after State legislators failed to act on the proposal. At nearly the same time, the Federal Highway Administration rejected the State's proposal to toll Interstate 80.

**Assessment of the Failed Lease Proposal**. The Pew Center for the States examined the Pennsylvania Turnpike leasing proposal to determine what went right and what went wrong. The study found that while Pennsylvania policy makers "did a lot right" in preparing for the deal, they fell short in several aspects:

- The State's projections for annual return on the investment of the upfront payment were "highly unlikely;"
- One-third of the upfront payment may have been lost in the recent collapse of the financial markets;

- Lawmakers "felt they had been excluded from the process," making them less inclined to support it;
- There was no clear plan for investing and spending the proceeds; and
- The debate did not adequately focus on the long-term impact of the lease on taxpayers, the economy, and the environment.

**Current Status.** The attempt to lease the Turnpike has stalled since the bid expired. The Pennsylvania Turnpike Commission is seeking to form public-private partnerships for two smaller highway projects - the northernmost leg of the Mon-Fayette Expressway and the Southern Beltway linking the expressway to Pittsburgh International Airport.

## CHAPTER V: P3 CASE STUDIES: PARKING

Public-private partnerships (in which the private sector partner retains operational control) for parking facilities are extremely rare in the United States. Chicago is the only major jurisdiction to undertake such an agreement prior to this year. However, difficult economic times have peaked interest in the use of P3s for parking facilities in other communities. The Cities of Indianapolis, Pittsburgh, Los Angeles, and Atlanta are either currently debating the use of parking P3s or have recently implemented such projects.

The case studies in this chapter focus on the leasing of existing parking infrastructure; OLO was unable to find any public-private partnerships for new parking facilities. The case studies summarized in this chapter include:

1. Chicago Parking Garage Lease;
2. Chicago Parking Meter Lease; and
3. Proposed Harrisburg, Pennsylvania Parking Lot Lease.

## 1. Case Study: Chicago Parking Garage Lease[1]

The lease of four downtown underground parking garages in Chicago in 2006 was the first lease of major public parking facilities in the country.

| Lease of Chicago Parking Garages | |
|---|---|
| Location | Chicago, Illinois |
| Facility Type | Four underground parking decks |
| Type Public-Private Partnership | Long-Term Lease: Private sector operates and maintains the parking garages while the public sector retains ownership. |
| Legislative Authority | Illinois Senate Bill 2872 |
| Private Partners | Morgan Stanley |
| Cost | Lease Agreement for Upfront Payment of $593 million |
| Type of Financing | Private Sector Equity provided by Morgan Stanley |
| Revenue Sources | Parking fares |

**Facility Description**. The City of Chicago constructed and operated four underground parking garages in downtown Chicago: the Millennium, Grant Park South, Grant Park North, and East Monroe Street garages. The four garages represent the largest underground parking system in the country with 9,000 spaces. Prior to the lease, the daily rates for all day parking ranged from $11 to $22.

**P3 Agreement.** The City of Chicago had been experiencing budget shortfalls throughout the early 2000s and was searching for innovative methods to close its budget gap. After the approval of the Chicago Skyway lease agreement (see Chapter IV), Chicago Mayor Richard Daley sought to identify other transportation facilities that could be leased to the private sector. Around the same time, in 2006, the State of Illinois approved legislation that allowed parking garages, several recycling centers, and Midway Airport to retain their exemption from property taxes in the event any are leased to private, for-profit companies.

[1] Sources for this case study are listed in Appendix A, Page ©9.

In May 2006, Chicago set out to lease four downtown underground parking garages. As part of the solicitation process, the City asked private firms to provide evidence of their financial ability to raise the concession payment and their technical capabilities to operate the parking garages. The City received submissions from 13 teams interested in bidding for long-term lease rights. After review by Chicago officials and their financial and legal advisors, the City selected a short list of qualified firms to submit final bids. After submission of final bids, the City selected Morgan Stanley's bid of $563 million to lease the parking garages for 99 years. In October 2006, the City Council approved the lease agreement by a vote of 37 to 8. The City used the revenues from the lease payment to:

- Pay off existing debt associated with the garages;
- Create a reserve fund to replace the $5 million a year the City had received from parking fees;
- Pay legal fees and other transaction costs related to the lease; and
- Fund park improvements around the city.

Under terms of the lease agreement, Morgan Stanley received a 99-year concession to operate the Millennium Park, Grant Park South, Grant Park North, and East Monroe Street garages in exchange for a single upfront payment of $563 million. However, the City netted only $157 million on the long-term lease after paying off debt for the garages and other lease-related expenses.

According to Chicago Mayor Daley, the agreement includes the "highest prices per parking space ever paid in the country," with an effective sale price of $61,000 per parking space. Morgan Stanley contracted operations of the parking garages to LAZ Parking, which manages more than 250,000 parking spaces across the country. Under the agreement, the private sector has unlimited authority to set parking rates. In addition, the agreement requires the private sector to:

- Reconstruct the East Monroe Street Garage in the near term;
- Rebuild all the garages over the course of the lease;
- Maintain garages at established standards; and
- Comply with City living wage, residential preference, and minority business requirements.

**Operations.** LAZ Parking took over the operations of the parking garages in December 2006. The four parking garages operate with a cash, credit, or debit payment option; monthly users can receive an access card to enter and exit the garages. Two garages, Grant Park North (1,850 spaces) and Grant Park South (1,350 spaces), have identical parking rates:

| Time | Fare |
|---|---|
| Early Bird: Monday-Friday | $14 |
| 0 to 20 min. | $5 |
| 20 to 40 min. | $10 |
| 40 to 60 min. | $14 |
| 60 to 80 min. | $19 |
| 80 to 100 min. | $23 |
| 100 min. to 8 hrs. | $26 |
| 8 hrs. to 24 hrs. | $29 |
| Special Event Rate | $25 |

The other two garages, Millennium (2,126 spaces) and East Monroe Street (3,850), have the following parking rates:

| Time | Fare |
|---|---|
| Early Bird: Monday- Friday | $14 |
| 0 to 8 hours | $19 |
| 8 to 12 hours | $22 |
| 12 to 24 hours | $24 |

**Current Status**. According to Chicago newspapers, the leasing of the Chicago parking garages has not resulted in any major operational issues for the City. Garage utilization has continued at levels similar to those before the lease agreement. While parking rates have increased since the lease agreement, LAZ officials contend that rates are set according to market conditions.

## 2. Case Study: Chicago Parking Meters[2]

In 2008, the City of Chicago leased its on-street parking meter system for 75 years to the private sector. This was the first time a U.S. city has privatized its parking meter system.

| **Lease of the Chicago Parking Meters** | |
|---|---|
| Location | Chicago, Illinois |
| Facility Type | On-street parking meters |
| Type Public-Private Partnership | Long-Term Lease: private sector has responsibility for maintenance and operation of the system while the public sector retains ownership. Public sector can also set meter policies, but would have to pay concessionaire for any changes. |
| Legislative Authority | Chicago has home-rule authority to lease its assets and does not need state legislation. Lease agreement was authorized by city ordinance. |
| Private Partners | Chicago Parking Meters LLC, a consortium of Morgan Stanley Infrastructure Group and LAZ Parking |
| Cost | Lease Agreement for Upfront Payment of $1.16 billion |
| Type of Financing | Private Sector Equity provided by Morgan Stanley |
| Revenue Sources | Parking meter fees |

**P3 Agreement.** During the early 2000s, Chicago had experienced budget shortfalls and resorted to layoffs and tax hikes to fill in the gap. To address on-going budget problems, Mayor Richard Daley sought to lease public transportation facilities including the Chicago Skyway in 2006 (see Chapter IV), four municipal parking garages in 2006 (see above), and Midway Airport in 2008. (The Midway lease proposal has since been cancelled because the concessionaire was unable to raise the capital needed for the upfront payment).

In February 2008, the city of Chicago issued a request for qualifications for private firms to submit credentials for leasing the rights to the city's parking meters. Over the next month, ten groups submited bids. City officials refused several request to make public the list of applicants.

[2] Sources for this case study are listed in Appendix A, Page ©10.

