OVERVIEW OF PUBLIC-PRIVATE PARTNERSHIPS IN HIGHWAY AND TRANSIT PROJECTS

(113–57)

MARCH 5, 2014

THE INTERNATIONAL EXPERIENCE WITH PUBLIC-PRIVATE PARTNERSHIPS

(113–65)

APRIL 8, 2014

HEARINGS

BEFORE THE

PANEL ON PUBLIC-PRIVATE PARTNERSHIPS

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

SECOND SESSION

Printed for the use of the
Committee on Transportation and Infrastructure

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February 28, 2014

SUMMARY OF SUBJECT MATTER

TO: Members, Panel on Public-Private Partnerships
FROM: Staff, Panel on Public-Private Partnerships
RE: Panel Hearing on "Overview of Public-Private Partnerships in Highway and Transit Projects"

PURPOSE

The Panel on Public-Private Partnerships is scheduled to meet on Wednesday, March 5, 2014, at 10:00 a.m., in 2167 Rayburn House Office Building to receive testimony on the role public-private partnerships play in the delivery of highway and transit projects. The Panel will hear testimony from Joseph Kile, Assistant Director for Microeconomic Studies, Congressional Budget Office; James M. Bass, Interim Director and Chief Financial Officer, Texas Department of Transportation; Phillip Washington, General Manager, Regional Transportation District; and Richard Fierce, Senior Vice President, Flour, on behalf of the Associated General Contractors of America.

BACKGROUND

The surface transportation system provides the physical platform to move people and goods, which facilitates economic growth and job creation, ensures global competitiveness, and supports national security. In addition, it affords Americans a good quality of life by enabling them to get to work, conduct business, and visit family and friends.

The vast majority of this system has been built via traditional delivery methods, whereby public entities, such as state departments of transportation, local governments, and public transit agencies are responsible for designing, engineering, constructing, maintaining, and operating surface transportation assets. The funding for highway and transit projects has been derived from various sources, including, but not limited to, federal funding, state funding, local funding, and proceeds from municipal bond markets. However, public entities have begun to utilize public-private partnerships to address their highway and transit needs.

Public-Private Partnerships

Public-Private Partnerships (P3s) are contractual agreements between public- and private-sector entities that allow for the procurement and delivery of a facility or service for public use. P3s vary widely in their structure, resulting in a range of involvement, scope of responsibility, and degree of risk assumed by the private sector in the project. The most common types of P3s include:

Design-Build-Operate-Maintain (DBOM): under this arrangement, the public entity releases one contract for engineering/architecture services, construction, operations, and maintenance of the project. This approach differs from the more traditional method of procuring such services via separate contracts to different entities. The project is financed wholly by the public sector, which also retains any revenue risk. The benefit of a DBOM arrangement is it combines four procurements into one contract with one private sector entity. This allows the entity to not only design and construct the asset, but also may create efficiencies by having the same entity develop a more specifically-tailored long-term operations and maintenance program.

Design-Build-Finance (DBF): under this scenario, the public sector owner awards one contract for the design, construction, and full or partial funding of the asset. This arrangement allows the public sector to realize the efficiencies of design-build, while also gaining private-sector funding contributions during the construction period. The benefit for the public sector under DBF is that it may be able to advance a project that would not be possible under public funding constraints. However, the project is likely to cost more than if it were pursued by traditional public funding. Once constructed, the public sector repays the design-build contractor over a set period of time. The repayments can be structured to incentivize the private contractor to accelerate the project delivery.

Design-Build-Finance-Operate-Maintain (DBFOM): this approach is the most commonly used arrangement for the largest and most complex P3 deals. DBFOM involves combining responsibilities from design to maintenance and transferring them to the private sector. DBFOM arrangements vary widely in the United States, especially the degree to which financial and revenue risk is transferred to the private sector. DBFOM project capital and construction costs are financed via debt that leverages revenue streams dedicated to the project. Toll revenue is the most common revenue source, though pledged tax revenue or availability payments have also been used as revenue sources. DBFOM contracts are often set for a period of 30 to 50 years, and the asset owner typically requires certain performance standards be met over that time period. The public sector generally retains ownership of the asset, and these procurements can shift revenue risk onto the private sector.

