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Editor
Tom Nelthorpe
Tel: (+1) 212 224 3554
E-mail: tnelthorpe@euromoney.com

News editor
Paul Smith
Tel: (+44) 20 7779 8554
E-mail: psmith@euromoney.com

Staff writer
Edward Russell
Tel: (+1) 212 224 3552
E-mail: erussell@euromoney.com

Managing editor
Sean Keating
Tel: (+44) 20 7779 8552
E-mail: skeating@euromoney.com

Marketing manager
Gill Chalk
Tel: (+44) 20 7779 8212
E-mail: gchalk@euromoney.com

Advertising manager
Natasha Mahabir
Tel: (+44) 20 7779 8859
E-mail: nmahabir@euromoney.com

Senior sales executive
Kim Kingston
Tel: (+1) 212 224 3474
E-mail: kkingston@euromoney.com

Associate publisher
David Samuel (Americas)
Tel: (+1) 212 224 3466
E-mail: dsamuel@euromoney.com

Publisher
Gary Parker
Tel: (+44) 20 7779 8848
E-mail: gparker@euromoney.com

Production manager
Steve Ashenden

Reprints/Office manager
Christine Jell
Tel: (+44) 20 7779 8743
E-mail: cjell@euromoney.com

Business group manager
Sean Brierley
Tel: (+44) 20 7779 8207
E-mail: sbrierley@euromoney.com

Divisional director
Roger Davies

Magazine subscriptions hotline
Tel: (+44) 20 7779 8999
Customer service (print products)
Tel: (+44) 20 7779 8610
Customer service (web site)
Julie Vrellaku Tel: (+44) 20 7779 8006

ProjectFinance™
Nestor House, Playhouse Yard
London EC4V 5EX
Tel: (+44) 20 7779 8888
Fax: (+44) 20 7779 8846/8400

Annual Subscriber Rates:
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Project Finance (USPS No 022-387) is a full service business website and e-news facility with supplementary printed magazines produced for \$2812 per year by Euromoney Institutional Investor PLC, and distributed in the US by Mercury Airfreight International Ltd, 365 Blair Road, Avenel, NJ 07001. Periodicals postage paid at Rahway, NJ and additional mailing offices. Postmaster: Send address corrections to: Project Finance, c/o Mercury Airfreight International Ltd, 365 Blair Road, Avenel, NJ 07001.

ISSN: 1756-7866

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Boiling point

Severe cost cutting at various levels of government across the US has resulted in painful and widely publicised cutbacks in a wide range of governmental services that had once almost been taken for granted. If, as seems increasingly likely, these budgetary constraints are structural and not merely transitory, they will force government to explore calling on private capital and expertise to develop, construct, operate and maintain transportation infrastructure in the United States.

These developments are coming to a head at a time when the volume of completed PPPs has grown to a level sufficient to create broad and growing awareness among public officials of their potential benefits.

The track record of private involvement in US transportation infrastructure projects includes the well-publicised monetisations of the Chicago Skyway Toll Bridge and the Indiana Toll Road, as well as the use of PPPs to procure numerous other significant transportation facilities, such as the Dulles Greenway, SR-91 in California, the new international air terminal (Terminal 4) at JFK International Airport, the Port of Miami Tunnel, the North Tarrant Expressway and I-635/LBJ Freeway in Texas, and Denver's FasTracks commuter and light-rail project.

These projects demonstrate, most notably, the fact that PPP procurement compels all parties to plan and budget for the full life cycle costs of maintaining and operating (and not just building) the transportation facility in question. This is a sea change from the traditional model of transportation infrastructure procurement in which the life cycle costs to be incurred years and decades into the future are neither considered nor budgeted for at the time of procurement. Aside from leaving state and local governments with a potentially significant overhang of unfunded operation and maintenance obligations, the traditional procurement model has not always focused the parties' attention on the fact that

design decisions at inception can have important effects on life cycle costs.

While the current environment creates an opportunity for PPPs to flourish in the US transportation infrastructure industry, obstacles certainly remain. Proponents of PPPs have encountered difficulty in achieving effective PPP-enabling legislation at many levels of government, as legislators attempt to balance transportation infrastructure needs with

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the concerns of their constituents. But governments must also avoid imposing terms and conditions on PPPs (whether substantive or procedural) that result in unnecessary delay or expense in the procurement process or that undermine the viability of projects by shifting risks to the private sector that it is not well equipped to bear. These dangers are particularly acute at a time when financial markets remain unsettled and lenders are reluctant to stretch to finance projects presenting unusual risks.

This article discusses the status of PPP-enabling legislation in the US at the state and federal levels and identifies some of the key transportation infrastructure PPP projects that have recently been procured or proposed in the US and their related financing structures.

PPP-enabling legislation

As a general matter, governmental entities in the United States must be authorised by statute to use PPPs to

procure transportation infrastructure projects. Recently, there have been both advances and setbacks on this front.

States

A number of states have enacted some form of PPP-enabling legislation. However, the scope and substance of state PPP-enabling statutes tends to differ significantly from state to state and, indeed, the lack of a uniform national framework has dragged on the PPP market in the US. Some states have

broad, sweeping PPP-enabling statutes that permit an array of projects, thereby facilitating the use of PPPs in those jurisdictions. Yet, other states' PPP-enabling legislation is narrowly drafted, sometimes specifically identifying permitted projects and/or requiring prospective projects to be approved by a specified officer or body of the state, thereby subjecting PPPs to greater political scrutiny and generally inhibiting their application in those jurisdictions.

Legislators in Illinois and Indiana have paved the way for procuring the estimated \$1 billion Illiana Expressway project, a 37km eight-lane expressway connecting interstate highways in Illinois and Indiana, through a PPP. In June 2010, Illinois governor Pat Quinn signed a bill authorising the state to seek a private partner to develop, finance, construct, maintain and operate the new road. Indiana governor Mitch Daniels had signed a similar bill in March.

In 2009, California enacted comprehensive PPP-enabling legislation that vastly expanded the state's PPP program for, among other things, transportation infrastructure projects, and Arizona governor Jan Brewer signed a bill authorising the state to enter into PPPs to construct, finance, operate and maintain transportation projects and to issue toll revenue bonds to finance them.

However, there have been setbacks. Most significantly, in 2007, Texas instituted a partial, two-year moratorium on

privately financed toll roads throughout the state (with exemptions for some existing projects). Although the partial moratorium expired on 1 September 2009, the Texas legislature failed to extend the PPP-enabling legislation that authorised comprehensive development agreements for transportation infrastructure projects, and the authority expired on 31 August 2009.

In May 2010, the Michigan house narrowly voted in favor of a bill to permit the Michigan Department of Transportation to enter into PPP agreements to design, construct, operate, or maintain public transportation facilities. However, the state senate has gone into recess without acting on the legislation. If the state senate had passed the bill, the \$2 billion Detroit River International Crossing project could have been procured as a PPP. A similar setback occurred in Hawaii, where a proposed bill that would have authorised

PPPs for transportation-related projects failed.

Federal – highways

US law generally restricts the tolling of roads that are constructed using federal funding, a class which includes most interstate highways in the country. As such, statutory exemptions to federal law are necessary in order to allow PPPs to charge tolls on such roads. The Safe, Accountable, Flexible,

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Debevoise & Plimpton LLP is an international law firm headquartered in New York, with approximately 700 lawyers conducting a diversified practice, including privatization and project financing of toll roads and airports, as well as power, telecommunications, petrochemical, mining, energy and other major infrastructure facilities.

Debevoise has been a leading firm in the US P3 market since its inception in the 1990's and has represented sponsors as well as lenders in connection with many of the most significant transactions attempted or closed during that period, including the highest bidder in the Pennsylvania Turnpike procurement process. Other past and current projects include JFK International Airport Terminal 4, Midway Airport in Chicago and Stewart International Airport in NY; the Carlsbad desalination plant in San Diego; the Detroit-Windsor Tunnel in Michigan; Chicago Skyway Toll Bridge; Indiana Toll Road; SH-130, SH-121 and Camino Colombia Toll Road in Texas; Dulles Greenway Toll Road in Virginia; SR-91 "express lanes" in California; Alligator Alley in Florida; and "800 Bridges" in Missouri.

NEW YORK OFFICE:

919 Third Avenue
New York, NY10022
1 212 909 6000

Robert J. Gibbons
Partner
Co-head, Project Finance Group
1 212 909 6303
email: rjgibbons@debevoise.com

Ivan E. Mattei
Partner
Co-head, Project Finance Group
1 212 909 6060
email: iemattei@debevoise.com

Michael P. McGuigan
Associate
1 212 909 6217
email: mpmcguig@debevoise.com

OTHER OFFICES:

Washington, D.C.
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Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law on 10 August 2005 and contains a number of such exemptions to federal law.

Among other features, SAFETEA-LU provides for an Express Lanes Demonstration Program, which authorises 15 express toll lane projects on congested interstates, high occupancy toll (HOT) lanes projects where existing high occupancy vehicle (HOV) lanes may charge tolls to vehicles that do not meet the passenger requirements, an Interstate Construction Toll Pilot Program, under which up to three states may impose tolls on new interstates to support the financing for their construction, and up to \$15 billion of tax-exempt private activity bonds (PABs) for PPPs in which a private partner has a long-term interest.

SAFETEA-LU was set to expire on 30 September 2009. James Oberstar, Chairman of the House Committee on Transportation and Infrastructure and an opponent of PPPs, has proposed the Surface Transportation Authorization Act of 2009, which would overhaul federal transportation programs and compromise the ability to use PPPs for highway projects in the US. The vote on the Surface Transportation Authorization Act of 2009 has been deferred until the end of 2010. In the interim, in March 2010, President Obama signed into law the \$17.6 billion HIRE Act, which contains language extending SAFETEA-LU through the end of 2010.

In addition to the various programs available under SAFETEA-LU, the Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) authorised the US Department of Transportation to assist in financing up to 33% of the cost of transportation infrastructure projects, including PPPs, with a value of at least \$50 million. The Transportation Infrastructure Finance and Innovation Act of 2009, introduced in the US House of Representatives in June 2009, could increase the maximum loan amount for certain transportation infrastructure projects from 33% to 49% of the cost of the related project.

Federal – aviation

In the airport sector, the PPP debate arises in the context of the necessary reauthorisation of the Federal Aviation Administration (FAA), including its airport privatisation pilot program. The US House of Representatives passed its version of the FAA Reauthorization Act in 2009 (FAARA), and that bill is now in the US Senate. The House bill, which was also proposed by Representative Oberstar, contains two significant changes to the airport privatisation pilot program that would adversely affect prospects for privatisation of US airports. First, the bill would increase from 65% to 75% the percentage of airlines using an airport that must approve its privatisation. Second, the privatised airport would not be entitled to some of the discretionary funds available to other airports. As the House and Senate continue to prepare an agreed-upon version of FAARA, the latest FAA authorisation has been extended until 30 September 2010.

American Recovery and Reinvestment Act of 2009

The \$787 billion American Recovery and Reinvestment Act of 2009 (ARRA), passed in February 2009, includes over \$48 billion for shovel-ready US transportation projects. While these projects are generally not suited to procurement as PPPs, the availability of such funds to state and local governments may have contributed to the recent lull in PPP activity in US transportation infrastructure.

Recent US transportation infrastructure PPP projects

California

In May 2010, the California Transportation Commission (CTC) approved the use of a PPP to procure the Presidio Parkway, a \$1.045 billion project that will refashion the south access to the Golden Gate Bridge in San Francisco.

The California Department of Transportation (Caltrans) subsequently issued a draft RFP, which indicated that Caltrans will apply for up to \$500 million in PABs and request \$309 million in TIFIA financing. This would be the first PPP project under California's new PPP-enabling legislation. In February 2010, the Los Angeles County Metropolitan Transportation Authority agreed to launch strategic studies of six PPP projects that would re-develop the area's highways and public transportation. Although California's PPP efforts encountered a slight setback in August 2010, when the California Public Infrastructure Advisory Commission determined to procure the \$1.1 billion Gerald Desmond Bridge project as a design-

build project rather than a PPP as originally anticipated, the PPP movement remains strong in California.

