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Annual Privatization Report 2015

Surface Transportation

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A. Global Overview

Long-term public-private partnerships (PPPs) for highways are a global phenomenon. PPPs began in a major way in France and Spain in the 1960s and 1970s, building on the experience of Italy with its then state-owned toll concession companies. In all three countries, their counterparts of the U.S. Interstate highway system were developed under long-term toll concession agreements. That model was adapted by the Australian state New South Wales in the 1980s, and subsequently by Victoria and Queensland, to develop modern tolled urban expressway systems in Sydney, Melbourne and Brisbane, respectively. The model spread to Latin America in the 1990s, with significant projects in Argentina, Brazil, Chile, Colombia, Mexico and Peru—mostly inter-city toll roads, but also major urban tolled expressways in Santiago, Chile. That decade also saw toll concession projects in China, India and a number of Southeast Asian countries. Most recently, such projects have begun to appear in Africa and the Middle East.

According to an international database maintained by *Public Works Financing*, Europe leads in both the total number of highway and transit PPP projects and the total number of projects financed, with Asia and Australia close behind in numbers but not in invested dollars. Latin America and the Caribbean also have far more projects and investment than the United States thus far. And although the United States has nearly 10 times the population of Canada, it has less than twice as much investment in highway PPPs.

Global PPP deals continued at a strong pace during 2014. *Public Works Financing*'s October 2014 issue listed the world's nine largest surface transportation concessions of 2014, as summarized in Table 1.

Table 1: Nine Largest Global Highway & Transit PPP Concessions in 2014

Project	Location	Country	Value ($B)	Type	Duration	Concessionaire
East-West Link	Melbourne	Australia	$5.60	DBFOM-AP*	30 years	QIC/John Laing
Metro Orange Line 6	Sao Paulo	Brazil	$5.10	DBFOM-AP	25 years	Odebrecht/others
East Coast Main Line	England's east coast	United Kingdom	$3.20	DBFM-AP	30 years	QIC/John Laing/Hitachi
I-4 Ultimate	Orlando	USA	$2.30	DBFOM-AP*	40 years	Skanska/John Laing
NW Rail Link	Sydney	Australia	$1.60	DBFOM-AP	15 years	MTR Corp./Leighton Holdings/others
Goethals Bridge	New York/ New Jersey	USA	$1.50	DBFM-AP*	40 years	Macquarie/Kiewit
Mersey Gateway Bridge	Halton	United Kingdom	$0.95	DBFOM-AP*	30 years	Macquarie/BBGI/ FCC
Light Rail Transit	Waterloo, Ontario	Canada	$0.82	DBFOM-AP	10 years + 2 10-yr options	Plenary/Meridiam

Source: *Public Works Financing*, October 2014

*Indicates government tolling

Notes: AP = availability payment. DBFM = design-build-finance-maintain. DBFOM = design-build-finance-operate-maintain.

Several points are apparent from this table. All nine projects depart from the long-standing model of *toll* concessions, in which the concession company takes on traffic and revenue risk. All are instead funded by annual *availability payments*, made by the transportation agency (out of its existing transportation revenues) based on the projects meeting all their performance requirements. (If not, the amount of that year's availability payment is somewhat less.) Financing a project based on customer revenues is obviously not feasible for passenger rail/transit projects, since the fare revenue generally does not even cover operating and maintenance costs.

For the two U.S. projects in the table, the I-4 project in Orlando involves reconstructing the six existing lanes of this congested freeway plus the addition of four express toll lanes. Since the toll revenue is unlikely to cover the entire $2.3 billion cost of the project, the Florida Department of Transportation is handling the tolling of the new lanes and is thereby taking on the traffic and revenue risk that would be borne by the concession company in a more-typical toll concession. In the other U.S. project, the owner is the Port Authority of New York and New Jersey, which for policy reasons wanted to retain control of the tolling on this project to replace an obsolete toll bridge.

Latin America remains a major market for highway PPP concession projects, most of which are tolled, but few of which shift the traffic and revenue risk to the concessionaire. Brazil has the largest mileage of highway concessions, with both federal and state programs well under way. In 2014 Sao Paulo state agreed to what may be its first pure toll concession, when the winning bidder for the Novo Tamois tollway, a $1.6 billion, 30-year concession, waived the offered availability payments and opted to rely solely on toll revenue, which made it the least-costly bidder. Colombia has rapidly expanded its program to modernize the country via its Fourth Generation program to upgrade transport infrastructure, which includes creating a network of long-distance toll roads. The first phase alone includes 10 toll concessions, such as a $414 million upgrade of an existing 32 km two-lane road linking Cali to Mulalo, won by ACS as a pure toll concession. Phase 2 will involve another large set of new toll roads. And Chile's new Socialist government led by Michele Bachelet announced a six-year $9.9 billion PPP infrastructure program that will include a number of additional long-distance toll roads, as well as two major urban projects, the $2 billion Costanera Central and the $726 million Americo Vespucio Oriente tunnel, both in Santiago.

