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Public-Private Partnerships:
Managing the Opportunities and Risks

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> **“This trend toward financing the cost of designing, building–and even operating and maintaining–public assets with private money is called a Public-Private Partnership, or P3.”**

What do the Port of Miami Tunnel, the Long Beach Court Building, and the I-495 Capital Beltway High Occupancy Travel (HOT) Lanes have in common? You probably know that each one is a very large, complex public project, but you may not know that private parties paid for the design and construction of each project with private equity and borrowed funds that the private party is obligated to repay. This trend toward financing the cost of designing, building–and even operating and maintaining–public assets with private money is called a Public-Private Partnership, or P3.

According to a recent report by Moody’s Investors Service, the United States has the potential to be the largest market for P3 in the world. Moody’s may well be correct, given two uniquely American conditions. First is a need to rebuild deteriorating roads, bridges, water systems and other public infrastructure in a hurry. The second is that public agencies simply do not have the funds to procure design and construction services in the traditional way. We can debate the reasons that America finds itself in this so-called “funding gap,” but we cannot dispute that this is our present dilemma, and that P3 offers a way out.

Risk Management Tips for P3 Concessionaires and Design-Builders

1. **Project Selection.** Carefully select the project, and if the revenue stream will be based solely on user fees or tolls, exercise the utmost caution in relying upon estimates of use provided by consultants. Based on the significant number of demand risk toll road projects that have failed in recent years, over-optimism is not a formula for success.

2. **Team Selection.** Carefully choose the team that will comprise the concessionaire consortium: the designer, design-builder and principal contractors. These projects require an extraordinary amount of cooperation and team-work by the parties. Similar work and moral ethics, as well as trust and confidence in each other, is required. Each party must have the desire and ability to carry its own weight, but be willing and able to help the others succeed as well.

3. **Joint Venture Agreements and Contractual Liability**. If forming a joint venture between consortium members and determining risk allocation, seek advice from an insurance broker knowledgeable regarding how insurance will respond to liabilities arising out of joint venture agreements. It is possible that insurance policies may not cover mutual indemnity obligations imposed in the joint venture agreement, but may exclude them from coverage based on the policy's contractual liability exclusion.

4. **Arm's Length Negotiations by Consortium and Team Members.** If the consortium is going to be subcontracting with one of its own members, affiliates or subsidiaries to perform design or construction, negotiate these contracts and subcontracts on an arm's length basis, with each party represented by separate counsel.

5. **Don't Expect the Public Partner to Rescue the Consortium from Poor Business Decisions or to Forego Enforcing Stringent Plans and Specifications**. If the concessionaire wins a project based on specific designs and explicit promises, the project owner is generally entitled to enforce those proposal details that are incorporated into the award of the agreement. The concessionaire must adhere to the details of its own proposal, plans and specifications. Be careful what you promise.

Thirty-three states, the District of Columbia and Puerto Rico have enacted P3 enabling statutes, which give public agencies the authority to enter into P3 deals. It is clear that public agencies and politicians like the unique opportunity that P3 provides to improve public infrastructure without, in some cases, having to pay a penny of public money. With so many P3 statutes around and so much work to do, P3 is inevitable.

A surge in P3 would help create more work for the design and construction industry within the US. For the more entrepreneurial members of the industry, more P3 may also mean taking on more risk than ever before, balanced by the opportunity to earn an income stream for many years to come. More work is a good thing, but P3 projects carry with them certain risks, including:

strict investor and lender prerequisites, substantial uncertainty regarding whether the asset will generate the income needed to repay the loans and contractual on-going performance guarantees to the public owner, all of which can potentially be transferred to design professionals and contractors at all levels. Depending upon contract terms, P3 projects may also transfer construction risks to the private sector that the public owner has always assumed, such as the cost of differing site conditions and pre-existing environmental conditions.

There can be no doubt that obtaining needed alternative project financing from the private sector is the primary driver behind the growing popularity of P3 projects, but there are other benefits. P3 supporters stress the value to the taxpayer when public clients work together at early stages with designers and contractors to solve problems and develop creative solutions in far less time, and for less money, than could be done under the traditional design-bid-build process.

In addition to spurring creativity, P3 projects hold out the hope that the public and private partners will work more cooperatively together than under the traditional procurement environment and will establish a team-based relationship to contribute their combined knowledge, expertise and skills to a project. Another advantage has to do with long term maintenance of public facilities. When the P3 contract requires that the private party operate and maintain the facility for 30 or 40 years, one might expect that it would be kept in better repair than when under the care of the public agency, whose maintenance budget is always the first to be cut in times of need.

P3 critics, on the other hand, point out that the P3 project may actually cost more, given that the public owner can borrow money more cheaply than the private sector. They also maintain that giving private parties control over public works and services is just not good government. In late 2008, some members of the public complained when the city of Chicago leased the right to collect parking meter fees for 75 years to a private entity. To the dismay of Chicago motorists, the company quadrupled the rates after the first year and has dramatically increased the rates every year since then. With this deal, and other similar long term leases, critics suggest that public entities may not be as skilled in negotiating as their private sector partners and may miscalculate the true cost of a project in terms of both dollars and the long-term public benefit.

As taxpayers, we should all be concerned about what public owners are doing with our money. However, this briefing paper addresses P3 projects from the perspective of the private sector developer, design professional, design-builder and contractor. In addition to the risks that these private sector parties must allocate and manage on any large design and construction project, P3 projects add the risk of financing the design and construction costs, as well as operating and maintaining the asset over many decades—risks that traditionally belong only to the public owner. In discussing the risks that are borne by the P3 private partner, this briefing paper describes various P3 structures and the risk allocations associated with them, analyzes some P3 success stories and failures, discusses funding sources and provides guidance on how to put together a P3 contract.