Colorado

In June 2010, the Denver Regional Transportation District (RTD) selected a consortium to design, build, finance, operate and maintain the \$2.1 billion PPP portion of the \$6.5 billion FasTracks commuter rail development project that includes a train to Denver International Airport. On 12 August 2010, the initial \$1.6 billion phase of the project achieved financial close with a financing package that included roughly \$400 million in PABs and \$52.3 million of sponsor equity, in addition to roughly \$1.15 billion in progress payments to be provided by the RTD.

Florida

In February 2010, ground was broken on the I-595 express lanes PPP project in Broward County, Florida. The US Department of Transportation provided \$603 million in TIFIA financing in March 2009 toward the total project cost of \$1.8 billion. The Florida Department of Transportation will use federal funds and toll revenues to make payments to the private operator under a 35-year design-build-finance-operate-maintain concession. In October, 2009, the Port of Miami Tunnel PPP project reached financial close. The financing for the project consisted of a

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\$340 million TIFIA loan, \$340 million of senior debt from a syndicate of ten banks, and \$80 million of sponsor equity. The city of Miami also provided a \$50 million letter of credit to backstop its obligations.

Georgia

Georgia passed PPP-enabling legislation in 2009 that allowed the Georgia Department of Transportation (GDOT) to establish a PPP program using solicited bids. In June 2010, GDOT short-listed three consortiums to bid on the West by Northwest project, which includes a 50-year concession to design, build, finance, operate and maintain a managed lane system on segments of I-75 and I-575, as well as the addition of managed lanes to portions of I-285 and I-20. GDOT, which has estimated the aggregate cost of the project at over \$2.3 billion, originally expected to issue the RFP in late 2010 but has extended the timeline of the RFP process to allow the short-listed bidders more time to study the draft RFP, and the RFP is now expected in January 2011. GDOT is currently considering eighteen separate projects that could be valued at over \$16 billion.

New Jersey/New York

The Port Authority of New York and New Jersey (the Port Authority) issued a request for information in May 2010 for a 30- to 40-year concession to design, build, finance and maintain a replacement to the Goethals Bridge. Operations, including toll collection, will remain under the Port Authority's control. It has been reported that the Port Authority expects to issue an RFQ in August 2010 and to select the winning bid by late 2011. It has also been reported that the Port Authority is looking to lease the Outerbridge Crossing and the Bayonne Bridge, which also connect New Jersey to Staten Island.

Puerto Rico

The Puerto Rico Public-Private Partnerships Authority (PRPPPA), which was established in 2009 to launch infrastructure PPPs, has started its first PPP process. In June 2010, the PRPPPA issued a RFQ for a 50-year concession to finance, operate and maintain the PR-22 and PR-5 toll roads, and by late July 2010, eight consortiums had responded to the RFQ. The 84km PR-22 is the most traveled highway on the island and generated \$85 million in revenues in 2009. PR-5 is located in the San Juan metropolitan area and generated \$4.2 million of revenues in 2009.

Puerto Rico also plans to seek a private partner for the financing, operating and maintenance of the existing PR-52, PR-20, PR-66 and PR-53 toll roads. While the PRPPPA has the authority to form committees that can issue RFQs and negotiate contracts for infrastructure projects, final decisions rest with the governor of the island.

Texas

The 52-year concession to design, build, finance, operate and maintain a managed lane system along I-635/LBJ Freeway

reached financial close in June 2010. The \$2.7 billion financing included \$615 million in PABs, a \$496 million loan from the Texas Department of Transportation (TxDOT), \$665 million of sponsors' equity and a \$850 million TIFIA loan – the second-largest loan in the history of the TIFIA programme. The \$2 billion North Tarrant Expressway project, which reached financial close in December 2009, was financed with a combination of PABs, a TxDOT contribution, sponsors' equity and a TIFIA loan.

Virginia

On 5 May 2010, the Virginia Department of Transportation (VDOT) solicited proposals for the 89km greenfield US Route 460 toll road project, which VDOT is procuring as a PPP under the Public-Private Transportation Act of 1995. The project is estimated to cost roughly \$1.5-2 billion and, initially, no state or federal funding was expected to be available to finance the project. However, VDOT has acknowledged a potentially significant gap in toll revenues and debt service and supplemented the solicitation for proposals with an addendum that provided for a public subsidy. Conceptual proposals are now due in early September 2010 and the detailed RFP is expected in January 2011.

Airports

After collapsing in 2009, the privatisation of Midway Airport may move forward. The FAA has granted the city of Chicago's latest request to extend its inclusion within the pilot privatisation programme, which permits the privatisation of five airports, and the city of Chicago now has until November to submit its plans and timetable for privatising the Airport. As a large hub airport, Midway occupies the sole slot available for such airports under the pilot programme.

The FAA has also accepted preliminary applications to privatise three non-hub airports, thereby allowing the airports to seek a private partner before submitting a final application to the FAA. In September 2009, the FAA accepted New Orleans's Louis Armstrong Airport's application. In December 2009, Puerto Rico's Luis Muñoz Marín Airport was selected as the third airport. Finally, in May 2010, the FAA accepted the application from Georgia's Gwinnett County Airport, leaving one last non-hub slot available. The RFQ for the Gwinnett County Airport project was issued in July 2010 and three consortiums responded; the RFP is expected in October 2010.

Conclusion

In order for PPPs to flourish, PPP-enabling legislation must be effective, workable and compatible with private sector concerns and objectives. Reliance on the private sector for transportation facilities long-provided by governmental authorities may seem a risky proposition at first. However, dire economic conditions and the escalating need for reliable transportation facilities may well allow PPPs to establish a prominent role in the development of transportation infrastructure facilities in the US. ■

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Making the case for PPP in Canada has become much easier now that a track record of projects exists. By Morty Gross, Robert Shouldice, and Heather Douglas, partners, Borden Ladner Gervais LLP.

Spreading out

Canada is a top international market for P3s. Across the country, all levels of government are looking to P3s as a viable and attractive method to renew or build new public infrastructure. In January 2010, the Conference Board of Canada released a report entitled “*Dispelling the Myths: A Pan-Canadian Assessment of Public-Private Partnerships for Infrastructure Investments.*”

Noting that “public-private partnerships (PPPs) have become an increasingly important procurement vehicle for Canadian governments seeking to build new or to upgrade infrastructure assets,” the report also highlights the wide range of PPP projects, “from hospitals, bridges, and highways through to courthouses, wastewater facilities, and concert halls.” In assessing the impact of the PPP model in Canada, the Conference Board, in the report, estimates that PPP projects now account for 10-20% of total infrastructure spending.

The Conference Board’s assessment of the second wave of PPP projects in Canada indicates that most Canadian PPP projects are being delivered on or ahead of schedule, and are providing cost certainty to the public sector, in that governments have not been compelled to channel additional funds midway through a project. The Conference Board does not however suggest that all projects are suitable for PPP procurement.

While many Canadian provinces have established PPP agencies, there is no unanimity across the country in terms of the acceptance and endorsement of the PPP model, as is indicated by the June 2010 report of the Auditor General of Quebec, which was negative in its assessment of the merits of recent PPP projects. Notwithstanding the Auditor General’s report, in July 2010 the McGill Health Centre in Montreal, a C\$1.57 billion (\$1.51 billion) project that involved the design, financing and construction of a four-building hospital – the largest hospital PPP project ever in Canada – reached financial close. The financing for the project involved a C\$764 million 34-year amortising bond issue.

Robust PPP market

Projects reached financial close in Canada’s PPP market during the height of the recent economic global downturn, though at a much slower rate.

In 2010, the PPP market is robust. This is due to a number of factors: the inherent strength in the Canadian economy, the stability of the country’s political and banking systems, the increasing public acceptance of PPPs, and a greater store of Canadian PPP expertise and experience. On

a practical level, this translates into a continuous stream of PPP projects reaching financial close in several provinces, most particularly in Ontario, with other jurisdictions stepping up to the plate.

During the first half of 2010, a number of PPP projects reached financial close, including the aforementioned McGill Health Centre; the redevelopment of Women’s College Hospital in Toronto; the Ontario Highway Service Centres project; Calgary’s Stoney Trail Highway project, the largest single highway project in Alberta’s history; the new BC Cancer Agency Centre for the North in British Columbia, and the new research centre of the Centre Hospitalaire de l’Universite de Montreal.

Federal government commitment

As recently as 30 June 2010, the federal Crown corporation PPP Canada, as part of its C\$1.2 billion P3 Canada Fund, which is designed to encourage the use of PPP procurement in delivering public infrastructure projects, closed Round Two of a call for provincial, territorial, municipal and First Nations PPP projects.

While PPP Canada’s mandate is “to develop the Canadian market for public-private partnerships for the supply of public infrastructure in the public interest,” in addition to managing the P3 Canada Fund, the corporation is undertaking a number of other initiatives. These include the screening of projects seeking funding from other federal infrastructure programmes for PPP opportunities; establishing a federal centre of expertise for PPPs; and advising and assessing federal projects and programmes to increase the application of PPPs at the federal level.

Canadian Finance Minister Jim Flaherty set the tone for the federal government’s support of P3 projects when he said, “Canada aspires to be a leader in public-private partnerships.” He also stated that innovative tools and approaches for infrastructure financing and delivery are vital for Canada’s competitiveness. Developing Canada’s P3 market through the P3 Canada Fund will help build and maintain the infrastructure Canadians need.

Large Canadian infrastructure deficit

There is a definite, and growing, infrastructure deficit in Canada. According to Saeed Mirza, professor emeritus of civil engineering and applied mechanics at McGill University in Montreal, “Canada’s infrastructure is in a very dire state.” Mirza is the author of several reports on the infrastructure deficit in Canada, including “*Danger Ahead: The Coming Collapse of Canada’s Municipal Infrastructure*” (2007).

In a 2009 published interview for *The Record*, a publication of the Canadian Council for Public-Private Partnerships, Mirza made the observation that 60% of all Canadian municipal assets are over 55 years old. About 30% of the entire infrastructure in Canada is more than 85 years old and the life expectancy of a little more than 80% of Canadian infrastructure has been exhausted.

According to Mirza, to upgrade the existing deteriorated municipal infrastructure to an acceptable level would cost C\$123 billion. In addition, he estimates that constructing new infrastructure to fulfill the new and changing needs of communities would cost roughly C\$115 billion. By extrapolating the municipal infrastructure deficit to the upgrading and new infrastructure needs of the provincial/territorial and federal governments, Mirza has concluded that the total infrastructure deficit in Canada could easily be between C\$350 billion and C\$400 billion.

Specialised agencies

PPP Canada has discussed with all provinces and territories applying PPP approaches to meeting public infrastructure needs. As referenced by PPP Canada in its “*Summary of Corporate Plan 2009-2010*”, to date “Canada’s PPP market has largely been driven by the provinces, territories and municipalities, who have recognized viable opportunities to implement public-private partnership solutions.”

As the Summary notes, “British Columbia, Ontario and Quebec have created provincial Crown corporations to manage and promote PPPs provincially, while Alberta has embedded a PPP function within its Treasury Board. Other provinces such as Saskatchewan, Nova Scotia and New Brunswick have created special offices to advise on PPP projects, and even provinces with less formal institutional PPP structures have undertaken select public-private partnership projects.”

At present, the most active PPP jurisdiction in Canada is the province of Ontario, which calls PPP “alternative financing and procurement” (AFP). Infrastructure Ontario, the Ontario Crown corporation which manages the implementation of AFP projects, brought a number of AFP projects to financial close during the credit crisis. Coming out of the credit crisis, it has a large pipeline of projects.

In British Columbia, BC Hydro may be considering adopting the PPP model, working with Partnerships BC on major dam expansion and rehabilitation projects.