In Europe, France continues to add new links to its national toll motorway network, all of which consists of toll concessions. The most recent of these, currently in competitive procurement, is the $1.6 billion A-45 motorway between Lyon and St. Etienne, being offered as a 55-year toll concession. Spain, meanwhile, continues working on rescue plans for a series of relatively new PPP toll roads in the Madrid area that went into bankruptcy due to the combined effects of a very severe recession and a federal court decision requiring them to pay several times more than they had originally paid for right of way for these toll roads.

Two European countries are in the process of privatizing their government-owned toll motorway systems, as France, Italy, Portugal and Spain did around the turn of the 21st century. Croatia in late 2013 released a request for bids for state-owned Croatian Motorways and Rijeka-Zagreb Motorway, hoping to raise $4.1 billion from a concession of 35 to 50 years (and use the proceeds to reduce its national debt). But the union representing motorway maintenance and toll collection workers collected half a million signatures demanding a public referendum on the proposed concession, which delayed the deadline for companies to submit bids. While that question remained undecided, bids were finally submitted in December 2014, with the government hoping to announce the winner by April 2015—if not constrained by the yet-to-be-decided referendum question. Turkey is also pursuing such a divestiture, after a false start in 2013 when a bid of $5.7 billion was rejected as too low for the assets involved, which include eight tolled motorways and two major bridges, including the famed Bosphorous Bridge. At year-end Turkey was seeking advisors for a new competition in 2015.

B. U.S. and Canada Overview

The United States is a relative latecomer to highway concessions. The first two projects appeared in the mid-1990s: the 91 Express Lanes in Orange County, California and the Dulles Greenway in northern Virginia. Two other greenfield (i.e., brand new) toll roads were developed under nonprofit corporation approaches (one in South Carolina and another in Virginia), but both failed due to insufficient traffic. The toll concession trend revived in the 2000s, with the long-term leases of the Chicago Skyway and the Indiana Toll Road attracting global investor interest. These were followed by greenfield toll road and express toll lane concessions in Florida, Texas and Virginia, with Colorado and Indiana joining the trend more recently. In 2014 Pennsylvania added bridge replacements as another category of long-term highway concessions.

Table 2 lists the 30 largest U.S. and Canadian PPP highway and bridge concession projects financed to date, whether by a long-term lease of an existing (brownfield) toll road, a long-term greenfield concession (DBFOM) with compensation either via tolls (toll) or availability payments (AP), or as design/build/operate/maintain concessions (DBOM).

Two major U.S. projects reached financial close in 2014. The largest of these was the I-4 Ultimate project in Orlando, which is reconstructing 21 miles of I-4 through Orlando and adding four express toll lanes in the median, a $2.3 billion project. The other was the SH 183 project in the Dallas/Fort Worth area, at $850 million.

