The Problem and Its Solution

State highway departments and transportation agencies have a continuing need to keep abreast of operating practices and legal elements of specific problems in highway law. This report is a new paper, which continues NCHRP’s policy of keeping departments up-to-date on laws that will affect their operations.

Applications

The amount of public funding available to state and local transportation agencies has failed to keep up with the increasing need to invest in highway construction, operation, and maintenance projects. Governmental agencies are constantly searching for ways to fund or facilitate highway construction projects. Public-private partnerships are viewed as one way to increase the availability of funds.

Congress has established a number of programs that authorize the use of tolling, pricing, and public-private partnerships on Federal-aid highways. Moreover, the U.S. Department of Transportation (USDOT) has promoted public-private partnerships as a significant tool available to state and local highway agencies for supplementing public funding for infrastructure and reducing traffic congestion. In light of the foregoing, there is a widespread expectation that the use of public-private partnerships in the U.S. highway sector will increase substantially in the next few years.

Common legal issues are associated with the implementation of public-private highways. As of July 2008, 23 states have legislation authorizing public-private partnerships. Many states do not have legislation authorizing the use of non-traditional project delivery methods for highway projects. Although the use of toll and other pricing revenues is a common way to finance private participation in highway projects, there remain significant restrictions under federal and state law on the ability to implement such direct user fees in particular circumstances. Other potential legal issues arise out of limitations on public and private financing methods, environmental review requirements, labor and employment laws, and public procurement standards. Project risks must also be allocated between the public and private sectors in the public-private partnership agreement.

This digest is designed to provide a broad overview of the major legal issues that are likely to arise in the implementation of public-private partnerships in the U.S. highway sector. It should be helpful to transportation administrators, attorneys, planners, financial officials, and the private transportation investment community.
I. INTRODUCTION

States are looking toward innovative contracting as a new and more efficient approach to respond to the increase in transportation capacity causing a continuing need for maintenance of current roads and bridges and the development of new facilities. The amount of public funding available to state and local transportation agencies has failed to keep up with the increasing need to invest in highway construction, operation, and maintenance projects. This increasing demand for investment in new and existing highways has been spurred by a variety of factors, including traffic congestion, aging infrastructure, population growth, and changing development patterns. In addition, the purchasing power of the traditional public funding mechanism for highway investment—the gas tax—has decreased as a result of the increasing fuel efficiency of motor vehicles, political resistance to increasing the gas tax, and further depletion of the Highway Trust Fund, which is used to allocate federal monies for highway investment. As a result, the use of private-sector capital, expertise, and other resources to design, construct, operate, or maintain public highway projects has become a more attractive option to state and local highway officials. In situations where the private sector is willing to contribute debt or equity financing, the potential benefits include access to private capital, which can supplement or even replace the need to obtain public financing for the project.

In addition to private-sector resources, the possibility of implementing a highway improvement project through a nontraditional contractual arrangement with the private sector—namely, an arrangement other than the traditional “design-bid-build” contracting approach that has been used historically in the highway sector—offers a number of potential benefits to state and local highway agencies. These potential benefits include accelerated project completion, cost savings, and improved efficiency, quality, and system performance. These potential benefits are created by allocating project risks (such as schedule delay, material cost, or quality of workmanship) to the project participant best able to manage those risks and by rewarding the private sector for accepting those risks. In theory, all of these potential benefits should enable state and local highway officials to use their constrained public resources in a more efficient and effective manner, thereby allowing more highway projects to be completed with less public expenditure.

There have been a number of public-private partnerships (PPPs) in the highway sector in the last several years. These projects have ranged from the long-term lease of existing toll roads (such as the Chicago Skyway and the Indiana Toll Road transactions) to the increasing use of design-build, design-build-operate-maintain (DBOM), and other innovative project delivery methods (such as the Utah Department of Transportation’s reconstruction of I-15 through the Salt Lake Valley using a design-build (D/B) contract). These projects have been implemented on highways built in whole or in part with federal funds (so-called “federal-aid highways”), whether they are part of the federal Interstate System, state and local highways, or bridges and tunnels.

Many but not all of the recent PPP arrangements in the U.S. highway sector have involved some form of direct user fees, particularly where the private sector participates in the financing of the project and seeks to use the revenue generated by the user fees to recoup its investment. These user fees can include flat-fee tolls or some form of congestion or variable pricing that varies by time of day (e.g., a peak-hour premium) or level of traffic congestion. Such tolling and pricing techniques can reduce traffic congestion by providing financial incentives to use alternative routes or modes of transportation (such as public transit).

Congress has established a number of programs that authorize the use of tolling, pricing, and PPPs on federal-aid highways. Moreover, the U.S. Department of Transportation (USDOT) has promoted PPPs as a significant tool available to state and local highway agencies for supplementing public funding for infrastructure and reducing traffic congestion. In light of the foregoing, there is a widespread expectation that the use of PPPs in the U.S. highway sector will increase substantially in the next few years.

However, there remain significant political and legal impediments to the successful implementation of PPPs in the highway sector. The primary “political” concerns relate to the transfer of a public asset to private control (particularly if the operator of the highway is a non-U.S. company) and the fear that the private operator will increase tolls or other user fees based on profit motives rather than public policy objectives. These concerns primarily relate to long-term lease arrangements and not necessarily to design-build or long-term operating and maintenance contracts that give the private sector less discretion over public policy matters.

1 See http://www.chicagoskyway.org/about/.
Common legal issues are associated with the implementation of public–private highways. As of July 2008, 23 states have legislation authorizing PPPs. Many states do not have legislation authorizing the use of nontraditional project delivery methods for highway projects. Although the use of toll and other pricing revenues is a common way to finance private participation in highway projects, there remain significant restrictions under federal and state law on the ability to implement such direct user fees in particular circumstances. Other potential legal issues arise out of limitations on public and private financing methods, environmental review requirements, labor and employment laws, and public procurement standards. Project risks must also be allocated between the public and private sectors in the PPP agreement.

This introduction provides a broad overview of common legal issues associated with implementing highway PPPs and possible solutions implemented to comply with those legal requirements in other U.S. highway PPP projects. Section II examines in detail the different types of PPPs that can be implemented in the highway sector, and Section III presents an overview of representative projects. Section IV reviews the existing literature on highway PPPs. Section V provides a detailed analysis of the major legal issues associated with highway PPPs, and Sections VI and VII focus on lessons learned and conclusions from this research.

II. DIFFERENT TYPES OF HIGHWAY PPP PROJECT DELIVERY STRUCTURES

A. Brownfield and Greenfield Projects

There are different types of highway infrastructure projects that may be suitable for PPP project delivery structures. The most significant difference is between new and existing highway projects. The operation and maintenance of an existing highway asset typically is referred to as a “brownfield” project. The development and construction of a new highway asset typically is referred to as a “greenfield” project. As a general matter, a greenfield project often will be more complex and expensive than a brownfield project because of the need to plan, finance, design, and construct new infrastructure. Both types of projects can be handled through some form of a PPP. However, the available PPP project delivery structures will vary in the first instance depending on whether the undertaking is a brownfield and greenfield project.

For a pure brownfield project involving the operation, maintenance, and preservation of an existing highway asset, the available PPP project structures generally are limited to long-term operation and maintenance contracts or long-term lease concessions. These two structures are on opposite ends of the spectrum with respect to the level of private-sector assumption of financial and other risk. A long-term operation and maintenance contract essentially involves the outsourcing of these functions to a private contractor. A long-term lease concession, however, often involves the transfer of operating, pricing, and many other traditionally public functions to the private sector.

For greenfield projects, a number of different PPP structures will be available depending on which phases of project development (e.g., planning, finance, design, construction, operation, and maintenance) are included within the scope of the project. On one end of the spectrum, a greenfield project could involve a D/B contract with a private entity for the development phase of the project and public-sector retention of operation and maintenance responsibility once construction is completed. On the other end of the spectrum, a private entity could be given the right to design, build, operate, maintain, and finance the development, construction, operation, and maintenance of a new highway under an exclusive franchise and at its own financial risk. The following two subsections describe many of the PPP project delivery structures available for brownfield and greenfield projects.

B. Innovative Contracting Techniques

The PPP structures discussed in this report can be divided for analytical purposes into two general types: 1) innovative contracting techniques that involve nontraditional forms of project delivery; and 2) innovative financing techniques that involve some form of private debt or equity investment in the project. The primary types of innovative contracting techniques are D/B, DBOM, cost-plus-time bidding (also referred to as “A+B Contracting), construction manager/general contractor (CM/GC), and construction manager at risk (CM at Risk).

Since the 1950s, most public highway improvements projects in the United States have been procured on a design-bid-build basis. Under this conventional approach, the state or local highway authority is responsible for developing design plans for the project (through its in-house engineering staff or outside contractors). Based on those design plans, the public authority then solicits competitive bids from private contractors for the construction work. The construction work typically is awarded on a low-bid basis, and the project is financed with federal, state, or local funds. Upon completion of construction, the public authority performs an inspection to ensure that the facility has been constructed in compliance with the design plans and then operates and maintains the facility for its useful life. Under this traditional procurement methodology, the public-sector sponsor retains the design risk, the design and construction work is procured sequen-
tially, and the public sector retains responsibility for operating and maintaining the infrastructure.

The potential advantages of this conventional procurement approach are numerous. First, the public authority has complete control over the design of the highway improvement. Second, the low-bid procurement process is designed to produce the lowest overall project cost. Third, the process is designed to ensure competition among private contractors, promote local public policy objectives (such as ensuring that smaller local contractors have equal access to such construction opportunities), and facilitate transparency in the procurement process. Fourth, the institutional framework for highway construction has been established around this traditional procurement methodology. In other words, state and local highway agencies are structured and staffed to procure highway projects in this traditional fashion.

The conventional method of procurement, however, can have a number of potential disadvantages, particularly with respect to large and complex projects. First, the public sector is subject to significant financial exposure from change orders and delay claims. These claims can have an enormous adverse impact on project schedule and total project cost. Such claims typically arise because of unanticipated design flaws or site conditions that the construction contractor uses as a basis for seeking additional funds above the original bid price. Second, the conventional method relies on complete public financing of the project. Third, it does not take advantage of potential synergies between the design and construction phases of the project because these phases are performed sequentially and often by different entities. There is no "single point of contact" that will be responsible for both design and build risks. Fourth, the traditional method does not reward expertise, quality, and innovation in the evaluation of bids.

These contracting methods all involve greater roles for the private sector than under the traditional design–bid–build method of highway construction contracting. It is estimated that innovative contracting methods can achieve costs savings of up to 20 percent compared to conventional procurement.

1. Design–Build

Under D/B contracting, the design and construction procurements are combined into one fixed-fee contract with a "single point of contact" that is responsible for both design and construction. The D/B contractor (which may be one company or a consortium of design, construction, and project management firms) assumes the "design risk" that detailed design drawings and specifications will be free from error and agrees to construct the project in accordance with its design. The potential benefits of D/B contracting relative to traditional procurement include time savings, cost savings, risk sharing, and quality improvement arising from the synergies created by having one contractor responsible for both functions. The use of D/B performance specifications developed by the public sector, instead of traditional prescriptive specifications, also encourages innovation by the private contractor.

Some D/B contractors are willing to guarantee that they will meet material, workmanship, and other performance guarantees for a specified period of time (typically 5 to 20 years) after the project has been delivered. This type of D/B with warranty approach allocates quality risk to the contractor and reduces the project sponsor’s need to conduct inspection and testing during project delivery. A D/B contractor that is willing to provide a warranty for materials or workmanship, or that remains contractually obligated for maintenance after construction, is compelled to complete life-cycle-cost analyses of all design and construction options. This provides an additional potential benefit to the public project sponsor by shifting the risk of project quality to the private contractor.

2. Design–Build–Operate–Maintain

Under the DBOM approach, the private contractor will be responsible for both the design/construction phase and the operation/maintenance phase for a specified period of time under a single contract. The contractor (often a consortium of design, build, operating, and project management companies) agrees to meet various performance standards established by the public sponsor involving physical condition of the asset, capacity, and congestion management. The potential benefits of the DBOM approach are the increased incentives for the delivery of a higher quality project because the contractor is responsible for operating and maintaining the facility for a specified period of time after construction. Thus, it is in the DBOM contractor’s best interest to consider life-cycle costs and provide high-quality construction in order to avoid higher life-cycle maintenance and improvement costs during the operating phase. A DBOM contractor effectively assumes the risk that it will comply with the public sponsor’s performance specifications, deliver the project on time and on budget, and ensure the quality of construction and the performance of maintenance and rehabilitation throughout the operating phase.

3. A+B Contracting

A+B contracting, also known as cost-plus-time bidding, is a procurement approach that selects the lowest bidder based on consideration of both (A) the proposed price for the contract bid items and (B) the value associated with the time needed by the contractor to complete the project. This procedure is intended to provide a contractual incentive for the A+B contractor to minimize delivery time for high priority and congested

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*See 23 C.F.R. 636.103.*

*See Fig. 2.2, Contracting Methods Involving Different Levels of Involvement, U.S. DEP’T OF TRANSP., REPORT TO CONGRESS ON PUBLIC PRIVATE PARTNERSHIPS (2004) (“USDOT Report”), at 13.

*Id. at 14.*
highways by offering incentives for early completion and assessing penalties for late completion.\textsuperscript{7} A+B contracting shifts the risk of failing to meet project deadlines to the private contractor.

One related technique that is designed to expedite project completion and minimize road user impacts is the practice of assessing “lane rental” fees against the contractor for every traffic lane that needs to be taken out of service during construction on an existing facility. A lane-rental fee typically is based on the estimated cost of delay or inconvenience to the road user during the rental period, assessed for the period of time that the contractor occupies or obstructs part of the roadway, and deducted from monthly progress payments.

4. Construction Manager/General Contractor

Under the CM/GC\textsuperscript{8} approach, the project sponsor simultaneously hires both the design contractor and the building contractor. Both contractors work together to develop innovative design and construction solutions that are tailored to the particular project. However, the project owner retains full control of project design throughout the design process. The CM/GC approach is valued for accelerating project delivery for certain types of projects, such as bridge construction.\textsuperscript{9}

5. Construction Manager at Risk

The CM at Risk\textsuperscript{10} project delivery structure involves a separate contract for a construction manager and a design contractor during the initial phase of the project. The construction manager negotiates a D/B contract with the project sponsor during this initial phase as the design work progresses. The potential benefits of this approach include advancement of the project during price negotiations and the potential for more optimal teaming among the members of the private consortium.

C. Innovative Financing Techniques

In addition to the innovative contracting techniques discussed above, there are a number of project delivery structures that can be used when the private sector intends to provide some debt or equity financing to the highway project. These structures are referred to herein as “innovative financing techniques” and discussed in more detail below. There are a number of different private financing tools that can be used to facilitate private-sector investment in highway projects. These tools, which include financing under the Transportation Infrastructure Finance and Innovation Act of 1998, 23 U.S.C. § 181-189 (TIFIA), and private activity bonds, also are discussed briefly below and can be used in conjunction with any of the innovative financing techniques described herein.

1. Design–Build–Finance–Operate

The design-build-finance-operate (DBFO)\textsuperscript{11} approach is a variation on the DBOM structure that involves some level of involvement by the private contractor in financing the design, construction, operation, and maintenance of the highway asset. Typically, the DBFO model uses revenues generated from the operation of the facility (usually in the form of tolls or other pricing mechanisms) to repay the private and other financing used to construct the facility. The potential benefits of the DBFO approach include those benefits available under the DBOM approach plus the transfer of financial risk to the DBFO contractor during the contract period. A variation on the DBOM approach is the build–transfer–operate (BTO) arrangement, under which the contractor retains ownership of the project until construction is completed. Under both the DBFO and BTO structures, the public sponsor will own the facility after completion of construction.

Only a few toll road projects in the United States have been procured using the DBFO model because public agencies generally are able to obtain cheaper, tax-exempt debt through traditional municipal financing methods. However, in the last several years, more design-build, operate, finance, and maintain/manage (DBFOM) projects are being planned or implemented because of limits on the amount of tax-exempt bonds that can be issued by state entities and due to the emergence of several innovative financing techniques (such as TIFIA financing, private activity bonds, and 63-20 public benefit corporations) that can provide financing at rates that are almost as low as tax-exempt debt.\textsuperscript{12}

Another DBOM financing option is known as “availability payments”—a type of PPP in which the public entity agrees to make regular payments to the private

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\textsuperscript{7} A+B contracting is a technique supported by the Federal Highway Administration (FHWA) under its experimental SEP-14 program, which is discussed in further detail below.


\textsuperscript{9} The Utah Department of Transportation (UDOT) is pursuing six CM/GC projects at various states of development under the [SEP-14] program and is seeking FHWA approval to allow UDOT to pursue 24 CM/GC federal-aid projects each year for 2 years on a pilot project basis. See Written Testimony of John R. Njord, Executive Director, Utah Department of Transportation, Before the House Subcommittee on Highways and Transit (Apr. 17, 2007) (“Njord Testimony”).


party based on the facility’s availability and level of service achieved for operations and maintenance. In this case, the public entity normally accepts the revenue risk and may provide some level of initial funding to offset capital requirements. The private entity takes the risk of project delivery, maintenance, and operations. This method is currently more prevalent with transit work. Transit agencies are experimenting with adding incentive payments based on increased ridership or service.13

2. Build–Operate–Transfer

The build–operate–transfer (BOT) structure is similar to the DBFO approach except that the contractor retains ownership of the facility after construction and during the operating and maintenance phase of the project. A variation on this is the build–own–operate structure, which does not necessarily involve a contractual obligation to transfer the facility back to the public sector upon expiration of the useful life of the asset. The potential advantage of the BOT and similar structures is that the contractor accepts all revenue risk and reward during the operating and maintenance phase of the project. These structures have not been used very often in the U.S. highway sector. Recently BOT strategies have been considered for portions of I-69 and the Southern Indiana Toll Road.14

3. Long-Term Lease Concessions

Among all the different PPP project delivery structures discussed in this digest, the long-term leases of the Chicago Skyway and Indiana Toll Road have received the most attention from the general public. Often criticized as the “privatization” of a public asset, the Chicago and Indiana deals involved the long-term lease of an existing road to a private concessionaire for a specified period of time.15 Under such a lease arrangement, the concessionaire agrees to pay an up-front, lump-sum fee to the public agency in exchange for the right to collect revenues generated by the facility over the life of the contract (typically 25 to 99 years). The concessionaire agrees to operate and maintain the facility during the term of the lease and may also agree to implement technological innovations (such as electronic tolling) or other capital improvements to the facility. The potential benefits of a long-term lease include the public agency’s ability to obtain a significant up-front payment; the transfer of the political risk of increasing user fees to the private sector; the allocation of most project, financial, operational, and other risks to the private concessionaire; and the ability to implement private-sector efficiencies and technology in operations and maintenance for the benefit of the road users. Many of these potential benefits are also the aspects of such arrangements that have been criticized for failing to protect the public interest, as discussed elsewhere in this report.