Municipal opportunities

In tandem with the Canadian government’s increasing support of the PPP model, there is a growing acceptance among the Canadian population that infrastructure spending should be a priority.

A January 2010 survey from the Federation of Canadian Municipalities (FCM) entitled “*Cities, Communities and the Federal Budget Deficit*” indicates that a resounding percentage of Canadians (96%) want the federal government to maintain or increase funding for local infrastructure in the next five years.

According to the federation’s survey, 69% (second only to health care’s 75%) regard infrastructure as the most important priority for continued spending even as the government deals with its deficit and 83% believe that the country’s prosperity is at risk if the government fails to improve and

upgrade its infrastructure. The survey indicates that while Canadians believe that the federal budget should be managed over time, they believe that infrastructure is a spending priority worthy of immediate action.

As pointed out by Mirza, municipal infrastructure encompasses much of the country’s infrastructure deficit. Accordingly, it is the area where much of the potential opportunity for PPP projects resides.

At present, Canada’s municipal PPP project market is relatively nascent. With some notable exceptions, like the Cities of Ottawa and Winnipeg, Canadian municipalities have not embraced the PPP concept for the delivery of municipal infrastructure with regularity.

There are a number of reasons for this, including the availability of funds through federal economic stimulus programs, the practice of consolidating financing leases within municipal financial statements that makes it more challenging to avoid consolidating PPP project debt, and the fact that municipal projects must be approved by municipal councils which sometimes inhibits the private sector’s participation.

While the Conference Board makes it clear that the PPP model is not appropriate for every infrastructure project, it may constitute an appropriate method of delivery for many significant infrastructure projects that need to be undertaken.

Practice groups export PPP expertise

It is important to note that Canada has a long track record of PPP projects compared to other jurisdictions. Over 100 transactions have been concluded with private sector consortiums in Canada since the early 1990s. As a result, a number of Canadian professional services firms have built up practice groups dedicated to PPP and infrastructure projects. They are experiencing a growing demand for their expertise and are exporting services on international PPP projects.

For example, Canadian firms are involved in international PPP projects, including light rail transit PPP projects in Mumbai, India and San Francisco, a highway project in Norway, and a water treatment facility in Arizona.

Bright future

Given Canada’s infrastructure deficit, governments have little option but to look to alternatives to traditional financing models. The PPP model, for suitable projects, will present a viable and attractive option.

In light of the country’s significant infrastructure deficit and the growing acceptance and endorsement of the PPP procurement model by Canadian governments, Canadian PPP may be an ideal investment opportunity over the next several years. ■

Morty Gross, QC Tel: 416.367.6205 mgross@blgcanada.com

Robert Shouldice Tel: 604.640.4145 rshouldice@blgcanada.com

Heather Douglas Tel: 416.367.6177 hdouglas@blgcanada.com

Borden Ladner Gervais LLP’s national public-private infrastructure projects group is composed of lawyers who provide PPP expertise from offices in Vancouver, Calgary, Toronto, Ottawa, and Montreal.

It pioneered US infrastructure PPPs 15 years ago, but California is still working out how to get private bidders comfortable. But looming over a new push into availability deals is a drawn-out fiscal crisis. By Edward Russell.

Basket case

For all its promise, California's public-private partnership (PPP) pipeline is as dry as Death Valley. So far this year, only the Long Beach courthouse replacement has been awarded while the Presidio Parkway project, already behind schedule, continues its long and arduous journey through the state's lengthy procurement process. However you cut it, the outlook for California PPPs does not look sunny.

"The PPPs that are going to get closed, the ones that are going to work are going to be few and far between in California," said one infrastructure adviser.

Legislators and bureaucrats in Sacramento are sending three distinct messages. Leading the charge are governor Arnold Schwarzenegger and Dale Bonner, secretary of the state's business, transportation and housing agency. As recently as this August, Schwarzenegger spoke on the importance of infrastructure to the country's – and state's – economic recovery and cited partnerships as a necessary tool to finance it. Putting his pen where his mouth is, he signed Senate Bill 4 (SBX2 4) into law in February 2009, which allows California's transportation agencies to enter into an unlimited number of PPPs.

California's legislators are another story. One adviser said Sacramento's elected ranks have shown little or no interest in PPPs and added that they would be surprised if more than a couple knew what an availability payment was. As Adrian Moore, a vice-president at the libertarian Reason Foundation, who served on Congress' National Surface Transportation Infrastructure Financing Commission, put it, you can hear "crickets chirping" in the state capital when it comes to partnerships.

Adding to the conflicting messages, the engineers union at the California Department of Transportation (Caltrans) – an agency overseen by PPP-proponent Bonner – is strongly opposed. Bruce Blanning, executive director of Professional Engineers in California Government, said the pending Presidio Parkway project was an "illegal waste of hundreds of millions

of taxpayer dollars" in a statement. He added in an interview that, while the organisation is not opposed to all partnerships, it does oppose deals that combine design and construction – the two project phases where the union's members would most likely be displaced by a private developer.

"[People] are accustomed to projects being delivered under standard approaches – either with federal funds, sales tax revenues or through the municipal bond market," said Bonner. "It's a pretty daunting challenge to convince them to look at a new way."

But it is not only Californians that Bonner, Schwarzenegger and an increasing number of regional transportation officials need to convince. Between the state's poor track record of past PPPs to its budget woes and the simple lack of projects, the bigger concern facing them is convincing developers and lenders that the Golden State is a place they want to do business.

Bad reputation

Say "California PPP" to sponsors and bankers and many pause before speaking. For all the potential opportunities in the state, its past failures – notably the South Bay Expressway – and procurement methods have left many with a bad impression.

The South Bay Expressway, also known as SR-125, is a privately-financed 13.9km toll road in the San Diego exurbs. In 2003, sponsor Macquarie Infrastructure Group (since split into Atlas and Intoll) financed the \$900 million highway with a \$140 million TIFIA loan from the US Department of Transportation (DOT), \$400 million in bank debt arranged by BBVA and Depfa, \$170 million in equity and \$132 million in grants from the Federal government and San Diego Association of Governments. Running through a sparsely populated section of eastern San Diego county from SR-54 to SR-905 near the Mexico border, the road was envisioned to serve the housing boom of the middle of the last decade. Things did not go as planned.

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Contractor Otay River Constructors (a Washington Group/Fluor joint venture) first sued the project company over issues with the engineering, procurement and construction contract in July 2006. The developer has been locked in litigation ever since, spending more than \$40 million by March this year, that, coupled with lower-than-expected traffic volumes, culminated in its chapter 11 bankruptcy filing – the first such action for a toll road concession in the country. As one PPP expert put it, the South Bay Expressway faced the “perfect storm” of issues, from construction and environmental litigation to the pop of the housing bubble, that ultimately led to its bankruptcy.

“South Bay will impact [PPPs] in the whole nation, not just in California,” said one infrastructure financing adviser who has worked in the state and elsewhere. They added that while sponsors and developers are still interested in projects in the Golden State, they are asking a lot more questions about the risks and guarantees attached to project contracts.

California, and the numerous local and regional entities involved in infrastructure development, has done an equally poor job developing and refining its PPP procurement process. One banker described it as simply “irrational” both in the way the state allocates risk and structures the termination regimes in transactions. A widely cited example of the haphazard approach taken is the Bay Area Rapid Transit’s (Bart) Oakland Airport Connector (OAC).

Under study since the 1970s, the OAC is a 5.15km automated guideway transit system connecting the Bart Coliseum/Oakland Airport station to the airport’s passenger terminal. Long talked about as a PPP by the transit agency, a tender for a 35-year design-build-finance-operate-maintain concession in 2008 only garnered one bid because of rising costs and declining ridership estimates. But the real issue that faced the project, according to one financial adviser who worked on the project, was that BART tried to sculpt an availability payment within a revenue forecast that, simply put, did not work. They added that if the agency had conducted a tight and fast procurement process without the budget indecision, the project probably could have been completed as a PPP years ago.

A Flatiron Construction and Parsons Corporation joint venture finally won a design-build-operate-maintain contract for the project in July. BART will repay the construction and operations & maintenance contractors through a combination of internal, local and state funds. Construction is scheduled to begin in the fourth quarter.

Unfortunately the OAC example, and the on-going saga of projects like the Presidio Parkway in San Francisco, are more the norm in California than the exception. But these issues are only part of the problem; there is a myriad of construction, payment and availability risks associated with deals in the state.

Appropriate appropriations risk

Between California’s notorious budget deficits and history of raiding supposedly safe funding accounts, it is difficult to convince anyone that payments from the state are guaranteed. Now, as two availability-based deals – the Presidio Parkway and Long Beach Courthouse – move forward, questions loom over how to make projects palatable to sponsors and financial institutions wary of government counterparty risk.

For the 2010-2011 fiscal year, California faces a \$19.1 billion budget shortfall. This comes after drastic measures were taken to close a \$26 billion gap in 2009. Since it briefly issued IOUs during the summer of 2009, the state’s general obligation credit rating has fallen from A-/A2/A+ (Fitch/Moody’s/Standard & Poor’s) to A-/A1/A- and, with IOUs again possible this year, the longer the state goes without a new budget, the rating could fall again.

“When the state tries to balance the budget, infrastructure always seems to go to the back burner because it can be done later,” said Kevin Klowden, managing economist and director of the California Centre at the Milken Institute. On top of it all, the state has no track record of availability payments for sponsors to look back upon.

The financing structure described in the Presidio Parkway request for proposals (RFP) offers a prime example of sponsors’ concerns surrounding payment and availability risk in the state. According to the document, state financing for the project includes a \$173 million milestone payment with an adjustment cap of \$3 million and availability payments indexed for inflation for the duration of the 30-year concession. However, both are subject to the annual appropriations process of the California legislature – a weak guarantee by most measures.

The concession structure is also not without its issues. The project is currently split into two phases, each consisting of various parallel sections of highway. The first was designed and financed by Caltrans and built in sections by various private firms; the second is the DBFOM availability-based concession currently being procured. However, the concessionaire will assume operations and maintenance for both, a structure that adds numerous risks to the deal in addition to the obvious financial ones.

The Presidio Parkway is a \$1.045 billion, 2.4km project to rebuild Doyle Drive, the southern approach to the Golden Gate Bridge in San Francisco. Caltrans and the San Francisco County Transit Authority are the project grantors. The RFP was released to Golden Gate Access Group (ACS, CH2M Hill and CC Myers), Golden Link Partners (Hochtief, Meridiam, HNTB, Kiewit and Flatiron) and Royal Presidio SF Partners (GlobalVia, Parsons, FCC and Tutor Perini) on 9 July.

The Long Beach Courthouse replacement, the first social infrastructure PPP in the US, is another availability-based concession in the state with appropriation risk. According to the RFP, the Administrative Office of the Courts (AOC), the grantor, will not provide any financing before the facility is occupied and then only in the form of service payments specified in the final agreement – a structure more akin to a real estate development deal than a project financing. The payments will come out of the AOC’s general budget – which is appropriated by the state legislature annually. In addition, the document forbids any form of tax-exempt financing, such as public activity bonds, to cover project costs.

Meridiam-led Long Beach Judicial Partners was selected as the preferred bidder for the 35-year concession, valued at roughly \$300 million, in June. Other project company participants include AECOM, Clark Construction, Edgemoor Real Estate and Johnson Controls. The financing for Long Beach has yet to reach the wider bank market. One banker that has participated in most US PPP deals to date said: “I’ve heard nothing from the sponsors for months.” Meridiam is,

however, advertising for a chief financial officer for the project company.

Schwarzenegger, in a largely symbolic move to mitigate investors concerns about the state's ability to finance payments for PPPs, included a 30-year continuous appropriation from the state highway account in his proposed fiscal year 2010-2011 budget. The appropriation would total \$3.45 billion, or \$115 million per year, over the term and be used to attract private sponsors to transportation projects by guaranteeing availability payments.