In November 2008, the City received two official bids to lease the parking meter system. The Mayor informed neither the City Council nor the public that an official bid solicitation had been made and gave no public explanation as to how the ten initial applicants were reduced to two bidders.

On December 1, 2008, the Mayor announced that final bids were received from Morgan Stanley and LAZ Parking for $1.157 billion and from Macquarie for $1.019 billion. The Mayor selected Morgan Stanley and LAZ Parking as the winning bidders.

On December 3, the Chair of Chicago City Council's Finance Committee called for a special meeting to consider the parking meter lease proposed by the Mayor. At that session, City officials urged the Council to quickly approve the lease because interest rates were at an all-time low. That same day, the Finance Committee voted to approve the lease.

At the request of the Mayor, the full Council held a meeting on December 4th for the sole purpose of voting on the lease agreement. According to news reports, Chicago Aldermen were not given full information about the proposed lease before the vote. The Council approved the plan 40-5. According to the Chicago Sun-Times, the five Aldermen who voted against the lease expressed concern that the Council had inadequate time to review the proposal and to receive public input.

In February 2009, the City and Morgan Stanley concluded the final legal work for the lease to transfer management responsibility for the parking meters to Chicago Parking Meters, LLC a collaboration between Morgan Stanley Infrastructure Partners A Sub LP (76 percent ownership), Morgan Stanley Infrastructure Partners LP (23 percent) and several other entities sharing one percent ownership. LAZ Parking was chosen as the operator for Chicago Parking Meters, LLC.

The City plans to use the revenues from the parking meter lease payment to fund:

- Contributions to a long-term reserve ($400 million);
- Shortfalls in City budgets through 2012 ($325 million);
- A budget stabilization fund ($324 million); and
- Programs for low-income residents ($100 million).

The 75-year lease of the Chicago parking meters allows for the Chicago Parking Meters, LLC to operate and maintain over 36,000 parking meters in the city. Some of the key features of the deal include:

- The City will retain responsibility for parking enforcement; however, Chicago Parking Meters, LLC can hire additional enforcement officers to assist the City in ticketing.
- Tickets may be issued as frequently as every two hours at two hour meters.
- The "broken meter" defense can only be used by motorists who report the meters "inoperable or malfunctioning within 24 hours" of the incident.
- The operator must replace the coin-based meter system with a, multi-space/multi-pay meter system that will allow payment via cash, credit and debit cards.
- Parking rates will be allowed to rise each year for the first five years of the contract, after which any subsequent rate increases over the remainder of the contract term will be subject to City Council approval. All increases would be capped to increases in the consumer price index.

**Operations.** LAZ Parking assumed operational responsibility for the Chicago parking meter system on February 13, 2009. Metered parking is in effect all days of the year (including Sundays and holidays) and most metered parking spaces require payment 24 hours a day. As shown in Table 5-1, meter rates have increased significantly in the first year and are planned to continue to rise through 2013.

**Table 5-1: Hourly Parking Meter Rates by Type of Meter**

| Location | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| Neighborhood Meters | $0.25 - $0.75 | $1.00 | $1.25 | $1.50 | $1.75 | $2.00 |
| Central Business District Meters | $1.00 | $2.00 | $2.50 | $3.00 | $3.50 | $4.00 |
| Loop Meters | 3.00 | 3.50 | 4.25 | 5.00 | 5.75 | 6.50 |

Source: Chicago Metered Parking System Concession Agreement

According to Chicago Sun-Times and Chicago Tribune Reports, the transition to private management of parking meters has resulted in several serious operating problems including:

- The breakdown of 250 pay-and-display[3] boxes that forced the city to stop writing downtown parking tickets for an entire workday.
- The failure of the private operator to make timely collections which resulted in meters being jammed with quarters.
- Pay-and-display boxes downtown failed to print receipts that must be displayed in the windshield of a parked vehicle.

According to the Chicago Sun-Times, the transition to privately operated meters corresponded with a spike in vandalism and a drop-off in on-street parking. In March 2009, the Chief Operating Officer of LAZ Parking stated: "We've certainly seen an uptick in the amount of vandalism at the meters. That suggests to me that some people are unhappy with the increase in the meter rates."

**Evaluation**. In June 2009, the Chicago Inspector General released an evaluation on the parking meter lease agreement and concluded that "the Chicago Parking Meters LLC paid the city $974 million less than the system would have been worth to the city if it raised rates by the same amount and kept the meters for the next 75 years." In addition, the Inspector General concluded that a 30-year lease with rate hikes 25 percent lower than those tied to the lease would have produced as much as $396 million. The report states that the Council should have conducted an independent analysis and considered alternatives, instead of agreeing with the Mayor's "hurried, high-pressure" argument that the money was needed to fill the budget gap.

After public outcry over implementation problems and the rising meter rates, the Mayor called a press conference in March to address the lease arrangement. Mayor Daley placed blame on the management company, Chicago Parking Meters, LLC. At the same press conference, the CEO of the

[3] Pay Box allows you to pay for parking at a central location and display your receipt on the inside of your vehicle's dashboard. Source: www.chicagometers.com

company stated, "We regret any issues that occurred; we are working as quickly as possible to address those issues." The company promised there would be no rate increases and no tickets until accurate information was posted and broken meters were fixed.

When the operational issues continued through August, Mayor Daley acknowledged that his administration "totally screwed up" the transition to private control of the City's parking meters. In addition, LAZ Parking hired dozens of employees to distribute information and to answer questions about the meter system.

In response to the problems with the meter lease, the City Council initiated new rules to slow down future asset sales. The City Council's Finance Committee agreed to mandate at least 15 days of legislative review before the sale of any city assets valued at over $100 million.

**Current Status.** In recent months, LAZ Parking has replaced many old-style meters with new pay boxes that allow payment by credit or debit cards. However, local newspapers have reported that a spot check of the new meters found that the time shown varies from machine-to-machine — leaving motorists confused about when to return to their vehicles to avoid getting a ticket.

In August 2009, the citizens' advocacy group, Independent Voters of Illinois-Independent Precinct Organization, sued Chicago to have the City's lease of parking meters to a private company "illegal and void." The suit claims the City did not have authority to lease its streets for an "excessive period" and that the City cannot pay police to enforce parking violations for a private company. In September 2009, the Cook County Circuit Court ruled that lawsuit's claims were unfounded. The Chicago parking meter lease remains in effect.

## 3. Case Study: Proposed Harrisburg Parking Lease[4]

In recent years, the City of Harrisburg, Pennsylvania has faced ongoing fiscal difficulties resulting, in part, from an inability to meet debt requirements for a waste-to-energy incinerator. To address the City's financial distress, the City hired an outside consulting team to recommend a five-year plan for fixing the City's finances. Among the recommendations, the consultant proposed the sale or lease of the City's parking system.

| **Proposed Lease of Harrisburg, Pennsylvania Parking Lots** | |
|---|---|
| Location | Harrisburg, Pennsylvania |
| Facility Type | Parking Garages |
| Type Public-Private Partnership | Long-Term Lease: Private sector operates and maintains the parking garages while the public sector retains ownership |
| Proposed Private Partners | Harrisburg Parking Partners: collaboration between North American Strategic Infrastructure Partners and LAZ Parking |
| Proposed Cost | Lease Agreement for Upfront Payment of $215 million |
| Revenue Sources | Parking fares |

**P3 Proposal**. In May 2008, the Mayor of Harrisburg, Stephen Reed, unveiled a plan to lease to the private sector nine garages, two parking lots, and approximately 1,200 metered parking spaces operated by the Harrisburg Parking Authority. Under the proposal, North American Strategic Infrastructure Partners, a New York City investment firm, and LAZ Parking of Hartford, Connecticut (collectively known as Harrisburg Parking Partners), would pay the Harrisburg Authority a one-time up front sum of $215 million to operate the City's public parking facilities for the 75 year lease period. The Harrisburg Parking Authority would retain ownership and oversight of the facilities. Under terms of the proposed agreement, the private operator would be allowed to increase parking rates 100 percent every six months with Authority approval.

The lease was contingent on approval from the City Council and the Harrisburg Parking Authority by October 15, 2008. The City also needed agreement with AFSCME Local 521B, the union which represents Authority parking garage employees, as their contract includes a clause preventing the City from leasing out parking facilities.