4. Innovative Financing Tools

There are a number of innovative financing tools available to private-sector entities that are willing to provide debt or equity financing for highway projects. In addition to standard financing mechanisms available in the general capital markets, including lines of credit, loan guarantees, and other debt instruments, private-sector entities have the ability to use TIFIA financing, private activity bonds, or funding from state infrastructure banks on highway projects. These tools are briefly summarized below.16 These tools often must be used in conjunction with tolling and pricing strategies that generate sufficient revenues to reduce debt or finance operations.

a) TIFIA Financing.—TIFIA17 allows USDOT to provide direct credit assistance to the sponsors of major transportation projects. The TIFIA program tools are designed to occupy the area between 1) traditional grant projects that do not generate revenue from tolls or other revenue sources and 2) projects that generate sufficient revenue to support marketable securities without governmental credit assistance. The TIFIA program offers three distinct types of financial assistance—direct loans, loan guarantees, and standby letters of credit. The project sponsors eligible for TIFIA assistance may be public or private entities. There are various criteria that must met to qualify for TIFIA assistance, and only 33 percent of eligible project costs can be supported.


14 See U.S. DEP’T OF TRANSP., supra note 11.


17 Compensation could also be in the form of revenue sharing.

18 The various tools available to finance highway projects are not the central focus of this report. For more detailed information on this subject, see CONGRESSIONAL BUDGET OFFICE, INNOVATIVE FINANCING OF HIGHWAYS: AN ANALYSIS OF PROPOSALS (1998); FED. HIGHWAY ADMIN., MANUAL FOR USING PUBLIC-PRIVATE PARTNERSHIPS ON HIGHWAY PROJECTS (2005); TRANSP. RESEARCH BD., Special Report 285, THE FUEL TAX AND ALTERNATIVES FOR TRANSPORTATION FUNDING (2006); NAT’L CO OP. HIGHWAY RESEARCH PROGRAM, Project 20-24(49), FUTURE FINANCING OPTIONS TO MEET HIGHWAY AND TRANSIT NEEDS (2006).

b) Private Activity Bonds.—A private activity bond is a form of tax-exempt bond financing that can be issued by or on behalf of state or local governments to provide special financing benefits for qualified projects. Under current law, highway and other transportation facilities are eligible for up to $15 billion in tax-exempt private activity bonds that are not subject to the general annual volume cap on private activity bonds for state agencies and other issuers. The primary advantage of a private activity bond is that it attracts private investment for projects having some public benefit and reduces financing costs to levels that are close to tax-exempt municipal financing rates.

c) State Infrastructure Bank Credit Assistance.—State infrastructure banks (SIBs) are revolving funds administered by states that support surface transportation projects. SIBs offer low-interest loans, loan guarantees, and other credit enhancements to public and private sponsors of federal-aid highway projects. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) established a new SIB program that allows all states to enter into cooperative agreements with the Federal Highway Administration (FHWA) to establish infrastructure revolving funds eligible to be capitalized with federal transportation funds authorized for fiscal years 2005–2009.

This program gives the states the capacity to increase the efficiency of their transportation investments and significantly leverage federal resources by attracting nonfederal public and private investment.

d) 63-20 Public Benefit Corporations.—A 63-20 corporation is a nonprofit corporation that, pursuant to Internal Revenue Service Rule 63-20 and Revenue Proclamation 82-26, is authorized to issue tax-exempt debt on behalf of private project developers. In order to qualify for this status, the nonprofit corporation must engage in activities that are “public in nature,” the state (or a political subdivision thereof) must have a “beneficial interest” in the corporation while indebtedness remains outstanding, and unencumbered legal title in the financed facilities must vest in the government until after the bonds are paid.

State and local governments can issue tax-exempt toll revenue bonds through established conduit issuers or by creating 63-20 nonprofit corporations. Although the conduit method is preferred, the 63-20 method provides a viable alternative that can be used to finance revenue-generating highway projects in two different ways. First, a 63-20 corporation can issue debt by leveraging future expected toll revenues and can enter into a DBOM agreement with a private contractor to design, build, operate, and maintain the facility for a specified period. Alternatively, the public sponsor of the project could agree to lease the toll highway to be developed by the 63-20 corporation to a private entity, and the 63-20 corporation would leverage the future lease payments to issue its debt. Under both of these arrangements, the private partner may assume responsibility for arranging the financing, but the debt would be issued on behalf of the 63-20 corporation.

e) Tolling and Variable Pricing Initiatives.—There are a variety of strategies available to impose direct fees on the users of highway facilities. The most common is a toll that can be imposed on a flat-fee basis. An alternative approach is some form of variable or congestion pricing, which charges higher user fees based on the level of traffic volume or time of day (e.g., peak-hour premium). There are a number of different technologies that can be used to collect such tolls, including electronic toll collection systems, automatic vehicle identification systems, and video-based toll collection enforcement.

As noted above, there is a common perception that federal and state gas taxes and other traditional methods of infrastructure finance alone cannot provide adequate funds for the enormous capital and maintenance requirements of the highway network. Tolling is an alternative strategy that can provide positive cash flow to invest in new capacity or reinvest in existing systems. Variable or congestion pricing is a mechanism that can increase the capacity of new or existing highway assets by spreading out demand and reducing congestion at peak hours. It has been supported by a wide spectrum of stakeholders, including economists (who view congestion pricing as the most efficient method of allocating constrained resources) and certain segments of the environmental community.

The use of tolling or pricing techniques does not have to be implemented as part of a PPP. There are many toll roads operated by state and regional turnpike authorities. In addition, not all PPPs in the highway sector (as defined in this report) involve tolling or pricing techniques. The use of innovative contracting methods such as D/B does not require any implementation of user fees. Nonetheless, the use of tolling and pricing expands the type and potential benefits of PPPs that can be implemented in the highway sector, particularly as a means of encouraging private-sector investment in highway facilities. PPP project delivery structures involving tolling and pricing include both long-term concessions for the design, build, finance, and operation


phases of new facilities (where toll revenue can flow to the private sector in exchange for its initial up-front payment or investment in the facility) and short-term operation and maintenance contracts for existing facilities (where toll revenues can be used to fund ongoing operation and maintenance activities).

f) Shadow Tolling and Availability Payments.—A variation on the use of tolling to support private financing of a highway project is the payment of a “shadow toll” to a private contractor that agrees to design, build, operate, or maintain the facility. A shadow toll is a payment to the contractor (or its debtors) equal to the amount of the toll that would have been imposed on users of the facility if a direct user fee had been implemented. In other words, a shadow toll is not an actual user fee but a payment that incentivizes the private contractor to maximize actual traffic volume on the facility.

Another variation on this technique is the use of “availability payments” to compensate a private contractor that agrees to front the costs of designing and building a highway facility. An availability payment is a regular (e.g., monthly) payment that is made to the concessionaire during the operating and maintenance phase in exchange for providing a facility available for public use at a predetermined level of capacity and quality. This financing technique has been used frequently in the United Kingdom (U.K.). The Port of Miami Tunnel project (discussed below) is the first major U.S. transportation project to be funded with availability payments.

Unlike shadow tolls, availability payments do not depend on the volume of traffic using the facility. Instead, the concessionaire typically receives an agreed-upon regular payment during the operating and maintenance phase of the contract less any deductions it is assessed as a result of failure to meet performance standards relating to availability of lanes, service quality, and safety. Availability payments can be used to supplement or even replace user fees in situations where user fees are insufficient, difficult to predict, or unacceptable from a policy perspective. The public sponsor of the project typically provides financing for the availability payment through public sources, although it can also be the recipient of the user fees if a facility is tolled. Since availability payments typically do not start until a facility opens for business, they create a strong incentive for timely completion of the project. In addition, availability payments provide an incentive for continued high operating and maintenance standards and lower the concessionaire’s cost of capital by eliminating traffic risk.26

III. OVERVIEW OF REPRESENTATIVE PROJECTS

This section of the report provides a brief summary of recent PPPs in the U.S. highway sector. The projects described below have been selected as representative examples of several of the different project structures featured in this report. The case studies set forth below are not designed to provide comprehensive information on the material terms and conditions of each particular arrangement. Instead, the case studies are provided to highlight certain innovative features of such transactions and as additional background for the discussion about specific legal requirements that is set forth in subsequent sections of the report.

A. Chicago Skyway and Indiana Toll Road

The Chicago Skyway and Indiana Toll Road transactions are closely linked as two highly controversial long-term concessions to the private sector for the operation and maintenance of aging toll roads in exchange for large up-front cash payments and the right to future toll revenues. The two deals have raised questions as to whether the public interest was served by relinquishing control of these toll roads to the private sector for long periods of time.27

Finalized in January 2005, the $1.83 billion Chicago Skyway agreement attracted intense media attention and helped focus the public on the PPP model’s possible benefits and potential pitfalls. The Chicago Skyway opened to traffic in 1959 as a 7.8-mi elevated toll road operated by the City of Chicago and linking Chicago’s downtown Loop with Indiana highways. After years of losing money on the Skyway’s operation, in March 2004 the City of Chicago opened a sealed bidding process for a private group to take over the operation and maintenance of the Skyway for a 99-year term. News accounts at the time reported that the City of Chicago would possibly accept a minimum bid of $800 million and would have been satisfied to receive $1.2 billion for the 48-year-old toll road with an unsteady financial history.28 The eventual $1.83 billion winning bid in October 2004 from the Cintra–Macquarie consortium (consisting of a Spanish transportation infrastructure developer and an Australian investment bank) sent shockwaves through the international transportation community.

In exchange for the right to all toll revenues during the term of the 99-year lease, the Cintra–Macquarie consortium agreed to perform certain capital improvements, install an electronic toll collection system, and improve the Skyway’s traffic throughput and operational competence. The operating standards portion of the agreement includes approximately 300 pages of

See USDOT Report, supra note 5, at ix.


detailed compliance requirements developed by the City of Chicago and its technical advisors.

According to the terms of the agreement, the Cintra–Macquarie consortium may increase Chicago Skyway tolls through 2017 at a rate equal to the greater of either a detailed negotiated toll schedule or the applicable increase in the Consumer Price Index (CPI). After 2017, the agreement caps maximum annual toll increases at the greater of 2 percent, the increase in the CPI, or the increase in the nominal gross domestic product (GDP) per capita.\textsuperscript{30} The lease agreement also included a provision requiring the private consortium to comply with City of Chicago hiring policies regarding residency preference, minority contracting, and existing wages. Aside from the toll revenue and lease payments from a restaurant located on the facility, the City of Chicago retained the rights to all other Chicago Skyway revenues, including the naming rights for a bridge on the system and revenues from utility rights-of-way. The lease agreement also specifies that the private consortium will assume all legal liability for the operation and maintenance of the facility during the 99-year term, excepting for certain preexisting environmental liabilities.\textsuperscript{30}

Within the first 6 months of its operation of the Chicago Skyway, the consortium modernized the toll collection process with the implementation of an electronic system and hired toll collectors at a much lower hourly wage than tenured city employees previously received.\textsuperscript{31} These reforms dramatically cut operational costs and helped double throughput at the toll plaza from 300 to upwards of 800 transactions per hour, thus generating more revenue for the private operator and reducing congestion on the urban access route.\textsuperscript{32}

The City of Chicago planned to use the $1.83 billion infusion from the lease agreement to repay $855 million of general obligation debt and Skyway-specific indebtedness, fund $100 million in “visible programs” for city residents such as winter heating assistance and homeless shelters, fill a $375 million operating budget shortfall, and fund a $500 million “permanent” city reserve.\textsuperscript{32} The city also is saving annually in lowered debt cost. This improvement in its debt rating saves it millions of dollars per year in interest costs. The lucrative Chicago Skyway deal piqued the interest of budget-strapped state and local governments across the country and paved the way for further examination of the long-term lease model in Indiana, New Jersey, Pennsylvania, and Virginia.

Soon after the Chicago Skyway deal was inked, the Indiana administration decided to pursue the long-term lease of the statewide Indiana East–West Toll Road (Indiana Toll Road), a four- to six-lane, 157-mi highway opened in 1956 and operated by the Indiana Department of Transportation (IDOT) since 1980. The Indiana Toll Road connects the Chicago Skyway in the west and Indiana’s border with Ohio in the east. Indiana patterned its bidding process after the City of Chicago approach but offered a slightly shorter 75-year term. On October 26, 2005, the same Cintra–Macquarie consortium entered the winning bid of $3.8 billion for the lease.

The Indiana Toll Road lease, however, required the approval of the Indiana state legislature in the form of specific enabling legislation.\textsuperscript{34} After much heated public debate and controversy over the alleged “transfer” of a public asset to foreign companies, the necessary legislation was passed and signed into law in March 2006. On April 12, 2006, the Cintra–Macquarie consortium and the State of Indiana executed the 75-year lease agreement, and on June 29, 2006, the consortium assumed operational responsibility for the Indiana Toll Road.\textsuperscript{34}

The final terms of the negotiated lease agreement require the consortium to fund over $700 million worth of capital improvements on the Indiana Toll Road, including, as in the Chicago Skyway deal, the installation of an electronic tolling system.\textsuperscript{35} Unlike the Chicago Skyway deal, however, the Indiana Toll Road lease contains a noncompete clause that proscribes the State of Indiana from funding the construction or improvement of any limited access highway within a 10-mi radius of the Indiana Toll Road. Additionally, the enabling bill passed by the Indiana legislature contained a specific schedule for annual toll increases. The bill provided for no change in the toll rate for passenger vehicles through 2010 and authorized periodic step increases for five-axle commercial vehicles during that period. In the years following 2010, the legislation calls for the same rate increase schedule as the Chicago Skyway deal—a permissible rate increase capped at the greater of the applicable increase in the CPI, per capita nominal GDP growth, or 2 percent.\textsuperscript{37}

\textsuperscript{30} See Nicholas J. Farber, Avoiding the Pitfalls of Public Private Partnerships: Issues to Be Aware of When Transferring Transportation Assets, 35 TRANS. L. J. 25, 26 (2008).

\textsuperscript{31} For further detail on the Chicago Skyway transaction, see FHWA Case Study on Chicago Skyway, available at http://www.fhwa.dot.gov/ppp/chicago_skyway.htm; see also N.Y. STATE DEPT OF TRANSP., TRANSPORTATION DEVELOPMENT PARTNERSHIPS: TOOLS FOR INNOVATIVE TRANSPORTATION OPERATIONS AND FINANCE, at 9-10 (May 2006).


\textsuperscript{33} N.Y. STATE DEPT of TRANSP. supra note 30, at 10.


\textsuperscript{35} Id.

\textsuperscript{36} Id.


Unlike the Chicago Skyway deal, whose proceeds were allocated to a variety of nontransportation municipal programs, the $3.8 billion generated by the 75-year Indiana Toll Road lease must be used almost exclusively for transportation-related activities. Specifically, Indiana plans to use $200 million to retire outstanding Indiana Toll Road bonds, $500 million to establish a trust fund whose interest would pay for future IDOT transportation projects, and $3.1 billion to fund the “Major Moves” construction program, which includes 200 planned projects throughout the state.28

As noted above, the long-term leases of the Indiana Toll Road and Chicago Skyway to the Cintra–Macquarie consortium have generated a significant amount of controversy. One significant concern relates to the terms of these agreements. A U.S. highway generally has a useful life of 20 to 30 years, and a bridge may last 50 years. Thus, many have argued that these 75-year and 99-year leases effectively function as transfers of ownership of the roads to the private consortium, which reaps tax benefits in the form of depreciation and amortization and gains a stable and relatively certain flow of income from the toll revenues. Another significant concern relates to the ability of the private consortium to raise toll rates (in accordance with the schedule negotiated by the State of Indiana) without obtaining political or public support for such increases.29

B. I-15 Reconstruction in Salt Lake City

At the other end of the spectrum of private involvement from long-term lease arrangements, the use of D/B as an alternative project delivery method has been successful in many recent highway projects. For example, the Utah Department of Transportation (UDOT) completed a $1.59 billion project to reconstruct approximately 17 mi of I-15 and associated facilities (including 142 bridges and the implementation of high-occupancy vehicle (HOV) lanes) through the Salt Lake Valley pursuant to a D/B contract. The reconstruction of I-15 was UDOT’s first D/B procurement. UDOT has estimated that the project would have taken 10 years to complete under the conventional contracting approach. However, the D/B contractor completed the project in less than 5 years and $32 million under budget.30

The D/B method was selected by UDOT for the I-15 project because of the immense public and political pressure to complete the project in the shortest possible time period. This pressure was generated by the need to complete the work before the 2002 Winter Olympics in Salt Lake City and the need to minimize the duration of severe traffic congestion caused by necessary diversions from I-15 during construction. Under the D/B contract, construction began in April 1997 and was completed in May 2001, well before the start of the Salt Lake City games.

To use the preferred D/B approach, state legislation had to be enacted to authorize the use of D/B contracting and “best value” (as opposed to low-bid procurement).41 In addition, because the project was funded in part with federal funds, UDOT had to obtain approval of the initiative from FHWA as a special experimental project under Special Experimental Project No. 14—Alternative Contracting (SEP-14), which is discussed in further detail in Section V.A. This FHWA approval permitted the use of D/B contracting and required some deviations from standard federal-aid requirements dealing with the selection of contractors and consultants.

The I-15 D/B contract provided up to $50 million in incentive bonuses for timely performance, quality of work, complying with project management requirements, and complying with requirements for community relations and maintenance of certain traffic levels during construction. In addition, UDOT estimates that it realized significant savings by using an owner controlled insurance program (OCIP) that provided comprehensive insurance coverage to all contractors working on the project. As a safety incentive, the D/B contractor received a share of all insurance premium rebates received by UDOT after completion of the project.42

C. SR-91 and SR-125 in California

California was one of the pioneers in implementing PPPs in the highway sector. In 1989, the California legislature passed Assembly Bill 680 (AB 680), which authorized the California Department of Transportation (Caltrans) to approve up to four geographically dispersed pilot projects across the state involving BOT projects that would be financed solely by the private sector. Under the legislation, a private entity that funded the development and implementation of a highway toll project was entitled to operate the facility for up to 35 years and then transfer it back to the state. The legislation established a maximum rate of return for the private entity and mandated that excess revenues collected through tolls would be used to reduce project debt or returned to the state. AB 680 also established an “absolute protection zone” in the 3-mi area adjacent to the centerline of each BOT project corridor. Within this protection zone, California was prohibited from making any capital improvements to alternate public routes. The zone served to prevent anticipated project revenues from being reduced by competing routes.