Concession Agreements for Existing Facilities: under this arrangement, the public asset owner holds a competitive process to lease an existing tolled facility to the private sector for a set period of time. Once awarded, the private-sector entity has the ability to set toll rates and the right to the toll revenue, and must operate and maintain the facility. Typically, as part of the transfer, the private sector will make an upfront payment to the public sector.

Typical Components of Highway and Transit P3 Projects

Utilizing P3s for the delivery of surface transportation projects in the United States is a fairly recent trend, and, therefore, the universe of projects is limited. However, there are several common components to P3 deals (especially the more complex DBFOM arrangements) that have been used for a variety of highway and transit projects.

TIFIA. Created under the Transportation Equity Act for the 21st Century (TEA-21; P.L. 105-178), the Transportation Infrastructure Finance and Innovation Act (TIFIA) Program provides Federal credit assistance, in the form of a loan, a loan guarantee, or a line of credit, to eligible surface transportation projects. State governments, local governments, toll authorities, and public-private partnerships are eligible to apply for TIFIA credit assistance.

TIFIA is designed to leverage federal funding to attract private and non-federal investment in surface transportation projects by providing supplemental or subordinate debt. TIFIA credit assistance provides improved access to capital markets, flexible repayment terms, and potentially more favorable interest rates than can be found in private capital markets for similar instruments.

The U.S. Department of Transportation (U.S. DOT) estimates that TIFIA's leverage ratio is more than 30:1, which means that every one dollar in TIFIA funding supports more than $30 in surface transportation infrastructure investment. TIFIA credit assistance must be repaid and repayment sources can include toll revenue, user fees, or other dedicated payments. In the event of a bankruptcy, TIFIA generally cannot be subordinated to other debtors.

Private Activity Bonds. Private Activity Bonds (PABs) are debt instruments issued by state or local governments whose proceeds are used to construct projects with significant private involvement. Surface transportation projects became eligible for PABs with passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, P.L. 109-59). PABs help encourage additional investment in transportation by lowering the cost of capital for the private sector through tax-exempt, low-interest borrowing. PABs for transportation projects are capped at $15 billion and subject to approval by the U.S. DOT.

Federal, State, and Local Funding. P3 projects in this country, particularly large projects, often include significant federal, state, and local funds. Federal funding sources can include Federal-aid Highway Program funds provided under Title 23, United States Code, and Federal transit funding provided under Chapter 53 of Title 49, United States Code. In addition, state and local governments' funding sources can include dedicated fuel taxes, sales taxes, toll revenue, and bond proceeds.

Private Equity Contributions. Private partners often contribute equity funds to the project. The amount of equity varies significantly across projects.

MAP-21

Congress most recently reauthorized federal surface transportation programs in the Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141), which was enacted on July 6, 2012. MAP-21 provided approximately $105 billion for fiscal years 2013 and 2014. MAP-21 increased funding for the TIFIA program from $122 million per year to $750 million in FY 2013 and $1 billion in FY 2014. It also made other substantive policy changes to the program, including increasing the allowable TIFIA loan amount from 33 percent to 49 percent of the project costs.

As of February 2014, TIFIA has approved 41 loans totaling over $15 billion in credit assistance to support over $59 billion in project costs.