Unfortunately, few experts expect Schwarzenegger's budget proposal to make it through the state's notoriously fraught budgeting process and, even if it did, it would not apply to social infrastructure such as the Long Beach Courthouse. But that may not be the point. One adviser pointed out that its inclusion sends potential investors the message that the state acknowledges the risks and is working to mitigate them.

PPP, like politics, is local

While Schwarzenegger and Bonner sing PPPs praises, there are few actual projects coming out of Sacramento. Besides the Presidio Parkway and Long Beach Courthouse, only the proposed high-speed rail project may be procured at the state level. The majority of projects are more likely to come from the local and regional level.

Los Angeles Metro probably has the most promising innovative financing programme. It has more than 80 transportation expansion and improvement projects in the works, many partially funded by the proceeds of a 30-year 1.5% countywide sales tax passed by voters in November 2008. To close that gap it is pursuing two tracks – one is the 30/10 plan to have the federal government lend it the proceeds of the sales tax today to be paid back over the term of the tax and two is Metro's innovative financing initiative.

Kathleen Sanchez, a transportation planning manager at Metro working on the initiative, said the agency selected 14 projects to be evaluated for PPPs (either DBF or DBFOM) and is pushing six. Those six include the Crenshaw/LAX transit corridor, Westside subway extension, regional connector transit corridor through downtown Los Angeles, the high desert corridor expressway, SR-710 north gap closure and I-710 corridor south to and from the ports of Los Angeles and Long Beach.

"We want projects that fit in the [PPP] mold instead of making them fit," she said on the agency's selection criteria. However, the procurement timeline is unclear; Sanchez said that Metro hopes to release RFPs on all of the six projects by the end of 2011 but would not go into further detail.

The San Francisco Bay Area's Metropolitan Transporta-

tion Commission, a regional body, is even further from procuring PPPs. This past July, it adopted a cooperative agreement with Caltrans to investigate PPPs to build and finance a 1,287km network of high-occupancy toll lanes in the Bay Area. The project, which is still very much in its infancy, is likely to be split into smaller concessions and would resemble the 91 Express Lanes in Orange County in design and operation.

While not local or regional, the California High Speed Rail Authority has potentially one of the most ambitious PPP initiatives in California – possibly the country. The proposed 1,100km network would connect the state's major cities and is estimated to cost more than \$42.6 billion. In 2008, Voters

approved \$9.95 billion worth of general obligation bonds to finance the first phase, from Los Angeles to San Francisco, and the authority received another \$2.25 billion from the American Recovery and Reinvestment Act (ARRA). The authority intends to seek private financing for up a quarter of the total project cost.

Jeff Barker, a deputy executive director at the authority, said it was still investigating what type of private partnership to pursue. He indicated that these deliberations included both the scope of work, for example whether it would be for construction, operations or both, as well as whether it would be structured as a DBF or a DBFOM concession. Because the ARRA financing came with the stipulation that it must enter into construction contracts by 30 December 2012, Barker said a request for qualifications would be released this fiscal year.

To come

With a need for at least \$500 billion in new and upgraded infrastructure, California remains ripe for PPPs, despite the challenges. Experiences elsewhere indicate that maybe 15% of this need could be financed with private dollars – some \$75 billion – and with the state's budget deficits, this estimate might be the minimum necessary. "There are long-term

infrastructure investment needs, fiscal constraints and a general consensus that California needs to look at new sources of financing for infrastructure," said Christopher Voyce, head of Macquarie Capital Advisors' North American PPP business.

Unfortunately, without a unified approach to PPPs and widespread support – not just in the executive and at the local level – projects are likely to be few and far between and remain a slow, painstaking process. "I look at California's [PPP] programme like an airplane," said Bonner. "Most people would like to see a fighter jet that gets off the ground in two or three seconds but in fact its more like a 747 that takes more time to get into the air." ■



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Build-finance development agreements, including Florida's I-4, offer the public sector greater flexibility and certainty in delivering necessary infrastructure projects in the United States. By Anthony Porter, head of project finance, North America, at Lloyds Banking Group.

Build, finance, innovate

The concept of build-finance procurement is not new to the United States and there have been some successful deal executions in the infrastructure sector. However, due to factors such as differences in legislation state-by-state, greater familiarity with traditional public-sector and municipal finance and engineering, procurement and construction contracting arrangements, and the gradual increased interest in long-term concessions and leases to the private sector, the merits of build-finance deals are often overlooked.

Private-sector involvement in core infrastructure has received some degree of negative press in recent years, with public concerns about long-term leases and ownership of assets and the level of returns on sponsor equity often examined unfavourably. However, with US infrastructure in serious need of investment for expansion, improvement and maintenance, coupled with the financial constraints on departments of transportation and state agencies as a result of the economic downturn, the requirement for efficient investment has never been greater. Though the long-term design, build, finance and operate model is well matched for some deals, it is by no means a panacea for all of the country's infrastructure needs.

Build quicker, transfer sooner

The build-finance model may bolster the US public-private partnership (PPP/P3) market by adapting to the working practices of different sectors, agencies and authorities. Build-finance offers the public sector a palatable alternative to full concessions in a number of circumstances, while allowing it to borrow the parts of the concession model that are most attractive to the state.

For example, for projects where states find that traditional financing methods, such as the municipal bond market, are not cost-effective, build-finance allows for projects to be built more quickly by accessing short-term bridge financing in the bank market rather than waiting for more attractive capital-market conditions.

Also, for projects where there is little historical data from which to make long-term toll revenue forecasts, or where tolling would not be appropriate and where availability payments do not provide value for money for the state, there is little upside for either a private-sector operator or public-sector authority to consider providing long term concession style financing.

There are also wider application possibilities for build-finance style procurement. The variations are extensive, but could include projects where the respective public-sector authority or department of transportation prefers to retain future flexibility for an asset or, indeed, will not have the opportunity to examine an asset's potential and determine its uses until it is fully operational.

Build-finance procurement provides states with a certainty of construction and mitigation against risks of cost overruns and time delays. Construction schedules are historically shorter, and come with built-in guarantees. It also eliminates the counterparty risks attached to the operations and maintenance payment obligations and availability payments to project sponsors that are associated with longer-term concession agreements. And for the private sector there is no long-term operating risk to consider.

Florida leads the way

The Florida Department of Transportation (FDOT) reached financial close on its Interstate-4 Connector highway project under a build-finance agreement in December 2009. Florida has been a front-runner in using new finance solutions to meet its substantial transportation and infrastructure requirements. Between 2008 and 2010, FDOT also reached financial close on a number of deals using newer structures, including a build-finance agreement on a section of the US-1 highway; and the state's long-awaited Port of Miami Tunnel project and the I-595 highway, both under long-term availability based concession agreements. FDOT recognises that there are a number of ways to procure a project and that not all transportation and infrastructure projects are suited to one particular financing model.

The \$180 million construction financing for Florida's I-4 Connector highway project was provided by a four bank club that included Lloyds Banking Group as one of the mandated lead arrangers. The debt has a six-year maturity. The financing also includes subordinated funding.

FDOT will fund the project with milestone payments through construction, which continue until the debt is repaid. The three-year construction is due to be completed in March 2013.

The construction involves connecting the I-4 to the Lee

Roy Selmon Expressway near Tampa, Florida, via a number of elevated ramps. The new tolled highway will also include designated lanes for truck traffic. The technical aspect of the project also includes 23 new bridges, and the rehabilitation of existing bridges on the route. The project is designed to connect I-4 to Tampa's port and reduce traffic on local streets in Ybor.

Build-finance precedents

The US has flirted with build-finance solutions to its core infrastructure needs for a number of years, but the relationship has not developed to its full potential. In 1996, the Hudson-Bergen light-rail transit system in New Jersey demonstrated how the model could be used. There have been a handful of similarly structured transportation deals since, including the successes in Florida, but the concept of short-term private debt for construction and subsequent transfer of assets back to the state has been more extensively tried and tested in other regions and with other asset classes.

In Canada, Ontario's non-concession hospital programme has proven very efficient for both the public and private sectors and has addressed the public need for healthcare facilities in a shorter timeframe than anticipated.

Some of the Canadian provinces have also shown how a number of financing solutions and PPPs can work symbiotically under a single procurement agency. Infrastructure Ontario's deal pipeline, for example, has depended on the build-finance model for many of its projects, but has also employed the design, build, finance and maintain concession model for some of the more complex hospital projects, which required a greater amount of debt and will benefit from long-term operations and maintenance as part of the financing structure.

The US does not yet have a procurement model similar to the single-purpose agencies like Infrastructure Ontario or Partnerships BC. State agencies and departments of transportation, which have a much wider mandate and a diverse set of responsibilities, determine the procurement of build-finance projects in the US, just as with full concessions.

Lender considerations

As any market begins to evolve and mature, participants face a learning curve on what works and what presents challenges on a project-by-project basis and dependent on region, sector, financial conditions, inter-creditor liaison and so forth. For a successful build-finance project development in the US, there are already some lessons learned, even from just a handful of case histories.

For a PPP to work well there must be economic value for the public sector, the private sector and the lenders; and a strong working relationship and understanding of respective positions between the three irrespective of differing agendas. For state agencies seeking to attract the appropriate bidders, the build-finance procurement method provides for a competitive and streamlined process, but it could take some trial and error before it becomes perfected.

For lenders, some bidding rules can complicate the process. For the public sector, fixed interest rates are preferable. But some authorities do not structure the procurement to allow for the cost-effective use of interest rate swaps to hedge interest rate exposure. They also require surety bonds without allowing for flexibility to provide more cost

effective forms of construction completion security. The result is often that more costly interest rate caps are used to hedge interest rate exposure and complicated intercreditor challenges are introduced into the transaction.

The structure of the relationship between the contractors, the borrowers and the awarding authority is also a key issue in terms of risk allocation and for lenders, the conditions of contractors' and sub-contractors' balance sheets and performance history can have an impact on robustness of any project's debt. Contractors must have the necessary balance sheet strength to stand behind the obligations of the construction contract and to provide the level of construction completion security that will be required by and authority and their lenders.

Development by design

Another potential challenge is design risk. For developers, if a project is simply build-finance and does not include any design, contractors and lenders must make sure that this early-stage planning is thorough enough to make sure that the state gets the asset built to its specifications and the developer is comfortable with the quality and practicability of the design.

There are a number of ways to mitigate design risk so that all parties are content. The design aspect of a project may be included in a procurement process so that the developer assumes responsibility for technical and engineering risks.

Alternatively, for states which require design to be done in-house due to cost considerations or the terms of enabling legislation, developers and awarding authorities could work together in the earlier stages of the bidding process to flag any potential problems or risks before the project is procured and indemnify the construction for any design risk.

Future implementation

States like Florida are blazing the trail for alternative infrastructure financing and their successes are likely to be replicated in other states, particularly those with some PPP experience, such as Texas and California.

The public sector is in a position where it must address the ever-increasing burden of infrastructure maintenance and development. Having a diverse selection of financing solutions to choose from provides more competition and better value for money for departments of transportation and state agencies.

Build-finance provides a sound alternative to the long-term lease of assets and related return on private equity which has been a cause of concern for the public with many projects, but provides the state with the appealing aspects of working with a private developer. Shorter construction schedules, guaranteed delivery timetables, and flexibility for the public sector to decide how to operate its asset post-construction, are all valuable traits.

Though the model is not suited to every project, procuring authorities could benefit from considering build-finance among their financing options. Contrary to some press perception, public-private partnership does not necessarily have to mean long-term asset transfer: There are as many varieties of PPP as there are projects which need attention, and build-finance is one of many innovative variations. But it is one that has proved effective and is evolving into an attractive and efficient option for procuring agencies. ■

The US high-speed rail network is at a critical stage in its development.
Will political support and more funding be the push it needs?
By Allan Marks, partner, Milbank, Tweed, Hadley & McCloy LLP.

Like a bullet

In August 2010, United States secretary of transportation Ray LaHood predicted that, within the next 25 years, a high-speed rail network would connect 85% of the United States. “We don’t know where the lines will fall on a map or where the money will come from, but I promise you in less time than it took to create our interstates, the country will have high-speed rail,” he said.