42 For additional detail on the I-15 reconstruction project, see Case Study Prepared by FHWA Utah Division, available at http://www.tfhrc.gov/pubrds/pr97-12/p40.htm.
In 1991, Caltrans executed agreements with private firms for one BOT pilot project in Northern California and three BOT pilot projects in Southern California. To date, only two of these four demonstration projects have been implemented—State Route (SR) 91 Express Lanes in Orange County and SR-125 in San Diego County. The vastly different results produced by the implementation of SR-91 and SR-125 provide some instructive lessons for both public- and private-sector entities considering highway PPP arrangements.

The SR-91 Express Lanes project was the first congestion-priced highway facility to be proposed in the United States. The project consisted of four express toll lanes that were built within the median of SR-91 (an existing state highway) between the Orange/Riverside County line and the Costa Mesa Freeway (a distance of approximately 10 mi). The Express Lanes project was financed in its entirety by a private consortium at a total cost of $135 million and opened for traffic using fully automated tolling technology in December 1995. The private consortium was able to expedite the environmental review process by obtaining and supplementing the National Environmental Policy Act (NEPA) documents prepared by the Orange County Transportation Authority (OCTA) for a proposed HOV project to address the design changes and tolling arrangements required for the express lanes project. The express lanes were constructed in about 14 months, and Caltrans has estimated that the project would not have been built until 2001 without private-sector involvement.42

The SR-91 agreement between Caltrans and the private consortium provided a 35-year franchise from the date of opening, specified that the maximum rate of return to the private operator could not exceed 23 percent, stipulated that Caltrans would not build competing road capacity within a 3-mi “protection zone” adjacent to the express lanes, and provided that traffic enforcement and facility maintenance would be provided by the state on a reimbursement basis. As provided in the authorizing legislation, any state expense incurred in the development and implementation of such a BOT project had to be reimbursed by the private-sector participant.

Despite the successful implementation of the SR-91 Express Lanes project, the PPP arrangement ran into problems several years later as concerns grew about the contractual restrictions on capacity improvements in the absolute protection zone and changes in the ownership of the private consortium. Several lawsuits were filed against Caltrans and the private contractor as a result of the noncompete restriction, and Caltrans ultimately was forced to make improvements to the toll-free lanes on SR-91. In 2002, as a result of the lawsuits and growing public opposition, the California legislature passed Assembly Bill 1010 (AB 1010) which authorized OCTA to buy out the private franchise, eliminated the absolute protection zone, and required the facility to become toll-free at the end of the 35-year term. AB 1010 prohibits OCTA from transferring the franchise and prohibits Caltrans from entering new franchise agreements without legislative approval.

Since OCTA took possession of the SR-91 express lanes in January 2003 after purchasing the franchise from the private consortium for $207.5 million, a number of changes have been made to the congestion pricing policies. In May 2003, OCTA adopted a policy allowing express lane users with three or more persons per vehicle to ride free except during “super-peak” hours, when they pay half of the posted toll rate. In addition, OCTA adopted a “congestion management” toll pricing policy in July 2003 that is designed to optimize the number of vehicles that can safely travel on the express lanes at free-flow speeds by setting lane prices at a level that maintains optimal throughput. As noted above, the express lanes are fully automated, and customers pay tolls from prepaid accounts using a pocket-sized transponder mounted on the inside of their vehicle’s windshield. This electronic toll collection technology eliminates the need to stop and pay tolls at traditional tollbooths, thus contributing to the free flow of traffic. OCTA estimates that the SR-91 express lanes have saved customers over 32 million hours of commuting time and produced approximately $480 million in economic productivity and quality-of-life benefits for its customers since opening at the end of 1995.43

In contrast to the SR-91 toll-lane project, SR-125 involves the construction of a new 12.5-mi highway facility between SR-905 near the Mexican border and SR-54 in San Diego County. The 35-year franchise for SR-125 was awarded in 1991 to a private consortium led by Parsons Brinckerhoff (PB). However, it took 9 years for the project to receive final environmental approval as a result of intense public reviews, various legal challenges, the identification of endangered species and anticipated loss of wildlife habitat in the project corridor, and the resistance of several federal agencies, including the Army Corps of Engineers and the Environmental Protection Agency. Under the agreement with Caltrans, the PB consortium assumed all risks associated with obtaining environmental clearance. Thus, the franchise holders incurred significant costs over the 9-year period overcoming various legal and institutional challenges to the project. In addition to these out-of-pocket costs, the implementation costs escalated as a result of the delay and toll revenues that could have been collected had the project stayed on schedule were lost. As a result, the original PB consortium sold its interest in the franchise to Macquarie in September 2002 before any construction had begun.

The SR-125 project consists of two segments. The first segment is the 9.5-mi southern segment (also referred to as the “South Bay Expressway”) that is being constructed as a privately financed and operated toll

42 USDOT Report, supra note 5, at 50.

43 For more information on the SR-91 Express Lanes, see the Express Lanes’ Web site at http://www.91expresslanes.com/learnabout/snapshot.asp.
road. Macquarie will finance the construction of the South Bay Expressway for $635 million using $400 in commercial bank loans, $140 million from TIFIA loans (the first ever provided to a private toll road development), and the remainder from private equity capital. The flexible repayment terms on the TIFIA financing (including deferred interest and principal) will reduce debt service pressure during the early years of the loan, and the commercial line of credit will serve as a traffic guarantee during the first 10 years of operation. Once operational, the South Bay Expressway will use an electronic toll collection system and the toll revenue will be used to repay the financing. The second segment is the 3.2-mi northern segment that will connect the South Bay Expressway with SR 54. The northern segment (also referred to as the “San Miguel Connection”) is being publicly financed with $139 million in regional tax revenue and federal funds. The San Miguel Connection will operate as a non-toll freeway, without tolls.

Under the innovative DBFO contract originally executed by Caltrans in 1991, Macquarie is responsible for design, construction, and financing of the South Bay Expressway toll road and also is responsible for the design and construction of the San Miguel Connection. Upon completion of construction, ownership of both segments will transfer to the State of California. However, Macquarie has a 35-year franchise to lease back and operate the toll road and will contract with Caltrans to provide maintenance and with the California Highway Patrol to provide routine patrol services and incident management. In addition, Macquarie will establish and collect tolls on the South Bay Expressway and may retain any toll revenues remaining after expenses and debt service as a return on its investment, subject to a cap of 18.5 percent on total funds invested in the facility. The contract also provides additional financial incentives if average vehicle occupancy on the toll road increases beyond certain thresholds.

Macquarie has contracted with a joint venture of construction contractors (Flour Daniel and Washington Group) to design and construct both the South Bay Expressway and the San Miguel Connection. The construction is occurring under two separate D/B contracts providing fixed-price and fixed-delivery schedules. The construction began in May 2003 and the toll road was operational in November 2007. Both segments will initially have two lanes of travel in each direction, although the design allows for additional lanes to accommodate traffic growth, and a wide median runs the full length of the project to allow for future carpool lanes or transit. Land developers have dedicated approximately 70 percent of the right-of-way for the toll project, a value of approximately $40 million. The San Diego Regional Planning Agency (SANDAG) has estimated that public monies to fund the South Bay Expressway would not have been available until 2020 or later.

D. Pocahontas Parkway in Virginia

The Pocahontas Parkway, also known as Virginia SR-895, is an 8.8 mi, four-lane toll highway that connects I-95 with I-295 near the Richmond International Airport. The Parkway was constructed without the use of toll revenue bonds through an innovative PPP that was the first construction project under Virginia's Public-Private Transportation Act of 1995 (PPTA). The Virginia Department of Transportation (VDOT) established a 63-20 public benefit corporation called the Pocahontas Parkway Association (PPA) to finance the development and construction of the toll facility by issuing $354 million in tax-exempt toll revenue bonds, obtaining $18 million from Virginia's State Infrastructure Bank, and using $9 million in federal funds for design costs. VDOT also entered into a comprehensive development agreement and a D/B contract with a Fluor/Morris Knudsen joint venture. Construction began in the fall of 1998, and the Pocahontas Parkway opened to traffic in stages beginning in May 2002. The construction phase was complicated by a costly bridge over the James River and by complaints from the City of Richmond about the lack of access to I-95. VDOT also learned from FHWA in 2002 that it would be unable to designate the toll road as I-895 because, under 23 U.S.C. § 129(a)(1)(A), federal funds may not be used for a tolled Interstate. VDOT had used approximately $9 million in federal funds for preliminary engineering purposes.

Upon the completion of construction, the joint venture's outstanding rights and obligations under the comprehensive agreement (including the rights to operate and maintain the facility) were transferred to the PPA. The Pocahontas Parkway was opened under the management and control of PPA. Unfortunately, PPA experienced serious financial difficulties during the operations phase, as toll revenues produced only half of the forecasted amount. PPA struggled to meet its debt repayment obligations, the rating agencies downgraded the PPA bonds, and PPA was forced to raise the average toll for the 8-mi link to $2. As a result of these financial woes, VDOT and PPA entered into discussions with Australian tollway operator Transurban about taking over the Pocahontas Parkway in response to an unsolicited proposal by Transurban and its finance partners.

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45 Although the authorizing legislation for the SR-125 toll road project (AB 680) prohibited the use of state or federal funds, the TIFIA loan is permissible because toll revenues will be used to pay the entire debt service costs of the loan. The sole purpose of the TIFIA loan is to reduce the cost of borrowing during project development and toll revenue ramp up.

46 For additional detail on the SR-125 project, see FHWA Office of Policy and Governmental Affairs, Case Studies of Transportation Public-Private Partnerships in the United States (July 2007) (FHWA Case Studies), at 3-76–3-86; see also FHWA Case Study: South Bay Expressway (SR-125), available at http://www.fhwa.dot.gov/ppp/sr125.htm.


In June 2006, Transurban agreed to acquire the Pocahontas Parkway from PPA through a special purpose entity and also entered into an Amended and Restated Comprehensive Agreement with VDOT. Under the terms of those agreements, Transurban obtained a 99-year concession to manage, operate, maintain, and collect tolls on SR-895 for the price of $548 million. The agreement with VDOT contains specific restrictions on the amount of toll increases that can be imposed by Transurban over time (for example, after 2016 the maximum toll increase will be the greater of the increase in the CPI, Real GDP, or 2.8 percent). Transurban also agreed to a revenue-sharing provision whereby VDOT will receive a “permit fee” equal to a percentage of toll revenue in excess of a specified rate of return. VDOT has the right to terminate the arrangement for convenience after 40 years, which is the estimated time it would have taken for the prior operator to pay off all liabilities.

Transurban also agreed to construct a 1.58-mi, four-lane extension of the parkway to the Richmond International Airport. Transurban’s obligation to construct the extension was contingent on receiving $150 million in TIFIA financing, which would be used to refinance $95 million of long-term senior bank debt, pay for $7 million in upgrades to the electronic tolling systems, and contribute $48 million to the construction of the airport connector. Construction on the airport connector is expected to begin in 2008 and end in 2010, at which point Transurban will operate and maintain the toll connection, which is viewed as a vital link in the regional transportation network serving the Richmond International Airport.

E. SH-130 and TTC-35 in Texas

Faced with a fast-growing population, congested roads, and a limited budget, the Texas Department of Transportation (Texas DOT) has looked towards the PPP model to fund and expedite the design, construction, operation, and maintenance of new highways. Texas DOT and related state and regional highway authorities have embarked on ambitious plans to develop the road network with extensive private-sector involvement. Several of these projects, including the State Highway (SH) 130 project discussed below, have been implemented successfully. However, recent public concerns about tolling arrangements with the private sector and the political reaction to those concerns have cast a cloud over the future of PPPs in the Texas highway sector. The Texas experience to date with PPPs can serve as a valuable lesson for governments and private entities looking to work together on future highway projects.

The SH-130 project is a 91-mi toll highway that extends from north of Georgetown to Sequin County. SH-130 is the largest element of the $3.6 billion Central Texas Turnpike System, which also includes SH-45 N and the Loop 1 Extension. Segments 1–4 of SH-130 were developed through an exclusive development agreement. Segments 5–6 were the first Texas highway development under a comprehensive development agreement (CDA). The CDA provides for the design and construction of SH-130 by the private consortium and also gives Texas DOT the option of requiring the D/B firm to provide capital maintenance. Texas DOT is responsible for operating the toll facility.

The SH-130 project does not involve any private financing (except for a $10 million subordinated note provided by the D/B firm to cover change orders) and is being funded with tax-exempt bond proceeds (including low-interest Bond Anticipation Notes that mature in 2007 and 2008), a TIFIA loan (which can be used to retire the Bond Anticipation Notes before principal and interest payment obligations kick in under the loan), and state and local monies. Texas DOT estimates that the entire Central Texas Turnpike System (including SH-130) will be completed 25 years sooner that it could have been under the traditional highway procurement approach as a result of the innovative PPP under the CDA and the innovative financing plan.

The entire first phase of the Central Texas Turnpike System is scheduled to be completed by the end of 2008. Three of the four segments of SH-130 already have opened for traffic, and the final segment was scheduled to open in 2008. The initial phases of SH-130 opened nearly 1 year ahead of schedule and more than $400 million under budget. Prior to the execution of the CDA, Texas DOT performed due diligence activities (including traffic and revenue studies, surveys, and geotechnical investigations) and obtained NEPA environmental approval. The D/B company also performed limited design and right-of-way acquisition activities prior to the

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The “permit fee” equals 40 percent of aggregate toll revenue once real net cash flow yields a pretax internal rate of return (IRR) of 6.5 percent on total invested project funds paid on pari with operating costs prior to payment of debt service. If pretax IRR of 8 percent is reached, the “permit fee” increases to 80 percent of total invested project funds. Transurban Presentation, VDOT: Pocahontas Parkway Agreement (July 2006).

Texas House Bill 3588, 78th Legislature, Regular Session, 2003, amended Transportation Code, ch. 361, by amending §§ 361.302–361.306 and adding §§ 361.3021–361.3024 to amend the requirements and procedures for entering into comprehensive development agreements for department turnpike projects. The amendments to Chapter 361 change the name “exclusive development agreement” to “comprehensive development agreement” and prescribe a detailed process for entering into comprehensive development agreements. The amendments to §§ 27.1–27.5 implement this process and other requirements of House Bill 3588, and establish a competitive process for selecting the proposal for a turnpike project that offers the best value to the department. 28 Tex. Regs. 8005.

See testimony of Phil Russell, Assistant Executive Director of Innovative Project Development, Texas Department of Transportation, before the Texas State Senate, July 22, 2008, Comprehensive Development Agreements: SH-130 (Segments 5 and 6), available at http://www.senate.state.tx.us/75r/senate/commit/c820/handout g08/072208/Phil_Russell.pdf.
financial close by Texas DOT. Texas DOT paid for these prefinancing costs and was reimbursed from the financing proceeds. 52

Under Texas law, a CDA is a project delivery tool that Texas DOT or a Regional Mobility Authority53 can use to enter into an agreement with the private sector to design, construct, rehabilitate, expand, and improve certain qualifying transportation facilities including toll roads. A CDA also can be used to arrange for private-sector financing, right-of-way acquisition, and maintenance and operation of a qualifying transportation facility. The SH-130 project involved a D/B CDA, which Texas DOT believes is appropriate for “well-defined” projects where environmental activities are complete, major regulatory approvals are in place, right-of-way acquisition is underway, the financial plan is finalized, and funding will be provided by public funds including toll revenue bonds. 54

The D/B CDA used for the SH-130 project enabled Texas DOT to shift the risk of design and construction from taxpayers to a private-sector firm. The potential benefits of this approach include greater price certainty and a guaranteed delivery date. By allowing many design and construction activities to occur concurrently, a D/B CDA can be completed faster and at lower cost than a traditional design-bid-build procurement. By all indications, the completed work on the SH-130 project has come in under budget and ahead of schedule.

The relatively defined scope of the SH-130 project can be contrasted with the visionary scope of the Trans-Texas Corridor initiative. The Trans-Texas Corridor (sometimes referred to as the “TTC”) is a massive infrastructure plan covering 4,000 mi of multimodal “super corridors” that would contain toll roads, high-speed freight and commuter rail operations, and various utility lines running in the same 1,200-ft-wide corridors. The conceptual financial plan calls for tolls and other user fees to generate sufficient revenues to finance the construction and operation of these multimodal corridors. The total cost of the TTC project has been estimated to be approximately $185 billion.

According to Texas DOT, the amount of vehicle miles driven on Texas roads has skyrocketed by 103 percent since 1980, but as of January 2008, total road capacity for the same period had increased less than 8 percent. 55

Texas DOT, still in the early planning and development phase for the TTC, has focused on the possibility of using a variety of PPP structures for the development, planning, financing, design, construction, and maintenance of this ambitious plan. 56 The master plan for the construction and operation of the TTC calls for a close relationship between the state government and the private sector, and the state has developed an umbrella CDA framework to guide such long-term partnerships.

While Texas DOT expects the ultimate construction and completion of the TTC to take place over a 50-year period as routes are phased in based on need, Texas DOT has prioritized the early construction of TTC-35, a new toll highway that would extend between Oklahoma and Mexico, as the first segment of the larger project. In March 2005, Texas signed a CDA for the development of TTC-35 with a consortium of private companies led by Spain’s Cintra and San Antonio’s Zachry Construction Company (Cintra–Zachry). 57 The CDA is a predevelopment agreement pursuant to which Cintra–Zachry agreed to develop preliminary concept and financing plans for TTC-35 in exchange for $3.5 million.

The CDA required the production of a master development and financial plan from the Cintra–Zachry consortium, which was submitted to Texas DOT in September 2006. 58 The plan identifies specific transportation facilities within the TTC-35 corridor that could be developed in the near term (2005–2010), mid term (2010–2025), and long term (after 2025). The plan also provides an overall project schedule and financing plans for those facilities. Cintra–Zachry concluded that seven primary toll road segments could be developed in the near term through a DBFOM arrangement based on a concession payment of approximately $2.4 billion to the State of Texas.