EXAMPLES OF P3 AGREEMENTS INVOLVING TIFIA LOANS AND PRIVATE EQUITY						
Project	State	Total Project Cost	TIFIA loan	Other Sources of Funding	Length of Concession	Delivery Method
Presidio Parkway	CA	$852 million	$150 million	$700 million: ARRA grant, federal, state, local, bank loan, and private equity	30 years	DB and DBFOM (2 phases)
Eagle Project	CO	$2.0 billion	$280 million	$1.7 billion: FTA New Starts FFGA, federal grants, sales tax revenue, PABS, private equity, bond proceeds, and local funds	34 years	DBFOM
Port of Miami Tunnel	FL	$1.1 billion	$341 million	$731 million: FDOT funds, private equity, and senior bank debt	35 years	DBFOM
Northwest Corridor	GA	$834 million	$275 million	$559 million: state motor fuel taxes, developer financing, state and local funds	N/A	DBF
Goethals Bridge Replacement	NY	$1.4 billion	$474 million	$985 million: PABS, private equity, and port authority funding	40 years	DBFM
SH 130	TX	$1.3 billion	$430 million	$796 million: senior bank loans and private equity	50 years	DMFOM
IH 635 Managed Lanes	TX	$2.6 billion	$850 million	$1.8 billion: PABS, private equity, toll revenue, and public funds	52 years	DBFOM
North Tarrant Express Segments 1 and 2A	TX	$2.0 billion	$650 million	$1.4 billion: PABS, public funds, and private equity	52 years	DBFOM
North Tarrant Express Segments 3A and 3B	TX	$1.7 billion	$531 million	$1.1 bilion in PABS, public funds, private equity, bond proceeds, federal and state funds.	52 years	DBFOM & DBB (2 phases)
I-495 Capital Beltway	VA	$2.1 billion	$589 million	$1.5 billion: PABS, state funds, and private equity	85 years	DBFOM
Downtown Tunnel/Midtown Tunnel/MLK Extension	VA	$2.1 billion	$422 million	$1.6 billion: PABS, private equity, public funds, and toll revenue	58 years	DBFOM
I-95 HOV/HOT Lanes	VA	$923 million	$300 million	$616 million: PABS, state funds, and private equity	76 years	DBFOM

Notes:
Source - Information from DOT TIFIA project profiles on TIFIA website. For more information, see http://www.fhwa.dot.gov/ipd/tifia/projects_project_profiles/
Total project cost represents TIFIA eligible project costs

WITNESS LIST

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Phillip Washington
General Manager
Regional Transportation District

Richard A. Fierce
Senior Vice President, Fluor
on behalf of
Associated General Contractors of America

OVERVIEW OF PUBLIC-PRIVATE PARTNERSHIPS IN HIGHWAY AND TRANSIT PROJECTS

WEDNESDAY, MARCH 5, 2014

HOUSE OF REPRESENTATIVES,
PANEL ON PUBLIC-PRIVATE PARTNERSHIPS,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The panel met, pursuant to notice, at 9:59 a.m. in Room 2167, Rayburn House Office Building, Hon. John J. Duncan, Jr. (Chairman of the panel) presiding.

Mr. DUNCAN. The panel will come to order. First, let me thank our distinguished panel of witnesses for being with us today to testify. And this is the second event and first hearing of the Panel on Public-Private Partnerships, or P3s, as they are commonly called. We had a very successful, very well-attended roundtable a couple of weeks ago, and now this is our first hearing.

We are investigating how P3s can accelerate the delivery of projects across all modes of infrastructure. I think almost everybody in the Congress, both Democrats and Republicans, agree that we have very great infrastructure needs in this Nation. The big question is how do we pay for them. And so, there are various suggestions or ideas or proposals, but certainly many States and several State and local governments have decided that public-private partnerships are one of the solutions to the problem that we all face.

Our roads and transit systems play a critical role in the movement of goods and people, and in the success of our economy. States are increasingly utilizing P3s to help them address their highway needs and other needs. We are happy to have one of the leaders in this effort today, a representative from the Texas Department of Transportation, with us.

Americans are also using transit systems to—more than ever, to get them where they need to go. But, as we all know, building new transit lines can be a complex and costly effort. The Denver region decided to pursue a public-private partnership in order to significantly expand its transit system far more quickly and cheaply than would have been possible with traditional project delivery approaches. We look forward to hearing from a representative of Denver's regional transportation district this morning.