P3 Structure

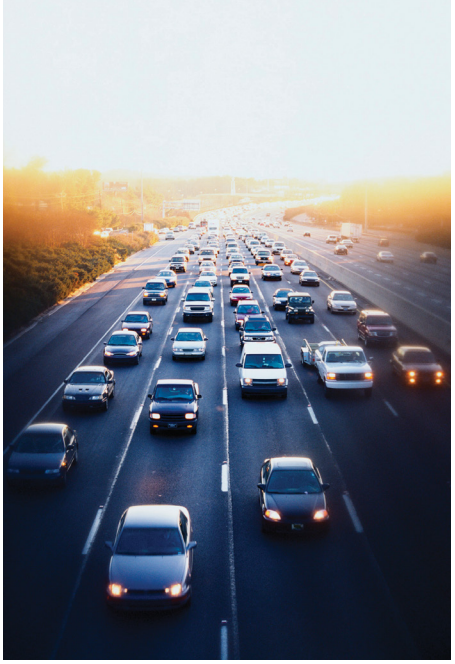
For new construction, a P3 contract can require that a private contractor (the "private partner") design, build and finance (DBF) a public asset, or it can add a requirement to operate the asset (DBFO), or maintain the asset (DBFM) or do both (DBFOM). Where the contract requires operation and maintenance of the asset over a period of time, the private contractor becomes a concessionaire and the contract is called a concession contract. These contracts include performance requirements, which can be terminated for the concessionaire's failure to operate and maintain the asset according to the preset contractual requirements. Normally, the public entity (the "public partner") retains the ownership of the asset throughout design, construction and operation.

When a public asset is already completed and in operation, such as a pre-existing toll road, a public partner may lease to a private partner the operation and maintenance of the facility over a long term--as long as 99 years. Although the asset remains in public ownership, long term leases have the same effect as privatizing an asset (placing it in private ownership) due to the lack of control the public partner retains over the asset. This briefing paper will not focus on privatization, but on new construction of large scale P3 projects that require DBFOM.

In addition to securing loans to finance its costs, the DBFOM concessionaire brings in investors and contractors with an equity interest in the project. The concessionaire entity that executes the P3 contract often comprises these multiple entities formed in a joint venture partnership or limited liability company, called a consortium. The concessionaire then subcontracts with designers, design-builders and contractors to design and build the project. When the project is complete, the concessionaire begins to operate and maintain the asset by retaining another contractor that specializes in long-term operation and maintenance. A reliable revenue stream after the project becomes available for use is essential. Without a steady revenue stream the P3 concessionaire will not be able to repay its debt and provide a return to equity partners, and will soon be forced into bankruptcy. In order for the concessionaire to earn a reasonable return on its investment, the P3 agreement may have a term of 35 or more years; longer terms are not uncommon.

The Revenue System

After the project is substantially complete and can be operated, the concessionaire can start to recoup its investment and earn a profit. In the United States today, P3 projects are following one of two basic schemes to provide a revenue stream to the private partner: either demand risk or availability payments, as discussed on the following pages.



> “Some of the variables associated with traffic risk are well ingrained in the American collective psyche.”

Demand or “traffic” Risk

Under this P3 model, the private partner is paid back for its investment solely by user fees that it collects over a period of many years from the public that uses the asset, normally in the form of rents collected from tenants or tolls charged to the public for road usage. For a toll road project, the concessionaire takes the risk that the traffic flow will be adequate to generate the tolls necessary to repay the loans it has taken to design and construct the roadway. This requires the private partner and its lenders to assume the risk of future market conditions, which is one way P3 shifts financing risk from the public to the private sector. While the private partner may exclusively take the risk of market conditions that fail to match expectations, it is usually not permitted to enjoy the benefit of market conditions that exceed expectations. The private partner will likely not be allowed to keep unexpected revenue, but will be required to share it with the public partner to avoid perceived windfall profits.

Some of the variables associated with traffic risk are well ingrained in the American collective psyche. Between 1792-1860 some 3,000 private corporations built and operated up to 52,000 miles of American roads. State and local governments lacked the funds to build roads then, just as they do today, and the private sector stepped in to fill the gap. Toll roads fell from favor after widespread automobile use created a demand for gasoline, which could be taxed to provide the funds for road building. Keeping the private sector out of road building became US policy with the Federal Aid Road Act of 1916, which barred the use of tolls on highways receiving federal money and required the states receiving federal funds to have a highway department that would design, construct and maintain the roads.

With roads paid for by the government (using mainly gasoline tax revenue), the cost of roads and highways became invisible to the average driver and to commercial truck drivers. As a result Americans began to think that having safe and adequate roads was a right that should be guaranteed and free, not a privilege to be paid for. That reluctance to pay for use of a road and the effect of the perceived high tolls that the present-day toll road concessionaire may charge to recoup its investment, make toll roads hard to sell to the American public.

Toll Road Failures

The typical American’s unwillingness to pay tolls, combined with overestimating the numbers of drivers that will use the road, has contributed to the failure of several recent toll road projects across America. Among the distressed P3 projects returned to creditors is the Pocahontas Parkway - an 8.8 mile connector in Richmond, VA, completed in 2002 by a non-profit corporation. The state of Virginia retained the right to operate and maintain the road long enough to recoup its own debt, but when it could not collect sufficient revenue it leased the road for 99 years to a new private partner, a large for-profit Australian toll road developer and operator. It took over the concession in 2006 and constructed an additional airport connector road under the expectation that economic development in the area would produce substantial auto and truck traffic.
The development and the traffic did not materialize, a fact largely blamed on the 2008 economic collapse. Within six years the operator announced that it had written down its $138 million in equity, and it turned over the operation to its lenders in 2013.

Other tolls roads where financial models were based on pre-2008 predictions of traffic flow, including the Washington DC I-495 Capital Beltway HOT Lanes, have also faced shortfalls. During the first year of operation an average of 37,574 daily trips were being made on the HOT Lanes as compared to the 66,000 trips that had been forecast. The HOT Lanes are starting to see revenues increase and the operator has injected additional equity. If things go well it will not meet the fate of other projects, such as State Highway 130 south in Austin, TX, which was returned to creditors in 2014 and the South Bay Expressway in San Diego, CA, which declared bankruptcy in 2010. The September 2014 issue of Public Works Financing reported that 12 demand risk projects were financed and constructed in the US on the basis of pre-2008 traffic and revenue forecasts. Of those, 11 have substantially underperformed those forecasts.