The CDA gives Cintra–Zachry a “right of first negotiation” to be the developer of certain facilities that it identified in the development plan. In other words, with Texas DOT approval, Cintra–Zachry can elect to finance, plan, design, construct, maintain, or operate any of the toll road segments that it determines would be viable once environmental approvals are received. 59

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52 For more detailed information on the SH-130 project, see FHWA Case Study: Texas State Highway 130, available at http://www.fhwa.dot.gov/ppp/sh130.htm.
53 A Regional Mobility Authority (RMA) is a political subdivision formed under Texas law by one or more counties to finance, acquire, design, construct, operate, maintain, expand, or extend transportation projects.
57 Id.
58 As part of its conceptual proposal during the CDA bid process, Cintra-Zachry offered to provide $6.6 billion in private investment to design, construct, and operate a four-lane, 316-mi toll road between Dallas and San Antonio for up to 50 years as part of the initial segment of TTC-35. In exchange for these concession rights, Cintra-Zachry offered to pay the State of Texas $1.2 billion that the state could use to fund road improvements or rail projects within the TTC-35 corridor or the adjacent I-35 corridor. See N.Y. STATE DEP’T OF...
der the CDA, Texas DOT retains the option to seek competitive bids from other developers on any TTC-35 facilities. The CDA also provides that a variety of project delivery structures can be employed in developing the facilities, including design-bid-build, D/B, DBOM, and the DBFOM concession.

While Texas DOT has moved quickly to engage the private sector in the construction and operation of highways throughout the state, recent action by the Texas state legislature threatens to curtail the process. In June 2007, the Texas legislature, emboldened by constituent concern about excessive tolls, the destruction of farmland, and the transfer of public assets to foreign corporations, passed Senate Bill 792, calling for a 2-year moratorium on future highway PPPs. Senate Bill 792 also calls for local toll authorities, rather than private corporations, to have the first opportunity to bid on projects in their regions.

Texas also has faced recent problems outside the Texas state legislature with highway-sector PPPs. In February 2007, Cintra signed a 50-year concession agreement with the State of Texas to invest $5 million in developing a 26-mi segment of SH-121 north of Dallas, Texas. The agreement called for Texas to receive an up-front payment of $2.8 billion from Cintra in exchange for the rights to collect toll revenue on SH-121. However, in June 2007 the North Texas Regional Transportation Council and the Texas Transportation Commission reversed their previous decision and transferred the project from Cintra to the North Texas Tollway Authority (NTTA), an existing state tollway authority. Local politicians hoping to prevent private foreign corporations from obtaining control over public highways and the establishment of toll rates on those highways explained the reversal by pointing to the aforementioned Senate Bill 792 and its provisions encouraging public investment in the highway sector.

In response to the SH-121 development, FHWA, in a letter sent to Texas DOT on August 16, 2007, concluded that Texas DOT violated FHWA regulations that require a “fair and open competitive process” and also specifically prohibit a public entity from bidding directly against a private entity. Recognizing that the NTTA had no current plans to use federal funds for the development of SH-121, FHWA imposed other “compliance measures” against Texas DOT, including the withdrawal of its February 2006 SEP-15 waiver, the withdrawal of prior approval for TIFIA financing and authority to issue private activity bonds, and the requirement that Texas DOT reimburse FHWA for all expenses incurred in evaluating a proposed TIFIA loan to Cintra on the SH-121 project. The FHWA letter strongly implies that these compliance measures will not be imposed if Texas DOT complies with federal law by exercising the options of either canceling the Cintra bid award and going with NTTA or just canceling all and starting over.

The recent experience in Texas with highway-sector PPPs shows the importance of local political support and public education about the potential benefits of different arrangements involving the private sector. Texas DOT was criticized for its quick approval of the TTC corridor plan in 2002 with limited public input. Texas DOT also resisted requests for more transparency in its agreement with Cintra–Zachry until the Texas Attorney General’s Office ruled that the entire CDA had to be released to the public. These initial actions may have fostered the growing suspicion about whether Texas DOT’s embrace of private-sector involvement in highway development is beneficial for the public. In 5 years, Texas moved from the forefront of those states using highway-sector PPPs to a much less receptive environment due to the backlash from the public and local politicians.

F. Port of Miami Tunnel Project

The Port of Miami Tunnel project involves the creation of a new, direct-access highway connection between South Florida’s Interstate highway network and the bustling Port of Miami. The objective of the project, which has been in the planning stage for more than 20 years, is to reduce truck and other traffic congestion in downtown Miami by routing such traffic onto nearby highways. The main component of the $1.4 billion project involves twin tunnels that will be bored underneath a shipping channel in downtown Miami. The project is being structured as a DBOM contract with the private sector based on “availability payments” instead of tolls.

See Letter from FHWA Administrator J. Richard Capka to Texas Department of Transportation Executive Director Michael Behrens (Aug. 16, 2007).

A copy of the CDA is available on the Trans Texas Corridor project Web site at http://www.keeptexasmoving.com.


The Florida Department of Transportation (FDOT), in conjunction with Miami–Dade County and the City of Miami, will provide the funding for the project over its 30-year life. FDOT plans to contract with a private consortium for the design, construction, and finance of the entire facility over a 5-year period and the subsequent operation and maintenance of key segments of the facility for 30 years after it opens to traffic. The concessionaire will receive availability payments from FDOT throughout the operating portion of the contract to repay the up-front, private-sector financing of the design and construction in addition to the costs of operating and maintaining the facility once it is operational.

FDOT elected to use a PPP for this complex and expensive project because of the ability to transfer significant portions of the project risk to the private concessionaire. Under the final agreement, the concessionaire will bear substantially all risk associated with the design, construction, finance, operation, and maintenance of the facility and all other risks not expressly assumed by FDOT. However, the unique geothermal risks associated with the tunnel project have convinced FDOT to enter into a risk-sharing arrangement for unforeseen geological or other site conditions. Under this risk-sharing arrangement for cost increases or schedule delays caused by unforeseen site conditions, the concessionaire is responsible for uninsured losses below $10 million, FDOT is responsible for such losses between $10 million and $160 million, the concessionaire is responsible for such losses between $160 million and $180 million, and FDOT bears substantially all responsibility for such losses in excess of $180 million.

FDOT elected to use an availability payment approach because it transfers the concessionaire all the projects risks while retaining revenue risks and toll/user fee policy decisions with the public sector. FDOT structured the innovative procurement so that the private consortia bid “maximum” availability payments over prescribed time frames. In May 2007, FDOT awarded the project to the concessionaire team (led by Bouygues of France), which submitted the lowest “maximum” availability payment of $33.3 million per year, to be distributed in monthly increments by FDOT over the 30-year term of the operating contract unless contractual performance standards relating to lane availability, service quality, and safety are not met. This approach provides an incentive both for timely completion of the project (because the availability payments do not start until construction is complete) and for high operating and maintenance standards over the life of the facility (so that the concessionaire earns the full availability payment without any deductions for failure to meet the performance standards).

The contract to be finalized between FDOT and the Bouygues consortium also will include a “high traffic payment” that will compensate the concessionaire for higher maintenance costs if traffic levels greatly exceed forecasts. This provision reflects FDOT’s recognition that heavier than anticipated truck and bus traffic to the Port of Miami could significantly increase anticipated maintenance costs. The private concessionaire also will receive $100 million in progress payments and a $350 million payment from FDOT upon completion of construction. These payments, combined with the $33.3 million per year in availability payments over the 30-year life of the contract, bring the projected cost of the project to approximately $1.4 billion.

Under the final contract, the private concessionaire will be responsible for obtaining all necessary federal, state, and local environmental permits. The federal environmental review process under NEPA has been completed by FHWA, which should reduce the level of risk incurred by Bouygues in assuming responsibility for permits. FDOT will be responsible for acquiring any right-of-way necessary for the core project, although any additional right-of-way will be the responsibility of the concessionaire. At the conclusion of the 30-year operating period, the concessionaire must hand over the facility to FDOT. At that time, an inspection will be performed and the concessionaire may be required to correct any deficiencies that do not meet certain performance warranties.

FDOT, Miami–Dade County, and the City of Miami will share the cost of the project. The source of the local contributions has not been identified with certainty. County voters approved $100 million in bond funding for the project in 2004, the county manager has outlined plans to dedicate over $100 million in transportation fees and $47 million in donated right-of-way, and various additional port user fees and tax increment financing arrangements have been discussed to cover the balance of the local contribution. Private activity bonds will be issued by the Miami–Dade County Industrial Development Authority to provide a bridge facility until the $350 million completion payment from FDOT is received. The private consortium is providing $50 million in equity to the project. Construction on the project is scheduled to commence in 2008 and is scheduled to be completed within 5 years.70

G. Oregon Predevelopment Agreements

In 1999, the Oregon legislature directed the Oregon Department of Transportation (ODOT) to examine tolling as a way to help finance highway construction.74 As part of its analysis of the potential benefits of tolling and alternative funding mechanisms, ODOT established the Innovative Partnerships Program under its Office of Innovative Partnerships and Alternative Funding Mechanisms to foster new and creative methods of delivering transportation services. ODOTs research demonstrated that private sector involvement in transportation projects can result in lower costs and better project outcomes. Oregon enacted enabling legislation for PPPs as a means to access private capital to solve transportation problems.

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Funding. As part of this initiative, ODOT entered into an agreement in early 2006 with a private consortium headed by Macquarie to provide predevelopment work on three potential projects—the Newberg-Dundee Bypass, the Sunrise Project, and the I-205 South Corridor improvements project. The three projects were selected because they were unlikely to be constructed in the foreseeable future using solely public funds.

Under the predevelopment agreements, the Macquarie team agreed to conduct financial, technical, and other predevelopment feasibility studies in order to advise ODOT on whether any of the projects should proceed to the implementation phase. If any of the projects are deemed technically and financially viable, ODOT will seek Oregon Transportation Commission approval to enter into negotiations with the Macquarie consortium for implementation. Macquarie also agreed to provide the financing needed to build any projects deemed viable and approved by the state. This was a critical part of the arrangement because of the lack of federal or state funds to build any of the three projects.

The Macquarie consortium also agreed to bear the cost of all predevelopment work up front, subject to possible reimbursement from ODOT of up to $20 million for the cost of conducting those studies should ODOT or the Macquarie team decide not to proceed with any project. None of the predevelopment costs would be reimbursed to the extent a project moved successfully into implementation. ODOT’s possible cost reimbursement obligation was capped at $20 million even though the estimated budget for the predevelopment work was over $26.5 million. Macquarie agreed to bear the overage at its own risk.

This innovative arrangement enables ODOT to combine its planning and oversight, environmental processing, and right-of-way experience with the private consortium’s financial resources, experience, and technical expertise. The private consortium agreed to provide up-front financing for all of the predevelopment costs and to bear the risk of any overage from the reimbursement cap in exchange for the opportunity to be the developer of any project that was approved for implementation.

One of the projects that the Macquarie consortium analyzed under this arrangement was the Newberg-Dundee Bypass Project, which is designed to provide an alternative 11-mi bypass to heavy congestion on Oregon Highway 99W. The Macquarie team explored the financial viability of the project and presented a final milestone report to the Oregon Transportation Commission in December 2006 that outlined a variety of options but no clear solution to a large gap in funding construction. In effect, Macquarie concluded that the travel time savings from using the bypass would not encourage enough drivers to pay the toll rates on the Bypass necessary to fund the capital and operating costs of the Bypass project. ODOT and Macquarie agreed to terminate their predevelopment agreement with respect to the Newberg-Dundee Bypass (which would have been the first toll facility in the state). It is anticipated that Macquarie will be entitled to reimbursement of its predevelopment costs on this project, as provided in the contract with ODOT.

As of January 2007, Oregon had decided not to pursue the Sunrise Corridor project because it determined that projected toll revenue was not enough to cover the cost of operation or construction. Rather, Oregon plans to seek traditional funding sources.

IV. PARAMETERS OF ANALYSIS WITH RESPECT TO HIGHWAY PPP REQUIREMENTS

A. Scope of Inquiry

As noted above, this report is designed to focus on the major legal issues of PPPs in the highway sector that arise under federal, state, or local law or as a result of contract negotiations among the parties to a particular transaction. There are a number of significant requirements to the implementation of highway PPPs that are not, strictly speaking, legal issues. These nonlegal issues are not the primary focus of this report but are often equally if not more important to the successful implementation of a highway PPP arrangement.

Many of the most challenging issues to such projects arise out of political and policy concerns. For example, the Indiana Toll Road lease to the Australian and Spanish consortium led by Macquarie and Cintra was strongly opposed by various segments of the Indiana electorate as a result of public concerns about foreign investment in the state’s public transportation assets. Eventually the state legislature approved the long-term lease arrangement. However, the episode demonstrated the importance of getting sufficient political and public support for a proposed PPP transaction involving the long-term lease of highway assets to the private sector. The widespread perception that the public sector is relinquishing “control” of a highway asset when entering into a long-term lease or other extensive contractual agreement with the private sector, even if the private-sector entity is a U.S. company, is one of the greatest obstacles to further implementation of PPPs.

Another impediment to new toll road projects is the widespread view that the public should not have to pay tolls or other user fees to access highways that presently are not tolled. A project sponsor must be able to persuade the relevant constituencies of the anticipated


The agreement can be found at http://www.igov.ifa/files/TRVolume_III.pdf.
benefits of tolling and pricing. As the Port of Miami project illustrates, tolling may not be appropriate in all circumstances, and alternatives such as shadow tolling or availability payments should be considered. These deliberations about pricing are issues that require substantial public outreach to explain the important role that user fees can play in expanding capacity and reducing congestion.

The State of Virginia is proposing to convert and extend existing HOV lanes on I-395 south of Washington, D.C., to high-occupancy toll (HOT) lanes through a PPP with a private consortium. The HOT lanes will be managed through congestion pricing. Opponents of the project are concerned about the level of access fees during peak periods (which, according to some reports, could reach as high as $1 a mile). In addition, there is concern that the HOT lanes (derisively referred to as “Lexus Lanes” based on the perception that only the wealthy will benefit from such arrangements) will negatively impact other current transit alternatives such as the practice of “slugging” a ride on the HOV lanes with a single-occupant vehicle. In addition, there are concerns that the HOV-to-HOT conversion will only worsen congestion on the free lanes and on local roads, thereby eliminating any prior environmental or congestion mitigation benefits from the HOV lanes. These types of public concerns have the ability to derail or stall a proposed PPP unless the project sponsors engage in a frank and open discussion with the public about potential advantages and disadvantages. The recent experience in Texas suggests that less than full disclosure about arrangements with private concessionaires may stir up a groundswell of opposition to such projects.

A state highway or turnpike authority, particularly in states with aging infrastructure and existing toll roads operated by the state, can be a significant source of opposition to a proposed highway PPP project. In Pennsylvania, the Pennsylvania Turnpike Commission (PTC) is staunchly opposed to the lease of the Pennsylvania Turnpike for an up-front multi-billion-dollar payment. The PTC has asserted that it can increase the value and throughput of the highway assets in the state by operating them at a lower cost and generating equal or more revenue than the private sector because it does not have a profit motive. Moreover, the trucking industry has expressed opposition in principle to the sale or lease of toll roads, bridges, or tunnels to private entities because such transactions often involve the imposition of, or an increase in, direct user fees that must be paid by motor carriers. The American Trucking Associations (ATA) has adopted a formal policy that strongly opposes transactions such as the long-term lease of the Chicago Skyway and Indiana Toll Road. The ATA has also published a list of conditions that it believes must be adopted in any such transaction in order to protect the public interest. These conditions include the following:

- Proceeds from any such sale or lease should be used by the government exclusively for investing in toll-free highway facilities.
- The toll rates on “privatized” facilities should not be set at levels that allow the private operator to recover more than the actual cost of constructing, operating, and maintaining the facility plus a reasonable return on investment and debt service.
- Users of such facilities should be provided with a rebate of federal and state fuel taxes.
- The private owner or operator of any such facility should be prohibited from imposing its own restrictions or special fees on vehicle configurations (e.g., oversize/overweight vehicles) and commodities (e.g., hazardous materials).
- A sinking fund should be established to ensure that sufficient revenues are available for continued maintenance and operation of the facility.
- Noncompete clauses that prevent improvements to competing highways should not be included.
- Performance specifications should be adopted that ensure that the facility is operated and maintained adequately, provides a level of safety comparable to similar facilities, and provides for acceptable traffic flows.
- The public-sector participant should be allowed to terminate the sale or lease agreement if it determines that continuation of the arrangement is not in the public interest. In addition, an oversight committee representing all major stakeholders (including the trucking industry) should be established to monitor the operation of the facility and the need for amendment or termination of the arrangement with the private-sector participant.

In several respects, political, organizational, and other nonlegal issues such as those expressed by the ATA and other interest groups present challenges to further use of the highway PPP model. It is important to note, however, that these issues sometimes evolve into legal issues that end up being addressed through legislation or in contract negotiations between the public and private sectors. For example, during the debate in the Missouri General Assembly over the legislation authorizing a PPP pilot project for a new Mississippi River Bridge in St. Louis, there was concern about the possibility of giving control of an important public asset to a foreign investor that could be involved in sponsoring terrorism. Such fears were prompted in part by the uproar that occurred when Dubai Ports sought to buy certain U.S. port facilities. As a result of the concerns in

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73 See USDOT 2008 Update, at 200.
74 Id. at 15.
76 Id.
Missouri, as described more fully below, a special provision was incorporated into the Missouri pilot project legislation to address this risk. This one example illustrates how political concerns may transform into the types of legal issues that are discussed in this report.

B. Summary of Existing Literature on Legal Requirements

There is a growing body of literature on U.S. highway and other transportation PPP transactions. Much of this literature is written from a general overview perspective or with a specific focus on a particular aspect of PPP arrangements (such as financing or congestion pricing) or with an emphasis on potential applicability of PPPs in a particular state). From a general perspective, USDOT has produced many of the seminal reports on this subject. USDOT’s 2004 Report to Congress on PPP arrangements in the highway and transit sectors provides a comprehensive overview of the subject and highlights many of the key issues that must be considered in developing and structuring PPP transactions. More recently, FHWA’s Office of Policy and Government Affairs released a comprehensive report entitled, User Guidebook on Implementing Public–Private Partnerships for Transportation Infrastructure Projects in the United States. This report provides an updated overview of the subject, includes a detailed analysis of individual case studies, and mentions many of the legal issues discussed more fully in this report.