While Secretary LaHood’s statement may be a bit idealistic and easier said than done, there is great potential for high-speed rail service in the United States. There are also enormous hurdles to overcome, not the least of which is the price tag, which is estimated to be in the range of \$500 billion and likely to climb.

In essence, the United States will have to build its high-speed rail network from scratch because the new system cannot simply be an upgrade or overlay of the existing heavy rail network. There are many dynamics in play as this process moves forward. The potential rewards, however, are worth working through any challenges that arise.

Leading the way: California and Florida

As part of the federal stimulus plan, the Obama administration designated 10 regional corridors for high-speed rail development. In addition to the Northeast Corridor these are:

- Northern New England Corridor
- Keystone Corridor (Pennsylvania)
- Empire Corridor (New York)
- Southeast Corridor
- Chicago Hub Network (including eight Midwestern states)
- South-Central Corridor (Texas, Oklahoma and Arkansas)
- Gulf Coast Corridor
- Florida Corridor
- California Corridor, with a proposed Los Angeles to Las Vegas connector
- Pacific Northwest Corridor (Oregon, Washington, British Columbia)

With a steep cost per mile and per passenger, there are many markets in the United States where high-speed rail does not make sense. In the Midwest, for instance, many cities are close enough together that driving between them is simply less expensive and more convenient than other options. It would be extremely difficult to build and operate a financially successful high-speed rail system in such areas.

On the other end of the spectrum, when cities are too far apart, air travel becomes a more attractive option than either auto or train transportation.

Of the 10 proposed regional corridors, the two that are furthest along in development – and represent the best potential for near-term success – are the Florida Corridor and the California Corridor. In Florida, environmental approvals and almost all of the rights of way for a Tampa-to-Orlando corridor have been secured, and the permit process for an extension to Miami is in the works. The projection is that a high-speed rail line will be in operation there by as early as 2015.

The baseline speed for the US government’s definition of high-speed rail is 250km per hour, but the world’s fastest bullet trains reach speeds of 320km per hour or more. Florida’s system is projected to run at a top speed of 270km per hour.

So far in the US, the California Corridor project appears capable of achieving those bullet train speeds – at least through part of its route. One end of the proposed network begins in the southern part of the state, linking San Diego and Los Angeles, with stops throughout Orange, Riverside and San Bernardino counties. The high-speed rail also heads north, where the system makes stops in the central region in Bakersfield and Fresno – then continues on into San Jose, San Francisco, Modesto and Sacramento, among others.

Over such a distance – 800km or more – high-speed rail would achieve great time savings for the state’s travellers. In addition, trains would offer a very competitive option to driving, despite an excellent interstate system in the state, and air travel, even though many airlines offer low rates between California cities.

Overseas, the British government was initially uncertain that Eurostar, the high-speed passenger rail service connecting London with Paris and Brussels, would attract significant riders to cover their investment. However, today Eurostar is the dominant operator in intercity transportation, carrying more passengers than all airlines combined. So although Californians rely on their cars or airlines to travel, in order to keep up with the state’s passenger growth, the US government would need to spend billions upgrading and expanding airports and highways, none of which would reduce congestion or be energy efficient.

Fortunately, the California plan is moving along quite quickly in terms of environmental approvals, and it is receiving a fair amount of political support. In November 2008, California voters approved Proposition 1A, which authorised \$9.95 billion in general obligation bonds to help fund the project. The federal government has contributed additional funds to the project, which is estimated to cost between \$42 billion and \$45 billion.

Planned to be completed by 2020, the California system will consist of 1,416km of high-speed rail lines. When finished, the high-speed rail lines will displace 92 million cars and 18 million new air passenger trips per year, avoiding the need to spend the hundreds of billions on new airport gates and new highway lanes.

A Chicago-based Midwestern high-speed rail system will also more than likely get on its feet in the years to come. However, this project is not nearly as far along as the projects in California and Florida.

Not all high-speed systems are the same

On the world stage, the United States is a relative newcomer to high-speed rail travel. Both Europe and Asia have established and more advanced systems, and there are certainly remarkable differences between the approach to high-speed rail in the US and that of other countries.

For instance, in the US, high-speed rail will consist of regional networks because of the varying population densities and distances between cities from region to region. In Europe, rail service is integrated across the entire continent. Particularly among European Union nations, there was a consensus that high-speed rail was an absolute necessity. This idea was bolstered by a longstanding history of mass transit on the European continent, as well as a significant bias toward rail transportation instead of automobile or intra-continental air travel.

In large parts of the United States, existing Amtrak passenger service has to share lines with freight carriers. Historically, the United States has given priority to these freight services. The opposite is true in Europe, where passengers have been given priority. As a result, the United States has an excellent nationwide rail system for transporting goods – arguably better than the freight system in Europe – but it cannot compare in terms of helping people get from place to place by rail.

Transportation infrastructure in the United States is quite often funded through federal and state gasoline taxes and, in some parts of the country, user fees or tolls. Most of that money, however, goes toward the construction of roads, bridges, highways and other vehicular transportation systems.

Railway transportation is funded with a combination of passenger fares, which do not cover the costs of operation, and a federal subsidy to passenger service operator Amtrak, which is barely enough to absorb that operating deficit. This situation is exacerbated by significant underinvestment in capital improvements, which has resulted in a woeful state of reliability and comfort for passenger trains. It is no wonder that Americans have, by and large, failed to embrace rail transportation.

The attraction, then, of the United States' renewed support for passenger train travel – in the form of the high-speed rail system – is not only the fact that people can get from point A to point B faster, but that they can do so with

significantly improved quality, reliability and comfort.

The question that remains in the United States is: “How are we going to pay for this very expensive system?” The federal government does not have the projected \$500 billion readily available to build a nationwide high-speed rail system – or, possibly, the political wherewithal to raise those funds. Even if it rolls out project by project, the money for California's or Florida's high-speed rail system is simply not available, neither from federal nor state government. And it would be virtually impossible to get the necessary political backing to divert gasoline taxes away from road construction and into rail construction, regardless of the best arguments for the economic advantages of rail transportation.

The solution to plugging this funding gap may come from public-private partnerships. This approach for passenger rail system development has already proved itself to some degree in Europe. Great Britain, for example, has privatised its long-haul passenger services, and has used various risk-sharing models to build high-speed rail infrastructure. Spain, France and the Netherlands have used PPP concessions to deliver high-speed rail infrastructure. Much of the investment in Spain's capital infrastructure has come through government funds or through the government's support for banks financing in the sector.

PPP can be applied in a variety of contexts, for a number of different purposes. At its core, though, the model involves private sector participation in the provision of an essential public service. In the United States, it is entirely reasonable to envision a scenario where state and federal governments agree to build and operate high-speed rail lines, paid for by a combination of private investments and government money. For instance, state governments could cover the purchase of right-of-way or underwrite a portion of operating costs.

Those two items – the capital cost of construction and operating costs – represent the two biggest chunks of expense for any rail project that would be built in the United States. Without searching for funding sources to cover construction costs, a private partner would have a real potential for achieving an acceptable level of profit from operations, which would be attractive to the private sector.

The caveat here is that it would be a challenge – albeit a worthwhile one – to make this kind of partnership work. Will the federal or state governments be willing to take a risk in terms of ridership or revenue? If they are, the high-speed rail system stands a much better chance of becoming a reality.

Another key difference between the development of a passenger rail system in the United States versus in Europe is the two-track system – federal and state – that exists in the United States. For instance, environmental clearances have to be obtained at both the federal and state levels. Granted, there is some streamlining of this process; environmental impact statements and reports that are created for state clearance, for instance, can often also satisfy federal requirements.

Nevertheless, it still adds up to a lengthy permitting process, and it is important to note that the United States federal government does not have the freedom of action that many European federal governments have. The process is further complicated in the United States when a regional rail system crosses multiple states, such as would be the case in the Midwest or the Northeast. Each state has its own approval process, its own political efficiencies (or lack

thereof) and its own fiscal constraints.

The US system, by design, offers multiple opportunities for public concerns to be aired and for opponents to attack a project. This causes projects to become more sensitive to environmental and public concerns, slowing project development considerably, and resulting in fewer projects moving forward.

Beyond high-speed rail service

Perhaps the most critical factor in creating a successful high-speed rail system in the United States – one that actually facilitates mobility and improves travel time in ways that are economically more efficient and environmentally more benign than building airports or adding lanes to highways – is to ensure that these systems connect into local and regional mass transportation networks.

Europe provides a good example of how this works when it is done right. A high-speed rail line, for instance, runs from London through the Channel Tunnel and on to Paris. At either end of the high-speed line – in both London and Paris – the system connects into an extensive public transportation network that includes the London Tube, the Paris Metro, regional commuter lines, and so forth. People can travel from one city to the other on high-speed rail, then seamlessly connect into a meta-system that will take them wherever they need to go.

In contrast, underdeveloped urban and regional transit systems could strand high-speed rail lines, sharply reducing ridership. For instance, a traveller on the Orlando-to-Tampa rail line would likely need to take a car to the train station and would also likely require a car at the destination they arrive. Considering that Orlando and Tampa are roughly 140km apart, it would probably be easier to just drive – particularly if the train trip is further delayed by too many stops along the way.

Of course, there are certainly some United States cities that are already better prepared to handle mass transit needs. In California, for instance, passengers on a Los Angeles-to-San Francisco high-speed rail route would find a good local public transit system in San Francisco and a rapidly expanding system in Los Angeles.

Nevertheless, the reality remains that in the United States, government cannot develop a successful high-speed rail network unless it makes significant upgrades to local and regional mass transit systems at the same time. Federal and state governments can go a long way in bringing a workable high-speed rail system into being by demonstrating their willingness to shoulder the burden for the smaller-scale local transportation networks that are also an absolute necessity.

The future of high-speed rail in the US

There are still too many factors in play to know for sure how the proposed nationwide high-speed rail system will turn out. With multiple roadblocks in developing high-speed rail, at best two to five systems will go into place in the near-to-intermediate future.

There has already been great progress with the California and Florida projects and they are likely to be completed. There will be improvements to the passenger rail system in the Northeast Corridor, simply because of the concentration of population and of wealth that exists in that region. However, the Northeast's network may not be a true high-

speed system, at least not in the near future. The primary constraint is right-of-way acquisition. This is a very dense region, so assembling the land to build an all-new high-speed line will be a time-consuming and expensive ordeal. For a vastly smaller investment, the existing Amtrak track and systems could be upgraded to make the system run at the speeds that the train cars are already capable of achieving.

Although there are few projects in the pipeline, the United States should only concentrate on the small handful of projects that have the strongest potential for success and are already making progress. One successful high-speed rail example will be the stimulus for future public and private investment.

It would be the wrong decision for the federal government to spread around a relatively small amount of funding to a larger number of projects for purely political reasons – to sway local elections and appease Congress. Instead, it would be ideal for the federal government to take almost all of the money it has allocated for high-speed rail and invest it in a way that will attract strong private partners into the most promising projects, such as the California and Florida rail systems.

There is an added benefit of putting most of the federal resources into these most promising partnerships. When a couple of projects get built and are up and running successfully, potential private investors, elected officials and the voting public will see what the advantage an efficient high-speed rail system offers over other transportation options. That could produce broader public support – both in the private sector and in government – for future networks in other parts of the country.

Making history with high-speed rail

Despite all the challenges, at least a few high-speed rail projects should come to fruition in the United States over the next few years. These projects could have a tremendous positive impact in terms of speed, convenience and cost of travel among large cities in several regions around the country. It will take patience and time to make the United States high-speed rail system as extensive and well-developed as it should be. There is still much work to be done to get the public and private sectors working together at peak efficiency.

History, however, has a way of putting things into perspective. The United States interstate highway network – a feat of politics and engineering that has dramatically shaped the course of economic development, social mobility, and land-use throughout the United States – took well over a quarter-century to complete. Yet it integrated the various regions of the United States to a degree that made history.