Table 2: 30 Largest Long-Term Highway Concessions in North America

Project	Location	Value ($B)	Type	Begun	Concessionaire
Indiana Toll Road	Indiana	$3.85	75-year lease-Toll	2006	Cintra/Macquarie
407 ETR	Toronto	$3.60	99-year lease-Toll	1999	Cintra/SNC Lavalin
LBJ Express Lanes	Dallas	$2.80	DBFOM-Toll	2010	Cintra/Meridiam
I-4 Ultimate Managed Lanes	Orlando	$2.32	DBFOM-AP*	2014	Skanska/Lane/Granite
Midtown Tunnel	Norfolk	$2.10	DBFOM-Toll	2012	Skanska/Macquarie
N. Tarrant Express, Ph. 1	Fort Worth	$2.05	DBFOM-Toll	2009	Cintra/Meridiam
I-495 Express Lanes	N. Virginia	$1.99	DBFOM-Toll	2008	Transurban/Fluor
Chicago Skyway	Chicago	$1.83	99-year lease-Toll	2005	Cintra/Macquarie
I-595 Express Lanes	Fort Lauderdale	$1.81	DBFOM-AP*	2009	ACS Infra
Henday Drive NE	Alberta	$1.80	DBFOM-AP	2012	Hochtief/ACS/Meridiam
Goethals Bridge	New York/ New Jersey	$1.50	DBFM-AP*	2013	Macquarie/Kiewit
A-30	Montreal	$1.43	DBFOM-AP*	2008	Acciona/Iridium
N. Tarrant Express Ph. 2	Fort Worth	$1.40	DBFOM-Toll	2013	Cintra/Meridiam
SH 130, Segments 5-6	Austin	$1.36	DBFOM-Toll	2008	Cintra/Zachry
Windsor-Essex Parkway	Ontario	$1.35	DBFOM-AP	2010	ACS/Acciona/Fluor
Henday Drive, NW	Alberta	$1.34	DBFOM-AP	2008	Bilfinger Berger
East End Crossing	Louisville	$1.18	DBFOM-AP*	2013	Walsh/Bilfinger/Vinci
PR 22, PR 5	Puerto Rico	$1.08	40-year lease-Toll	2011	Abertis/GIP II
Grand Parkway F1-2	Houston	$1.01	DBOM*	2013	Zachry/Odebrecht
407 ETR East, Ph. 1	Ontario	$1.00	DBFM-AP*	2012	Cintra/SNC Lavalin
I-95 Express Lanes	N. Virginia	$0.94	DBFOM-Toll	2012	Transurban/Fluor
Port of Miami Tunnel	Miami	$0.91	DBFOM-AP	2009	Meridiam
SH 183	Austin	$0.85	DBF+OM	2014	Kiewit
I-35E Managed Lanes	Dallas	$0.84	DBM*	2012	Archer Western
Golden Ears Bridge	Vancouver	$0.81	DBFOM-AP*	2006	Bilfinger BOT
South Bay Expressway	San Diego	$0.77	DBFOM-Toll	2003	Macquarie
S.E. Stoney Trail	Alberta	$0.76	DBFOM-AP	2010	SNC Lavalin/Acciona
Confederation Bridge	Prince Edward Island	$0.73	DBOM*	1993	Vinci/BPC Marine
S. Fraser Perimeter Road	Vancouver	$0.70	DBFOM-AP	2010	ACS/Ledcor
Pocahontas Parkway	Richmond	$0.61	99-year lease-Toll	2006	Transurban

Source: "U.S. & Canadian Transportation Projects Scorecard," *Public Works Financing*, October 2014.

*Includes government tolling

C. Federal Policy on PPP Concessions

Both Congress and the U.S. Department of Transportation (USDOT) are strongly supportive of PPP concessions. The House Transportation & Infrastructure Committee created a bipartisan panel on the potential of PPPs for transportation infrastructure. It released a very positive 55-page report in September 2014 titled, "Public-Private Partnerships: Balancing the Needs of the Public and Private Sectors to Finance the Nation's Infrastructure." While not finding PPPs to be a panacea, the report made a strong case for their applicability to a wide array of transportation infrastructure, including highways and bridges, both to rebuild and modernize aging facilities and to create new ones. The bipartisan report was signed by all the special panel's members.

The Office of Innovative Program Delivery at the Federal Highway Administration was created during the George W. Bush administration and has been expanded by the Obama administration. During 2013 and 2014 it has been developing an ambitious PPP Toolkit, which now includes fact sheets, primers, guides and analytical tools. As requested by Congress in the MAP-21 legislation, in 2014 it developed a model toll concessions contract, and in 2015 the office will develop a similar model contract for availability payment concessions. It also offers materials explaining two key federal tools to assist with PPP concession financing: tax-exempt Private Activity Bonds and the TIFIA credit-support program.

Private Activity Bonds were authorized by Congress in the SAFETEA-LU surface transportation reauthorization legislation of 2005. The idea is to create a level financing playing field between government surface transportation infrastructure projects and comparable projects done as PPP concessions. For such projects, the public sector typically issues bonds that carry a low interest rate because interest on them is exempt from federal income tax, while projects carried out by private-sector firms must issue ordinary corporate bonds, which carry a higher interest rate because that interest income is taxable to bond buyers. To remove this disparity in debt-service costs, Congress authorized up to $15 billion worth of Private Activity Bonds for PPP highway, transit and intermodal facility projects, which must be approved by the USDOT's credit council, a group of senior officials. Once approved, the bonds must be issued by a state or local government entity on behalf of the PPP concession-holder. Because these are project-finance bonds, the concessionaire, not the government, is responsible for debt-service payments.

As of December 2014, PABs totaling $4.83 billion had been issued as part of the financing for 10 highway projects, one transit project, and two intermodal center projects. Another $5.36 billion has been allocated, but not yet issued, for five more highway/bridge projects, one transit project, and one intermodal project.