In this hearing we also want to explore how the public sector can ensure that public-private partnerships deliver public benefits, and how those benefits are protected over time. That is a very impor-

tant question. We also recognize that the private sector will only engage in projects that make economic sense for their business models. So it is important to understand what the private sector looks for when selecting projects to participate in. One critical issue we will discuss is how the public and private sectors can share in the risk of a project, especially in arrangements that can last for 30 years or even longer.

Finally, while public-private partnerships are, first and foremost, driven at the State and local level, the Federal Government has a very important role to play in these arrangements. Everything that this committee deals with, there is a very important Federal role, because people in Ohio sometimes use the highways in Tennessee, and vice versa. People in California sometimes use the airports in Texas, and vice versa. People in New York sometimes use the water systems in Florida, and vice versa, and so forth. And the same is true with our ports and railroads and every other topic that this committee deals with.

The last surface transportation bill, MAP–21, significantly increased the size of the TIFIA program, which provides credit assistance to eligible surface transportation projects. We have heard from many stakeholders that the TIFIA program is a critical component of public-private partnerships in this country. We want to explore how the TIFIA program is working, and what changes we may need to make in the next authorization bill, which we hopefully can complete later this year.

Private activity bonds are also important in the P3 arrangements, and I am sure we will hear about their role today, as well.

Again, I want to thank the witnesses for being here today, and I now recognize the ranking member, Mr. Capuano from Massachusetts, for 5 minutes to make any opening statement he may have.

Mr. CAPUANO. Thanks for being here, guys. I look forward to the discussion.

[Laughter.]

Mr. DUNCAN. Well, that is the quickest opening statement I think I have ever heard. Well, thank you. Thank you very much.

We have now been joined by our chairman, Mr. Shuster, and it is always an honor and privilege to have him here with us, and so I would like to call on him for any comments he has at this time.

Mr. SHUSTER. I just want to echo Mr. Capuano's words.

[Laughter.]

Mr. DUNCAN. All right. And Mr. Meadows?

Mr. MEADOWS. Ditto.

Mr. DUNCAN. Well, well, this is a first, I can tell you. Of all the committee hearings I have chaired over the years, that is a first.

Mr. SHUSTER. Mr. Chairman?

Mr. DUNCAN. Yes?

Mr. SHUSTER. Just a reminder, we are not in the Senate, so——

[Laughter.]

Mr. DUNCAN. All right. Well, I previously welcomed all the witnesses. Our panel today is a very distinguished one. We will start with Mr. Joseph Kile, who is assistant director for microeconomic studies at the Congressional Budget Office, and then, following his testimony, Mr. James Bass, the interim executive director and chief financial officer of the Texas Department of Transportation. Next

is Mr. Phillip Washington, general manager and chief executive officer of the Regional Transportation District of Denver, Colorado. And finally, Mr. Richard Fierce, a senior vice president of Fluor Enterprises. And he is here on behalf of The Associated General Contractors of America.

I ask unanimous consent that our witnesses' full statements be included in the record.

[No response.]

Mr. DUNCAN. And hearing no objection, that will be so ordered.

Since your written testimony has been made a part of the record, the subcommittee would request that you limit your oral testimony to around 5 minutes.

And, Mr. Kile, we will begin with you.

TESTIMONY OF JOSEPH KILE, ASSISTANT DIRECTOR FOR MICROECONOMIC STUDIES, CONGRESSIONAL BUDGET OFFICE; JAMES M. BASS, INTERIM EXECUTIVE DIRECTOR AND CHIEF FINANCIAL OFFICER, TEXAS DEPARTMENT OF TRANSPORTATION; PHILLIP A. WASHINGTON, GENERAL MANAGER AND CHIEF EXECUTIVE OFFICER, REGIONAL TRANSPORTATION DISTRICT OF DENVER, COLORADO; AND RICHARD A. FIERCE, SENIOR VICE PRESIDENT, FLUOR ENTERPRISES, INC., ON BEHALF OF THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA

Mr. KILE. Thank you. Good morning, Congressman Duncan, Chairman Shuster, Congressman Capuano——

Mr. DUNCAN. Pull the microphone a little bit closer to you, if possible.