High-speed rail has the potential to remarkably change the way Americans use passenger train transportation. An even further incentive comes from the additional economic and environmental benefits of more efficient use of land and a reduction in congestion and pollution. Building these transportation networks will be a challenge, but is well worth the time, effort and money. ■

Allan Marks is a partner in the global project finance and Latin America practice groups of Milbank, Tweed, Hadley & McCloy LLP and is based in the firm's Los Angeles office. He can be reached at amarks@milbank.com or 213-892-4376.

The private activity bond issue for Denver Transit Partners was the first for a transit project in the US, and the first US transit PPP ever. Will other municipalities be able to adopt the structure for their own uses? Edward Russell reports from Denver.

Bold Eagle

At the ground breaking of Denver Transit Partner's (DTP) East corridor in August, local politicians hit on all the typical topics in their speeches – job creation, the importance of transit and improved competitiveness. The financing process took something of a back seat. Still, Greg Amparano, project director at DTP, called the project a new benchmark for rail transit financing in the US.

The Regional Transportation District (RTD), the transit authority for the Denver metropolitan area, awarded Fluor and Macquarie-led DTP the \$1.64 billion, 30-year Eagle P3 concession on 15 June. The consortium beat HSBC, Veolia and Siemens Financial Services' Mountain-Air Transit Partners (MTP). Financing came together quickly for the deal, the first design, build, finance, operate and maintain availability-based transit concession in the US. Barclays Capital and Bank of America Merrill Lynch (BoA Merrill), which underwrote \$397.8 million in private activity bonds, closed them on 12 August, little more than six weeks after the concession was awarded.

Before DTP's financial close, the only similarly-structured transit deal in North America was Canada Line, a 35-year, C\$1.9 billion (\$1.6 billion) DBFO awarded to SNC-Lavalin's InTransitBC by Translink in November 2004. Banks arranged C\$600 million in debt and the sponsor contributed C\$120 million in equity to the heavy-rail line connecting downtown Vancouver to the airport and the suburb of Richmond. In the US, the closest comparable project is Florida's \$1.678 billion I-595 toll road financing that was the first availability-based structure in the US, and closed in March 2009.

Thinking outside the tax base

Speed and best value were important to RTD. The Eagle P3 project, which includes the 36.7km East corridor, 11.7km gold line, 8.4km northwest electrified rail segment (NWES) and a new maintenance facility, is part of the agency's 225km FasTracks light rail, commuter rail and bus rapid transit expansion plan. The RTD will finance its contribution to the concession with the proceeds of a 0.4% sales tax that was approved by voters in 2004. The RTD put forward a public-private partnership (PPP) in 2007 as a way to help close a more than \$2 billion budget gap that resulted after tax receipts came in lower than expected and construction costs rose. With more than half of FasTracks' projects delayed indefinitely, RTD needed the PPP to jump-start the commuter rail portion of the plan.

In July 2007, the US Department of Transportation approved the Eagle P3 for its PPP Pilot Programme (also

known as Penta-P). Designed as a way for the department to study the benefits of partnerships, it allowed participating projects to benefit from a simplified and accelerated Federal Transit Administration (FTA) review process. BART's Oakland Airport Connector and two bus-rapid transit lines in Houston were also included in the pilot but both have since proceeded without private financing.

With the East corridor and gold line's inclusion in Penta-P, RTD began working towards procuring the PPP. It retained Goldman Sachs and JP Morgan as advisers and held meetings with potential bidders and the community before releasing a request for qualifications (RFQ) in June 2008. Three consortiums – DTP (Fluor, Macquarie, Ames Construction, Balfour Beatty, Alternate Concepts and HDR Global Design), Mile High Transit (John Laing, HOCHTIEF, Bombardier, Flatiron, Archer-Western, Aldridge Electric, AECOM and CH2M-Hill) and MTP (HSBC, Siemens, Veolia, Kiewit, Herzog, Stacy and Witbeck, HNTB and Mass Electric Construction) – replied to the RFQ and were subsequently short-listed to bid on the project. But the deal, as it was structured in the RFQ, hit a red signal.

Brian Middleton, senior Penta-P manager at RTD, said the proposers came to the agency and warned them that, as the project was then structured, they would not be able to submit bids. The problem was Tabor, Colorado's taxpayer bill of rights, which restricts the amount of money government agencies can raise from citizens based on a combination of population growth and inflation.

The bids and DTP's triumph

Under the RFQ, the Eagle P3 was structured outside Tabor, meaning availability payments would have to be re-approved annually by RTD as part of its budgeting process and, if the contract was terminated, the transit agency would have no responsibility for the remaining debt. Proposers told RTD that with these risks they could not raise project financing for the deal. Middleton said they were able to restructure the deal within Tabor, splitting RTD's obligations into a Tabor portion, which constitutes a subordinated lien over sales tax revenues, and an appropriated portion. RTD released the request for proposals (RFP) on 30 September 2009.

The document was only sent to DTP and MTP, after Mile High Transit dropped out of the bidding process in November 2009. The consortium attributed its withdrawal to the short procurement timeline, because RTD planned to award the contract in the third quarter of 2010, which they said was not enough time for them to put together a competitive bid.

Case Study: Eagle P3

The two remaining groups submitted their final proposals on 14 May 2010. Both envisaged using tax-exempt private activity bonds (PABS) and were based on RTD's preliminary designs, but included elements, such as multiple single-track sections instead of double-track, which reduced costs but maintained the 15-minute frequency mandatory service requirement.

On 15 June, DTP was selected as the winning bidder on the basis of its financial proposal, which reduced the project's overall cost by roughly \$300 million. The final evaluation scores were 77.05 for DTP (financial 56.15 and technical 20.90) and 41.95 for MTP (financial 21.33 and technical 20.62).

The financing process

DTP mandated Barclays and BoA Merrill to underwrite the PABS, but retained a group of commercial banks to work on a bank debt component until shortly before the bid went in. The sponsors eventually chose to stick with the PAB option, and this decision was driven, at least in part, by fact that if medium-term, 10- to 12-year maturity, bank debt was used (long-term, 20- to 25-year loans were not an option due to the 2008 credit crunch), the 30-year concession length would have involved refinancing risk. The commercial banks nevertheless received a work fee to reflect the time spent on the alternative proposal.

The underwriters launched the \$404 million in PABS on 23 July. The preliminary offering documents estimated an average yield of 6.17% over a term of 30 years and that the debt service coverage ratio (DSCR) at the end of construc-

tion in 2017 would be 1.52x, rising to 2.04x by 2040. The sponsors, Fluor and Macquarie, would contribute \$55.1 million in equity (split 10% and 90% respectively) and RTD would make \$1.14 million in construction payments, \$44 million in availability payments before the end of construction and \$4.9 million in interest payments.

The sponsors and underwriters held a road show in late July and financial close took place by 12 August. The PABS were 3x oversubscribed and, according to Nicholas Hann, an executive director for Macquarie Capital Advisers, who worked on the project, priced at a better-than-expected margin when they hit the market – between the sovereign debt provoked volatility of late June and before the August holidays. The final issuance was slightly smaller than planned, \$397.8 million, because of the better margin, averaging 6.078% with a spread between 217bp and 247bp against the benchmark municipal market data AAA index.

The PABS are split into 14 semi-annual series tranches and three term tranches. The semi-annual series totalled \$80.3 million with yields ranging from 4.85% to 6.13% and maturities between 15 July 2015 and 15 January 2026. The term tranches totalled \$62.5 million (maturity 2030), \$79.97 million (maturity 2034) and \$175.1 million (maturity 2041), and yielded 5.9%, 6.08% and 6.13% respectively. According to the final term sheet, DSCR on the bonds ranged from 1.56x in 2017 and 2.09x at maturity.

John Laing and Lloyds Banking Group's Ueberior Infrastructure Investments bought Macquarie's equity stake in DTP at financial close. Each took a 45% stake in the project. Hann said the decision was driven by the fact that the sponsors

Still on the fast track to P3 success



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FORWARD thinking

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brought in specialist PPP equity investors better suited to the size of investment and return profile of the Eagle P3. The deal marks a return for Macquarie's strategy of syndicating down infrastructure equity, after a period of retrenchment from principal investments in favour of advisory work.

A joint venture consisting of Fluor and Balfour Beatty, and joined by local contractor Ames Construction, is building the rail lines. Hyundai Rotem will provide rolling stock, electric-multiple units nearly identical to SEPTA's new Silverliner-V. Sherman and Howard acted as bond counsel with Marla Lien and Freshfields representing RTD, Orrick and Kutak Rock DTP and Mayer Brown the underwriters.

Monthly availability payments will be made to the project company upon commencement of service. Payments will be contingent on operational performance, not ridership or farebox collections, and cover both operations and maintenance of the rail line. Denver Transit Services, a joint venture of Alternate Concepts, operator of the 637.5 mile Massachusetts Bay Transportation Authority Commuter Rail system, Balfour Beatty and Fluor, hold the O&M contract.

Construction and termination risk

Fitch rated the bonds BBB- stable and Moody's rated the PABs Baa3, highlighting concerns over construction phase risk. The agency cited the deal's high reliance on RTD financing and the concession's termination payment regime. The amount payable in the event of termination varies depending on whether this is attributable to the RTD or to the concessionaire, and whether the project is still in construction. The termination amount in the event of a concessionaire default will be reduced by, among other things, the RTD's costs in finding another contractor to finish the work, and could, in Moody's opinion, reduce bondholder recoveries substantially.

Phase one is construction of the East corridor and maintenance facility, while phase two involved building the the gold line and NWES. DTP and city officials broke ground on phase one on 26 August and RTD has until 31 December 2011 to decide whether to proceed with phase two. Completion of the first is not dependent on receipt of a notice to proceed with the second and construction costs for just phase one are estimated at \$1.52 billion.

The financing therefore has to incorporate the possibility that the RTD decides not to approve a second phase, because roughly half of the RTD's \$1.184 billion in construction payments, a little over \$585 million, is only payable if phase 2 goes forward, but the additional cost of phase 2 is only \$266 million. If phase 2 does not happen, the sponsors might have to issue an additional \$412 million in bonds, and contribute another \$56 million in equity, though the RTD would increase the phase 1 availability payments to service this higher interest burden. However, the transit agency has indicated that, in the case of no notice to proceed, it expects to increase funding to the concessionaire.

To comply with Tabor, these are split into a Tabor portion and an appropriated portion. The former is automatically funded out of the proceeds from the 0.4%

FasTracks sales tax, with trustee the Bank of New York Mellon applying the proceeds first to payments on outstanding 2006 and 2007 revenue bonds and second to the Tabor portion of the concession agreement.

Any shortfall in available proceeds from the 0.4% tax would then be drawn from the proceeds of the transit agency's existing 0.6% sales tax. The appropriated payments are required under the agreement but subject to annual budgeting by the RTD board. In 2009, the district's sales tax receipts were \$371.4 million (including both the 0.4% FasTracks and 0.6% RTD general sales taxes) and its maximum annual debt service requirement was \$172.5 million.

RTD has requested \$1.03 billion in full-funding grant agreements (FFGAs) from the FTA's new starts programme for the project, \$850 million for the East corridor and \$180 million for the gold line. In February, the federal agency included the lines in its fiscal year 2011 funding recommendations and, based on historical precedent, is likely to award the grants by December 2011. The transit agency has received all FFGAs it previously applied for, including \$268.5 million (87% of its original \$308.7 million request) for the FasTracks west corridor, which is under construction.

The Eagle P3 signals the opening of the US market to transit PPPs. Other transit agencies, for example Los Angeles Metro and Dallas Area Rapid Transit (DART), have said they are following Denver's progress and sponsors are keen for additional opportunities. Metro is considering availability-based financing for a number of its measure R transit projects, those funded by a half-cent sales tax passed by voters in November 2008, including the Crenshaw corridor and regional connector through downtown. DART has identified its Cotton Belt transit line for PPP financing. ■

The deal marks a return for Macquarie's strategy of syndicating down infrastructure equity, after a period of retrenchment from principal investments in favour of advisory work.