The TIFIA program was created by Congress in the TEA-21 reauthorization bill in 1998. It offers several forms of credit support to PPP surface transportation projects, including highway/bridge and transit projects. Most applicants seek low-interest TIFIA loans, rather than its other forms of credit support. These loans are intended as subordinated debt; accordingly the program requires projects to obtain an investment-grade rating on their primary debt, to have a dedicated revenue stream, and to seek no more than 33% of the project budget as a TIFIA loan. Congress significantly expanded the size of the program in the MAP-21 legislation of 2012, and also increased the maximum size of a TIFIA loan to 49% of a project's budget. But thus far the TIFIA office has limited its loans to the original 33%, in order to emphasize TIFIA's role as subordinated debt and to make its annual allocation of loan money support as many projects as possible.

Table 3 summarizes the financing of key highway and transit PPP projects that have received financing assistance via PABs, TIFIA, or both.

Table 3: PPP Project Finance Using PABs and/or TIFIA

Project	Public Financing		Project Financing			Total $M	Year Financed
	State/ Local $M	TIFIA $M	PABs $M	Bank Debt $M	Equity $M		
South Bay Expressway	$0	$140	$0	$400	$160	$700	2003
I-495 Express	$409	$589	$589	$0	$350	$1,937	2008
SH 130, 5/6	$0	$430	$0	$686	$210	$1,326	2008
I-595	$0	$603	$0	$781	$208	$1,592	2009
Port Miami Tunnel*	$100	$341	$0	$342	$80	$863	2009
N. Tarrant Express	$573	$650	$400	$0	$426	$2,049	2009
LBJ Express	$490	$850	$615	$0	$672	2,627	2011
Denver Eagle Rail*	$1,312	$280	$396	$0	$54	$2,042	2010
Midtown Tunnel	$731	$422	$675	$0	$272	$2,100	2012
Presidio Parkway*	$0	$150	$0	$167	$45	$362	2012
I-95 Express (VA)	$83	$300	$253	$0	$280	$916	2012
East End Bridge*	$392	$0	$677	$0	$82	$1,151	2013
N. Tarrant Express Ph.2	$0	$531	$274	$0	$430	$1,235	2013
Goethals Bridge*	$456	$474	$457	$0	$113	$1,500	2013
US 36, CO	$76	$60	$20	$0	$41	$208	2014
I-69, IN*	$80	$0	$244	$0	$40	$370	2014
I-4 Ultimate*	$861	$949	$0	$486	$104	$2,300	2014
TOTALS	$5,563	$6,769	$4,600	$2,862	$3,594	$23,388	

Source: *Public Works Financing*, September 2014.

*Denotes availability payment concessions

Reviewing the numbers in the table shows that for an initial government outlay of $5.56 billion, these agreements enabled $23.4 billion worth of new infrastructure—more than four times the direct outlay. This long-term financing means these projects are developed and put into service several decades sooner than if they had been procured solely out of annual capital budgets, the traditional practice. For the 10 projects that are toll concessions, the concession company is responsible for generating enough revenue to service the debts and (they hope) to earn a reasonable return on the equity they have invested in the project.

For the availability payment concessions, the state or local government in question has taken on a long-term liability to make annual payments for the life of the concession agreement. For the AP projects that include government-collected tolls, the toll revenue stream will cover some (and in some cases possibly all) of the availability payments, but often the AP model is selected because the bond markets judge the project to have insufficiently robust traffic and revenue projections to be financeable on the basis of the toll revenue stream. Note also that investors in toll concessions put in considerably more equity than investors in AP concessions, which somewhat reduces the amount of debt needed to finance the project.

D. State Policies on PPP Concessions

The National Conference of State Legislatures counts 37 states and Puerto Rico with some form of transportation PPP-enabling legislation. No new enabling acts were passed in 2014; the measure passed by both houses of the legislature in Kentucky was vetoed by the governor because it did not include tolling authority. A revised version, including tolling, passed the House in March 2015.

As discussion in the next section will make clear, nearly all the PPP projects being implemented thus far are in a small minority of those 37 states. Some enabling measures are highly restricted, such as allowing only one or a handful of pilot projects or lacking tolling authority. Others include provisions that create serious political risk, such as requiring a painstakingly negotiated concession agreement to go before the legislature for a vote. The possibility of such a legislative veto—after teams have spent large sums preparing competitive proposals and the winner and the department of transportation (DOT) have spent six months and many millions of dollars negotiating the detailed concession agreement—creates very large political risk, discouraging teams from submitting proposals.

At the Transportation Research Board's 2015 Annual Meeting, a researcher from the Eno Transportation Center summarized an ongoing Eno research project that is evaluating the provisions of state PPP-enabling measures in terms of which provisions facilitate or discourage investment.