Mr. KILE. Sure thing. Is that better?

Mr. DUNCAN. Yes.

Mr. KILE. Good. Good morning, again, and thank you for having me here today to talk about public-private partnerships before this panel.

The United States has about 4 million miles of public roads. In 1960 the number of miles of—since 1960 the number of miles of roads has grown slowly, but the demands on them have grown substantially. In particular, the number of vehicle miles traveled roughly quadrupled, rising from about 700 billion in 1960 to roughly 3 trillion in 2012.

To pay for those roads, the Federal Government and State and local governments spent about $155 billion in 2012. Traditionally, a State or local government assumes most of the responsibility for carrying out a highway project, and bears most of its risk. Such risks include the possibility of cost overruns, delays in the construction schedule, and shortfalls and toll revenues for such roads. Alternatively, some analysts assert that public-private partnerships can increase the amount of money available for highway projects, and can complete the work more quickly, or at lower cost than is possible with the traditional approach.

Over the past 25 years, governments at all levels have created about 100 public-private partnerships for highway projects that exceeded $50 million. Adjusted for inflation, the total value of those projects was about $60 billion. That is about 1.5 percent of the total amount spent by all governments for highways during that period.

But roughly half of that total has been committed during the past 5 years.

My testimony today is going to address the role of the public-private sector in financing and providing—that is, designing, building, operating, and maintaining a highway project—and I want to make three broad points.

First is that private financing can provide capital necessary to build a new road, but such financing comes with the expectation of a future return for private lenders and private investors. Private financing only increases the available funds for highway construction when States or localities have chosen to restrict spending by imposing legal or budgetary constraints on themselves. Even so, regardless of the financing mechanism chosen, the ultimate source of money for highways is toll revenues paid by drivers and funds from taxpayers.

Second, the cost of privately financing a highway project is roughly equal to the cost of financing it publicly after factoring in certain costs to taxpayers. Those costs include the risk of losses from the projects that are borne by the Federal Government, and the financial transfer made by the Federal Government to States and localities. CBO examined 29 highway projects that were undertaken since 1989 that cost more than $50 million and involve private financing. The amount of risk that was transferred to the private partner varied substantially from project to project. In some cases, the financial risk was borne primarily by taxpayers, who were responsible for repaying the debt incurred by the private partner. But in other cases, the private partner bore much more of the risk of the investment, in particular the risk that it might lose the money if the project did not receive the revenues that were expected.

Of the projects that have been completed, some of those that were financed through tolls have failed financially because the private partners over-estimated the revenues that the project would generate. And, as a result, they were unable to fully repay the project's debt. Perhaps in response to that history, projects that are still under construction tend to rely less on tolls for revenues. More commonly now, private partners are compensated through a State's general revenues, which reduces the risks of not being repaid. In addition, financing provided by TIFIA and tax-exempt private activity bonds have become an increasingly important source of funds for highway projects.

Third, and finally, CBO assessed the limited evidence on cost savings that might occur from bundling together other elements of providing highways—in particular, designing, building, operating, and maintaining them.

On the basis of the evidence, it appears that public-private partnerships have built highways slightly less expensively and slightly more quickly than when compared with the traditional approach. Contracts that bundled two or more elements of the work may give greater control to the private partner, and a stronger incentive to reduce costs and meet established schedules.

But contracts that achieve those goals can be challenging to formulate, especially in light of the lengthy period of time over which many contracts extend. The relative scarcity of data and the uncer-

tainty surrounding the results from the available studies make it difficult to apply the conclusions definitively to other such projects.

Thank you very much. That concludes my statement. I would be pleased to answer any questions you might have.