Denver Transit Partners

Status: Closed 12 August 2010

Size: \$1.64 billion

Location: Denver, Colorado

Description: 56.3km of electrified commuter rail connecting downtown to the airport and western suburbs, and a maintenance facility

Awarding authority: Regional Transportation District

Government contribution: \$1.14 billion construction payments and \$44 million pre-completion service payments

Sponsors: Fluor (10%), Uberior (45%) and John Laing (45%)

Equity: \$54.3 million

Debt: \$397.8 million private activity bond issuance

Underwriters: Barclays Capital and Bank of America Merrill Lynch

Financial advisor: Macquarie

Sponsor counsel: Orrick and Kutak Rock

Bond counsel: Sherman and Howard

Underwriter counsel: Mayer Brown

Grantor counsel: Marla Lien and Freshfields

Bond trustee: Bank of New York Mellon

Technical advisor: Arup

Contractors: Fluor and Balfour Beatty

Operations and maintenance: ACI and Fluor

Rolling stock: Hyundai-Rotem

The financing for the acquisition and expansion of the Seagirt container terminal neatly accommodated the specific demands of the grantor, sponsor, and a tax-exempt bond financing. By Richard Lincer, partner, and Alexandra Bell, associate, at Cleary Gottlieb Steen & Hamilton LLP, and Laurene Mahon.

Berth of a template

The concession and financing of the Seagirt Marine Terminal in the Port of Baltimore could be described as the first real marine terminal partnership. It is a prime example of an infrastructure project in which the parties – Ports America Chesapeake (PAC), which is owned by Highstar Capital, and the Maryland Port Administration (MPA) – completed a fast and transparent procurement process that produced more than \$250 million in near term capital investment and 3,000 construction jobs during the first three

years of the concession's life. The deal also brought sustainable economic and financial benefits, including 2,700 permanent jobs in the Port of Baltimore, along with continuing revenues to the MPA without any fiscal costs to the State of Maryland.

The concession was signed on 16 December 2009, the tax-exempt bond offering closed on 12 January 2010 and construction broke ground on 8 March 2010. PAC and the MPA negotiated a long-term public private partnership that involved design, build, operations and finance elements and overcame various hurdles along the way using an innovative project structure. Seagirt is the first major movement in the US ports sector since 2007, the only public private partnership transaction to close in the US during the first half of 2010, and just one of three such transactions for the year to date. The Seagirt project can serve as a blueprint for the constructive injection of private capital into public infrastructure.

In the past decade, the number of PPPs undertaken in the US has grown as governments attempt to reduce public sector debt while at the same time maintaining and improving public facilities. The Seagirt project added several layers of complexity to the traditional PPP model. First, Seagirt does not fit squarely into a traditional model. Seagirt has been operated as a container terminal since its opening in 1990. However, the proposed PPP added a new construction element to the existing operations.

Port prospects and PPP parties

MPA, mindful of the port's long-term objective to remain competitive among the East Coast ports when the enlarged Panama Canal opens in 2014, required the concessionaire to construct a 50-foot berth capable of servicing super post-Panamax vessels in advance of this opening. Thus, while Seagirt offered the stability of an operating facility with an established customer base, the concessionaire was also obligated to finance, design, and construct a new berth and invest in new cranes.

In addition, the negotiations and approval process brought several parties to the table. On the government side, the MPA is itself a unit of the Maryland Department of Transportation and has a statutory mission to benefit the public interest by increasing international waterborne commerce through the Port of Baltimore. The MPA maintains a close working relationship with sister entities within the Department of Transportation in order to facilitate efficient cargo movement through the port.

The Maryland Port Commission, a public body chaired by the state's Secretary of Transportation, supervises the MPA; however, final authority over

MPA's significant contracts rests with the Maryland Board of Public Works, which is comprised of the state's governor, comptroller and treasurer. Additionally, before this project, a separate state entity, the Maryland Transportation Authority (MdTA), owned Seagirt, even though the MPA was in charge of operating of Seagirt on behalf of MdTA, and thus was the ultimate recipient of any upfront payment by the concessionaire.

PAC is owned by Highstar Capital, a private equity fund focused on investments in the infrastructure sector. Highstar's port holdings together comprise the Ports America group, which is the largest marine terminal operator in the Americas. A separate Ports America entity, Ports America Baltimore (PAB), operated Seagirt prior to this concession and also held a lease at Dundalk, a separate, smaller

In the past decade, the number of PPPs undertaken in the US has grown as governments attempt to reduce public sector debt while at the same time maintaining and improving public facilities.



Seagirt: A long term lease and modernisation

terminal in the port. PAB has certain obligations in respect of the Ports America group which ultimately played a role in the structure of the deal and the built-in “corporate separateness” protections in the financing.

Finally, to add one more piece to the puzzle, the parties recognised that, if the project could be financed through a tax-exempt bond offering, such a structure would increase the amount of capital that could be raised upfront – and thus the payment to MdTA – by reducing financing costs and extending the available term of the debt. The issuer for the tax-exempt bonds was another separate state entity, the Maryland Economic Development Corporation (MEDCO). In order to accomplish the financing on a tax-exempt basis, it was necessary to issue two series of bonds, with those bond proceeds to be paid to MdTA specifically allocated to the construction of qualifying transportation projects within the State, and the remainder used to finance the construction of the new berth and various other capital improvements.

The bonds were secured by the net revenues from the port and a lien on PAC’s rights to the lease and concession agreement, and received an investment grade rating. Underlying all of the particulars of this deal was the

economic climate and the uncertainty in the debt markets during 2009.

Public priorities and the concession structure

The interest of the taxpayers is always at the forefront of the public sector’s thinking. This interest was manifested most directly by the MPA’s specific mission to efficiently run the port to promote the economic development and well-being of the region and the state. However, the broader public objectives of ensuring that the state disburse its resources effectively, fill any gaps between what government could afford and what its residents need, and serve the common good of the Maryland taxpayers played a critical role in the decision-making process.

Two of the state’s most publicized goals were to create jobs and to enhance the port’s competitiveness through the construction of the new berth. These objectives were carefully incorporated into the PPP structuring and agreements at every step of the process. Of the concession’s projected 5,700 new jobs, 3,000 will be construction jobs over the next three years and 2,700 will be permanent jobs resulting from the growth of the container business at the terminal. In addition,

the parties entered into both an engineering, procurement and construction contract as well as a crane purchase contract at the end of 2009 in order to ensure that construction timelines were met. While the third party contracts for the construction were entered into directly by PAC, the MPA maintained oversight by way of contractual performance standards and timing benchmarks incorporated into the concession agreement.

In addition to these more visible value markers, the structure of the deal unlocked value for the state in a variety of other ways. There is, of course, the monetary consideration that brings direct revenue to the state. PAC's bid incorporated a hybrid payment structure, which included the upfront payment, annual payments, incremental fees for sharing of revenues in excess of agreed thresholds and capital expenditure commitments. Thus, above and beyond the \$140 million upfront payment, the total investment and revenue to the state of Maryland over the life of the contract is projected to exceed \$1.5 billion.

This payment structure offers the state different types of value. For instance, because the upfront payment was made directly to the MdTA as prior owner of Seagirt, MdTA was able to unlock the value of a prior investment and make new investments in other road, bridge and tunnel facilities to meet critical infrastructure needs, in contrast to many transactions closed or proposed in other states, in which the securitization of future revenues from infrastructure projects would be used to defray current operating deficits.

The MPA will receive the annual payments in monthly installments over the course of fifty years and will thus have a stable and steady revenue stream to cover its operating costs in other areas of the port. The incremental fees increase the revenue stream but also indicate an increased level of business in the port and thereby increased tax payments to the state. Finally, the capital expenditures improve the overall value of the port and make Seagirt a more attractive destination for the container ship industry.

Another key aspect of the structure was the way in which the parties were able to realign properties and their uses to create more efficient port development options. Dundalk, a smaller multi-use facility next to Seagirt, had been a patchwork of small parcels and different operating modes. As part of the overall agreement, the MPA and PAC agreed to consolidate container operations at Seagirt, affording operational efficiencies to PAC while allowing PAB to redeliver to the MPA a portion of the parcel it leased at Dundalk. As a result, even though the MPA gave up operational control of one terminal in the port, it gained control over approximately 65 acres at another terminal. Since closing, the MPA has successfully leased a portion of this land for the roll-on, roll-off cargo business at Dundalk.

The state also gained the value of the private sector's

skills in design, construction and operations with the expectation that PAC, as a private entity, will be able to operate Seagirt and construct berth IV in an efficient manner. Additionally, risk associated with any cost overruns and insurance would not be borne by the state.

Private priorities and risk-sharing

Despite the significant value provided to the state by the transaction, PAC would not have entered into the deal if it was not able to achieve a reasonable return on its investment and a legal framework that allowed for a long-term capital commitment on acceptable terms and conditions. While certain structuring mechanisms that elevated the

state's position, such as the payment structure, the terminal consolidation and the tax-exempt financing, provided the dual advantage of also benefiting PAC's bottom line, certain additional elements of the structuring were also important to PAC's valuation of the project.

First, the concession had a term of 50 years and included an exclusivity provision under which the state was prohibited from operating (or allowing a third party to operate) another container terminal at the port for 15 years following the closing. Additionally, the concession specified that no other party except for PAB could operate a container terminal at Dundalk during this period unless the throughput levels at Seagirt exceeded 80% of capacity (as calculated by an independent expert) on average for two consecutive years. While these provisions were important to PAC's evaluation of the project, the structure of this provision also ensured that the MPA

would not lose out on the possibility of increased business at the port as a whole because the Dundalk restriction would no longer be applicable if throughput levels at Seagirt grew sufficiently to warrant expanded operations at the port. Additionally, the inclusion of incremental fees payable to the MPA also ensured that the parties' interests were aligned such that the MPA continued to have an economic interest in the successful operation of Seagirt.

The public and private parties also included provisions in the concession that anticipated the concerns that would arise during a bond offering. In order to achieve the investment grade necessary for the tax-exempt financing, PAC had to address the ratings agencies' requirements as well as prospective bondholders' needs and concerns, including ensuring through various arm's length services agreements that PAB's obligations in respect of the PAC credit facility would not affect the security for the bonds. Since the tax-exempt financing would mutually benefit PAC and the state, the parties agreed to include the proper protections in the concession. Therefore, the concession included specific rights and remedies for a lender, including expanded cure and step-in rights. These provisions proved invaluable to the subsequent investment grade rating and successful bond offering. ■

Despite the significant value provided to the state by the transaction, PAC would not have entered into the deal if it was not able to achieve a reasonable return on its investment and a legal framework that allowed for a long-term capital commitment on acceptable terms and conditions.

Are models such as Ontario's alternative financing and procurement programme the right choice for North American governments?

A global perspective of infrastructure construction from
Michael Laliberte, director, Laing O'Rourke.

New horizons

As North American governments move to adopt various newer structures for procuring and financing infrastructure assets, including Ontario's alternative financing and procurement (AFP) model, it is only natural that questions begin to surface on the appropriateness of the approach and the commitments being made for the future.

The undeniable fact is that public infrastructure requires continuous investment and renewal. The challenge for a governing body is to deliver such improvements to public infrastructure in a manner that is responsible and answerable in terms of quality, durability and value. Recent global financial pressures have made this task exponentially harder, with limited resources needing to be balanced against accountability and transparency in procurement, with all of these imperatives requiring a coordinated response.

This does not mean that the traditional strategies were fundamentally flawed. It is true however that they were inefficient, particularly in financing and project management, adversely affecting delivery schedules and costs.

The passion, expertise and ingenuity of the private sector forms the backbone of the new methodology, shifting the risk back from the taxpayer and firmly into the lap of the private sector, where it can be more effectively managed. All elements of the process, from design, planning and construction to lifetime management and maintenance, can be linked to performance criteria, ensuring higher quality public services.