Demand risk projects that will generate tolls are typically funded based solely on the project's estimated toll revenue during operation, without recourse to the borrower's assets. Lenders take a security interest only in the revenue stream, not in the toll road property, which remains with the public entity. This type of non-recourse loan (called project finance) shifts risk from the public partner and the concessionaire to the lender, which takes substantial risks that the toll revenue will be adequate to repay the loan based largely upon estimates of daily use made well in advance of design and construction. Actual usage numbers may vary over time or may have been made based upon false assumptions—a risk that the lender assumes in reliance upon the estimates.

Overestimation of toll revenue is not a problem unique to America. In Australia, P3 has been utilized with success for many years. However, several toll roads have failed financially in recent years, leading to substantial investor losses. Trying to partially recover these losses, investors are now suing the design firms and accountants that collaborated on preparing the traffic estimates for three of the four Australian projects listed below.

- **Lane Cove Tunnel - Sydney, Australia.** Traffic forecasters estimated that 150,000 cars per day would use the tunnel, but in 2009, two years after the tunnel opened, only approximately 66,000 cars a day were using it. The tunnel went into receivership in 2010 and was purchased by a toll road operator for about $1 billion less than the construction cost. The fund manager of two funds that provided $80 million in equity filed suit against two consulting firms that provided the traffic forecasts.
- **Cross City Tunnel - Sydney, Australia.** The project completed in 2005 at a cost of $1 billion. After going into receivership it was purchased for $700 million. After the tunnel failed to generate the necessary income from traffic, the new owner placed the tunnel into voluntary receivership in 2013, with its value reduced to $500 million. It is reported that the original concession based its financial projections on anticipated usage levels of 70,000 cars per day in 2005, rising to 90,000 by 2013. Unfortunately, by 2013 only 36,000 cars per day were using the tunnel.

- **Brisbane Airport Link - Brisbane, Australia.** This toll road project opened in July 2012 with the concessionaire assuming all construction and usage risk. Its bid for a 45 year concession was $4.8 billion. Due to low traffic levels and debts of more than $3 billion the concessionaire entered voluntary administration of the project, a process similar to Chapter 11 Bankruptcy, after only seven months of operation. The original traffic forecast predicted 179,000 vehicles per day after six months of operation, but in December 2012, after five months of operation, only about 48,000 drivers per day were using the tunnel. Over 30 investors have filed a class action suit against the traffic forecaster.
- **M7 Clem Jones Tunnel - Brisbane, Australia.** This toll road tunnel was completed in early 2010. The traffic had been forecasted at 100,000 vehicles per day, but actual traffic is reported at only 22,000 vehicles per day. The operator went into receivership blaming insufficient toll revenue to pay the interest on its $1.3 billion debt. The receiver, as well as 700 private investors, have filed suit against the consultant that provided the estimates.

The failed projects listed above are detailed in a July 16, 2013 article in the Australian publication *Tunnel Talk*. The article states that where toll roads have failed, "the traffic forecasts were two or three times higher than the actual traffic usage when opened." The article further notes that while mistakes in estimation might be expected; all of the errors overestimated, rather than underestimated, the amount of traffic flow. For a possible explanation, the article quotes two industry experts who blame the procurement process used. The government awarded the projects to the bidder offering the highest upfront payment to the government, a number directly dependent upon high estimates of traffic. The experts suggest that structuring the awards in that way encouraged overestimation of tolls.

Another suggested reason for low traffic, just as in America, is that the traffic estimates for the failed Australian toll roads were prepared during a robust economy prior to the collapse in 2008. One expert suggested that after 2008 the perceived value of time dropped and commuters became more interested in saving money than in saving time. Another factor leading to failures concerns the expectations of equity partners, who require a speedy return on investment and are impatient with the typical "ramp up" time for a toll road, where traffic loads increase slowly over a period of years. That same point was also noted in a *Financial Review* article posted online February 19, 2013. Announcing the financial collapse of the Brisbane Airport Link, the article quoted the operator as having been willing to "bleed revenue" for over a year to entice drivers to the tunnel, but the banks would not support that strategy.

Availability payments. While toll roads seem synonymous with P3, projects that do not generate user fees may also be designed and constructed with private funds. The private funding allows a project to move forward when a public agency does not have the sufficient funds needed to design and construct the project, or the ability (or political willingness) to raise them through municipal bonds or other public lending sources, but can commit to making payments to the concessionaire over a period of years after the project is complete and available for use. The agency agrees to make "availability" or "performance" payments that cover design and construction costs, as well as debt service paid on the private financing, operation and maintenance service fees and profit, provided that the project is completed by a certain date and meets the specified criteria throughout the term of the P3 agreement. Stringing the payments out over a number of years, just as under a typical home mortgage, may make it possible for a public entity to obtain a needed project that it would otherwise not be able to fund.

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Under availability payments the concessionaire no longer takes on the risk that the project itself will generate the revenue needed to repay its loans. Instead, the concessionaire assumes the risk that the public partner will continue to make the availability payments over the term of the contract, which usually is at least 30 years. The concessionaire also assumes the risk that it can operate and maintain the asset over the term in compliance with the performance requirements set forth in the contract. The public partner is normally permitted to deduct amounts from the availability payments for any days when the asset is not available or functioning to the preset standards. At the end of the term, the concessionaire is required to turn back to the public partner a fully operational asset. The maximum amount of each availability payment and the maximum total cost to the public partner over the terms of the concession is established when the contract is signed.