Colorado DOT's High Performance Transportation Enterprise encountered significant local opposition to its first toll concession, for Phase 2 of the US 36 express toll lanes. Upset that the deal went through despite their protests, opponents lobbied state legislators for reforms to the PPP process that would have made Colorado unattractive to PPP investors and developers. When a bill including some of these restrictions passed both houses, it was vetoed by Gov. John Hickenlooper after 50 infrastructure companies and organizations pointed out its negative effects. But because the bill did include worthwhile transparency provisions, the governor issued an executive order adding such requirements to the PPP procurement process.

Virginia's new governor and transportation secretary developed new guidelines for administering that state's widely emulated Public Private Transportation Act (PPTA), releasing a draft in July 2014 for public comments. The changes were aimed at increasing transparency and strengthening the competitive process for PPP transportation projects. Industry reaction to the draft PPTA guidelines was generally positive.

The changes came about in response to problems with two PPP projects started under the previous administration. The Midtown Tunnel project in the Hampton Roads area generated considerable backlash over the concession agreement authorizing tolls not only on the new tunnel but on the two existing (formerly tolled) tunnels, all of which are close substitutes. The state ended up putting more state money into the project in order to reduce the level of tolls during the construction phase, and the Virginia Supreme Court unanimously upheld the constitutionality of tolling as a user fee, not a tax, in 2013. The other problem was a concession for a new toll road parallel to US 460, estimated to cost $1.4 billion. It was clearly not toll-feasible, but was awarded as a toll concession nevertheless (Virginia does not permit availability payment concessions). The new administration of Gov. Terry McAuliffe suspended the contract in March 2014, pending environmental clearance, and if the project is developed at all, it may be done as a simple design-build (DB) project, or as an upgrade of the existing US 460.

Ironically, Virginia is one of a handful of states that has created a formal PPP unit to administer PPP transportation projects. Such units make sense, because long-term concessions are a significant departure from traditional procurement methods, such as design-bid-build (winner selected solely on price) and design-build (winner selected based on best value). Devising sound and transparent competition procedures for PPP projects—including a pre-qualification phase in order to limit the eventual candidate firms to teams with documented experience with these kinds of large, complex projects—requires considerable legal and financial advice and expertise. Virginia's PPP unit is the Office of Transportation Public-Private Partnerships. Colorado's is the above-mentioned High Performance Transportation Enterprise (HPTE) unit within its state DOT, and Puerto Rico has its Public-Private Partnerships Authority.

The growing bipartisan support for transportation PPPs is indicated not only by strong support from the Obama DOT but also by substantive reports from the Brookings Institution. The Brookings Project on State and Metropolitan Innovation in December 2011 released a comprehensive report—"Moving Forward on Public Private Partnerships: U.S. and International Experience with PPP Units," by Emilia Istrate and Robert Puentes—urging states to create "dedicated PPP units" and to enact workable PPP-enabling legislation. The think tank followed up in 2014 with a report on guidelines for successfully implementing PPP concessions, titled "Private Capital, Public Good: Drivers of Successful Infrastructure Public-Private Partnerships," by Patrick Sabol and Robert Puentes.

E. Major PPP Highway Projects, by State

Alaska: After several false starts in recent years, the $900 million Knik Arm Crossing, a new toll bridge between Anchorage and its fastest-growing borough, seems likely to finally move forward in 2015. Previous plans for a toll concession and later for an availability payment concession were both dropped. The current plan is to build the project on a design-build (DB) or design-build-maintain (DBM) basis, using a TIFIA loan to help finance the project.

Arizona: Broad PPP-enabling legislation was enacted in 2009 and fine-tuned in 2012, but the state still has not used it for any concession projects. In early 2014 the Arizona Department of Transportation (ADOT) received an unsolicited proposal from a Kiewit/Sundt/Parsons consortium to design, build, finance operate and maintain the long-planned South Mountain Freeway (Loop 202) as an availability payment concession. ADOT's value-for-money analysis argued against taking on the long-term liability, opting instead for a DBM procurement. It received statements of qualification from five consortia in December. There is no apparent forward movement for possible toll highway projects, such as managed lanes in Phoenix/Maricopa County, a new Interstate 11 between Phoenix and Las Vegas, and a widened SR 189 in Nogales, serving trucks crossing from Mexico.