The Mayor outlined a plan for the use of the lease proceeds. The Mayor indicated that he would dedicate lease revenues to pay off $112.8 million of existing Parking Authority bonds, reduce City debt by $93.6 million, provide tax rebates to City residents, and hire 15 more police officers and other City employees.

[4] Sources for this case study are listed in Appendix A, Page ©11.

After the Mayor revealed the proposal, the City held several public hearings in which support and opposition was voiced. According to local newspapers such as the Harrisburg Patriot News and the Central Pennsylvania Business Journal, objections to the proposed lease included:

- The primary purpose of parking facilities should be to regulate traffic and not to generate surplus income;
- The proposed lease would obligate the City to reimburse the private operator up to $2 million in legal and other costs;
- The lease would result in the loss of jobs;
- An increase in parking rates would harm retail businesses; and
- Privately operated parking facilities would be subject to County and City real estate taxes.

In May 2008, the Harrisburg Parking Authority approved the proposed deal. Shortly after Authority approval, the City Council issued a Request for Proposal for an independent consultant to evaluate the proposed lease. The Council received two proposals for a consultant, neither of which they found adequate for the evaluation. As a result, the Council agreed to reopen the search. The Council did not act on the proposal by the October 15 deadline.

**Revised P3 Proposal.** After the deadline passed, the Parking Authority and Harrisburg Public Parking began negotiating on proposed amendments to assure that the lease complied with State antitrust guidelines and that the parking garages would remain exempt from real estate taxes.

During the course of negotiations, the Parking Authority solicited input from garage employees about the proposed lease agreement. According to WGAL Harrisburg, the employees raised concerns that the agreement was made without their input and that the lease would result in a loss of jobs.

In November 2008, the Parking Authority and Harrisburg Parking Partners agreed to lease amendments hours before the City Council was scheduled to vote on the matter:

- A new closing date of April 15, 2009;
- A restriction allowing only one increase in monthly parking rates per year;
- A limit that monthly parking rates could increase no more than$40 per month in a year; and
- A reduction in the "breakup fee" the Parking Authority would pay Harrisburg Public Parking if the agreement was terminated.

After months of negotiations, the City Council rejected the proposed lease on November 25, 2008. As reported in the Harrisburg Patriot News, the seven-member Council voted unanimously against the lease for several reasons:

- Several members opposed the concept of leasing the City's parking assets for 75 years; and
- Many Council members raised concerns about the structure of the contract, particularly relating to the State's antitrust laws, the lessee's requirement to pay real estate taxes and the potential loss of jobs.

**Current Status.** After the Council rejected the lease, there has been no effort to re-introduce or amend to the proposal.

## CHAPTER VI: P3 CASE STUDIES: TRANSIT

In the United States, the use of public-private partnerships for transit projects has been limited. The primary use of public-private partnerships in transit includes traditional contracting or design-build agreements, both of which are not discussed in this OLO study. However, there have been projects recently implemented in transit public-private partnerships:

- Houston Metro has entered into long-term lease agreements with private entities to build and operate rail and busway facilities;
- Bay Area Rapid Transit (BART) District in California includes private investment into its new connection between Oakland Airport and the BART Coliseum Station;
- Denver Regional Transportation District has established a design-build-operate maintain model for new rail corridors; and
- Virginia I-495 High Occupancy Toll (HOT) Lanes includes a lease agreement with the private sector for four lanes added to the Capital Beltway between the Springfield Interchange and just north of the Dulles Tollway.

The Transportation Research Board is currently working on a study on transit P3s to show "how effective they are at allocating risk, accelerating project delivery, and improving reliability and performance."

For this study, OLO was able to identify two primary case studies in transit public-private partnerships in which the private sector has taken on significant financial and operational risk. This chapter provides case study summaries of two public-private partnerships in transit:

1. Hudson-Bergen Light Rail; and
2. Las Vegas Monorail.

## 1. Case Study: Hudson-Bergen Light Rail[1]

The Hudson–Bergen Light Rail (HBLR) is a light rail system in northern New Jersey. Opened to the public in April 2000, it was the first and currently the largest Design-Build-Operate-Maintain or "turnkey" public-private partnership in the United States.

| Construction of the Hudson-Bergen Light Rail | |
|---|---|
| Location | Hudson County, New Jersey |
| Description | 20.6 mile light rail transit system (elevated and surface level) |
| Type Public-Private Partnership | The light rail is contracted out to the private sector and will be handed back to the government at the end of the contract. The private sector was/is responsible for the design, construction, equipment, and operations of the light rail. The public sector maintains ownership. |
| Legislative Authority | New Jersey Statute § 27:25-5 |
| Private Partners | 21st Century Rail Corporation |
| Cost | Fixed price contract for $2.2 billion to 21st Century Rail Corporation to deliver a fleet of vehicles, a guaranteed completion date, and 15 years of operation and maintenance of the system |
| Type of Financing | Combination of Federal Transit Administration New Starts Full Funding Grant Agreements and Grant Anticipation Notes (GANs) |
| Revenue Sources | Passenger Fares<br>Motor Fuel Tax Receipts (State Transportation Trust Fund) |

**Facility Description**. The Hudson-Bergen Light Rail (HBLR) is a light rail transit system currently serving 23 stations in northern New Jersey. The light rail line runs north-south along the Hudson River waterfront in Hudson County, New Jersey. The light rail runs on a combination of old rail and new private rights-of-way for most of its length. The rail also shares a lane with automobiles in parts of Jersey City.

**P3 Agreement**. New Jersey officials had considered various transportation plans for the densely populated Hudson River waterfront area since the early 1980s. After completing several studies and soliciting community input, the State decided that a light rail system would be the most effcient and cost-effective transporation system for the area. New Jersey Transit (NJ Transit), the State's public transportation corporation, originally put out a request for proposals for the design and construction of the light rail system, not the operations and maintenance. However, when the original proposals exceeded the anticipated project cost and schedule, officials changed the request to include a contract for design, construction, operations and maintenace of the light rail line.

[1] Sources for this case study are listed in Appendix A, Page ©13.

After receiving numerous proposals to the revised solicitation, New Jersey selected 21st Century Rail Corporation (a subsidiary of Washington Group International) for the light rail contract. Under the contract, 21st Century Rail would provide for a fixed price: a fleet of vehicles, construction of rail and stations by a guaranteed completion date, and 15 years of operation and maintenance in compliance with established standards. The initial contract only covered one operating segment of the line, but it was later renegotiated to include subsequent extensions.

NJ Transit, as owners of the light rail line, retains oversight responsibility for system operations and maintenance. The contract provides for evaluation of the system using a "quality service index," which includes performance measures such as on-time arrivals, noise control, and passenger comfort.

**Financing.** The initial Hudson-Bergen light rail contract, known as Minimum Operating Segment 1 (MOS-1), was awarded to 21st Century Rail Corporation for approximately $1 billion. A few years later, 21st Century Rail Corporation was also awarded the Minimum Operating Segment (MOS-2) project, an expansion of the light rail light for $1.2 billion. The funding for the contract came from two sources: Federal Transit Administration New Starts funding and the establishment of grant anticipation notes[2] (GANs). The GANS were borrowed against the New Jersey State Transportation Fund, which collects motor fuel tax receipts for its primary source of funding. The table below details the financing structure of the Hudson-Bergen light rail P3 agreement.

**Table 6-1: Summary of Hudson-Bergen Light Rail Financing Resources**

| Funding | Amount ($) |
|---|---|
| **MOS-1** | |
| Federal New Starts Grant | 885.7m |
| State Grant Anticipation Notes | 106.4m |
| *Subtotal MOS-1* | *992.1m* |
| **MOS-2** | |
| Federal New Starts Grant | 653.7m |
| State Grant Anticipation Notes | 561.7m |
| *Subtotal MOS-2* | *1.2b* |
| **Total Federal Funding** | **1.5b** |
| **Total State Funding** | **668.1m** |
| **Total Funding** | **2.2b** |

Source: FTA New Starts Annual Reports

**Operations.** The initial segment of the Hudson-Bergen light rail opened to the public on April 22, 2000. Since operations began, the service has been extended northward to Pavonia-Newport and Hoboken Terminal, Bayonne, and Weehawken. New Jersey Transit officials report that there have been no major closures or mechanical problems since the opening of the light rail.