For its part, the private partner takes on the substantial risk that the amount of the recurring availability payment will be sufficient to cover its operation and maintenance cost over the life of the contract. It also has to take into account inflation for the cost of labor and material and the obsolescence of equipment that may need to be replaced before the term of the agreement expires. Because the availability payments include a factor for inflation, the total payments over the term will substantially exceed the sum of the original cost of the project. This can lead to criticism that the public is paying more for the project than it should and that the concessionaire is achieving windfall profits. It can be difficult to estimate future costs; both public and private partners need to conduct substantial financial analysis to establish a net present value of the project’s total costs that both sides can agree upon. To avoid criticism, they need to present that number to the general public in a way that the average tax payer can understand.

The Long Beach Court Building, one of the few American building projects to utilize P3, provides an example of how availability funding works and the criticism that these projects can generate. To determine whether P3 was a reasonable way to deliver the building, the state of California’s Administrative Office of the Courts (AOC) performed a value-for-money analysis, which compared the costs of the project if delivered traditionally to the costs if done through P3. Public entities throughout the world commonly perform such value-for-money analyses before commencing a P3 project. Based on that analysis the AOC ultimately contracted with a concessionaire to design, build, finance, operate and maintain a new building to replace a nearby existing court building. Construction was completed in the fall of 2013 (ahead of schedule) and the AOC began payment of an annual service fee that will vary depending upon the availability and performance of the building as determined by contractual performance criteria. The state retains all ownership of the land and building throughout the 35 year agreement term.

The project generated substantial controversy and was accused by another state agency, the Legislative Analyst’s Office (LAO), of utilizing incorrect assumptions in the value-for-money analysis and, due to those assumptions, having paid $160M too much for the project on a net present value basis. The LAO also emphasized that the courthouse will cost the state $2.3 billion (the accumulative total cost of all service fees for 35 years, if paid at the maximum amount allowed). The AOC defended that its value-for-money assumptions were reasonable and vetted by the state’s Department of Finance. The AOC did not dispute the $2.3 billion number, but explained that the cost includes 35 years of operations and maintenance. The AOC further noted that utilizing a net present value analysis to determine the cost of the building and its maintenance in today’s dollars, the total project cost was $725 million, which it considered a reasonable price.

The LAO also asserted that the private contractors bore no risk. Design professionals and contractors would likely not agree. Considering that the concessionaire and its contractors took 100% of the risk of cost overruns during design and construction and have guaranteed the performance and availability of the building for 35 years, which places them fully at risk for any latent design or construction defects and for escalation in the cost of labor and material to operate and maintain the building. The amount of the annual service fee is not assured, because the AOC is permitted under the P3 agreement to deduct from the service payments for any outage or building operations failure.

The Port of Miami Tunnel is also an example of project paid for under availability funding. Completed in the summer of 2014 by a DBFOM concessionaire, the project provided twin tunnels under Biscayne Bay that route traffic from Interstate 395 directly to the Port, thus diverting cargo truck and cruise ship auto traffic congestion away from the streets of downtown Miami. Payment for this project began during construction with the state and local governments making $100M in milestone payments. They also made an additional $350M payment upon tunnel operation, which will be followed by 30 years of availability payments during tunnel and roadway operations.

Availability Payments Usage

Due to the poor track record of nearly every demand risk toll road constructed in recent years and some well-publicized loan defaults, lenders have become reluctant to make loans for projects that depend solely upon toll revenue for repayment of debt. These lenders have asked for additional equity and other accommodations that raise the total cost of the project. For that reason, states have had to move away from the demand risk model. With availability payments, the private partner's loans are secured, not by revenue that might be generated, but by the credit of the public entity. At the present time, the availability payment model for P3 has taken priority over demand or traffic risk models in the US and other parts of the world.

The Federal Highway Administration (FHWA), a branch of the US Department of Transportation (USDOT), supports availability payments, recognizing the obvious fact that the "revenue risk often poses the greatest hurdle to attracting project investors." The FHWA Web site notes that in availability payments "the private sector takes on most of the risks of design, construction, financing, operation and maintenance", while "the public sector takes on the long-term obligation of making payments." The private sector is accustomed to taking on the risk that a client may be slow or late to pay, although few in the construction industry are used to assuming that risk for 30 or more years. Real estate developers that build and retain a portfolio of properties and evaluate financial returns over 30 years based on fluctuating rents and future rent escalation may be the best prepared to understand and calculate the risks of availability payments to the concessionaire.

The FHWA currently identifies the following eight projects, all of which will be, or have been, delivered by DBFOM private partners compensated through availability payments over a period of 35 to 40 years. The payments will be made based on meeting performance requirements, whether or not the public entity collects revenue from the public's use of the asset.

- **Eagle Project - Denver Metro Area, CO.** A commuter rail project where the public entity will collect and retain all fares; it was approved 2011 and is currently under construction.
- **I-4 Ultimate - Orlando, FL.** An extensive highway improvement project that was approved in 2014. Construction begins in 2015. Florida DOT will collect tolls, but the tolls are not related to the amount of the availability payments.
- **I-595 Corridor Roadway Improvements - Broward County, FL.** Approved in 2008 and completed in 2014, this project widened lanes and added reversible variable rate toll lanes. Florida DOT retains all toll income.
- **I-69 Section 5 - Bloomington to Martinsville, Southwest IN.** This is the fifth of six sections connecting Evansville to Indianapolis. Construction started in 2014. In addition to annual payments, two milestone payments will be made for the contractor's completion of certain safety improvements.
- **Ohio River Bridges East End Crossing - Southern Indiana/ Louisville, KY.** Construction started in 2013 on this new bridge across the Ohio River with associated roadway, tunnel and facilities. The state of Indiana will collect tolls on the bridge, which will partially support the availability payments.

- **Port of Miami Tunnel - Miami, FL.** These twin tunnels connect the Port of Miami to I-395. Completed and opened to the public in 2014, there are no plans to collect tolls for its use. Because the tunnel's purpose is to alleviate congestion on city streets, Florida authorities agreed that toll collection would discourage use and defeat that purpose.
- **Presidio Parkway (Phase II) - San Francisco, CA.** This roadway replacement provides the southern access to the Golden Gate Bridge. It is California's third P3 highway project, but the first under availability payments. Construction starts in early 2015.
- **Goethals Bridge Replacement - Staten Island, NY to Elizabeth, NJ.** This six-lane cable-stayed bridge replaces the existing 85 year old bridge. Unlike the other projects listed above, the private partner will not serve as operator. The Port Authority will operate the bridge, set and collect tolls.