In the UK, PFI (private finance initiative) or PPP (public private partnership) models have been in operation for many years. Putting political preferences aside, these schemes have been largely responsible for the delivery of major infrastructure projects across the education, healthcare, transport and defence sectors, on time and budget, across the country.

The concept of private sector participation in the funding, delivery and operation of public sector infrastructure is, in reality, not a revolutionary one. Governments have always relied on the private sector to design and build major capital assets that provide critical public services. It is instead the transfer of investment risk from the public to the private purse that requires the leap of faith, such that the design, finance and build accountabilities are placed predominantly in the hands of private developers. The capital cost is of course recovered over an agreed term, and for some clients, the inclusion of operation and maintenance regimes can be the springboard to a wider review of asset management onto a more commercial footing.

Laing O'Rourke is the UK's largest privately owned engineering and construction enterprise and a leading proponent of this approach and a showcase organisation for the successful implementation of major PFI/PPP

projects. Laing O'Rourke has recently brought its expertise into the Canadian market, where it is seeking to work with public and private sector clients to deliver key elements of Canada's infrastructure programme.

The company seeks early involvement with all of its clients to better understand the concepts and aspirations for the completed scheme, applying industry-leading project finance, design, management, logistics, construction and operations experience to the planning process. With strengths in planning, financing and asset management in the public and private sectors, Laing O'Rourke also has a specialist investment and development business. The team's primary focus is to invest equity into PFI/PPP projects that will provide complementary returns to the Group's core construction and operations businesses.

At the initial concept phase, the investment and project delivery teams collaborate with clients to undertake a full feasibility study, determining a project's viability and deliverability. Through this stage, a true understanding can be gained of the requirements for both clients and stakeholders, critical success factors identified and strategies formed to mitigate risk, capital investment secured, and a detailed project business plan formed that satisfy the value drivers of all parties.

Later in the project lifecycle, as the PFI/PPP transactions complete construction and pass into their operational phases, financing efficiency can be improved. Efficiency opportunities include the reduction of margins, the relaxation of cover ratio and gearing constraints, or the variation of debt tenor and structure. In this secondary market, new parties such as infrastructure investment funds or pension funds can be attracted by the reduced risk profile and the longer term stability of the resource.

As governments typically are able to secure pure investment funding at rates more preferential than the private sector there will always be misconceptions that PFI/AFP projects cost more, or represent the start of a gradual slide towards the wholesale privatisation of public sector capital assets. On a risk-adjusted basis however and after taking the whole life costs of the project into account the benefits to the public sector typically far outweigh the outturn costs incurred by the public under traditional procurement models. Of course due diligence and maintenance of the public interest are paramount as is demonstrable value for money, but as long as the sums add up to reduced construction costs and times, and more efficient and practical designs for operating and maintaining the infrastructure, the case to be made for the public/private partnership route is a compelling one.

Selected case studies

Pembury Hospital

The Pembury Hospital in Kent provides a real-life example of a successful Laing O'Rourke-led PFI project. The historic healthcare facilities on the site are, in some areas, over 100 years old, and not suited to 21st Century medical practices. With a strong relationship between the local Health Trust and Laing O'Rourke as lead construction partner, over 60% of external work on the 213,360m² footprint was completed within 12 months. The development was one of the biggest of its kind in the UK, with over 1,000 craft labour personnel active on site at its peak. It was designed using the latest 5-dimensional modelling software, which helped assure build quality was of the highest standards. Many of the building components were preassembled, which contributed to the safety record and efficiency of the build programme. When it opens early in 2011, it will be the first hospital in the UK to offer 100% in-patient accommodation in single en-suite rooms, setting new standards in modern hospital healthcare.

Heathrow Terminal 5

The £6 billion Heathrow Terminal 5 project is one of the most advanced integrated passenger terminals in the world, integrating a sophisticated transport interchange involving main line rail connections, underground lines, a network of new roads, car parking, retail and airport facilities. Construction included the main and satellite terminals, rail station, baggage and transit system tunnels, car park, diversion of two rivers, and construction of a spur directly linking to the

M25. Laing O'Rourke resource levels were over 600 staff and 2,500 operatives. The total workforce peaked at approx 5,000 and the project involved more than thirty tower and crawler cranes, including the world's biggest topless cranes.

LOR worked in a true partnership with the client, BAA and throughout the supply chain to create a culture based on innovation, control and performance. Many of the radical solutions developed on T5 led to industry advances in areas like safety (incident and injury free), demand fulfilment, lean construction, digital prototyping and Production Control.

LOR was accountable for one third of the build programme, with full responsibility for construction delivery management of the main terminal infrastructure, including the complex enabling and site logistics, integrating across 16 major projects and 147 sub-projects coordinating the thousands of activities that had to be undertaken in parallel across over 60 contractors. The principles on which the partnership agreement between BAA and LOR was based have been adopted across the industry as a template of best practice.

London 2012 – Main stadium construction

As a leading member of the programme delivery consortium for the London 2012 Olympic and Paralympic Park, the company also plays a key role in managing the immense challenges of this huge project. Using its experience in other megaprojects, it has influenced the safety performance and behavioural culture across the worksite, the largest construction project in Europe.

The 500-acre purpose-built Olympic Park in East London will include an 80,000-seat stadium, aquatics centre,

Laing O'Rourke an international engineering enterprise



Laing O'Rourke funds, designs, manufactures, constructs and maintains the built environment, providing the facilities to accommodate, educate, employ, connect, power, care for and sustain communities.

www.laingorourke.com



- Clockwise from top left
- St Pancras International Station, London, UK
 - Aldar HQ, Al Raha Beach, UAE
 - Terminal 2 Heathrow, London, UK
 - 2012 Olympic and Paralympic Park, London, UK
 - Kwinana Power Station, Western Australia
 - Cannon Place, London, UK
 - Canary Wharf Crossrail Station, London, UK

velopark, hockey centre and an Olympic Village. The delivery programme provides a world showcase for the UK construction sector and a unique opportunity to raise the bar nationally / internationally, demonstrating best practice in workplace safety, design, construction and sustainability.

As delivery partner, Laing O'Rourke forms part of the consortium to provide programme management services working with the Olympic Delivery Authority (ODA) to manage the delivery of the design, procurement and construction programme. Working as part of a fully integrated team, we are responsible for delivering one of the most complex and aggressive infrastructure programmes ever seen in the UK.

Our primary role is programme management, leading the integration of design, construction, commissioning, procurement, scheduling and cost management functions for the onsite and offsite facilities and subsequent modifications for the Legacy.

We are also responsible for managing delivery risk on behalf of the ODA. This includes ensuring that the design, construction, commissioning, testing and decommissioning activity required to deliver the necessary facilities in both Olympic mode and Legacy mode is carried out in accordance with the ODA's time-certain, quality and budget objectives.

St Pancras International Station

At the iconic St Pancras station in London, Laing O'Rourke worked with all of the parties involved with the transformation of the 100 year old railway terminus – designers, conservation consultants and the client, to achieve practical, efficient and yet sensitive engineering solutions.

The Rail Link Engineering CTRL (Channel Tunnel Rail Link) contract was at the centre of the large-scale St Pancras and Kings Cross urban regeneration scheme, which transformed St Pancras into one of the UK's most important transport interchanges.

The contract covered an extensive scope of work, including heavy civil engineering, specialist piling and demolition, refurbishment, new build, and mechanical and electrical services. The railway works included the construction of a new International Station housed at St. Pancras, but extending beyond its previous limits. The Victorian platforms were extended by 185m in order to accommodate the longer Eurostar trains.

A new deck structure permitted the construction of 13 new platforms, including six for international services and three for domestic trains using the CTRL line. In order to progress the project, the use of an interim station allowed the closure of the existing station for refurbishment. The result was sophisticated sequencing which saw an East Deck extension constructed, followed by the West deck, while a new Thames link station, built entirely underground, was built concurrently.

The programme for all the work extended to 2007, with major elements opening as they were completed. This large scale, complicated project was delivered on time and on budget.

About Laing O'Rourke

The Laing O'Rourke Group has an unrivalled track record in capital investment, construction management and project delivery, having assembled a highly talented and experienced team of professionals able to manage all aspects of a client's

project through to successful completion. Key areas of expertise include investment feasibility, project development, design management, project mobilisation, planning and consents, project controls, quality assurance, risk mitigation, operations, renewal and life-cycle management, complex stakeholder management and resource deployment.

Laing O'Rourke's delivery model is founded on a collaborative approach defined as 'Complete Thinking'. This involves working with its clients from conception to completion, advising on and providing the best ways to manage projects from end-to-end to achieve the greatest value.

The company's achievements are not limited to operations in the UK. Laing O'Rourke has an international presence in some of the world's most dynamic and developing economies. Operating under a two-hub organisational structure, Laing O'Rourke has a highly successful track record in the Middle East with such iconic landmarks as the Atlantis Hotel under its belt. An operational highlight in the past year has been the completion of the first phase of the North-South Railway project in the Kingdom of Saudi Arabia, a 800km new rail link spanning some of the world's harshest desert terrain.

Further international success has been achieved in Hong Kong, where the company has considerable experience in the rail infrastructure and maintenance arena, recently securing new work as part of the development of the Mass Transit Railway (MTR) high-speed rail expansion programme. In partnership with Bachy Soletanche, Laing O'Rourke will be delivering a major contract for the Guangzhou – Shenzhen – Hong Kong Express Rail Link, delivering the West Kowloon terminal approach tunnels.

Australia and South East Asia has the highest proportion of Laing O'Rourke's infrastructure projects. Since entering the market in 2004, it continues to flourish with a strong position in key geographies, including Australia, New Zealand, Malaysia and Indonesia. Major sector involvement is in power, rail, mining and materials handling contracts. The company has developed a substantial presence in Western Australia with BHP Billiton delivering and commissioning major facilities at the Yandi iron ore mine, while in Queensland, the country's largest combined-cycle gas turbine plant has been successfully completed for Origin Energy. 2010 saw the first rail project secured in New Zealand, with a joint venture opportunity won to install a fully electrified rail system in Auckland.

As an engineering enterprise, the company's operations are driven by the application of intellect and innovation. Capability throughout the organisation has been enhanced through relationships with several of the world's leading academic institutions. Strategic partnerships have been agreed with Cambridge University and the University of Queensland, as well as strong and growing links with several other world renowned educational centres. By connecting industry and academia, Laing O'Rourke is creating a vibrant forum for the exchange of industry skills and educational discipline, while attracting engineering alumni into the company's worldwide operations. ■

For further information, please contact:

Michael Laliberte, Director
401 Bay Street, Suite 1600, Toronto, Ontario M5H 2Y4
Tel: +1.416.999.8016 mlaliberte@laingorourke.com
www.laingorourke.com



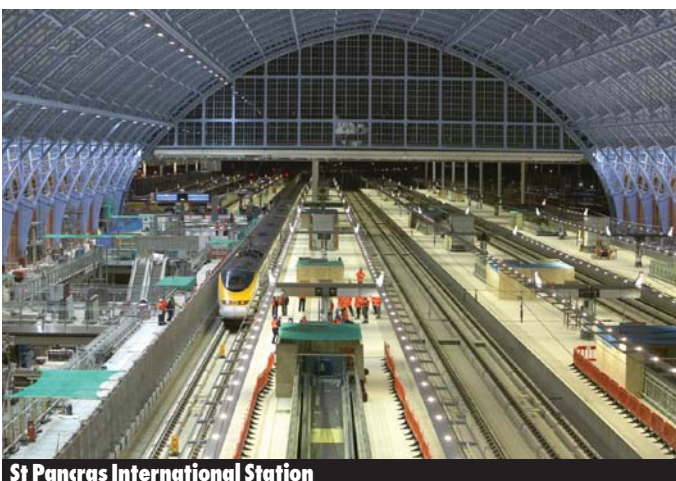
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Oakland Airport Connector BART
Rail Line

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Project

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