Initial ridership fell below projections but increased when the system extended to Newport (next to a large shopping mall). After the World Trade Center attacks and the closing of the New York/New Jersey Port Authority's Exchange Place station, Hudson-Bergen ridership rose dramatically as the

[2] Grant Anticipation Notes (GANs): Used by transit agencies to borrow against future Federal formula or grant funding. Source: AASHTO Center for Excellence in Project Finance.

line became the only way to access lower Manhattan from New Jersey by rail. Ridership has steadily increased to a current average of approximately 38,200 customers per weekday. Average weekday ridership is projected to grow to 100,000 when the final segments of the rail line become operational in 2010. NJ Transit authorities attribute this projected increase in ridership to real estate development in vacant and underutilized properties close to the light rail expansions.

Fares and Schedules. The one-way adult fare on the light rail is $1.90, with discounted rates for monthly passes, children, senior and passengers with disabilities. In addition, NJ Transit customers holding a monthly or weekly rail pass, or a bus pass for two or more zones, can ride the light rail system at no additional charge. Light rails trains operate on the following schedules:

- Every five minutes from 5 a.m. to 1 a.m. daily;
- Every ten minutes for weekday off peak times; and
- Every 15-20 minutes during the weekend.

**Current Status**. A report by the Federal Transit Administration (FTA) on the rail system states that the project schedule was advanced by at least one and possibly two years by using this public-private partnership. The FTA also concluded that the project has improved mobility and connectivity in northern New Jersey and has spurred significant economic development in the communities served by the line.

Similarly, a study of the Hudson-Bergen Light Rail by the Voorhees Transportation Center of Rutgers University found that the system has:

- Increased the mass transit ridership;
- Improved the environment;
- Spurred creation of business and employment;
- Increased property values and tax revenues, and
- Engendered a "fresh, emerging sense of place."

One issue for the Hudson-Bergen Light Rail is that despite its name, the rail only serves Hudson County at present. Transit and community activists have campaigned steadily for an expansion of the rail system. There are numerous proposed extensions – Meadowlands, Secaucus Junction, Northern Branch Bergen County, Route 440, and Staten Island. NJ Tranist has begun to study the feasibility of such extensions.

## 2. Case Study: Las Vegas Monorail[3]

The Las Vegas Monorail is a monorail mass transit system located on the Las Vegas Strip in Clark County, Nevada. Opened in 1995, the monorail is the nation's first urban rapid transit system to be funded without public tax revenues.

| Construction of the Las Vegas Monorail | |
|---|---|
| **Location** | Las Vegas, Nevada |
| **Description** | 3.9 mile monorail serving the Las Vegas Strip |
| **Type Public-Private Partnership** | The private and public sector entered into a franchise agreement in which the private sector was responsible for the design, construction, finance, and operation of the monorail system. The public sector's involvement included the issuance of government bonds, approval of development plans, and assurance of compliance with building standards. |
| **Legislative Authority** | Nevada Senate Bill 333, passed August 1997. |
| **Private Partners** | Originally the Transit Systems Management, a joint venture of Bombardier Inc. and Granite Construction Corp. Investors include:<br>• MGM-Bally's Monorail LLC;<br>• MGM Mirage; and<br>• Park Place Entertainment.<br><br>Currently owned and managed by Las Vegas Monorail Company, LLC. |
| **Cost** | Cost of franchise agreement, for original monorail system plus cost to design and build the new monorail - $650 million |
| **Type of Financing** | Tax exempt revenue bonds issued and Nevada Department of Business and Industry |
| **Revenue Sources** | Passenger Fares and Advertising Revenues |

**Facility Description.** The Las Vegas Monorail is an electric and driverless monorail that runs parallel to the Las Vegas Strip. The Monorail was originally proposed as a joint venture between two Las Vegas hotels, the MGM Grand and Bally's Hotel, to connect the two hotels. The monorail is primarily intended for city tourists and not for daily commuters.

**P3 Agreement.** In 1998, Clark County entered into a 50-year franchise agreement with Transit Systems Management LLC (TSM) to design and build the Las Vegas Monorail. Transit Systems Management included the following companies: Granite Construction Company, da-based Liaise

[3] Sources for this case study are listed in Appendix A, Page ©14.

Corporation, Gensler & Associates, Carter-Burgess, Salomon Smith Barney, and Bombardier Transportation. In addition, TSM formed agreements with local businesses to construct the monorail. Much of the monorail system was constructed on private land.

In 2000, ownership and management of the monorail was transferred to the non-profit Las Vegas Monorail Company (LVMC) in an amicable merger. The monorail was granted non-profit status because it provides a public service. The non-profit is governed by a Board of Directors appointed by the Governor of Nevada. The President of the Board oversees the daily operations of the monorail, which is contracted out to Bombardier.

The franchise agreement with LVMC outlines the roles and responsibilities of each party. The private parties are responsible for the design, construction, maintenance, and operations of the system. The role of the public sector includes:

- Approval and review of any development and construction plans, similar to all construction in the County;
- Issuance of bonds to fund the project;
- Inspection of compliance with all county building standards; and
- Ability to revoke franchise agreement for compliance failure.

**Financing.** As a non-profit entity, the Las Vegas Monorail was funded through tax-exempt revenue bonds issued by the Nevada Department of Business and Industry (managed by Salomon Smith Barney). The bonds were issued as follows:

- $451 million - first tier of current interest[4] ($348 million) and capital appreciation bonds[5] ($97 million) insured bonds backed by Ambac Assurance Corp;
- $149 million - second tier of current interest bonds was unrated; and
- $48.5 million - third tier of subordinated capital appreciation bonds[6] which were privately placed with major hotels and construction companies involved in the project.

**Analysis of Proposal.** After project sponsors produced ridership, cost, and revenue projections for the Las Vegas Monorail, a consultant was hired to assess the sponsors' projections. The consultant reported that:

- Daily ridership would likely be in the range of 16,900 to 25,400 in 2004, compared to 53,500 as projected by the sponsors;
- The monorail system would likely experience a net loss from 2003-2035 of $1.0 to $1.7 billion compared to the sponsors' projection of a $534 million profit; and
- Revenues would be unlikely to be sufficient to pay project obligations during all but two years of operation through 2035.

[4] Current Interest Bond: A bond on which interest payments are made to the holders on a periodic basis. Source: Municipal Securities Rulemaking Board.

[5] Capital Appreciation Bond: A municipal security on which the investment return on an initial principal amount is reinvested at a stated compounded rate until maturity, at which time the investor receives a single payment (the "maturity value") representing both the initial principal amount and the total investment return. Source: Municipal Securities Rulemaking Board

[6] Subordinated Bond: A loan (or security) that ranks below other loans (or securities) with regard to claims on assets or earnings. Source: Forbes Investopedia.

The consultant's report warned that the financial failure of the monorail project could lead to service reductions on other Las Vegas public transportation systems, higher taxes to support the system, and higher bond interest rates for the State. Particularly, the Monorail could divert passengers from the local bus route along the Las Vegas Strip, which in turn could face a financial deficit. In addition, if the monorail experienced financial failure: (1) the state could face higher bond interest rates; and (2) government assistance could be required to continue operations.

Despite the analysis, Transit Management Systems proceeded with project development. According to local newspapers, state and local officials approved the construction of the monorail for numerous reasons:

- The desire for a public rail system to alleviate traffic and congestion;
- A potential reduction in environmental pollution; and
- The assurances that there would be no effect on taxpayers.

**Operations**. The Las Vegas Monorail opened to the public on July 15, 2004 after several malfunctions delayed the start of passenger service for almost a year. In addition, shortly after opening the Monrorail, the system was forced to shut down for four months due to parts falling onto the ground below.

Fares and Schedule**.** There are currently seven stations located behind hotels, attractions, and the Las Vegas Convention Center along the Las Vegas Strip. The monorail operates from 7am-2am on weekdays and 7am-3am on weekends. The current fare rates are as follow:

- $5 Single Ride Fare;
- $13 Unlimited One Day Fare; and
- $28 Unlimited Three Day Fare.