California: The Los Angeles County Metropolitan Transportation Authority dropped one of five proposed PPP projects due to an ongoing dispute with Caltrans over who should pay for maintenance of HOT lanes developed on state highways. Still in prospect are the I-710 freight corridor including truck-only lanes from the port to downtown Los Angeles, the I-710 north gap closure deep-bore tunnel, an ambitious road/rail tunnel under Sepulveda Pass to relieve congested I-405, and the High Desert Corridor in northern L.A. County. Further north, Monterey County has hired Ernst & Young as its financial advisor for a proposed $268 million toll road (SR 156) linking SR 1 to US 101. California's PPP-enabling law sunsets in January 2017.

Colorado: This state's first toll concession reached financial close in February 2014, and construction is under way on Phase 2 of the US 36 managed lanes project between Denver and Boulder. Winning bidder Plenary has a 50-year toll concession that includes operating and maintaining both phases of the US 36 managed lanes, as well as the HOT lanes on I-25. The Colorado Department of Transportation's (CDOT) PPP unit decided against a PPP for planned express toll lanes on the C-470 beltway, recommending DB procurement instead. CDOT's second concession project will be the $1.8 billion reconstruction of I-70 East between downtown Denver and its airport, which will include replacing an elevated section with new regular and express toll lanes below grade. The project will likely include an extension of the I-25 HOT lanes northward. It is contemplated as an availability payment concession. CDOT is still reviewing an unsolicited proposal from Parsons Corp. to add reversible express toll lanes to the I-70 mountain corridor west of Denver.

Florida: Two major availability payment concession projects opened to traffic in South Florida in 2014: the $900 million Port of Miami Tunnel and the reconstruction and modernization of I-595 in the Ft. Lauderdale area. The latter is a $1.8 billion project by ACS Infrastructure that included the addition of three reversible express toll lanes in the median. Both projects received TIFIA loans. In September the Florida Department of Transportation (FDOT) reached financial close on its $2.3 billion I-4 Ultimate project in Orlando. Winning team Skanska/John Laing received a 40-year availability payment concession, to be partly funded via toll revenues from the four express toll lanes that will be added to the 21 miles of rebuilt I-4 through downtown Orlando. FDOT is also moving forward with the first phase of a new tolled ring road for Jacksonville, the First Coast Outer Beltway. The first 15-mile segment of this project, costing $400 million, is under way as a conventional procurement, upgrading an existing state highway. The subsequent 31-mile St. Johns River Crossing portion will be developed as a concession.

Georgia: This state has tried several times to procure projects under its PPP law, but each try has ended in failure. The most recent attempt—for the Northwest corridor project to add express toll lanes to I-75 and I-575 outside the Atlanta beltway—was halted in mid-procurement by Gov. Nathan Deal. That project is now proceeding as a DB project with the contractor providing some short-term gap financing.

Indiana: Indiana and Illinois are operating under a bi-state Memorandum of Understanding to develop the Illiana Expressway, a 47-mile, $1.3 billion project from I-65 in Indiana to I-55 in Illinois, to be procured on an availability-payment basis, with each state managing its portion as a separate concession. Illinois has short-listed four teams and Indiana has done likewise. FHWA approved the plan in December 2013, issuing a Record of Decision. Indiana reached financial close the following July on a $370 million concession to upgrade an existing highway to become part of I-69; the 35-year design-build-finance-operate-maintain (DBFOM) availability payment concession will be carried out by a team headed by Isolux Corsan. Indiana is also partnered with Kentucky on the Ohio River Bridges project in the Louisville metro area. While Kentucky is building its portion conventionally, Indiana's portion—the $1.2 billion East End Crossing—is being done as an availability-payment concession by Walsh/Bilfinger/Vinci. Both bridges will be tolled. Finally, East Chicago's privately financed project for the $200 million Cline Avenue Bridge replacement still has not begun construction, awaiting needed permits from the Army Corps of Engineers and the Coast Guard.

Illinois: As noted above under Indiana, IDOT has partnered with Indiana DOT to procure the greenfield Illiana toll road as an availability-pay concession. Shortly after FHWA issued its Record of Decision approving the project in December 2014, new Illinois Gov. Bruce Rauner put all discretionary spending—including Illiana—on hold in January 2015 due to the state budget's financial crisis.

Kentucky: The much-needed replacement of the aging Brent Spence Bridge across the Ohio River, between Covington, Kentucky and Cincinnati, Ohio, is estimated to cost $2.5 billion, and both the Kentucky and Ohio DOTs agree that tolls are the only realistic funding sources for the project—and that a PPP procurement could offer important advantages. But in 2014, the Kentucky legislature passed PPP-enabling legislation without tolling authority, leading Gov. Steve Beshear to veto the bill. A Beshear-backed PPP/tolling bill passed the Kentucky House in February 2015, but at press time faced uncertain prospects in the Senate.