P3 Project Finance

The concessionaire is fully responsible for putting its own equity into the project, securing other equity partners, and obtaining loans to provide the total cost to design and construct the project including debt service and profit. In rare cases a public entity may contribute cash up front and obtain an equity interest in the project. Because the concessionaire does not own the asset, it has no loan collateral other than the future revenue stream from user fees, or availability payments made by the public partner, to provide security for the loans it must take. Monetizing the revenue stream provides the cash to build the project.

The revenue stream itself provides the funds to repay the lenders. While, as borrower, the concessionaire is on the hook to repay the loans, the loans are non-recourse and the concessionaire's liability is limited to the equity it has invested in the project. As illustrated by the Brisbane Airport Connector, if the revenue stream does not materialize within the expected time frame, the lenders may be quick to declare the loan agreements in default.

In the United States, the federal government is also a primary source of funding for infrastructure projects. The US government is an enthusiastic supporter of P3. The FHWA website states that it "encourages the consideration of public-private partnerships (P3s) in the development of transportation improvements." It further declares that "early involvement of the private sector can bring creativity, efficiency and capital to address complex transportation problems facing state and local governments." The USDOT provides financing support to P3 projects through two important programs authorized by federal legislation: TIFIA Loans and Private Activity Bonds. Both of these programs allow for federal credit assistance to the private sector and encourage private investment in public works.

> **“TIFIA provides direct loans, loan guarantees and standby lines of credit for transportation projects of national and regional significance.”**

TIFIA Loans

The Transportation Equity Act for the 21st Century (TEA-21) authorized the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA). In 2005, TIFIA was reauthorized and amended by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and it was re-authorized again in 2012 under the Moving Ahead for Progress in the 21st Century Act (MAP-21). According to a December 17th, 2014 USDOT Press Release, “The TIFIA credit program is designed to fill market gaps and leverage substantial non-federal investments. Each dollar of federal funding can provide up to $10 in TIFIA credit assistance and support up to $30 in transportation infrastructure investment. Since its launch, the TIFIA program has helped 47 projects turn almost $20 billion in U.S. Department of Transportation assistance into nearly $72 billion in infrastructure investment across America.”

In addition to public agencies, TIFIA borrowers may include private entities such as railroad companies and private firms or P3 consortia comprising companies specializing in engineering, construction and the operation of transportation facilities. As a federal program, TIFIA requires that the borrower jump through many hoops to demonstrate credit-worthiness. Many P3 concessionaries are qualifying and taking advantage of this program, including the majority of the US projects discussed in this briefing paper.

TIFIA provides direct loans, loan guarantees and standby lines of credit for transportation projects of national and regional significance. TIFIA offers flexible repayment terms — with the first payment not due until five years after substantial completion — and potentially more favorable interest rates than can otherwise be found. On January 8, 2015 TIFIA’s published interest rate was 2.55% for a 35 year loan. TIFIA assistance generally does not exceed 33% of “total reasonably anticipated eligible project costs,” but with appropriate rationale the statutes permit loans up to 49% of costs.

The loans are not primary, but to protect the taxpayer the government obtains a lien that is on parity with the senior lenders should the borrower default. Each borrower negotiates its TIFIA loan directly with the USDOT, which evaluates loans based on eight statutory criteria, including the project’s impact on the environment, its significance to the national transportation system and its ability to generate economic benefits, leverage private capital and promote innovative technologies. Each project must be included in the transportation plan of its home state and must be supported in whole, or in part, by a revenue stream of user fees or other non-federal funding sources.

TIFIA loans may be made for a variety of transportation-related projects, including: international bridges and tunnels, passenger bus and rail facilities, publicly owned freight rail facilities, private facilities for highway users, intermodal freight transfer facilities, service improvements along federal highways, projects located within a port terminal and intelligent transportation systems. One common denominator for all TIFIA projects is size. TIFIA loans are made for large projects only, with these minimum project cost thresholds: $50 million for most projects, $25 million for rural infrastructure projects and $15 million for intelligent transportation systems. The largest TIFIA loan made to a P3 project to date is $950 million for the reconstruction and widening of 21 miles of Interstate 4 in Orlando, FL.

USDOT states that TIFIA was created to solve the problem that state and local governments faced to obtain financing at reasonable rates for large-scale transportation projects when only unpredictable tolls or other user fees could provide the revenue stream needed to repay the debt. Since 1998, the US federal government, through a series of elected presidents and other officials, has demonstrated a willingness to take on the risk of these uncertainties, in exchange for stimulating private investment and creating construction jobs.

It is clear that the TIFIA program presents risk to the taxpayer, but to date no TIFIA loan is in default. However, some projects, including San Diego's South Bay Expressway and Virginia's Pocahontas Parkway, declared bankruptcy prior to defaulting on any TIFIA loan repayment. In the case of Pocahontas Parkway, the project failed prior to the first TIFIA payment date and new purchasers retired the TIFIA loan.

On the San Diego South Bay Expressway the first concessionaire declared bankruptcy and restructured the original $140 million TIFIA loan in 2010. Subsequent owners, the San Diego Association of Governments (SANDAG), restructured the loan again in 2011. SANDAG obtained a new TIFIA loan in the amount of $94.1 million, at a higher interest rate than the former loan and repaid $15.1 million. Consumer groups are skeptical, but the USDOT optimistically states, "Although the principal amount of the original loan was reduced, based on the credit attributes of the restructured loan and the higher interest rates... the TIFIA program is positioned to realize 100% of the original loan balance."

Private Activity Bonds

Private Activity Bonds (PABs) allow a private entity to benefit from the tax exempt status of municipal revenue bonds. A form of conduit financing, the bonds are issued by a public agency as conduit, but guaranteed by a private entity based on the revenue to be derived from a privately developed project that provides a public benefit.