Ridership. The Las Vegas Monorail has not met projected ridership numbers since the opening of the system. The partners projected approximately 50,000 daily riders in the proposal; the actual ridership numbers are as follows:

| Year | Average Daily Ridership |
|---|---|
| 2005 | 29,161 |
| 2006 | 19,929 |
| 2007 | 22,493 |
| 2008 | 21,598 |
| 2009 (Two Quarters) | 16,915 |

Source: Las Vegas Monorail Website

Revenue. The Las Vegas Monorail's revenues have slightly decreased over its first years of operations. The following table shows the annual and average daily revenue for the Monorail from 2005-2008. The annual financial audit of the Las VegasMonorail officials report that Monorail revenues currently cover the operational and administrative costs of the system, but do not cover debt service.

**Table 6-2: Annual and Average Daily Revenue, Las Vegas Monorail 2005-2008**

| Year | Average Daily Revenue ($) | Annual Revenue ($ millions) |
|---|---|---|
| 2005 | 86,082 | 30.3m |
| 2006 | 88,254 | 32.2m |
| 2007 | 80,676 | 29.5m |
| 2008 | 81,201 | 29.7m |

Source: Las Vegas Monorail Audits 2006-2008

Financial auditors report that the "severe national economic downtown" has affected the ridership and revenue of the rail system and may account for the decreasing revenues.

**Current Status**. While monorail management has raised and lowered fares over recent years to increase revenue or ridership, fare revenues have not been enough to pay debt service. In July 2007, Fitch Ratings[7] downgraded $451 million in outstanding bonds used for the construction of the monorail. In July 2009, Fitch further downgraded the bonds to "C," which means the raters believe a default "appears imminent or inevitable." In addition to those bonds, the monorail project has $200 million in other debt, which can be repaid only after the $450 million "first tier" is repaid.

Fitch also reported that the monorail only has enough cash reserves to cover costs until 2010. In fact, the monorail bond has been in default since missing a January 2008 interest payment. Fitch estimates that the debt reserves are adequate to fund the interest needs of the top-tier bonds through 2009 but that the lower tier bonds may miss payments from July 2009 onward.

Because the Monorail has not met ridership and revenue goals, the Board of Directors is currently considering ways to increase both including:

- Federal loans through the Transportation Infrastructure Finance and Innovation Act;
- Expansion to Las Vegas McCarran International Airport; and
- Other sources of revenue such as bulk ticketing and reduced fares for local riders.

Because the monorail is a private non-profit entity, the government is not obligated to take over the monorail or its debt should it go bankrupt. Ambac Assurance Corporation insures the bonds and there is a contingency fund to tear down the line should it close. Currently, Monorail officials report that ridership covers the cost of operation and maintenance, but not the repayment of construction costs. The Executive Vice President of Rogich Communications Group, which represents Ambac, recently stated that there are no immediate plans to shut down the monorail.

[7] Fitch Ratings is a global rating agency committed to providing the world's credit markets with independent and prospective credit opinions, research, and data. http://www.fitchratings.com/index_fitchratings.cfm

## CHAPTER VII: FINDINGS

All jurisdictions must balance the needs of their transportation systems with competing demands for finite resources. In recent years, the gap has widened between the amount of available public funding and the need to improve and expand the nation s transportation infrastructure. As a result, governments have begun to look seriously at non-traditional approaches, such as private-private partnerships, to meet some of these needs.

A public-private partnership ("P3") is an agreement between a public agency and private sector entity to share responsibility for the development, operation, management, and/or financing of a facility and/or service. The federal Department of Transportation defines a P3 as follows:

> A public-private partnership is a contractual agreement formed between public and private sector partners, which allow more private sector participation than is traditional. The agreement usually involves a government agency contracting with a private company to renovate, construct, operate, maintain, and/or manage a facility or system. While the public sector usually retains ownership in the facility or system, the private party will be given additional decision rights in determining how the project or task will be completed.[1]

Public-private partnerships represent a wide variety of project financing and delivery approaches ranging from contracted services such as maintenance to full financing, development, and operation of a project over a long time period. The degree of private sector involvement is adapted to the individual needs and characteristics of each project.

The Council asked the Office of Legislative Oversight (OLO) for a report on public-private partnerships in transportation, to include the fiscal, policy, and administrative benefits and risks associated with P3s. The remainder of this chapter summarizes OLO's findings on public-private partnerships in transportation.

## OVERVIEW

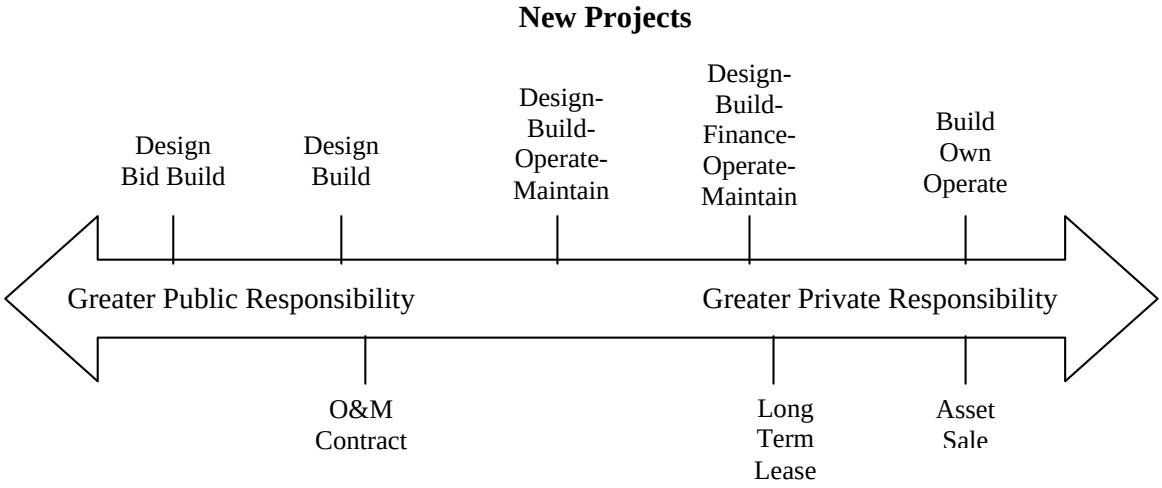
### Finding #1: The different forms of transportation public-private partnerships can be placed along a continuum.

Transportation public-private partnerships take many forms, with varying degrees and types of private sector involvement and responsibility. A transportation P3s can be designed for a new project or as a modification to an existing project.

The diagram on the next page shows the continuum of the types of P3 arrangements used in transportation projects, arrayed from the least to the greatest private sector involvement, followed by a brief description of each approach. A P3 project is often a hybrid of two or more of these methods.

[1] "Report to Congress on Public-Private Partnerships." United States Department of Transportation 2004, Page 10.

## Types of Public-Private Partnership Arrangements[2]




The following provides a brief description of each type of public-public private partnership approach identified above:[3]

## Summary of Public-Private Partnership Approaches

| | |
|---|---|
| **Design-Bid-Build** | The government contracts with the private sector for the design and construction of a project under separate contracts. The government assumes operational responsibility. |
| **Design-Build** | The government contracts with the private sector for the design and construction of a project under one contract. The government assumes operational responsibility. |
| **Operations and Maintenance (O&M) Contract** | The public sector contracts with the private sector to perform specific services. |
| **Design-Build-Operate-Maintain** | The government contracts the private sector to design, build, operate and maintain a project. Ownership and operating revenue is retained by the public sector. |
| **Design-Build-Finance-Operate-Maintain** | The government contracts the private sector to finance, design, build and operate a project. Ownership is retained by the public sector but the private sector receives revenues generated during the project's operation. |
| **Long-Term Lease** | The public sector leases a publicly financed facility to the private sector for specified time. |
| **Build-Own-Operate** | The private sector finances, designs, builds, and operates a project. Ownership is retained by the private sector. |
| **Asset Sale** | The public sector sells ownership of a public facility to the private sector. |

[2] Adapted from the National Council for Public-Private Partnerships
[3] Definitions adapted from National Cooperative Highway Research Program (2009), based on FHWA's "User Guidebook on Implementing Public-Private Partnerships for Transportation Infrastructure Projects in the United States."