The bridge carries both I-75 and I-71 across the Ohio River. By contrast, for the $2.6 billion pair of bridges being developed across the Ohio River at Louisville, connecting Indiana and Kentucky, the Louisville & Southern Indiana Bridges Authority has tolling authority, and is under way with a competitive procurement for the toll systems provider for both the Downtown Bridge (Kentucky's responsibility) and the East End Bridge (Indiana's responsibility). But since Kentucky lacks PPP legislation, the Downtown Bridge, currently under construction, has been procured conventionally.

Louisiana: The state DOT has accepted and will review an unsolicited proposal from AECOM for a 23-mile tolled bypass around Baton Rouge, estimated to cost between $700 million and $1 billion.

Maine: The $2 billion, 220-mile, east-west toll road across the state proposed several years ago by Cianbro Co. would link the underutilized coastal port of Eastport to Cobun Gore on the Quebec border, offering a shorter route between Quebec and New Brunswick. The plan would be entirely privately financed and would proceed using existing (mostly private) roads that would be acquired for this purpose. In May 2013 the legislature rescinded a previous agreement to pay for the needed feasibility study, but the project remains alive, according to both Cianbro and 2014 NIMBY protestors.

Maryland: Maryland officials so far have used their PPP-enabling legislation for a major rail transit project, the $2.4 billion Purple Line, whose future is in question because new Gov. Larry Hogan campaigned against it. Officials in Montgomery County, Maryland, just across the Potomac River from Virginia, have discussed extending the I-495 Beltway express toll lanes across the American Legion Bridge, onto their portion of the Beltway. And the Maryland State Highway Administration is studying possible express toll lanes extending northward from the Beltway up I-270 toward Frederick. Either or both could be carried out as PPP concessions.

Massachusetts: To make use of its relatively recent PPP law, the Bay State has identified two possible projects: adding express toll lanes to Rt. 3 south of Boston and adding a third bridge over the Cape Cod canal. Massachusetts DOT held an industry day in October 2014 to brief interested firms on the projects, and 95 such firms were represented. Advisors have already been hired, and the state hopes to issue a request for information (RFI) in first quarter 2015.

Michigan: The long-stalled Detroit River International Crossing (DRIC) to supplement (and compete with) the privately owned Ambassador Bridge linking Detroit with Windsor, Ontario seems to have received the necessary Canadian government support to proceed in 2015. The Windsor-Detroit Bridge Authority is expected to release a Request for Qualifications by mid-2015. The agency plans a DBFOM procurement for the $2 billion toll bridge, which will connect to I-75 in Detroit and Highway 401 in Windsor.

Missouri: This state lacks both PPP legislation and tolling authority, but Gov. Jay Nixon is pursuing an ambitious plan to have I-70, a major truck route that is 56 years old, reconstructed with dedicated truck lanes. A federally funded "Corridors of the Future" study found this to be the preferred alternative for the aging Interstate, and Missouri holds one of three slots in a federal pilot program that allows each state in the program to use toll finance to reconstruct and improve a single Interstate highway. The federal study encompassed four I-70 states, with Illinois, Indiana and Ohio taking part in addition to Missouri. The other three have both PPP and tolling legislation.

Nevada: In August 2014, Nevada DOT decided not to pursue its Project Neon, a $1.5 billion project to add capacity to congested I-15, a DBFOM concession, opting instead for a DB procurement.

New York: Three major toll bridge replacement projects are under way in the New York/New Jersey metro area. The $3.9 billion replacement of the aging Tappan Zee Bridge across the Hudson River is under construction by the winning Fluor-led team. Because the New York State Thruway Authority lacks PPP authority, the procurement is via a DB contract. The state received a $1.6 billion TIFIA loan for the project late in 2013. A toll schedule for the replacement bridge has not yet been announced. The other two projects are being carried out by the Port Authority of New York & New Jersey, which has PPP authority. The $1.5 billion Goethals Bridge replacement project is being procured as an availability payment concession; it received a $474 million TIFIA loan in November 2013 and reached financial close shortly thereafter with its Macquarie/Kiewit team. The Bayonne Bridge is being revamped via a $1.3 billion conventional procurement project to raise the existing bridge deck to provide a 215-foot clearance for ships, rather than the 151-foot clearance of the current deck.

North Carolina: The state selected a Cintra-led consortium as its preferred bidder to finance, develop and operate 26 miles of express toll lanes on I-77 in Charlotte, and reached commercial close with the firm in June 2014. The $650 million project is being procured as a 50-year DBFOM toll concession. Financial close, expected in March 2015, was delayed by a lawsuit, now dismissed. Financing will include Private Activity Bonds and a TIFIA loan.