These bonds were previously used for projects like ports and hospitals. The SAFETEA-LU legislation amended the Internal Revenue Code to add highway and freight transfer facilities to the list of privately developed and operated projects for which PABs may be issued. The law limits the total amount of PABs issued for transportation projects to $15 billion and directs the USDOT to allocate this amount among qualified facilities. Once the USDOT approves an application, the state or local government issues the tax-exempt bonds on behalf of the private entity.

> **“Providing private developers and operators with access to tax-exempt interest rates lowers the cost of capital significantly, enhancing investment prospects.”**

A 2014 USDOT publication stresses the federal government’s interest in stimulating private investment in public projects by stating that “passage of the private activity bond legislation reflects the Federal Government's desire to increase private sector investment in U.S. transportation infrastructure. Providing private developers and operators with access to tax-exempt interest rates lowers the cost of capital significantly, enhancing investment prospects. Increasing the involvement of private investors in highway and freight projects generates new sources of money, ideas, and efficiency.”

Any project that qualifies for TIFIA credit assistance is also eligible for PABs. The program is popular and by June 2014 USDOT had already authorized 73% of the $15 billion limit, including the Washington, DC Capital Beltway HOT Lanes, which was the first project authorized. As of December 16, 2014 over $4.8 billion in PABs have been issued to 13 projects and an additional $5.4 billion is approved for an additional seven projects.

Skin in the Game

Obtaining private equity is a critical component of the P3 project. It is common for the concessionaire to be formed through a consortium of a construction company, or the parent company of a construction company, and an investment banker. These companies join to form another company, a special purpose entity formed for the sole purpose of developing the project.

This legal entity is typically organized as a joint venture partnership or limited liability company into which each partner or member invests substantial sums and contractually limits its liability to the amount of that equity investment. The design-builder that contracts to perform the project is frequently an equity partner of the concessionaire or a subsidiary company of the concessionaire. For a few typical examples, see details of the following projects, as provided on the FHWA web site:

- **Port of Miami Tunnel, Miami, FL.** Private Equity: $80.3 million; Concessionaire: Miami Access Tunnel, LLC, comprising Meridiam Infrastructure Finance, S.a.r.l (90% equity) and Bouygues Travaux Publics, S.A. (10% equity); Design-Builder: Bouygues Civil Works Florida.
- **Eagle P3 Project, Denver, CO.** Private equity: $54.3 million; Concessionaire: Denver Transit Partners, comprising Fluor Enterprises, Inc., managing partner (10% equity), Uberior Infrastructure Investments, part of Lloyd’s Bank, (45% equity) and Jon Laing Investments (45% equity); Design-Builder: Fluor, as managing partner with Balfour Beatty Rail, Inc.
- **Ohio River Bridges East End Crossing, Southern Indiana at Louisville, KY.** Private equity: $78.1 million; Concessionaire: WVB East End Partners comprising Walsh Infrastructure, LLC, VINCI Highways SAS and Bilfinger Project Investments International Holding GmbH; Design-Builder: Walsh Construction Company and VINCI Construction Grands Projects.

- **Presidio Parkway Phase II, San Francisco, CA.** Private equity: $43 million; Concessionaire: Golden Link Partners, LLC, comprising Hochtieff PPP Solutions North America and Meridiam Infrastructure; Design-Builder: a joint venture of Flatiron West, Inc., a subsidiary of Hochtieff, as managing partner and Kiewit Infrastructure West, Co.

As partially illustrated by the examples above, it is frequently true that one of the concessionaire entities is the parent of the design-builder. The same parent company may also own the design firm it retains independently or that the design-builder retains, as well as the company that the concessionaire retains for operations and maintenance.

Although that ownership makes the two companies related entities, each company will have its own balance sheet to protect, which may give them conflicting profit goals and lead them to make claims against the other as would any two unrelated contracting parties. The claim may reach an unexpected result when the parent files a claim against a design firm that it owns due to the standard related entity exclusion in the typical professional liability policy.

Lender Requirements

In addition to substantial equity, as well as federal loans and tax exempt bonds, projects must also rely heavily on bank loans to provide the funding for the design and construction of the large P3 transportation project. These loans depend upon the project's revenue stream for repayment. The certainty of the revenue stream, whether from estimated tolls or availability payments, is a substantial risk for lenders. However, the ability of the concessionaire to design, build, operate and maintain the project is also a significant risk factor. If the concessionaire lacks adequate experience, or fails to perform for any other reason, the project will likely not complete on time and allow the revenue stream to flow.

The concessionaire's design-builder may also lack sufficient financial strength to finance the cost of contractual payments it must make to its design firms and subcontractors, a concern in any design-build project. For all of these reasons and more, lenders typically undertake a period of due diligence before making a loan commitment. During that period, lenders will retain their own engineers, lawyers and other advisers to assist them in evaluating the risks of the loan.

Lenders will also commonly require written assurance from the concessionaire and its design-builder in the form of legally enforceable parent guarantees, letters of credit and surety bonds. They will demand these assurances from the concessionaire as a condition of loan closure. The concessionaire will then demand the same or similar assurances from the design-builder, which will demand them from the design firm and all the construction contractors it retains as a condition of contracting.

Should the concessionaire default on its loan, the bank can use one or more of these instruments to pursue monetary relief. The concessionaire, design-builder and all other downstream design firms and contractors will then take the same steps against their own lower-tier contracting parties.

Contracts

If you are contract-adverse, you need to steel yourself, because it takes a lot of contracts to put a P3 project together. To begin with, the public partner will need to retain its own consultants and advisers, including design professionals to evaluate the private partner's proposed designs and any usage estimates. The concessionaire similarly may retain design professionals and other consultants prior to executing the design-build agreement. Contracts written to require design, construction, operation, maintenance and to provide for an appropriate revenue stream are going to be very long. Parts of them may be understandable only to attorneys and financial consultants.