**Finding #2: While the number of jurisdictions exploring P3s is growing, there remain only a small number of transportation-related P3s implemented in the United States.**

Many of the earliest roadways and transit systems in the United States were privately-owned. However, the involvement of the private sector in transportation infrastructure declined as states and the federal government increased their involvement in transportation construction. Over the past 30 years, the participation of the private sector in transportation infrastructure re-emerged as funding became more constrained and the demand for transportation facilities and services increased.

In recent years, interest in public-private partnerships for transportation has increased. Federal and state governments began to promote the use of P3s through programs and laws with a new vision for transportation, including greater state flexibility in using non-traditional procurement methods. According to the Transportation Research Board of the National Academies and The National Surface Transportation Policy and Revenue Study Commission, this movement over the past two decades towards public-private partnerships is a result of numerous trends:

1. Aging of the transportation infrastructure;
2. Shorter timetables to complete transportation infrastructure projects;
3. Increase in facility construction and maintenance costs;
4. Decrease of available revenue for transportation investment; and
5. Increase in automobile travel demand.[4]

Currently, the implementation of transportation public-private partnerships remains limited although many are under consideration. The use of public-private partnerships in road construction and management is the most prevalent form of transportation P3s, with 15 private roads operating as of 2008. The use of P3s in transit and parking are less common, with only a handful actually implemented across the country.

**Finding #3: Numerous federal and state laws and programs support the use of public-private partnerships.**

The traditional way that government has supported the growth of transportation infrastructure has been via public sector funding. However, with an increasing interest in involving the private sector in transportation development, governments have adopted numerous measures to support the creation of P3s.

**Federal Government.** The federal government has passed three transportation laws that support and promote the use of public-private partnerships. Specifically, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Transportation Equity Act for the 21st Century 1998 (TEA-21), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act 2005 (SAFETEA-LU):

- Identified the private sector as a source for funding transportation improvements;
- Increased funding flexibility and relaxed funding restrictions for toll roads;
- Allowed the private sector to own toll facilities;
- Increased funding for research and training with the private sector;
- Established credit assistance programs for private sponsors; and
- Encouraged the use of innovative financing methods.

[4] Adapted from The Transportation Research Board of the National Academies (2009) and The National Surface Transportation Policy and Revenue Study Commission (2009).

The following federally-funded programs also promote the use of P3s in transportation:

- Special Experimental Project – 14 (SEP-14) supports states in evaluating non-traditional contracting techniques.
- Special Experimental Project – 15 (SEP-15) identifies public-private partnership approaches that advance the efficiency of transportation projects.
- New Starts Program is the primary funding resource for supporting locally planned and operated transit capital investments, including P3s.
- Public-Private Partnership Pilot Program (Penta-P) encourages more private sector involvement and investment in transportation projects by evaluating the benefits of forming P3s for federally-funded projects.

**Maryland** is among 25 states that have adopted some type of enabling legislation for public-private partnerships in transportation, The approaches taken by different states vary from broad authorization for all types of projects to limited authorization of specific projects.

In Maryland, the Code of Maryland Regulations (COMAR) authorizes the state to enter into non-highway P3 agreements with private entities. While the use of P3s in highways is not expressly authorized, the Maryland Attorney General has ruled that the law does not prohibit "a private entity from owning, constructing, operating, or maintaining a highway."[5]

In order to further support the use of P3s in transportation, Maryland created the Transportation Public-Private Partnership Program to encourage the creation of public-private partnerships to supplement traditional transportation resources. The program assists the State in working with the private sector in the acquisition, financing, construction, and operations of new and existing transportation facilities, excluding highways.

### Finding #4: Innovative financing mechanisms for transportation projects encourage the use of public private partnerships.

Traditionally, transportation infrastructure has been financed through a combination of state and local taxes and fees, and federal grants from the Federal Highway Trust Fund (funded by the federal gasoline tax). In recent years, the public sector has more actively explored "innovative finance mechanisms" – defined as alternatives or supplements to traditional, tax- or grant-based funding strategies – to fund transportation projects. These techniques are designed to maximize the ability of states and municipalities to leverage federal funding, attract new sources of funds including private sector funding, and accelerate project completion dates.

The following table lists the array of conventional and innovative financial mechanisms available for transportation projects. Many of these financing tools are available for traditional procurement of transportation projects or services; however, many of these tools promote the use of P3 as a funding alternative. Often, transportation projects are funded using a combination of funding sources and financing approaches. More detailed explanation of these financing tools can be found in Chapter II of this report (page 12).

[5] Maryland 81 OAG 261 (Opinions of the Attorney General).

## Financing Mechanisms for Transportation Projects

| Mechanism | Brief Description |
|---|---|
| **Federal Credit Assistance** | |
| Transportation Infrastructure Finance and Innovation Act (TIFIA) Program | The program provides three forms of credit assistance to public and private sector – secured (direct) loans, loan guarantees, and standby lines of credit to eligible transportation projects. |
| State Infrastructure Bank Program (SIB) | Revolving loan program to provide infrastructure investment funds such as loans at subsidized rates and/or with flexible repayment provisions; grant anticipation notes (GANs); and short-term construction or long-term debt financing. |
| Section 129 Loans | Loan program that allows Federal participation in a state loan to support projects with dedicated a revenue stream. |
| **Bonding and Debt Instruments** | |
| General Obligation Bonds | Municipal bonds issued that are backed by the "full-faith-and-credit" of the issuer. |
| Limited and Special Tax Bonds | Bonds issued on the pledge of the proceeds against a specific tax. |
| Revenue Bonds | Bonds issued in which revenues are used to make payments including toll-backed bonds and fare box revenue bonds. |
| Private Activity Bonds (PABs) | Bonds issued by or on behalf of local or state government for the purpose of financing the projects of the private sector. |
| Tax Credit Bonds | Bond in which bondholders receive federal tax credits of up to 100 percent of the interest amount in lieu of or in addition to partial interest payment. |
| Nonprofit Financing | Incorporation of the public-private partnership as a nonprofit corporation to allow the project to be financed with tax-exempt bonds. |
| Anticipation Notes | Short-term notes issued based on the anticipation of funding from a specific source. |
| **Other Financial Mechanisms** | |
| Flexible Match | Program that allows a variety of public and private contributions to be counted toward the non-Federal funding matching requirement of Federal-aid projects. |
| Pass-through Tolls | Per-vehicle or per-vehicle-mile fees paid by the public sector to the private sector as reimbursement. |
| Availability Payments | Payments made to the private sector partner by the public sector based on project milestones or facility performance standards. |

Source: American Association of State Highway and Transportation Officials (AASHTO) for Excellence in Project Finance @ http://www.transportation-finance.org/

## BENEFITS

### Finding #5: The involvement of both the public and private sectors expands the financing tools available in an environment of budgetary restrictions.

Many jurisdictions have shown interest in innovative approaches to financing that may allow transportation projects to move forward without needing to increase taxes or fees. The involvement of the private sector in transportation projects can result in access to capital and financial resources that can help address transportation problems facing the public sector. The most commonly cited potential benefits from involvement of the private sector include:

- **Quick Influx of Cash.** The public sector may receive a large upfront payment that can be used to close budget gaps or free up resources for other needs.[6]
- **Lower Costs.** The private sector has the incentive to limit the cost and time of a project in order to turn a profit, including efficiencies gained through lower direct (economical design features and cost-saving construction methods), indirect (lower overhead costs primarily from savings that may result from avoided inflation), and life-cycle (focus on minimizing the long-term costs of the project) costs.[7]
- **Access to Non-Traditional Funding.**[8] The use of private equity and federal and state financing options/programs that promote public-private partnerships may provide transportation projects with financial resources otherwise not available. In particular, new debt financing strategies such as non-traditional bonding authority, federal credit assistance, and state infrastructure banks provide incentive for private sector involvement.[9]

### Finding #6: Public-private partnerships offer potential efficiencies and operational flexibility for achieving a project's objectives.