Ohio: This state's first PPP concession will be the $850 million Portsmouth Bypass, linking US 23 with US 52 via a new 16-mile highway. The concession will be a 30-year DBFOM financed via availability payments. ACS/Infrared was selected as the preferred bidder in September 2014. Ohio DOT is using a DBF approach for the new Inner Belt Bridge in Cleveland, a river crossing on I-90. The westbound replacement bridge is under construction as a conventional procurement. The $330 million eastbound span, which the state could not afford to do at the same time as the westbound one, will be accelerated thanks to the DBF contractor providing six years of gap financing. Ohio DOT is also partnering with Kentucky DOT for the $2.4 billion Brent Spence Bridge over the Ohio River at Cincinnati.

Pennsylvania: Various toll concession projects were proposed in this state during the years it took to enact PPP-enabling legislation, but none was seen as the driving force for the 2012 enactment. The first procurement under the new law took place in October 2014 when PennDOT selected a team headed by Plenary Group for an $899 million project to replace 558 deficient bridges statewide and to then maintain them for 25 years. The availability payment concession will be largely financed via $772 million worth of Private Activity Bonds.

Puerto Rico: One of the first improvements concession company Abertis made to the PR-22 toll road that it had leased in 2011 was the addition of six miles of variably priced express toll lanes in the median, west of San Juan. The two reversible lanes opened to traffic in August 2013. Buses use the lanes at no charge; other vehicles pay a variable toll. Abertis is discussing an extension of the lanes farther to the west with the government. This project is the first time variably tolled express lanes have been added to an existing toll road.

Texas: In the Dallas/Ft. Worth metro area, the first four miles of the Cintra/Meridiam express toll lanes project on the LBJ Freeway (I-635) opened in December 2013, and a second section opened in July 2014. The same concession team opened the $2.1 billion North Tarrant Express toll lanes project in Fort Worth in October, nine months ahead of the original schedule. The team has won another concession, to extend NTE 35W another 10 miles to downtown Fort Worth. For the $850 million managed lanes project on the SH 183 Airport Freeway, the Texas Department of Transportation (TxDOT) is using a DBF contract with a 25-year operating and maintenance contract; that project reached financial close in July. For the $1.1 billion project to add managed lanes to I-35E in Dallas, TxDOT opted against a concession and is procuring the project as a DB project. The agency has selected a team led by ACS Infrastructure Development a 52-year, $2.1 billion toll concession for express toll lanes on 10 miles of SH 288 in Houston, and a TIFIA loan request is pending. And TxDOT selected a winning bidder for a new toll road in El Paso, Loop 375 Border Highway, under a DBM contract.

Virginia: In December 2014 the former reversible HOV lanes on I-95 south of Washington, D.C. re-opened as the 95 Express Lanes. The same Transurban/Fluor team that opened the I-495 Beltway Express Lanes two years earlier completed the conversion under a 76-year toll concession with Virginia DOT. The $940 million, 28-mile reversible facility includes three lanes instead of two north of the Prince William Parkway and a two-mile extension of the lanes south to Stafford County. Under a 58-year toll concession agreement, Skanska/Macquarie continues the construction of the $2.1 billion Elizabeth River Crossings project in the Norfolk area. Virginia DOT is also considering a project to add express toll lanes to 25 miles of I-66 outside the Capital Beltway.

West Virginia: In December 2014, this state awarded the first project under its transportation PPP law for a three-mile, $45.2 million section of the Coalfields Expressway. The project is being procured as an availability payment concession.

About the Author

Robert Poole is Director of Transportation Policy and the Searle Freedom Trust Transportation Fellow at Reason Foundation. He received his B.S. and M.S. in mechanical engineering from MIT and did graduate work in operations research at New York University. He has advised the U.S. DOT Office of the Secretary, the Federal Highway Administration, the Federal Transit Administration, and the state DOTs of a half dozen states, including California and Florida. He has also testified before House and Senate committees on transportation policy issues, as well as before a number of state legislatures. He is a member of the Transportation Research Board's standing committees on Congestion Pricing and on Managed Lanes. In 1995–96 he was a member of California's Commission on Transportation Investment. In 2008 he was a member of the Texas Study Committee on Private Participation in Toll Roads, and in 2010 he served as a member of Washington State DOT's Expert Review Panel on a proposed $1.5 billion managed lanes project on I-405. And in 2010 he was a member of the transportation policy transition team for Florida Gov.-elect Rick Scott. He received the American Road & Transportation Builders Association's 2007 Private Sector Entrepreneur of the Year award, and he received the TRB Managed Lanes Committee's 2012 Leadership Award.