As noted above, lenders will also place their own experts and consultants under contract. When the project is underway, the design-builder will execute scores, if not hundreds, of subcontracts to execute the work and the concessionaire will also contract with another entity to provide operations and maintenance. However, the most important contract (the one that will determine the price, schedule, terms and conditions for all other lower tier agreements) is the P3 agreement between the public entity and the concessionaire.

Risk Management Tips for Design Firms on P3 Projects

Design professionals may provide services directly to the concessionaire or to the design-builder. Before providing any professional services, the design professional should execute a written agreement with its client that sets forth the scope of services and the terms and conditions of the contract. This should include an insurable standard of care covering all services, a limitation of liability and a waiver of consequential damages.

Services to the Concessionaire. These services may include feasibility studies, environmental assessments, estimates of future facility usage such as traffic flows, initial designs for inclusion in the proposal to the project owner and construction contract administration services.

To mitigate the risk assumed when providing estimates of future facility usage or expected revenue, the services contract should identify the owner-provided information, as well as any assumptions that the parties agreed to use in performing calculations. Reliance upon the estimates may be limited to certain uses and any warranty of accuracy disclaimed.

Services to the Design-Builder. Negotiating the professional services agreement with the design-builder may present special challenges in a P3 project, because the concessionaire may have transferred to the design-builder some of the extraordinary risk it assumed in its contract with the public owner. The design-builder may seek to flow down that risk to all of its subcontractors, including the design professional, without recognizing the unique nature of professional liability insurance coverage. Reasonable and insurable risks may be even more difficult when the design-builder is in an equity relationship with the concessionaire, sharing both in possible losses and anticipated profit. The design professional should consider seeking insurance and legal counsel to assist in negotiating reasonable contract terms that take into account professional liability insurance coverage.

Contractual Risk Allocation Clauses for Design Firm Consideration:

- Scope of service that is carefully and clearly articulated
- Standard of care that does not exceed the generally accepted level of skill and care
- Warranties or guarantees of professional services not accepted
- Limitation of liability provided
- Waiver of consequential damages provided
- Quantity estimates with caveats, disclaimers and subject to the standard of care
- Third-party beneficiaries disclaimed
- Responsibility for contractor's means, methods and procedures disclaimed
- Responsibility for overall site safety disclaimed
- Liquidated damages avoided, but if accepted, limited to damages to the extent caused by negligent performance of professional services

Each of these clauses has been discussed at length in the Zurich Contract Guide for Design Professionals that is available on the Zurich NA website.

The most distinguishing feature of the P3 contract is its term, which must be as long as needed to repay the debt and provide a reasonable rate of return to investors. Many demand risk and availability payment contracts have terms of 30 to 50 years. Leases to operate existing facilities may run for 99 years. Normally, attorneys try to account for future events when drafting contract provisions, but that is difficult, if not impossible, to accomplish for a contract term that may span several generations.

Attorney Jacques Cook makes several important points in his article "Modern Enhancements to PPP Concession Contracts", published in 2008 in *The Construction Lawyer*. He stresses that rather than trying to expand the contract to cover every possible eventuality, the P3 contract should provide a framework for maintaining the relationship between the public and private parties over the life of the contract. Then parties can continue to work together in the face of changing market conditions and political climates.

To preserve the relationship it is essential to have a contractual process that allows for resolving disputes before they escalate into taking advocacy positions and adopting polarized views that can lead only to termination of the contract. This could potentially have disastrous consequences for both sides, including the possible suspension of public services. Cook suggests that litigation should be avoided in favor of informal, less adversarial approaches, following the model of countries that have been performing P3 for many years, including Chile, South Africa, the UK and most other European Union countries.

> “Litigation is a good process for deciding winners and losers when parties are willing to part ways.”

Litigation is a good process for deciding winners and losers when parties are willing to part ways. However alternative dispute resolution processes, such as discussions and negotiations, dispute review boards, mediations and conciliation conferences are better at preserving relationships. For that reason, Cook recommends that they should be required in a P3 contract.

Perhaps Cook’s most important point concerns changing market conditions. Observing that “the bargain perceived in one period is transformed by unforeseen or uncontrollable factors,” Cook stresses that the financial model upon which the P3 deal is stuck should be analyzed and agreed upon by both sides and included in the contract, complete with all of its market assumptions. Thereafter, it can be used as a risk management tool throughout the life of the agreement.

When market conditions change the financial model will provide the parties with a rational basis for renegotiating contract terms, including tolls charged and payments made, to keep the financial model within agreed-upon profit margins. Transparency in the financial model is key. If only the concessionaire is privy to the financial analysis, then the public partner will always be negotiating from a position of ignorance and suspicion and will be quick to assume that the private partner is taking unfair advantage. Once the relationship is soured, it may be difficult to regain.

The US political process provides a changing array of politicians and newly elected leaders may be inclined to reject their predecessor’s pet P3 projects. If the concessionaire’s contract has a provision for periodic review and renegotiation based on an attached financial model that can be evaluated impartially, then it is more likely to stand the test of time.

Public or Private

Private parties entering into contracts on private projects may enter into contracts with whomever they want based upon whatever criteria they choose, allocate risk as they agree, pay whatever labor rates the market bears and buy any product a supplier provides irrespective of its country of origin. The same is not true on a public project, which is controlled by local or federal procurement statutes and other statutes passed by our elected representatives to promote social policy goals, such as small business and minority participation.

A private entity retaining other private entities to perform construction or professional services on a privately financed project may be under the mistaken belief that the project is private, particularly if the private parties are separated by a few tiers from the agreement between the concessionaire and the public entity. That mistaken belief could have costly consequences.

If a project is owned by a public owner, receives public funding or is used for a public purpose, then certain public laws will apply. For that reason, all private parties entering contracts on a P3 project should assume, until proven otherwise, that a number of federal and state statutes will apply to all of the contracts on the project. If contracts are carefully drafted at the concessionaire level and appropriately flowed down to all lower tiers, then all questions about the applicability of state or federal statutes should find answers in the contracts.