In addition to financial benefits of public-private partnerships, P3s can sometimes make the best use of private sector operational efficiencies to reduce cost, increase quality, and speed up infrastructure development through:

- **Transfer of Risk.** The transfer and sharing of project risks can result in the allocation of risk to the partner best able to manage them. For example, the private sector may be better able to manage construction, operational, and revenue risks while the public sector is better equipped to deal with environmental, regulatory, and public acceptance risks. Diversifying risk can result in lower overall project risk, reduced project costs and accelerated project delivery.[10]

[6] "Highway Public-Private Partnerships." General Accounting Office 2008, Page 20.
[7] "Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects." Department of Transportation 2007, Page 8.
[8] For more detailed explanation of financing mechanism identified, refer to Chapter II.
[9] American Association of State Highway and Transportation Officials (AASHTO) for Excellence in Project Finance @ http://www.transportation-finance.org/
[10] "Highway Public-Private Partnerships." General Accounting Office 2008, Page 21 & "Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects." Department of Transportation 2007, Page 12.

- **Increased Mobility on Roadways.** Pricing techniques, such as congestion pricing, can be used to reduce congestion and demand for road travel at peak periods, allowing the roadway to accommodate demand with fewer delays. Any increase in toll rates often results in public dissent; however, the private sector may have more flexibility in the use of such techniques because private partners are not directly accountable to the taxpaying public.[11]
- **Improved Quality.** More flexibility to maximize the use of innovative technology and the ability to select the best materials may result in increases in the project quality.[12]

## RISKS AND CHALLENGES

### Finding #7: The shift of financial risk to the private sector under a public-private partnership may result in the public getting less value or paying more compared to more traditional public financing.

Because of their long-term nature, P3s may make projects more affordable in the short term but not necessarily in the long term. Some of the specific financial risks to the public sector of entering into a public-private partnership include:

- **Difficulty in Estimating Long-Term Worth.** Determining the long-term worth of transportation infrastructure can be an imprecise activity. Value assessment of such a project requires multi-year economic trend analysis and traffic predictions which can be difficult, resulting in the under-estimation of value. [13]
- **Costs to the Public Sector.** Over the long-term, the public sector may incur potential additional costs as a result of a P3, including personnel or contract costs to review, select, and monitor the partnership and potential foregone tax revenue when tax-exempt debt is used.[14]
- **Higher Cost of Private Financing**. In general, the borrowing costs of private debt are higher than public tax-exempt debt, which can result in the higher costs being passed to the public through a lower up-front payment or higher user rates.[15]
- **Financial Difficulties by the Private Sector Partner.** If the private sector defaults on its loans or its agreement there is typically no legal requirement for the public sector to step in. However, if the project is an important facility to the community, the public sector may choose to bear some of the costs to operate the facility.[16]

[11] DeCorla-Souza, Patrick and William Baker. "Innovative Public-Private Partnership Models for Road Pricing/BRT Initiatives." Journal of Public Transportation, Vol. 8, No. 1, 2005. Page 64.
[12] "Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects." Department of Transportation 2007, Page 13.
[13] "Public Sector Decision Making for Public–Private Partnerships." National Cooperative Highway Research Program 2009, Page 18.
[14] Ibid, Page 22.
[15] Ibid, Page 22
[16] Ibid, Page 23.

**Finding #8: Public-private partnerships can result in the inability of the public sector to make changes to the operations of the project or its impact on other public policies.**

Public-private partnerships are complex to design, implement and manage. Public officials who enter into such agreements must create a partnership that protects the public interest by providing efficient and effective services at a minimum risk to the public. Officials are responsible for the assignment of roles and responsibilities of a P3 in a transparent and accountable manner.

While there are risks associated with public-private partnerships, potential risks or pitfalls can be addressed and managed within a well-structured partnership agreement. There are two common public concerns that public officials must address with P3 agreements:

- **Higher User Rates for Transportation.** Because the private sector seeks a return on its investment, the rate of tolls/fares will be driven by market factors. In addition, the private sector may face fewer constraints on raising user rates.[17]
- **Loss of Policy Control.** Many public policies in all areas of government are interconnected and dependent upon transportation infrastructure. For example, if the public sector enters into a P3 for a major transportation project, the public sector may lose control over the impact of the P3 on other transportation, economic, and environmental policies.[18]

[17] "Highway Public-Private Partnerships." General Accounting Office 2008. Page 19.
[18] "Highway Public-Private Partnerships." General Accounting Office 2008, Page 19 &"Public Sector Decision Making for Public–Private Partnerships." National Cooperative Highway Research Program 2009, Page 40.

## CASE STUDIES

### Finding #9: The use of public-private partnerships throughout the United States demonstrates mixed success.

For this study, OLO identified ten cases studies of road, parking and transit P3 agreements in which the private sector had significant control over management and financing of the project. OLO found that the selected P3 projects have resulted in mixed success. The following table highlights some of the noteworthy successful and unsuccessful aspects of the projects reviewed.

**Examples of P3 Successes**

- The City of Chicago received a large amount of revenue from the lease of roads and parking lots/meters that was used to fund other immediate needs of the City.
- The Dulles Greenway was finished ahead of schedule and on budget.
- Almost all of the case studies examined used innovative financing mechanisms, including private equity.
- The Hudson-Bergen Rail utilized a significant amount of funding from state and federal grants available to P3 projects.

**Examples of P3 Challenges**

- Almost all of the projects did not meet projected traffic goals.
- There was public backlash against projects such as the Indiana Toll Road and the Chicago parking meter lease, and two projects – the PA Turnpike and Harrisburg Parking lease – did not come to fruition because of a lack of public support.
- Almost all P3 have resulted in higher user rates for patrons, including increased toll rates on the Dulles Greenway and higher parking rates in Chicago.
- The Las Vegas Monorail is not collecting adequate revenue to pay back debt.
- According to a report by the Chicago Inspector General, the City of Chicago received $974 million less than the long-term value of the parking meters in the lease agreement.

## CHAPTER VIII: RECOMMENDED STEPS FOR CONSIDERING PUBLIC-PRIVATE PARTNERSHIPS

Across the United States, an increasing number of state and local governments are exploring the use of public-private partnerships (P3s) for transportation projects, including roads, parking, and transit. In some cases, greater involvement of the private sector helps to address funding shortages and accelerate project completion. However, the use of public-private partnerships also raises a variety of concerns that range from the initial decision to use a P3 delivery mechanism through the specifics of a formal P3 agreement.

In 2007, the Federal Highway Administration issued the "User Guidebook on Implementing Public-Private Partnerships for Transportation Infrastructure Projects in the United States;" this guidebook is a resource document designed to assist state and local governments successfully execute a P3 while protecting the public interest. The User Guidebook contains information on strategies as well as precautions for the development, implementation, and management of different kinds of P3 arrangements.[1]

**A P3 arrangement is not suitable or feasible for all transportation projects. Ultimately, each jurisdiction needs to determine for itself the proper balance between competing objectives when it comes to delivering an effective transportation system.**

Based on the Federal Highway Administration's User Guidebook and other literature, this chapter outlines the steps that a state/local government should take to determine whether the use of a P3 is a viable option for the delivery of a transportation project. For purposes of this chapter, the elected and appointed officials considering the use of a P3 are referred to as the "public sector decision makers."

### Step 1: Identify project goals and funding availability.

When considering how to develop and operate transportation projects, public sector decision makers should start by identifying the goals of the project. In addition to the immediate goal of adding road, transit, or parking capacity, a project often is intended to achieve corollary goals such as:

- Relieve traffic congestion;
- Improve accessibility;
- Stimulate economic development;
- Achieve land use objectives;
- Protect the environment; and/or
- Create/preserve jobs.

In addition to identifying project goals, decision makers must decide how much public funding is available for accomplishing a specific transportation project compared with competing transportation and non-transportation projects. And as part of the funding decision, it must also be determined how much facility or service users should contribute through fares and other charges, such as tolls.