As noted above, USDOT has released model legislation for states to consider as they evaluate the adoption or revisions of PPP authorizing legislation. FHWA’s Manual for Using Public–Private Partnerships on Highway Projects is a helpful guidebook that focuses on many of the legal requirements arising out of federal law and the SAFETEA-LU provisions that were adopted to address many of these requirements. The FHWA Web site also has extensive information on PPP project structures, project case studies, overviews of state PPP legislation, and other useful materials specific to highway PPPs.

In addition to the materials issued by USDOT and FHWA, several states have commissioned reports on highway PPP project structures that provide useful overviews of both federal and state legal requirements to implementation of PPPs in a particular jurisdiction. There are a number of nonprofit groups (including the Reason Foundation and Environmental Defense Fund) and academic centers that also have been active in publishing position papers and other reports on highway PPPs. When consulting the nonprofit publications and the FHWA publications, it is important to be sensitive to the political preferences of the authors with respect to PPPs and infrastructure financing generally.

There also is a considerable body of relevant literature from Europe and other parts of the world on PPPs. The U.K. requires government agencies to consider using PPPs to procure infrastructure before using conventional methods. Under the U.K.’s Private Finance Initiative (PFI) model, private contractors are engaged to design, build, finance, and operate public projects based on output specifications developed by the project sponsors. According to data from the U.K. government, over 88 percent of PFI projects have been delivered on time, and none of the cost overruns in those projects have been borne by the public sector.

V. ANALYSIS OF MAJOR LEGAL ISSUES ASSOCIATED WITH HIGHWAY PPP IMPLEMENTATION

This section of the report contains a detailed overview of the major legal requirements to the implementation of PPPs in the U.S. highway sector. Each of the following subsections describes a particular type of legal impediment, discusses the specific ramifications of such impediment to highway PPPs, and explores possible solutions to dealing with such impediment that have been used or considered in other projects. The first two subsections below, dealing with federal law requirements and state law requirements, also contain a detailed discussion of recent legislative changes that have been made to facilitate the implementation of PPPs.

A. Principal Issues Arising Out of Federal Law

1. General Federal Legal Requirements

There are a number of legal requirements to PPPs that arise out of federal law. This is largely attributable to the significant role that federal funding has played in U.S. highway development since the 1950s and the his-

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85 See, e.g., Maryland Department of Transportation Report; New York State Report.
86 For example, see USC KESTON INSTITUTE FOR PUBLIC FINANCE AND INFRASTRUCTURE POLICY, PROTECTING THE PUBLIC INTEREST: THE ROLE OF LONG-TERM CONCESSION AGREEMENTS FOR PROVIDING TRANSPORTATION INFRASTRUCTURE (2007) (“USC Report”).
87 See Opening Statement of David B. Horner, Chief Counsel of the Federal Transit Administration, Before the House Subcommittee on Highways and Transit (Apr. 17, 2007), at 3 (citing statistics from HM TREASURY, PFI: MEETING THE INVESTMENT CHALLENGE (2003)); see also STANDARD & POORS, INFRASTRUCTURE FINANCE, THE ANATOMY OF CONSTRUCTION RISK: LESSONS FROM A MILLENNIUM OF PPP EXPERIENCE.
torical use of the design-bid-build method of procurement in federal-aid highway projects. As noted above, the Federal-Aid Highway Act and Highway Revenue Act of 1956, which authorized the creation of the Interstate Highway System pursuant to President Eisenhower’s vision of a coordinated network of free highways providing dependable and efficient mobility routes for goods and people across the country, established a statutory and institutional framework for federal funding of road development that remains largely in place today.

Federal highways laws impose a general prohibition on using federal-aid highway money for toll roads. Federal participation is permitted in 1) the construction or reconstruction of a toll highway that is not part of the Interstate System, 2) the reconstruction of a toll highway that is part of the Interstate System, 3) the conversion of a bridge or tunnel to a toll facility, and 4) the conversion of a toll-free federal-aid highway not part of the Interstate System to a toll facility. However, FHWA is prohibited from allowing federal participation in the initial construction of a toll highway, or in the conversion of an existing free highway into a toll facility as part of a reconstruction project that is part of the Interstate System. This general prohibition on tolling Interstate highways is a significant limitation on the ability of state and local governments to explore innovative financing methods for developing and improving highway assets.

These exceptions are contingent on several other requirements that could restrict innovative contracting or financing solutions. For example, a private entity may own a facility that with FHWA approval can be financed with federal funds as long as the public authority remains responsible for complying with all federal requirements that apply to the facility. In addition, the public and private entities must agree that “all toll revenues received from operation of the toll facility will be used first for debt service, for reasonable return on the costs necessary for the proper operation and maintenance of the toll facility.” Any revenues collected by the state in excess of these uses may be applied to other projects eligible for assistance.

In addition to this impediment to the use of federal monies for certain toll facilities, federal highway law contains a number of requirements that reflect the historical use of design-bid-build procurement on FHWA-sponsored projects. In traditional federal-aid highway construction contracting, cost is generally the one criterion that determines the winning bid. Highway construction contracts generally are awarded competitively to the lowest responsive bidder. A state using federal-aid highway funds must use such competitive bidding procedures unless it can demonstrate to FHWA that some other method is more cost effective or required because of an emergency. In addition, engineering service contracts are awarded using qualifications-based selection procedures (instead of best-value procurement). Innovative contracting techniques that consider factors other than cost (such as quality, delivery time, road user impacts, life-cycle costs, innovative construction and management techniques, and the use of innovative technologies) require legislative exceptions in the awarding of highway construction contracts. Finally, there are various Buy America requirements under state and federal laws that could be viewed as a legal impediment by the private sector because it limits their ability to source materials from all qualified and cost-competitive suppliers. As a general matter, the use of any federal funds or other assistance (such as TIFIA financing or private activity bonds) on a highway project will trigger the application of federal Buy America requirements. The Federal Buy America statute mandates that all steel and iron used in such projects be produced in the United States unless FHWA grants a waiver because such materials and products are not produced in the United States in sufficient and reasonably available quantities, such materials and products are not produced in the United States of a satisfactory quality, or the inclusion of domestic material will increase overall project cost by more than 25 percent.

2. Recent Federal Incentives to Expand PPP Usage

Despite the historical roots of these limitations, the federal government has taken a number of steps over the last 15 years that can facilitate the use of PPPs in the highway sector. In 1991, Congress enacted the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Section 1012 of ISTEA authorized the use of federal funds allocated to the states from the Highway Trust Fund to be commingled with private funds for purposes of highway development and construction. In addition, with the enactment of new toll exceptions in Section 1012, ISTEA authorized the use of such allocated federal funds to repay debt from the construction of new toll roads (if authorized by federal law). These changes gave state governments more flexibility in arranging financing for their highway projects.

12The general prohibition set forth in 23 U.S.C. § 301 specifies that, except as provided in 23 U.S.C. § 129, all highways constructed with federal assistance “shall be free from tolls of all kinds.”
14Id.
1523 U.S.C. § 129(a)(3). If the relevant state certifies annually that the tolled facility is being adequately maintained, the state may use any toll revenues in excess of the amount required under § 129(a)(3) for any purpose for which federal funds may be obligated by a state under Title 23.
16Id.
ISTEA also established the first significant exceptions to the general prohibition against using federal funds on Interstate toll facilities. Specifically, Congress established a congestion Pricing Pilot that provides grant funds and other support for the costs of implementing up to 15 variable pricing pilot programs to manage congestion on highways (which could include tolls on Interstate highways). The Congress established a Congestion Pricing Pilot that, as later amended, provides grant funds and other support for the costs of implementing up to 15 variable pricing pilot programs to manage congestion on highways (which could include tolls on Interstate highways). These changes offered further flexibility to state highway officials responsible for maintaining the National Highway System and alleviating capacity constraints.

Congress further facilitated the potential use of PPPs by enacting federal highway legislation in 1998 as part of the Transportation Equity Act for the 21st Century (TEA-21). TEA-21 provided specific statutory authority for states to use D/B contracting on federal-aid highway projects up to certain dollar thresholds and upon FHWA's issuance of a final rule describing the approval criteria and procedures for using D/B approaches. Section 1307 of TEA-21 defined qualified D/B projects as those with estimated total costs of over $5 million for intelligent transportation system (ITS) projects and over $50 million for other federal-aid highway projects.

Most recently, with the enactment of SAFETEA-LU in August 2005, Congress created or amended a number of statutory provisions in an effort to further facilitate PPPs through the use of innovative contracting or innovative financing techniques. SAFETEA-LU eliminated the dollar thresholds on D/B contracting that were established in TEA-21. Thus, any federal-aid highway project (regardless of estimated total costs) is now potentially eligible for D/B contracting under the FHWA regulations. Moreover, Section 1503 of SAFETEA-LU required FHWA to issue a rulemaking that allows states to issue requests for proposals (RFPs), award D/B contracts, and issue notices-to-proceed for preliminary design work prior to the conclusion of the NEPA process. Section 1503 did not, however, amend the existing prohibition against D/B contractors undertaking final design work or construction prior to completion of the NEPA process. The rationale for this restriction is that final design or construction work on a particular alignment cannot start until the locally preferred alternative has been approved under the NEPA process.

FHWA issued a notice of proposed rulemaking to implement the Section 1503 statutory requirement on May 5, 2006. FHWA's final rule on D/B contracting expands the types of preliminary design activities that D/B contractors may undertake prior to the completion of the NEPA environmental review process for highway projects, as required by SAFETEA-LU Section 1503, and amends definitions of "preliminary design" and "final design" that many commentators believed were too restrictive in the proposed rule.

In the final rule, FHWA specifies that "preliminary design defines the general project location and design concepts" and may include a range of activities including environmental assessments, topographic surveys, geotechnical investigations, utility engineering, traffic studies, financial plans, revenue estimates, and other work needed to establish parameters for final design. All such preliminary engineering and other activities and analysis which "do not materially affect the objective consideration of alternatives in the NEPA process" are permitted prior to the completion of the NEPA process under the FHWA final rule. Under the final rule, "final design" is defined as "any design activities following preliminary design and expressly includes the preparation of final construction plans and detailed specifications for the performance of construction work."

In contrast to the proposed rule, the FHWA final rule does not include any requirement for FHWA to approve the issuance of a request for qualifications (RFQ), although federal law still requires the contracting agency to obtain FHWA authorization before proceeding with preliminary design. The FHWA final rule also provides that a D/B contractor may finance the preparation of NEPA documents but the contractor and its team members may not have any decision-making responsibility in the NEPA process. This is designed to safeguard the objectivity of the alternatives analysis after the environmental review is complete. In addition, the FHWA final rule states that FHWA plans to consider whether a separate rulemaking proceeding should be implemented with respect to PPP procurement requirements.

Through SAFETEA-LU, Congress also continued efforts to create pilot and demonstration programs under which states can obtain specific authority to use tolling and variable pricing on federal-aid Interstate highways. SAFETEA-LU amended 23 U.S.C. § 166 to permit the conversion of HOV lanes into HOT lanes. Section 1604(b) of SAFETEA-LU created the Express Lanes Demonstration Program, which will allow up to 15

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103 Section 1012(b), as later amended.


106 FHWA issued a final rule authorizing design-build contracting in Dec. 2002 (see 67 Fed. Reg. *75901, Dec. 10, 2002). This design-build contracting rule was recently amended following SAFETEA-LU, and its current requirements are discussed further below.


108 Id.

109 Id.
demonstration projects through 2009 to involve tolling to manage high levels of congestion, reduce emissions, or finance added Interstate lanes for purposes of reducing congestion. A state, public authority, or private entity designated by a state may apply for participation in the program, and eligible toll facilities include existing toll facilities, existing HOV facilities, and newly created toll lanes (including facilities and lanes on the Interstate system). Automatic toll collection is required, and tolls charged on HOV facilities must use variable pricing.

Section 1604(c) of SAFETEA-LU also created the Interstate System Construction Toll Pilot Program, pursuant to which FHWA may authorize a state or a compact of states to collect tolls for the purpose of constructing new Interstate highways. The pilot program is limited to three projects, and public authorities are prohibited under the program from entering into a noncompete agreement with the private sector that would preclude the improvement of adjacent public roads to accommodate diverted traffic. Section 1604(a) of SAFETEA-LU also amended and modified the Congestion Pricing Pilot established in ISTEA by renaming it the Value Pricing Pilot Program and authorizing up to $59 million in available funds through 2009 to support the implementation of the 15 variable pricing pilot programs.

There are now at least four different tolling and pricing programs administered by FHWA for the Federal-Aid Highway Program. The nongrant programs were advertised for participation in the Federal Register notice dated January 6, 2006. The Value Pricing Pilot Program was advertised for fiscal year (FY) 2007–2009 participation on December 22, 2006. Eligibility for these various programs depends on the type of route (Interstate vs. non-Interstate), HOV lane status, past and current federal funding, and other factors. FHWA has a Tolling and Pricing Team that assists state and local highway agencies in matching proposed projects to the appropriate program. The availability of these various programs gives state and local highway officials additional flexibility and greater opportunities to use tolling and other strategies in connection with the private construction, operation, and maintenance of highway facilities.

In addition to these legislative changes, the USDOT has undertaken a number of initiatives as part of a comprehensive plan to help state and local governments reduce transportation congestion. The National Strategy to Reduce Congestion on America’s Transportation Network (often referred to as the “Congestion Initiative”) includes several programs (including the Urban Partnership Program) that are designed in part to remove barriers to private-sector participation in the development and operation of transportation infrastructure. Under the Urban Partnership Program, FHWA recently entered into agreements to provide funding available under the Value Pricing Program and an ITS grant program to five major metropolitan areas (Miami, Minneapolis, New York City, San Francisco, and Seattle) that have proposed to use some form of variable pricing to mitigate road congestion. Many of these proposals involve collaboration with the private sector on financing and implementing these variable pricing strategies. In January of 2007, USDOT issued model PPP legislation (USDOT Model Legislation) that is designed to provide a template for states interested in contracting with the private sector to invest in and manage transportation projects. The model legislation should be of interest to both states that have not yet enacted such PPP legislation and to states that are looking to expand their authority to implement PPP transactions in the transportation sector. The model legislation provides sample provisions dealing with many of the frequent legal requirements to transportation PPP projects arising out of state or local law, including several of the issues discussed in this report. Based on existing provisions in various state statutes, the sample provisions provide a “starting point” for states to consider as they explore ways to “reduce or remove barriers to private-sector investment in transportation infrastructure.”

In addition to FHWA initiatives discussed above, other modal administrations within USDOT have actively sought to encourage joint public–private development of public transportation facilities as a result of both legislative and administrative directives. These joint development laws allow the investment of private-sector funds and possibly grant money from other DOT agencies in highway facilities through various programs. Many state and local transportation agencies may see such joint development initiatives as a way for the public to capture or leverage the value of transportation improvements by giving developers access to ad-

110 See FHWA, SAFETEA-LU Opportunities for State and Other Qualifying Agencies to Gain Authority to Toll Facilities Constructed Using Federal Funds, 71 Fed. Reg. 965 (Jan. 6, 2006).
115 The USDOT Model Legislation can be found at http://www.apta.com/about/committees/public_private/docume nt/legis_model.pdf.
The Federal Transit Administration (FTA) administers a “joint development” program that encourages joint public-private investment in improvements (including residential or commercial developments) that enhance the effectiveness of a mass transit project, provided the private developer pays its reasonable share of the cost of the joint development improvement and all of the costs of any revenue-producing facility not related to mass transportation. Such joint development laws have facilitated projects involving park and ride lots, day-care centers, and other improvements that enhance access to public transit facilities. In a similar fashion, federal airport development laws encourage the development of revenue-producing facilities at airports, provided that the revenues are dedicated to operation and improvement of the airport.

3. Specific Federal Procurement PPP Incentives

The Federal-Aid Highway Program generally mandates the use of low-bid procurements. Federal-aid highway construction contracts should be awarded competitively to the lowest responsive bidder. Thus, a state planning to use federal money for a project or seeking to improve a federal-aid highway must use competitive bidding procedures unless it demonstrates that some other method is more cost effective or that an emergency exists. Moreover, engineering service contracts should be awarded using qualifications-based selection procedures. As a result of these two federal statutory requirements, which require design and construction contracts to be procured in different manners, D/B contracts and other quality-oriented contracting techniques often used in PPPs effectively are prohibited unless explicit FHWA approval is obtained.

Since 1990, FHWA has supported the evaluation of certain innovative contracting techniques through SEP-14. SEP-14 originally was formed, under FHWA’s research and development authority, to evaluate recommendations made by a Transportation Research Board task force on innovative contracting practices. SEP-14 provided a vehicle for states to experiment with new concepts in construction contracting within the Federal-Aid Highway Program. The objective of SEP-14 was to assess innovative contracting practices that might reduce the life-cycle cost of projects while maintaining project quality. As a result of successful implementation by many states under SEP-14, four experimental techniques (D/B, cost-plus-time bidding, land rental, and warranty clauses) have become accepted techniques. As noted above, a SEP-14 waiver granted by FHWA allowed UDOT to use certain experimental D/B and procurement techniques for the I-15 construction project that would otherwise have been prohibited by federal procurement law.

In October 2004, FHWA established Special Experimental Project No. 15 (SEP-15) to explore alternative and innovative approaches to the project development process. SEP-15 allows FHWA to explore innovative approaches to project delivery that are designed to increase project management flexibility, encourage innovation, improve timely delivery, and generate new revenue streams for federal-aid highway projects. SEP-15 allows states to apply for conditional approval of innovative approaches to project development on a project-by-project basis.

The purpose of the SEP-15 program is to encourage tests and experimentation in the entire project delivery process with a focus on identifying impediments in current laws, regulations, and practices to the greater use of PPPs and private investment in transportation projects. This gives states the flexibility to propose innovative procurement ideas, although any proposed experimental approach must comply with otherwise applicable federal and state laws (such as environmental laws) and any conditioned approval will be contingent on close oversight and monitoring by FHWA. Prior to FHWA’s August 2007 enactment of its final D/B contracting rule, FHWA had granted both Texas and Oregon conditional approval to issue an RFP for a D/B contract prior to the completion of the NEPA process. This approach is now permitted under the FHWA regulations.