> **“TIFIA loans reduce the cost of capital and the overall cost of the project.”**

If this is not the case, then a private party should obtain local counsel to figure out which statutes apply and then execute contracts with all of its subcontractors to flow down those requirements and avoid gaps. The state’s P3 enabling statute will provide information regarding which state statutes apply; the TIFIA statute identifies the federal statutes that apply to projects receiving TIFIA loans.

TIFIA loans reduce the cost of capital and the overall cost of the project. However, the acceptance of TIFIA funding obligates the borrower to certain design, procurement and construction requirements prescribed by statutes for highway or transit projects. According to TIFIA regulations, the borrower is also subjected to “generally applicable Federal laws and regulations, including title VI of the Civil Rights Act of 1964, the National Environmental Policy Act of 1969 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.”

Standard Forms

P3 got its start in the United Kingdom, where the UK Treasury Department has published a standard form annotated contract for what is called Private Finance Initiative (PFI) since 1999. The contract is widely circulated and periodically updated for use by all UK public agencies. In the United States we have never had a standard form to give guidance. Most P3 contracts are manuscript agreements written by lawyers retained by the public entity, concessionaire and the lenders.

Recently, contract guidance has started to appear. In September 2014 the Federal Highway Administration published its Core Toll Concession Model Contract Guide, which provides detailed guidance for drafting a P3 contract where the concessionaire will be paid through tolls it collects. The Guide also includes several suggested contract clauses. Also in 2014, the Engineer’s Joint Contract Documents Committee (EJCDC) published the first standard form Public-Private Partnership Agreement.

EJCDC P3-508 Public-Private Partnership Agreement

The Engineers Joint contract Documents Committee (EJCDC) is a joint venture of the American Society of Civil Engineers, the National Society of Professional Engineers and the American Council of Engineering Companies. It has been publishing standard forms since 1975. The EJCDC released the P3-508 Public-Private Partnership Agreement in September 2014 after more than two years of work by its volunteer committee and outside legal counsel, and obtaining comment from a number of design and construction industry practitioners and attorneys.

The EJCDC document’s instructions clarify that due to the wide variation in the structure of P3 deals, the document is not a typical fill-in-the-blank standard form, but is “a template that informs the parties of issues for consideration” in creating a customized P3 concession agreement between the Public Owner and the Private Entity. The instructions also note that the drafting team assumed a P3 project for the design-build of new facilities, or the renewal of existing facilities.

Divided into 21 articles that generally follow the chronological order of the project from the concession grant, through site selection, operations, maintenance and facility management, the template is user-friendly with bracketed, bold face, italic instructions. It also provides tips regarding what to add, delete, modify or expand upon with respect to the standard form text. The template is written with the expectation that it will be heavily edited to create the customized contract and to include numerous attached exhibits for detailed information, such as time schedules, expected project revenues and insurance requirements.

While some sections offer a lot of suggestions, such as the Grant of Concession at Section 3.01 which offers eight choices for the many possible concession grants and instructions to modify "as needed to accurately state the specific concession granted," other sections are more narrowly tailored. The Project Financing section at 9.03, for example, makes crystal clear that the Private Entity is "solely responsible for obtaining funds with which to pay all Private Entity's obligations relating to or arising from this Contract... and for repaying all financing at its own cost and risk without recourse to Public Owner... and bears the risk of any financial market changes affecting the financing." This section also provides suggested language regarding the security interests that lenders may obtain and the limited conditions under which the property may be used as collateral.

Although not stated in the instructions, this template is very thoroughly written to cover demand risk concessions, which until very recently dominated the US P3 market. Although one of the suggested concession grants at Article 3 includes the right of the Private Entity to receive availability fees, the template does not include other provisions that would support availability payments from the Public Owner during construction and the operations and maintenance period. Since the template is otherwise so complete, P3 contract drafters could add those sections, and delete others regarding the collection of user fees or tolls, to create an availability payments concession agreement using this template.

Moving Forward with P3

Many states have aging roads and bridges. According to estimates by the American Society of Civil Engineers, the US will need to spend $3.6 trillion by 2020 to fix not only deteriorating roads and bridges, but also water systems and other public infrastructure. Most states find that they lack the funds to design and build infrastructure projects in the traditional ways. However, our current political climate makes raising taxes to cover the cost of these improvements extremely unlikely. Under these circumstances, it is incumbent upon state officials to evaluate the pros and cons of using private funding for public projects.

The federal government is already onboard with P3. Unlike the quashing of P3 we saw in most of the 20th century, where state agencies receiving federal funding were required to design and build their own projects without private funding, the 21st century federal government is completely dedicated to the concept of private participation in federally funded transportation projects. The White House is also currently working to expand private participation in other types of public works.

On January 16, 2015, the White House announced two new initiatives within federal agencies. The first is a new Water Finance Center within the Environmental Protection Agency that will use federal grants to stimulate private investment in state and local water infrastructure construction. The second is a new Rural Opportunity Investment Initiative within the Department of Agriculture that will strive to increase private investment in rural infrastructure projects such as water and waste water systems, energy efficiency improvements and broadband networks. The White House also announced that it will seek Congressional approval of a new Qualified Public Infrastructure Bond (QPIB), which would be similar to PABs, but would expand use of the funds to projects like airports, solid waste disposal, and sewer and water projects.

Given the support for P3 at the highest levels of the US federal government, it appears that P3 is here to stay for the foreseeable future. The current trend of moving away from transferring all revenue risk to the private sector is encouraging and the projects awarded based on availability payments are successful so far. On the other hand, P3 projects are generally large, costly and complex. They must jump over significant financial and political hurdles to get to the loan closing date and substantial completion.

For all those who champion P3 as the solution for financing greatly needed projects, there seems to be an equal number of opponents who swear that P3 is all about giving control and money to private companies that should stay purely in the public domain. The political debate will continue, but if more P3 projects begin to succeed due to incorporating the lessons learned from previous P3 failures, then the critics may have less to say.

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