1 The complete User Guidebook is available online at: http://www.fhwa.dot.gov/ipd/pdfs/ppp_user_guidebook_final_7-7-07.pdf

**Step 2: Evaluate whether the project is suitable for a public-private partnership.**

With a clear understanding of project goals and funding availability, public sector decision makers can then move on to evaluating whether a project is an appropriate candidate for a public-private partnership. In order to discern a transportation project's suitability for a P3 arrangement, decision makers should pose and answer the following set of questions:

a. *Does the jurisdiction have the authority to enter into a P3 arrangement?* States have varying laws about what type of jurisdiction (municipal, local, or state) may enter into a P3 agreement. In addition, transportation infrastructure within a jurisdiction may be owned and operated by other entities (such as the state or a multi-jurisdictional entity like WMATA). In such cases, a jurisdiction may lack the authority to directly implement a P3 arrangement.

b. *Does the private sector have the resources and expertise to manage the project better than the public sector?* In some cases, the private sector may be able to build or operate a project more efficiently than the public sector. For example, private firms often have more flexible management practices and better access to capital and technology than government entities.

c. *Would the private sector have an opportunity to achieve a reasonable return on investment from the project*? Some public transportation functions (e.g., transit services) frequently cost more to build and operate than can be recovered through user fees. The private sector would likely not participate in an arrangement that has little chance of turning a profit.

d. *How much will users be willing to pay*? To generate revenues, private operators must charge for the transportation service provided. Decision makers must assess how much users would be willing to pay for access and how alternative rate schedules would affect usage.

e. *To what degree, if any, would the public sector subsidize the construction, operations, or maintenance of the project*? Governments have an opportunity to share the cost burden of privately built and operated transportation facilities and services through donations of land, assumption of certain operations and maintenance responsibilities, or direct payment of specified capital or operating expenses.

f. *Does the public sector have the capability to oversee the private management of the project?* A P3 arrangement does not absolve the government of oversight responsibility for a facility or service that is part of the public transportation infrastructure. In other words, government must be in a position to properly oversee a transportation project that is provided by the private sector for the use of the public-at-large.

**Step 3: Identify safeguards needed to protect the public interest.**

Once a transportation project is deemed suitable for a P3 arrangement, the next step is to identify the parameters of an agreement needed to protect the public interest. Traditionally, government agencies operate publicly-accessible transportation facilities. A public–private partnership transfers operational responsibilities to the private sector. With a greater private sector role, public sector decision makers must identify ways to protect the public interest while allowing investors to achieve a return on their investment.

As stated above, government officials remain accountable for the public transportation system even when the private sector operates certain transportation facilities or services. Best practices in P3 implementation cite two primary methods to ensure the public is financially protected and the partnership does not adversely affect other government policies: (1) establishment of performance standards in the agreement; and (2) effective monitoring of the partnership.[2]

To safeguard the public interest in any P3 arrangement, decision makers should ask the following questions:

*a. How will the government determine the value of the P3 contract or lease*? Calculating the present value of future toll payments, transit fares, or parking fees can be a complex undertaking. Decision makers should ask for an explanation of the methodology and assumptions used to estimate the expected value of future revenues for the full life of the proposed agreement. A government should also consider a provision to share in future revenues that exceed a pre-designated amount.

*b. What performance standards and measures will be required*? A P3 agreement should require that the private facility operator meet specified service, maintenance, and safety standards. In addition, a P3 contract should specify consequences (e.g., penalties, grounds for termination) for failure of the contractor to comply with terms of the agreement.

*c. Should the contract limit rate increases?* Decision makers should consider whether to include a provision in the contract or lease agreement that limits future rate increases. In assessing this matter, officials should take into account the cost burden placed on both current and future users of the transportation facility or service.

*d. Should the contract include provisions to help achieve other public policies?* Decision makers should evaluate what other transportation, land use, economic development, and environmental policies would be affected by the P3 agreement. Depending upon what is decided, the contract should be crafted to preserve the desired policy objectives.

*e. How will the government oversee implementation of the agreement?* Decision makers should put in place a mechanism for overseeing the P3 agreement. Contract negotiations should take into account the cost of government oversight.

*f. What would happen in the case of default?* The contract or lease should include provisions to provide continued operation of the project should the private operator default on its responsibilities.

**Step 4. Select suitable financial mechanisms for the public-private partnership.**

Traditionally, the public and private sector have two different (and sometimes conflicting) objectives concerning the financing of a project: the public sectors seeks to cover the full costs of the project over time while the private sector wants to ensure that the project can provide a reasonable return on invested capital.

[2] Source: Federal Highway Administration Guidebook, Department of Transportation Reports 2004 and 2007

Key to deciding whether to move ahead with a transportation public-private partnership is an evaluation of the financial structure of any proposed agreement. Transportation projects can be very costly; therefore it is essential that the decision makers consider the financial criteria for evaluating the project and the financial sources available for the project.

Some specific questions decision makers should consider concerning the details of financing a public-private partnership include:

a. *How were the financial assumptions built? Are they reasonable?* Assumptions regarding borrowing rates/private equity, future user and revenue levels, or maintenance schedules may have a significant impact on the value of the project. Decision makers must have a clear understanding of the calculations associated with the project s financial assumptions.

b. *What are the current options for financing? What are the benefits and drawbacks of each option?* There are many financing options available for transportation public-private partnerships, including federal and state programs, private debt, and government issued bonds. Decision makers should evaluate the advantages and disadvantages of each financial option in the context of project goals and current economic conditions.

c. *What are the transaction/other costs associated with the deal, and does the public sector have the financial capacity to cover these costs?* There are often additional costs (such as the cost of selection and monitoring of a private partner) compared to traditional procurement that must be accounted for as part of the P3 agreement cost estimate.

d. *What financial risks do the public and private sectors bear in the deal? Does the structure of the agreement account for risks?* In a P3 agreement, there is a correlation between financial risk the public sector is shifting and the rate of investment return the private partner is expecting. Decision makers must be aware of the division of financial risks within the agreement.

e. *How should the revenue from the P3 be spent? If there is an upfront payment, will the revenue be used to create a sustainable source of revenue for the future?* P3 agreements often result in a budgetary windfall for the public sector. Decision makers should have an upfront plan for both the short- and long-term use of the revenue.

**Step 5: Develop a process to ensure transparency.**

A common criticism of public-private partnerships is the lack of transparency on the part of government officials before the final agreement is reached. If a preliminary decision is made that project is suitable for a public-private partnership, decision makers should ensure that adequate opportunities for public input exist.

Before approval of a P3 agreement, key terms (such as contract standards, user rate policies, non-compete clauses and transaction costs) should be made public and hearings should be held. In addition, numerous jurisdictions have contracted with an independent auditor to evaluate the short and long term impacts of the proposed agreement.

The transparency of a P3 agreement is not limited to the proposal and selection process, and should extend to the implementation of the P3 project. Government officials and the general public may require access to annual user and revenue information along with audited financial statements.

Additionally, if a payment was made to the public sector as part of the agreement, the general public should be able to access a summary of the distribution of the revenue received from the project.

Specific question decision makers should consider concerning transparency in the P3 process include:

*a. How will the government receive public input?* Decision makers should provide adequate opportunities for public input on P3 proposals and agreements. The public should have access to the following information: proposed contract standards, toll/user policy, non-compete clauses, and transaction costs. A process should be put in place to allow public input before a final decision is made.

*b. Will the bidding process be fully competitive?* A government should make every effort to solicit bids/proposals from as many qualified firms as possible. Where multiple potential vendors exist, the public sector should not favor (or give the appearance of favoring) one firm over its competitor(s).

*c. Will decision-makers have access to the information they need to make a sound decision?* Decision makers should be able to review the full terms of the proposed P3 agreement. In addition, there should be full access to all fiscal analyses, operation and management plans, and policy reviews used to justify the proposed agreement.

**In sum.** As governments struggle with the widening gap between growing transportation system needs and available public funding, public–private partnerships may provide an alternative arrangement for accomplishing some projects. However, a public-private partnership is not a one-size-fits-all solution. Each jurisdiction must decide for itself whether the use of a public-private partnership is a viable option in specific situations. Determining the appropriate sharing of responsibilities, risks, and rewards in a P3 poses both a challenge and opportunity for the public sector seeking to improve their transportation system.