One example of a SEP-15 method under evaluation is the procurement process that was proposed as part of the Oregon Innovative Partnerships Program. As part of the procurement process for the three projects under consideration, Oregon proposed to negotiate the final design and construction price with the developer using a completely transparent (open book) approach to confirm its reasonableness. FHWA’s D/B rule generally contemplates that a proposed lump sum price for D/B services will be a factor in contractor selection, thus allowing a competing price proposal to be used as the basis for determining price reasonableness. Nonetheless, FHWA gave Oregon conditional approval to proceed with this approach but (if any of the three projects go forward) will monitor whether the “open book” method adequately ensures competition and price reasonableness.

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119 Section 112(b)(1) of tit. 23.
120 Section 112(b)(2) of tit. 23. The federal “Brooks Act,” 40 U.S.C. § 1101 et seq. (formerly § 541), with a counterpart at FAR 36.6, requires federal agencies procuring architectural, engineering, or land surveying services to base their selection on “demonstrated competence and qualifications” instead of just the lowest responsible bidder. Id. Many states have modeled their own public RFP procedures on the Federal Brooks Act.
121 SEP-14 originally was referred to as the “Innovative Contracting” program. In 2002, FHWA changed the name of the program to “Alternative Contracting” to reflect the fact that many of the contracting practices under evaluation had become widely used. See Ray, supra note 114, at 2.
As demonstrated by the examples mentioned above, both SEP-14 and SEP-15 provide significant opportunities for project sponsors to seek FHWA approval for experimental approaches to project delivery. Although neither SEP-14 nor SEP-15 would authorize any action expressly prohibited by federal highway law or other federal and state laws, both programs give FHWA considerable flexibility to consider the permissibility of innovative approaches that allow project sponsors to work around federal legal barriers. As the D/B example shows, many of these experimental approaches later become codified into law or regulation following successful implementation in practice.

B. Principal Issues Arising Out of State Law

1. Historical Background on State PPPs

One of the most significant requirements to further implementation of PPPs in the highway sector is the lack of specific authorizing legislation in many states. Although the number of states with such legislation has increased recently, as of June 2007 only about half of the states had legislation providing clear authority to engage in the types of PPP arrangements discussed in this report. In many of those states, the authority is limited to a particular project or region, only permits certain types of innovative contracting approaches, or otherwise imposes significant limitations on the ability of state and local governments to use PP structures.

One of the first states to adopt comprehensive legislation authorizing PPPs was Virginia, which adopted its Public-Private Transportation Act (PPTA) in 1995. Several other states have followed Virginia’s lead through the passage of similar enabling legislation, and the PPTA helped position the Commonwealth of Virginia at the vanguard of the PPP movement.

Since implementation of the PPTA, Virginia has implemented a number of highway projects involving close collaboration between VDOT and a variety of private entities. Recent examples include the Pocahontas Parkway, an 8.8-mi tolled highway connector outside of Richmond that was the first project implemented under the PPTA, and the Dulles Greenway, a 12.5-mi tolled highway in the suburbs of Northern Virginia. Virginia estimates that its transportation needs will total more than $100 billion over the next 20 years, and it has projected that 15 to 20 percent of these potential funds will be used in some form of PPP.

2. Lack of State Legislation Authorizing PPP Transactions

As noted above, one of the greatest impediments to the implementation of PPPs in the highway sector is the lack of sufficient authorizing legislation at the state level. Through June 2008, approximately 23 states had legislation authorizing the use of various PPP arrangements in addition to D/B contracting for transportation projects. The most recent states to enact such legislation include Tennessee, which enacted the Tennessee Tollway Act in June 2007, and Mississippi, which enacted legislation in 2007 that authorizes state agencies to contract with private entities to design, construct, operate, and maintain new toll roads and bridges under certain conditions. However, a number of states—including New York, Massachusetts, and many of the states in the Northeast, and Illinois, Michigan, and many of the states in the Midwest—still do not have any such legislation. At a very general level, this reflects the regional split between the older, historically industrial economies in the Northeast and Midwest, on the one hand, and the newer growth economies in the South and West, on the other hand, in the acceptance of transportation PPP arrangements.

Several of the states with some form of PPP legislation provide only project-specific authority or impose significant restrictions on the ability to engage in PPP arrangements. For example, some states (including Alaska, California, Indiana, Missouri, and North Carolina) have enacted PPP legislation only with respect to specific designated projects or in limited geographic areas. The Missouri legislation enacted such legislation with respect to a proposed bridge project in St. Louis, and any other PPP project would need special legislation to be pursued as a PPP. Similarly, the Alaska legislation only authorizes the Knik Arm Bridge and Toll Authority to use a PPP to finance, design, construct, operate, and maintain a bridge connecting Anchorage and one of its suburbs.

In other states (including Arizona, California, and North Carolina), the PPP authority applies only

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to a limited number of “pilot” or “demonstration” projects. For example, the Arizona legislation authorizes two pilot programs involving up to two solicited and unsolicited proposals. The North Carolina Turnpike Authority is authorized to enter into PPP arrangements for the development, construction, operation, and maintenance of up to nine toll facilities (including a toll bridge). The pilot program approach may be a good way for a state without much PPP experience to “test the waters,” but it shows a lack of long-term political and institutional commitment to completing projects under the PPP approach and therefore may dissuade bidders from investing substantial resources in those procurements. Other states have restrictions on the modes of transportation eligible for PPP projects. For example, California legislation enacted in 2006 authorizes PPPs for “fee-producing infrastructure projects” but excludes toll roads on state highways. These types of geographic, modal, or numerical scope restrictions generally limit the ability of project sponsors and private entities to provide innovative solutions to existing transportation problems.

In some cases, state law may authorize D/B and other forms of innovative contracting but may not explicitly authorize state or local entities to engage in long-term lease or other innovative financing transactions. As of April 2007, approximately 42 states provided some form of authority to procure transportation projects using the D/B approach. Since April 2007, several states (including Colorado and Texas) have enacted or enhanced their D/B legislation. It is estimated that approximately 15 states (including California, Florida, and Georgia) make extensive use of the D/B approach. Such D/B authority often is a precursor to more extensive PPP legislative authority, as state and local highway agencies become more comfortable sharing project risks and rewards with the private sector to expedite projects and control costs.

In certain states, PPP authority is restricted to the state DOT or turnpike authority, and therefore regional and local entities are precluded from using this project delivery method. For example, South Carolina, Tennessee, Oregon, and Utah authorize their respective DOTs to construct and operate turnpike facilities through PPP arrangements. In other states, including Florida and Colorado, quasi-commercial institutions have been established within the DOT to develop and administer highway PPP projects. In Texas, the legislative authority permits Texas DOT, the Texas Turnpike Authority, and Regional Mobility Authorities to enter into comprehensive development agreements with the private sector for highway projects.

In situations where a state or local highway agency lacks authority to engage in PPP arrangements generally or specific types of PPP arrangements such as long-term lease agreements, then enabling legislation will be necessary before state and local highway agencies can consider using PPP approaches to their highway infrastructure needs. Such specific enabling legislation was necessary to authorize the State of Indiana to engage in the Indiana Toll Road transaction. The Indiana statute also authorizes a public–private agreement on I-69 between Indianapolis and Evansville, but prohibits the state from entering into any other similar agreement without specific legislative approval. In addition, as a result of criticism of the Indiana Toll Road deal, the legislation for I-69 requires increased legislative oversight and gives the Indiana DOT (rather than the Indiana Finance Authority) administrative responsibility for any PPP transaction. Many other states (including Alabama, Delaware, Florida, Georgia, Minnesota, Oregon, Texas, Utah, and Virginia) authorize the public sector to grant long-term lease or similar franchises to the private sector to design, build, operate, and maintain toll highways.

In addition to state legislation authorizing the desired form of PPP, state legislation also may be required to implement tolling and pricing techniques in a particular transaction. State law authority generally is required before a public or private entity can levy tolls or other charges on motorists within the state. This

136 See U.S. DEPT. OF TRANSP., USER GUIDEBOOK ON IMPLEMENTING PUBLIC-PRIVATE PARTNERSHIPS FOR TRANSPORTATION INFRASTRUCTURE PROJECTS IN THE UNITED STATES 25 (2007), Exhibit 15 (citing to information from the Design-Build Institute of America).
137 See CAL. REV. STAT. 43-1-1-1401, et seq.
138 See TEX. TRANSP. CODE ANN., ch. 227, 361, 370.
141 See U.S. DEPT. OF TRANSP., supra note 138.
authority is required even if the project would involve tolling and pricing on state and local roads not constructed with federal funds. In the event that the proposed project involved a federal-aid highway, appropriate authority for tolling and pricing would be required at both the state and federal levels.

The USDOT Model Legislation is designed to provide a template for states that are considering the use or expansion of the PPP approach to highway infrastructure development. The model statute contains specific provisions that authorize the receipt, evaluation, and acceptance of proposals to enter into PPP arrangements for the development, financing, maintenance, or operation of a highway or other transportation facility. Several of the provisions of the USDOT Model Legislation are discussed further throughout this section of the report.

3. Other State Law Restrictions on PPP Transactions

There are various other state law restrictions that can impact the ability of state and local highway authorities to engage in PPP transactions. Some states (including Maryland and South Carolina) do not allow specific legislative authority for mixing public and private funds on a highway project. This type of uncertainty is a significant constraint on large or complex projects that may require funding from a range of sources. To increase the chances of privately financing all or part of a particular PPP project on favorable terms, state and local governments need to enact legislation that explicitly permits the public project sponsor to transfer or lend public monies to private-sector participants upon reasonable terms and conditions. Even if a jurisdiction prohibits the transfer of such public monies to a private-sector entity, the jurisdiction could allow the public monies to be used as a form of credit enhancement for the private sector (thus allowing the private sector to obtain financing at a lower overall rate). In recognition of this potential limitation arising out of state law, the USDOT Model Legislation specifically provides that federal, state, local, and private funds may be combined to finance a transportation facility. Several states (including Florida, Georgia, Oregon, Texas, and Virginia) specifically permit federal, state, and local funds to be combined with private-sector funds on a transportation PPP project. However, it remains a state prerogative whether such mixing will be permitted.

In addition to potential uncertainty about mixing public- and private-sector financing, there are often state law restrictions on whether existing or partially constructed highways may be converted into toll roads. Such restrictions reduce the ability of state and local highway officials to implement innovative financing arrangements involving the private sector. In some jurisdictions, the conversion from toll-free to tolled status is permissible if the highway project will increase capacity. However, several states (including Georgia, Minnesota, North Carolina, Texas, and Virginia) explicitly permit the conversion of existing or partially constructed state highways into toll roads. The USDOT Model Legislation specifically provides that a public-private agreement “may include the imposition and collection of user fees and the development or use of other revenue sources.” This provision, standing alone, does not necessarily provide for tolling of toll-free state highways if other existing legislation precludes such action.

In some cases, a state or local jurisdiction may seek to require the removal of tolls after the complete repayment of project debt. The North Carolina legislation requires the North Carolina Turnpike Authority to remove tolls after all project debt has been repaid. Although this approach will be popular with the users of the facility, it imposes a limitation on the public-sector sponsor’s ability to use excess revenues to fund other transportation projects. The Florida Turnpike Enter-

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prise, which was established by a statute enacted in 1953 and is run like a private-sector business within FDOT, has used excess tolling revenues to develop additional highway projects.173

Another controversial issue is whether the public sector’s revenues from a long-term concession arrangement should be dedicated to certain specific transportation purposes (such as transit improvements in the same corridor as the highway project) or should be available to the general fund. The Chicago Skyway and Indiana Toll Road transactions involved different approaches on this issue. The City of Chicago used its $1.83 billion lump-sum payment for nontransportation purposes. In some circumstances, it may be helpful if the PPP enabling legislation specifies the permitted uses of the up-front revenue from a concession arrangement. Several states (including Florida,174 Indiana,175 North Carolina,176 Oregon,177 Texas,178 and Utah179) have enacted restrictions that prevent PPP project revenues from being diverted to the state general fund or for other unrelated uses.

In some cases, the provisions of a state’s constitution can have a dramatic effect on the ability to structure a PPP transaction. In some states, legislation may be necessary to make it clear that highway and other public assets can be owned, leased, or controlled by private-sector entities pursuant to arrangements with the appropriate public authorities.

The State of Missouri had to deal with such a limitation as part of its analysis of an interstate toll bridge project. In Pohl v. State Highway Commission,180 the Missouri Supreme Court held that toll roads that are not owned and operated by the Missouri Highways and Transportation Commission (MHTC) are not contemplated as part of the state highway system, and, as a result, MHTC is prohibited from expending any of its constitutionally dedicated State Road Fund moneys on such roads. As a result of this decision, the Missouri General Assembly had to enact legislation181 that requires that ownership of the interstate toll bridge project authorized in the bill be vested in MHTC and the State of Illinois (or some other suitable public body of Illinois). The bill authorizes a lease of the facility to the private partner, but does not allow ownership to transfer out of public control.

C. State Law Procurement Issues

1. Limitations on Performance-Based Procurements

As a result of legal or practical limitations, many state and local transportation agencies do not engage in performance-based procurements and instead are required to award contracts based on the “lowest responsive price.” In addition, to promote transparency and fairness, these procurements must offer bidders the opportunity to bid on a uniform bid package without allowing for proposals that may differ from the bid specifications. In other words, this conventional approach to procurement does not consider total aggregate costs or other benefits that may arise from a performance-based competition. For example, the project sponsor may be precluded from considering the assumption of risks, the nonmonetary value of a commitment, or certain public policy considerations that may be equally if not more important than the initial capital costs.

The USDOT Model Legislation attempts to alleviate this potential impediment by providing sample procurement provisions for states to consider as they adopt or modify PPP legislation. The approach suggested by USDOT specifically provides that a state highway authority may use any of the following procurement approaches for PPP initiatives: 1) sealed bidding; 2) selection of proposals, with or without negotiations, based on qualifications, best value, or both; or 3) any competitive selection process determined to be appropriate or reasonable.182 The USDOT model statute provides that state highway authorities should select private partners “on a competitive basis to the maximum extent practicable.” The sample legislation also provides a list of different factors that can be used in evaluating or selecting PPP proposals, including 1) the general reputation, qualifications, industry experience, and financial capacity of the private entity; 2) the proposed design, operation, and feasibility of the transportation facility; 3) the proposed cost and financial plan; 4) the ability of the proposal to improve safety, reduce congestion, increase capacity, and promote economic growth; and 5) the benefits to the public.183

Many states (including Colorado,184 Delaware,185 Georgia,186 North Carolina,187 Oregon,188 Texas,189 Utah,190

174 Id.
179 Utah Code Ann. §§ 63-56-502.5; 72-6-118, 72-6-201–206.
180 431 S.W.2d 99 (Mo. 1968).
181 Mo. Code § 227.600.2(10).
and Virginia\textsuperscript{193}) have enacted legislation that permits public-sector agencies to engage in a variety of different types of procurements for PPP projects. These approaches include competitive RFQs and RFPs, procurements based on financial terms such as return on equity rather than price, and other innovative mechanisms that are more appropriate when considering greater private-sector involvement in the development of highway projects. One of the most controversial topics in the procurement area is whether state or local law will permit the public sponsor to accept unsolicited proposals from the private sector. This issue is discussed in more detail below.

2. Solicited vs. Unsolicited Proposals

In any given jurisdiction, there is a threshold question of whether applicable state or local law permits the acceptance of unsolicited proposals. A particular jurisdiction may have a general procurement code, which allows, prohibits, or is silent on unsolicited proposals, or it may have enacted special legislation that permits unsolicited proposals in connection with particular projects, public agencies, or other circumstances.

In the event a particular jurisdiction allows unsolicited proposals, it should have regulations or internal guidelines that dictate how the agency will handle the unsolicited proposal and any competing proposals that may be allowed. From a fairness and transparency perspective, it is unlikely that a jurisdiction would accept an unsolicited proposal without allowing other entities to propose alternative approaches or submit competing bids. Therefore, most jurisdictions that accept unsolicited proposals have a detailed process in place that specifies how the unsolicited proposal is reviewed, when competing proposals will be accepted and reviewed, and how a final determination will be made. In addition, to encourage private-sector innovation, many jurisdictions (including Delaware\textsuperscript{192} and Indiana\textsuperscript{193}) have a statutory mechanism for maintaining the confidentiality of any proprietary information set forth in an unsolicited proposal and for compensating the initial proposer for concepts, technical solutions, or other work product that the public sponsor wants to use even if the initial proposer does not win the competitive bid process.

The receipt of an unsolicited proposal is likely to impose substantial costs on the public agency as it reviews the proposal and establishes a procurement process to solicit and evaluate competing proposals. Thus, some jurisdictions have imposed “proposal review fees” in order to defray the costs incurred in reviewing unsolicited proposals. The amount of any such fee must be established at a level that will not discourage private-sector entities from submitting unsolicited proposals. Public-sector agencies generally do not reimburse bidders for the costs incurred in developing their proposals, and the imposition of a substantial extra fee on top of such costs may drive private-sector companies away from making unsolicited proposals.

The USDOT Model Legislation explicitly provides for the receipt, evaluation, and acceptance of unsolicited proposals. The sample statute generally provides the following framework for dealing with unsolicited proposals. Within a specified number of days after receipt, the public agency must make a threshold determination whether the unsolicited proposal benefits the public and contains sufficient detail for the agency to evaluate it in an objective and timely manner. If the unsolicited proposal meets this threshold requirement, the public agency must advertise the proposal in a general manner in order to solicit competing proposals for the same proposed transportation facility. Upon receipt of any competing proposals that are comparable in scope, the public agency may select the initial or any competing proposal based on the standard criteria it is authorized to use in any PPP procurement. The model legislation provides that a public agency may charge a reasonable fee to cover its costs of reviewing the unsolicited proposal and any competing proposals.

Many states authorize the acceptance of both solicited and unsolicited proposals. The Virginia PPTA,\textsuperscript{194} as amended, contains detailed guidelines on the treatment of unsolicited proposals and is a good starting point for public entities looking to implement such procedures. The PPTA outlines a detailed six-phase process pursuant to which a private entity’s unsolicited proposal moves from an independent review panel to an oversight board to the negotiating table. The process ensures that the proposed project satisfies a public need and that the private group is capable of completing the project at the proposed budget and in a suitable time frame. VDOT’s Innovative Project Delivery Division estimates that an unsolicited proposal can move from initial submission to a comprehensive agreement in 10 to 18 months.\textsuperscript{195} Virginia, like some other states, authorizes the imposition of application fees to offset proposal review costs in certain circumstances.

3. Other Procurement Considerations

In addition to the debate over unsolicited proposals, there are other important aspects of the procurement process that must be established with clarity to encourage private-sector interest in a highway PPP project. For example, many states (including Florida and Virginia) have laws, regulations, or internal guidelines that specify the evaluation criteria used to evaluate PPP proposals received under a given procurement approach. These criteria often include technical quality, innovation, and price. Moreover, it is important to spec-

\textsuperscript{193} Utah Code Ann. §§ 63-56-502.5, 72-6-118, 72-6-201–206.


\textsuperscript{195} Id.

\textsuperscript{196} See generally Commonwealth of Virginia, Dep’t of Transp., Innovative Project Delivery Division, Memorandum on Objective Criteria and Guidance for Selection of Candidate Public-Private Partnership Act Projects, No. IPD 06-01.0, Apr. 26, 2006.
ify the structure of the review and evaluation process and the identity of the participants in that process. For example, some jurisdictions will establish review committees that include representatives from a cross section of interested stakeholders within the sponsoring public agency.

The fairness and transparency of the procurement process is one of the elements most critical to the success of a highway PPP. Any perceived unfairness, lack of transparency, or uncertainty in the procurement process will undermine general public support for a PPP transaction and will make it difficult for private-sector bidders to have confidence in the process. There also should be sufficient flexibility in the procurement process to allow innovative project delivery and financing approaches to be submitted and evaluated by the project sponsor. Certain procurement techniques, such as competitive RFQs and RFPs, qualifications review followed by an evaluation of “best value,” or some combination of those techniques, are more appropriate for different types of project structures. To eliminate confusion, any legislation authorizing procurement methodologies specific to PPP transactions should make it clear which sections of the general procurement code may still be applicable. The USDOT Model Legislation addresses this issue by explicitly providing that a state’s general procurement code does not apply to any proposals received under the PPP legislation. Several states (including Colorado, Delaware, Oregon, and Virginia) provide explicit exemptions from the application of the state’s general procurement laws.

4. Confidentiality of Proposals

Another controversial issue relating to highway PPP arrangements is the confidentiality of any proposals or other bid and negotiation materials. This is an area where the interest in transparency must be balanced with the interest in protecting the confidentiality of any trade secrets or other proprietary information. Most jurisdictions have freedom of information or open records laws that compel the release of procurement information to the public unless the information qualifies for a specific exclusion from disclosure, such as information that is determined to be confidential and proprietary. The type of material generally protected from disclosure under these laws includes balance sheets, financial statements, trade secrets, and other commercially sensitive financial information that the private entity may submit as evidence of its qualifications.

The USDOT Model Legislation contains sample state legislative provisions that establish a mechanism for dealing with confidentiality issues. Under the USDOT model approach, the private bidder is authorized to submit information as part of a solicited or unsolicited proposal that is designated as confidential or proprietary under the applicable open records law. The recipient public agency would be required to determine if it agrees with the confidentiality designations made by the bidder. To the extent that the public agency agrees with the bidder’s designation, the public agency is required not to disclose such information and to take other appropriate steps to protect confidentiality. To the extent that the public agency disagrees with the bidder’s designation, the bidder would have the opportunity to appeal the agency’s determination or withdraw that information from its proposal. As noted above, several states have laws that explicitly protect the confidentiality of solicited and unsolicited PPP proposals and any information disclosed during negotiations.

The negotiation phase of a PPP agreement raises sensitive confidentiality issues, particularly in controversial projects involving long-term arrangements between the public and private sectors. There is an inherent conflict between the private sector’s expectation of confidentiality and the public’s demand for information about the negotiations. This conflict can be heightened if there are public concerns about the integrity or transparency of the process. The negotiation of a contract initiated by the submission of an unsolicited proposal will generate additional concerns about the appearance of impropriety. Thus, there will be strong pressure on the public-sector negotiators to make information about the negotiations available to the public.

On the other hand, the private sector has a legitimate interest in the confidentiality of its proprietary information during ongoing negotiations. In the current U.S. market, there are only a handful of private companies that are bidding on the large-scale PPP opportunities in the highway sector. Therefore, there is intense concern among those bidders about the public disclosure of negotiating strategies, financial information, or other cost and technical proposals. The confidentiality issues during the bidding and negotiation phase are complicated by the involvement of various participants in large-scale PPP transactions. In addition to the private-sector bidders and the sponsoring state or local agency, the participants may include federal agencies such as FHWA, financial underwriters, bond rating agencies, and all of the various financial and legal advisors to the participants. Therefore, it is imperative that all participants understand and appreciate the applicable federal and state open record and sunshine laws, the confidentiality expectations of the various participants, and the dynamics of commercial negotiation and public decision making.

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197 COLO. REV. STAT. §§ 43-1-1201–1209, 43-4-801–812, 43-3-201–43-3-416.
198 DEL. CODE ANN. tit. 2 § 2003.
199 OR. REV. STAT. §§ 383.005 et seq.
200 VA. CODE ANN. §§ 2.2-4303, 2.2-4306, 33.1-12.
201 See USDOT Model Legislation at § 1-102(g), 1-103(c)-(d), available at http://www.apta.com/about/committees/public_private/documents/legis_model.pdf.
To address these confidentiality concerns, many PPP transaction participants develop a standard form of confidentiality and nondisclosure agreement (confidentiality agreement) that applies to any information submitted as part of the bid and negotiation process. The confidentiality agreement will obligate any authorized recipient of confidential information to undertake certain precautions that are designed to prevent unauthorized disclosure of such information to the media or the public. It is not unusual for PPP bidders to designate all of the information they provide during the bid and negotiation process as confidential and proprietary, and the obligations set forth in any confidentiality agreement would apply unless the public agency makes a determination that certain information does not qualify for confidentiality protection under applicable law.

The involvement of a federal agency such as FHWA in a PPP project raises some unique issues relating to confidentiality. As a general matter, any document submitted to a federal government agency becomes a “government record” subject to public disclosure under the Freedom of Information Act (FOIA) unless a specific exemption under FOIA applies. FHWA has recognized that, with respect to any PPP proposal that may be submitted under SEP-15, private-sector entities may be reluctant to propose innovative ideas if there is a risk of disclosure under FOIA. FHWA also has recognized that many documents submitted to it as part of its evaluation of a PPP on a federal-aid highway project will not necessarily be relied upon by FHWA as part of its decision-making process under SEP-15. Thus, FHWA has established a procedure whereby it reviews documents relating to a proposed PPP project offsite and determines which of those documents it believes will qualify for confidentiality protection under FOIA. When the formal PPP proposal is submitted to FHWA, only those records identified as qualifying for confidentiality protection will be submitted and the other sensitive records will not become “government records” subject to disclosure under FOIA.  

**5. Additional State or Local Approvals**

Some jurisdictions may have requirements that the legislature or some other public entity review and approve a proposed PPP transaction after the arrangement has been negotiated and finalized between the project sponsor and the private participant. For example, California legislation enacted in 2006 authorizes regional transportation agencies to develop and operate HOT lanes with private-sector involvement, but only subject to the approval of the California Transportation Commission.  

Florida recently enacted legislation that requires legislative approval for long-term leases of existing toll facilities by FDOT. As noted above, approval from the Indiana legislature is required before IDOT can enter into a PPP transaction for I-69.

These types of approval requirements add significant uncertainty to the process and may dissuade bidders from incurring the significant development costs necessary to establish their proposals. One compromise approach to avoid such an impact would be to require other public entities (such as local or regional transportation authorities) to provide their input when a proposal is first issued or received. This will give the parties ample time to address any concerns expressed by such authorities and will preclude a “local veto” that otherwise could dampen the extent of pre-bid and pre-award analysis performed by qualified bidders. Another possible solution is to adopt the approach taken by Oregon, which agreed to reimburse its private partner for all predevelopment costs (up to a cap of $20 million) in the event that a project was not approved for implementation by the Oregon Transportation Commission or otherwise not pursued by ODOT. This is exactly what happened with the Newberg–Dundee Bypass. If the parties had entered into a DBFOM contract for that project, ODOT probably would have had to pay breakup and other termination fees to the consortium.

**D. Environmental Review Process Requirements**

The environmental review process is a critical part of any highway improvement project, particularly if the project involves greenfield construction of new infrastructure. The environmental review obligations under NEPA or an equivalent regime under state law (such as the California Environmental Quality Act, otherwise known as CEQA) are often extensive and time-consuming and may threaten the viability of a project’s budget if environmental challenges are raised through litigation.

Aside from environmental litigation or an inability to obtain environmental clearance of a proposed highway project, primary legal issues associated with highway PPPs arising from environmental laws relate to the sequencing of the environmental review process with the engagement of and activities conducted by a private-sector concessionaire. In other words, the two main challenges involve 1) allocating environmental clearance and permitting risk between the public and private sectors; and 2) enabling the private-sector developer to engage in certain preliminary activities prior to the completion of the environmental review process. Each of these two types of requirements is discussed in turn below.

The challenge of obtaining environmental clearance for a highway project, and the potential imposition of mitigation measures (including realignment of a preferred route) as part of that environmental review process, involves allocating sufficient time and costs for completing the environmental review. There is also the potential risk of litigation and the possibility that the

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201 See Jan. 26, 2005, Memorandum from D.J. Gribbin, Chief Counsel of FHWA, to Assistant Chief Counsels of FHWA.
203 See Fla. Stat. § 125.01.
204 42 U.S.C. 4321, et seq.
205 Public Resource Code 21000, et seq.
most optimal conceptual design from a transportation standpoint will be unacceptable from an environmental standpoint. Final engineering and construction typically cannot commence until the environmental review process is finalized and an acceptable alignment has been identified.

The most ideal approach from a risk management perspective is not to enter into a PPP agreement until the environmental review process has been completed. However, this is not optimal in many greenfield projects, particularly where the public sector is looking to leverage the private sector’s resources and expertise to assist in refining the project and appropriate environmental review. Therefore, the parties must decide who will bear the risk of obtaining environmental clearance for the project.

As a general matter, public-sector agencies are in a better position to bear the risk of obtaining environmental clearance than the private sector due to their responsibility for acting in the public interest, their long-term relationships with other participating agencies, and their focus on long-range transportation planning. Thus, most PPP arrangements allocate the risk of obtaining environmental approval to the public sector. For similar reasons, the risk of right-of-way acquisition and obtaining environmental permits typically is allocated to the public-sector partner in a PPP arrangement.

The case study discussion above about the development of SR-125 presents some instructive lessons about the allocation of environmental risk to the private sector. In the SR-125 project, the original private concessionaire agreed to assume all risk associated with obtaining an environmental record of decision from FHWA. During the 9 years that it took to obtain final environmental clearance, the initial concessionaire incurred substantial direct costs and also incurred the opportunity cost of foregone toll revenues from the extensive delay. As a result of these and other problems, the initial concessionaire ultimately had to sell its interest in the project.

The State of Oregon has taken an innovative approach to the environmental review process through the predesign agreements that it negotiated as part of the Innovative Partnerships Program. Under this arrangement, the private partner (Macquarie) is responsible for funding the up-front costs of the predevelopment work until a determination is made that a project is financially and technically viable. Macquarie preserved the ability to develop the implementation of any project that is approved by the state for implementation, and also preserved its ability to obtain reimbursement for the costs of predevelopment work (subject to a fixed cap) for any project that did not proceed.

Under this arrangement, ODOT remained responsible for any NEPA or state environmental review process that would need to be completed once a project structure was developed. The work done under the predesign agreement certainly would be useful to ODOT in developing its environmental documentation.

The other major issue arising out of environmental laws is the limitation on activities that the private-sector developer can engage in prior to the completion of the environmental review process. As noted above, FHWA’s original D/B contracting rules precluded state sponsors from issuing RFPs or RFQs or entering into a D/B contract prior to the completion of the NEPA process. As a result of SAFETEA-LU amendments, FHWA has modified its regulations and now permits those activities prior to the completion of the NEPA process. However, there remain significant limitations on what the D/B contractor is permitted to do in this interim period. First, the D/B contractor cannot start any final design or construction work until a locally preferred alternative has been approved. Second, none of the members of the D/B consortium may participate in the preparation of the NEPA documentation.

E. Other Common Risk Allocation Requirements

1. Background on Risk Allocation

One of the major justifications for entering into PPP project delivery arrangements in the highway sector is the potential benefit of allocating certain project risks to the party in the best position to manage those risks. For example, it is common in a PPP transaction for the public sector to retain the risks associated with environmental clearance, environmental permitting, and right-of-way acquisition. The public sector typically is in a better position to manage such risks than the private-sector partner because the public authority may have condemnation authority, an interest in developing long-term good relationships with environmental reviewing agencies, and generally may be viewed as more objective than a private-sector partner. On the other hand, it is common to allocate construction, financial, traffic and revenue, and various other risks to the private-sector partner because it is often in a better position to manage such risks and because the profit it earns is based on its willingness to accept such risks.

2. Risks Commonly Allocated to the Public Sector

In addition to the environmental and right-of-way acquisition risks, there are several other risks that are commonly (though not necessarily) allocated to the public sector in concession agreements. One good example is the risk of changes in applicable law that could have a deleterious effect on the private partner’s revenues or costs. The private partner usually has no control over or way to mitigate such a change in law risk, and therefore it is usually allocated to the public sponsor. The public sector also typically assumes the risk of provid-

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207 If the NEPA process has been completed, it may be feasible to allocate the risk of obtaining permits to the private sector partner.


209 See, e.g., SAFETEA-LU, § 1503.
The construction of a tolled facility or agrees to operate the facility at a fixed price and within a specific time frame. This type of arrangement transfers both price risk and schedule risk to the private contractor. If the D/B contractor agrees to provide a warranty or accepts responsibility for operating and maintaining the facility after completion of construction, then the contractor would be accepting all quality risk.

To the extent a private contractor agrees to finance the construction of a tolled facility or agrees to operate and maintain a tolled facility pursuant to a long-term concession agreement, there are a number of risks that are typically allocated to the private sector. These risks include financing risk, traffic risk, and revenue risk. In addition, there are a number of risks typically assumed by the private concessionaire with oversight and the possibility of limited assistance from the public sponsor. For example, the private-sector operator will be responsible for compliance with the operating and maintenance standards and the “hand back” standards established by the public sponsor. The public sponsor will have oversight responsibility to ensure that the contractor is complying with these standards and will have the contractual right to compel the contractor to perform these responsibilities.

4. Risks Commonly Shared Between the Public and Private Sectors

There are several risks that are commonly shared between the public and private sectors in a typical PPP arrangement. One prime example relates to sharing excess revenue over an agreed upon return on total investment. This issue is discussed further below. Other shared risks include environmental and force majeure risks, which are outside the control of either party.

F. Tort Liability, Condemnation, and Other Delegation Challenges

1. Tort Liability

One frequent concern of private-sector participants in highway PPP projects, particularly those involving operation and maintenance, is the applicability of tort liability protections otherwise available to the state or local highway authority. Many states have sovereign immunity protections, prohibitions on punitive damages against a state agency, or caps on the amount of tort damages recoverable against a state agency. Without similar protections against possible tort claims arising out of accidents, the private sector may be hesitant to accept the risk of operating and maintaining a highway asset. The cost of insurance to cover exposure to unlimited potential damage claims is tremendous. The potential for unlimited tort liability in the absence of sovereign immunity and other protections available to public agencies is a significant concern for private entities that are considering whether to operate or maintain a public highway. One solution to this problem, if politically feasible, is the enactment of state legislation that limits tort claims against a private partner to the damage caps applicable to the public sector. In Missouri, the legislation authorizing the Mississippi River Bridge PPP project specifies that tort claims against the private partner shall be limited to sovereign immunity caps of the state. Another solution is to avoid the problem by transferring operation and maintenance of a facility back to the public authority after it has been designed and constructed. Some commentators have suggested that some form of shared immunity may be helpful to alleviate this impediment.

The USDOT Model Legislation provides that nothing in the sample PPP statute is designed to limit any waiver of the sovereign immunity of the state or its employees with respect to its participation in or approval of any PPP transportation facility. This sample provision does not address the potential liability of private-sector participants, but merely seeks not to override other state law relating to the potential immunity of the state or its employees.

2. Condemnation Authority

A number of state and local highway authorities have expressed concerns about their ability to condemn property for highway PPP projects in light of the backlash from the Supreme Court’s decision in Kelo v. City of New London. In that decision, the Supreme Court upheld the ability of a public development authority to exercise its eminent domain authority for the benefit of a private developer that was working on a redevelopment project. The decision, however, upset many people that felt private property should not be condemned.
unless it is used by a public authority. Thus, many states passed or have debated the passage of legislation that is designed to restrict the ability of public authorities to use their condemnation power for the benefit of private parties. For example, the Missouri Code gives only MHTC the authority to condemn lands necessary for the new Mississippi River Bridge PPP pilot project and does not allow the MHTC to delegate that condemnation power to a private partner.\footnote{See \textsection\textsc{227.657 Mo. Rev. Stat.}}

The backlash in some states from the \textit{Kelo} decision has complicated the ability of project sponsors to assign the risk of land acquisition necessary for a highway improvement to private entities. One typical solution to this delegation limit is for the public project sponsor to retain the risk of land acquisition and related permits and approvals, which often is a risk that the project sponsor is in a better position to manage than the private entity. The Virginia Public-Private Partnership Transportation Act of 1995\footnote{Va. Code Ann. \textsection\textsc{56-569.}} provides that only the state may condemn property, but the required just compensation award may be paid by the private partner. Many states (such as Texas and Missouri) merely provide that the state may condemn property for toll projects but do not impose specific limits on the ability of the state to lease that property to private entities.\footnote{See Tex. Transp. Code \textsection\textsc{314.011, et seq.} and 7 Mo. Code Regs. Ann. \textsection\textsc{10-24.070, et seq.}} Finally, the Florida PPP statute is silent on the question of eminent domain.

The USDOT Model Legislation specifically provides provisions for the state highway agency when considering its power of eminent domain to acquire property, rights-of-way, or other rights for purposes of PPP initiatives, but it does not address whether private-sector partners can use or otherwise benefit from the exercise of such authority.

\section*{G. Financing Issues}

\subsection*{1. Tolling and Other Revenue Allocation Arrangements}

As noted above, many of the innovative financing techniques available for highway infrastructure projects are based on the premise that private financing can be repaid with the revenue generated from the operation of the highway asset. In other words, the fees charged on users of the facility (in the form of tolls or other congestion pricing measures) can be used to repay the debt or equity investment made by the private-sector partner. Although the concept of using cash flows to repay the investors is simple, the actual negotiation and implementation of such an arrangement is fraught with controversy and complexity because of the extent of private-sector involvement in setting user fees.

The most controversial aspects of the Chicago and Indiana transactions involved the agreement to allow the private concessionaire to control the level of tolls charged to users over the life of the long-term lease.\footnote{See Craig L. Johnson, Martin J. Luby & Shkhrukh I. Kurbanov, \textit{Toll Road Privatization Transactions: The Chicago Skyway and Indiana Toll Road}, IND. SCHOOL OF PUB. & ENV. AFFAIRS, Sept. 2000, available at http://www.cviog.uga.edu/services/research/abfm/johnson.pdf.} Both transactions involved a contractual restriction on the extent to which the concessionaire could raise tolls,\footnote{Id.} although many stakeholders believe the restriction is not sufficient and gives the concessionaire too much discretion to raise tolls.

The same issue is raised if a variable pricing arrangement is used to repay private-sector investment in a new or existing facility. The public- and private-sector partners must agree on the extent to which the private investor will have the discretion to set variable prices based on varying congestion conditions. This can be more difficult to negotiate than a flat tolling arrangement because the purpose of congestion pricing is to manage demand, and thus the private operator must be given some flexibility to establish such pricing based on changing traffic levels.

In some jurisdictions, the question of who has authority to establish or modify user fees and under what circumstances is governed by applicable law. For example, many states (including Arizona, Florida, Minnesota, North Carolina, and South Carolina) specify by statute what entity has the authority to impose user fees and under what circumstances fees may be changed.\footnote{See, e.g., Ariz. Rev. Stat. \textsection\textsc{28-7701–28-7758, Fla. Stat. Ann. \textsection\textsc{338.22–338.241, Minn. Stat. Ann. \textsection\textsc{160.84–160.93, N.C. Gen. Stat. \textsection\textsc{136.89(a)(3), S.C. Code \textsection\textsc{57-5-1310, et al.}}}} The recent legislation in Florida specifies that toll rates must be indexed to the CPI or a similar index and must be adjusted at least every 5 years.\footnote{See Fla. Stat. \textsection\textsc{338.165.}} In other jurisdictions, this issue must be negotiated by contract. If the private sector is given greater flexibility to impose and modify user fees such as tolls, the private sector will have a greater ability to finance its involvement in the project on favorable terms. Whether the issue is governed by law or by contract, the public sponsor should take steps to ensure that the private-sector participant can earn a reasonable rate of return on its investment. To the extent there are surplus revenues beyond that reasonable return, whether due to higher than anticipated traffic demand, improved throughput, or other factors, the parties must agree on how those surplus revenues will be allocated among the project participants.

The Chicago and Indiana transactions are viewed by many as a windfall for the private concessionaires because the anticipated revenue cash flow during the term of the concession is likely to exceed their “return on investment.”\footnote{See Johnson et al., supra note 219.} Thus, many of the innovative financing structures being discussed today would involve
some form of revenue sharing between the public- and private-sector partners. The public sector recognizes that the private sector must expect some reasonable return on its investment to obtain sufficient financing arrangements to participate in the project on an equity or debt basis. The public sector has been requiring interested partners to share the return over and above that threshold amount to create an incentive whereby both the private- and public-sector partners are encouraged to reinvest excess proceeds in other public initiatives.

There are a number of different technologies that can be used to collect tolls or other user fees, including electronic toll collection systems (such as an EZ-Pass),\textsuperscript{223} automatic vehicle identification systems,\textsuperscript{224} and video-based toll collection enforcement systems.\textsuperscript{225} Some of these systems raise privacy concerns that must be addressed at the state level.\textsuperscript{226} There is also the issue of whether private companies will be given the authority to collect tolls and other user fees, particularly if technologies raising privacy concerns will be used. For an automated electronic toll facility, there is also the practical problem of how to ensure that all motorists using a particular tolled facility will be able to obtain transponders before the facility opens for traffic.\textsuperscript{227}

2. Other Financial Issues

Some state laws limit the ability of a state highway agency to issue bonds or notes in connection with the development, financing, or operation of a highway PPP project. These limitations frequently are in the form of annual caps on the amount of indebtedness that may be incurred by the state or the specific instrumentality of the state. The USDOT Model Legislation contains a provision that provides that any bond or note issued in connection with a transportation PPP project “does not constitute the indebtedness of the State” or a “pledge of the faith and credit of the State or any political subdivision of the State.”\textsuperscript{228} Several states (including Alaska, Florida, Missouri, Oregon, Texas, and Utah) have specific legislation that authorizes certain public sector entities to issue toll revenue bonds or notes, in some cases above otherwise applicable state caps on bonding authority.\textsuperscript{229}

Some states (including Colorado, Oregon, South Carolina, and Virginia)\textsuperscript{230} provide specific authority for establishing nonprofit 63-20 corporations that are authorized to issue debt on behalf of a public agency. This was the initial structure used in the Pocahontas Parkway project. In addition, the use of certain financing tools may require specific legislative authority in a given state. Several states (including Alaska, Oregon, Texas, and Virginia) explicitly provide that TIFIA loans may be used on PPP projects authorized by the state legislation. Recent legislation enacted in Florida specifically authorizes shadow toll and availability payment arrangements (such as the mechanism used on the Port of Miami Tunnel project). The new legislation in Mississippi allows borrowing against future toll revenues to develop new road and bridge projects through PPP structures.

The State of Washington enacted one of the earliest PPP statutes in 1993, but the legislature subsequently determined that the statute did not meet the expectations of the public and private sectors. The new PPP-enabling legislation enacted in 2005 contains significant restrictions on the ability of the private sector to invest in PPP projects. The only source of financing for PPP projects sponsored by Washington DOT is indebtedness issued by the state treasury, and no such indebtedness may occur without prior legislative approval.

H. Other Legal Considerations

1. Noncompete Clauses

In cases where the private sector has assumed revenue risk on a particular highway as part of its financial proposal, the presence of a noncompete clause is often viewed as a critical part of the economics by both the private entity and its financial backers. A noncompete clause typically prevents the public sponsor from building a new road or expanding an existing road that is adjacent to and an effective alternative route for traffic on the PPP road. The purpose of such a clause is to avoid diverting potential toll traffic to alternative free routes. A contractual or legislative noncompete agreement could cause significant problems as well.

The SR-91 project in Orange County became embroiled in litigation and public outrage over the “absolute protection zone” clause that was negotiated as part of the original agreement between the public sponsor and the private operator. Ultimately, the California legislation was amended to eliminate the noncompete clause, and the contract with the successor operator

\textsuperscript{223} See http://www.ezpass.com/
\textsuperscript{224} For example, the Houston, Texas, Transtar system, description available at http://www.houstontranstar.org/about_transtar/docs/2003_fact_sheet_2.pdf.
\textsuperscript{225} The California Bay Area has utilized a video-based toll collection enforcement system since 2001 and is in the process of upgrading its system. See, e.g., http://www.tollroadsnews.com/node/3510.
\textsuperscript{229} See, e.g., 3 ALASKA ADMIN. CODE § 51.030.
\textsuperscript{230} See, e.g., COLO. REV. STAT. §§ 43-1-1201–1209, 43-4-801–812, 43-3-201–43-3-416.
was amended to eliminate this restriction.231 There are at least two states (Alabama232 and North Carolina) that have legislation explicitly prohibiting noncompete clauses.

A private-sector participant’s concern about competition from adjacent roads can be addressed in a number of ways. First, the parties could attempt to negotiate a noncompete clause that adequately protects the private participant’s financial interest while recognizing the obligations of the public sponsor to provide its constituents with adequate facilities to meet future traffic demand. Virginia has used limited noncompete clauses with apparent success. The amended agreement negotiated with Transurban for the Pocahontas Parkway contains such a limited restriction on “competitive transportation facilities.” These clauses are narrowly structured in a way that addresses the predominant financial risks that could arise from competing facilities, but protect the public interest with regard to non-competitive facilities.

In addition, legislation could be passed to address this issue. Many public authorities, due in part to the problems with SR-91, have taken the position that non-compete clauses are unacceptable. This creates a huge impediment to the ability of private-sector entities to assume traffic and revenue risk. However, one alternative approach is to allow the public sector to retain traffic risk and to structure the transaction based on an availability-payment mechanism. This was done with the Port of Miami Tunnel Project.

The USDOT Report to Congress in 2005 concluded that successful highway PPPs should have the authority to establish a geographic noncompete zone.233 However, the Chicago Skyway transaction did not involve any restrictions on the establishment and development of competing toll roads. Similarly, the Texas PPP law234 provides that Texas DOT may not limit the public’s access to the PPP facility with the intent to benefit an ancillary facility. On the other hand, the SR-125 project developed in California does have such a noncompete clause.235 Some state legislative provisions contain requirements that the public sector maintain comparable routes with no tolls when it establishes new toll roads. Such a requirement would reduce the ability of the public agency to solicit proposals for new or expanded projects. For example, the North Carolina Turnpike Authority is required to maintain such comparable nontoll routes when it enters into a PPP to develop a toll highway or bridge. Mississippi adopted a similar approach in its recently enacted PPP legislation. An alternative approach could involve an agreement to fund improvements to the existing bus or rail transit service in that transportation corridor in order to offset the economic impact of tolling or congestion pricing. This is an approach that is being considered by many jurisdictions looking at long-term concessions, including Pennsylvania and New Jersey.

2. Performance Bonding

Many state and federal laws require project sponsors to obtain performance bonds at levels that exceed what would be required by private investors. Such state and federal laws disregard the availability of other forms of security. An owner-controlled insurance policy was used successfully on the I-15 Reconstruction Project by UDOT to significantly reduce insurance costs for all contractors. A statutory revision was passed by the Missouri General Assembly236 to enable bidders to obtain commercially feasible performance bonds for the Missouri DOT’s design-build-finance-maintain contract to repair/replace 800 of the state’s worst bridges within 5 years and to maintain them in good condition for 25 years.237

3. Tax Implications

A private entity considering a PPP must evaluate the federal tax implications of such an undertaking. For example, the private entity typically makes an up-front payment to a governmental entity to enter into a PPP. This up-front payment must be allocated among various income-producing activities to determine the federal tax consequences. To the extent the payment is allocated to a franchise right—that is, the right to charge tolls on the private highway—the private entity should be able to recover the payment on a straight-line basis over a 15-year period. To the extent the payment is allocated to a right-of-way—that is, the right to construct the private highway on land owned by the governmental entity—the private entity will only be able to recover the payment over the life of the agreement. In addition, amounts allocated to the right-of-way could cause non-U.S. private entities to be subject to additional U.S. taxes, as the right-of-way is viewed as an interest in U.S. real property. Accordingly, the allocation of the up-front payment between these various elements is an important part of the tax analysis and is often supported by evidence such as a report from an economist. The private entity must also consider the deductibility of ongoing payments to the governmental entity, such as revenue-sharing payments and payments to construct new improvements on the property (and the period over which such depreciation deductions may be taken).

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232 See ALA. CODE § 8-1-1.
233 See USDOT Report, at 111.
237 See http://www.modot.org (click on Safe & Sound MoDOT project icon).
Private entities entering into a brownfield project must consider additional tax consequences with respect to the up-front payment. In a brownfield project, the private entity must allocate the up-front payment to the franchise right, right-of-way, and additionally, the existing improvements. The tax consequences of amounts allocated to existing improvements depend on whether the private entity is viewed, for tax purposes, as the owner of the existing improvements or as a lessee. As the owner of the existing improvements, the private entity will be able to take depreciation deductions for these amounts over a relatively short time period. However, if the private owner is treated as a lessee, it will only be able to deduct these amounts as an expense over the lifetime of the lease, typically a longer time period. The determination of whether the private entity is the owner or lessee will turn on which party bears the benefits and burdens of ownership for tax purposes under the agreement.

There are also property tax implications of a long-term lease or other arrangement that gives the private-sector possession and control over a highway facility. Such facilities and related property generally are exempt from state and local property taxes and special assessments when owned and controlled by government agencies. However, the long-term lease or other conveyance of such property to a private-sector consortium will not necessarily qualify for an exemption from such property taxes. The USDOT Model Legislation contains a provision that specifies that property used in a PPP facility is exempt from all property taxes levied by the state or any political subdivision of the state.

4. Prevailing Wage Requirements

Many state legislators are concerned that a PPP would not be required to pay workers constructing the project the prevailing wages required under federal and state law if the private partner was the entity responsible for constructing the project. This is a particular problem if the private partner is the sole funding source for the project and will own the improvement once it is constructed. Missouri, for example, has required that the public authority retain ownership of a PPP project to ensure that prevailing wages required under state law will continue to be paid to project workers.

I. Other Legal Issues Typically Addressed in PPP Agreements

1. Term and Termination Clauses

As noted herein, one of the most important issues to resolve during negotiations is the term of any highway public-private agreement. As a general matter, DBOM and similar contracts for operation and maintenance tend to have shorter terms (e.g., 15–30 years) than long-term lease arrangements (e.g., 50–99 years). There has been growing belief since the criticism that followed the Chicago and Indiana deals that the term of any future long-term lease concessions should be reduced, in part because of the difficulty of forecasting traffic demand and revenue growth many years into the future. As a result, the Florida legislature enacted a bill in 2007 that imposes a 50-year limit on any long-term lease of new or existing toll facilities. The Florida Secretary of Transportation can increase the limit to 75 years, but approval of the legislature is required beyond 75 years. The new statute in Mississippi provides for a 30-year limit and requires tolling to end at the end of the term.

In addition to the term of years, a PPP contract also must address what happens at the end of the term or upon a material default by either party during the term. With respect to the expiration of the contract, it is important to have provisions in place that define each party’s rights and responsibilities leading up to and following the end of the term. One of the common criticisms of a long-term PPP agreement is that the private sector will not have any incentive to maintain and improve the facility at the highest standards near the end of the term because of the impending reversion of the facility to public control and responsibility. Thus, it is important to develop provisions that can provide incentives or appropriately penalize the private contractor for not maintaining the condition of the facility through the end of the contract term.

Moreover, it is important to have clear and understandable provisions in the PPP agreement that govern the rights and obligations of the parties upon a material default. This is often a very difficult issue to negotiate because of the competing interests of the public- and private-sector participants. The public-sector sponsor needs to ensure that it can take prompt and adequate steps to keep the highway facility available and in proper condition for the traveling public in the event of a contractual breach by the private contractor. On the other hand, the private contractor needs to ensure that it will have a reasonable opportunity to cure any alleged breach, particularly any circumstances caused by factors outside its control (including force majeure conditions).

The USDOT Model Legislation provides that upon occurrence and during the continuation of any material
default by the private operator, the state highway authority may elect to take over the transportation facility (subject to any liens on revenues previously granted by the private entity), terminate the PPP agreement, and exercise any rights and remedies that it may have thereunder or pursuant to applicable law.\footnote{USDOT Model Legislation at § 1-106, available at http://www.apta.com/about/committees/public_private/documents/legis_model.pdf.} The model provisions do not define what constitutes a “material default” and do not otherwise provide for any dispute resolution mechanism that would apply in the event the parties disagree about the existence or cause of an alleged default. These types of additional provisions must be developed in any PPP agreement for a highway project.


As noted above, certain risks and responsibilities are often allocated to the public sector in a PPP arrangement because the public sector is better placed to manage and handle such risks and responsibilities. The exercise of health, safety, and welfare responsibilities such as law enforcement and certain emergency services is one area of responsibility that typically is retained by the public sector. Therefore, the parties to a PPP agreement must address how the public sector will continue to carry out and enforce such “police power” responsibilities. The USDOT Model Legislation specifically provides that law enforcement of a state or any affected jurisdiction will retain all of their powers and will have access to the transportation facility at any time to exercise those powers.\footnote{USDOT Model Legislation at § 1-111, available at http://www.apta.com/about/committees/public_private/documents/legis_model.pdf.}

3. Other Contractual Provisions

The USDOT Model Legislation contains a list of other contractual provisions that typically should be included in transportation PPP agreements between the public and private sectors. These provisions include 1) the type of property interest (if any) the private entity will obtain in the transportation facility; 2) procedures for public inspection of construction or improvements; 3) insurance provisions; 4) a requirement that the private operator file periodic financial statements and traffic reports; (5) apportionment of expenses between the public- and private-sector parties; and (6) assignment, subcontracting, or other delegation of rights. This is not a comprehensive list of all provisions that should be included in a PPP agreement, but merely represents some of the provisions that typically appear in such arrangements.

VI. SUMMARY OF LESSONS LEARNED

Generally speaking, the most successful solutions to legislative requirements at either the federal or state level are those that give PPP project participants the flexibility to develop the optimal project delivery structure for a particular project. For example, SEP-14 and SEP-15 have been very successful in helping states develop innovative approaches to historical requirements set forth in the Federal-Aid Highway Program. As noted above, the Federal-Aid Highway Program historically prohibited state and local highway authorities from using any procurement method other than low bid. However, as a result of FHWA’s creation of the SEP-14 innovative contracting program, many highway authorities were permitted to use D/B, cost-plus-time, warranties, and other experimental contracting approaches on particular projects. The successful implementation of these approaches ultimately convinced FHWA to determine that these approaches had become operational and were no longer experimental techniques.

Similarly, many states have enacted legislation that gives state and local highway officials maximum flexibility in customizing an approach to a particular highway project. These types of legislative or administrative initiatives, which balance the need to protect a public policy interest against the need for flexibility and innovation, have allowed state and local highway authorities to expand the menu of options available to them in the face of growing infrastructure demands and dwindling budgets. Many of the case studies discussed in this report highlight the complexity of the financing and contractual risk-sharing arrangements used to develop and construct highway PPP projects. This underscores the need for significant flexibility in developing the finance plan, project delivery structure, and other aspects of a successful highway PPP. Solutions are best managed by state policy makers who are in the best position to determine what is in the best interest of the state.

VII. CONCLUSION

This report was designed primarily to identify significant legal issues associated with the implementation of PPPs in the highway sector. The report also discusses some potential solutions to these requirements and attempts to draw some lessons that may in certain circumstances facilitate the implementation of highway PPPs. Many of the requirements discussed in this report have more than legal dimensions or could be the subject of further discussion and analysis. The objective of this report was to provide a broad overview of legal requirements and possible solutions. The report does cite to a number of sources that provide further discussion about various topics that are beyond the scope of this endeavor. This report hopefully will serve as a baseline resource for any public- or private-sector participant that wants to expand its involvement in PPPs in the highway sector.
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JO ANNE ROBINSON provided liaison with the Federal Highway Administration, and CRAWFORD F. JENCKS represents the NCHRP staff.
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