Mr. DUNCAN. Well, thank you very much, Mr. Kile.

Mr. Bass?

Mr. BASS. Good morning. My name is James Bass, and I am the interim executive director and chief financial officer at the Texas Department of Transportation. I would like to thank Chairman Duncan and Ranking Member Capuano for holding this hearing today. I will discuss the State's perspective using public-private partnerships—or P3s, for short.

As the panel is well aware, States are struggling with the lack of predictable funding for our transportation projects. The surface transportation program, until very recently, was one of the most reliable of all Federal undertakings. Now there are recisions, earmark claw-backs, short-term extensions, and a trust fund that can no longer fully replenish itself. These are obviously not ideal circumstances in which to deliver projects, because they disrupt the planning process for agencies, local communities, and our private-sector partners, both on the construction and the engineering side.

In recent years, Texas has looked to the private sector more frequently to help us not only pay for, but to construct large-scale projects that otherwise would be years away from construction. These P3s are enabling the State to leverage our resources and deliver projects to our citizens much more efficiently and expeditiously than with the standard pay-as-you-go methods of the past.

In Texas, P3s for transportation projects are entered into using a procurement process that allows TxDOT to select the proposal that provides the best value to the State. These agreements provide for the design and construction, rehabilitation, expansion, or improvement of a transportation project, and may also provide for the financing, maintenance, and operation of such a project.

Through the use of P3s, TxDOT has been able to narrow the gap between our transportation needs and our transportation assets, and has helped citizens to realize our transportation goals of improved traffic flow and improved air quality. Without the option of these P3s, several projects would not be developed for a number of years, including State Highway 130 segments 5 and 6 in central Texas, and a number of long-awaited projects in the Dallas-Fort Worth region.

There are different ways to structure a P3 agreement, and the terms of these agreements vary, based on the level of private sector participation. In Texas, a concession agreement gives the developer responsibility to perform some or all of the development, financing, operation, and maintenance of a facility for up to 52 years. In exchange, the developer is provided a right to the revenue generated by the project, and these projects also can potentially provide for revenue sharing with TxDOT over the life of the contract and, in some cases, include an upfront, lump sum payment.

Other potential advantages include the developer assuming the risk for cost, schedule, traffic and revenue, financing, and meeting State and Federal standards over time. It also removes the financial burden of operating and maintaining the project from TxDOT.

And it also reduces and, in some cases, eliminates the amount of public funds needed to construct the project.

One of the benefits of building projects under a P3 is that elements of risk are transferred from the public sector to the private developer. However, there are some risks that are better managed by TxDOT than by the developer. And one of our core principles is to allocate risk in such a way that we maximize the benefits of the P3 to the public. These risks are identified and allocated on a project-by-project basis.

Private activity bonds and TIFIA are very important tools that have helped several Texas projects be more feasible. A point that is generally missed in the descriptions of MAP–21 is that it—the reinvigorated TIFIA program had the practical effect of adding at least an extra year of project delivery to the 2-year bill.

MAP–21 also solved key challenges that have historically held back the TIFIA program. We are very encouraged by the substantial increase in funding for the program, the increased share of project costs that TIFIA can finance, and the congressional desire to make the TIFIA program more efficient.

To date in Texas we have received over $4.2 billion in TIFIA assistance. And when that's been combined with local, private funding, has yielded over $13 billion in total projects. These projects have been critical to relieving congestion and contributing to efficient movement of people and goods in the heavily populated areas of our State.

Prior to MAP–21, USDOT was allowed discretion to evaluate and choose eligible projects under specific criteria. Over time, USDOT continued to add criteria such as livability to its list of selection criteria. These criteria, while seen by some as beneficial to help narrow down projects for funding, went beyond what was laid out in the law. MAP–21 eliminates discretionary selection criteria, and establishes a limited set of objective criteria that require a yes-or-no determination of satisfaction, and TxDOT welcome this change.

MAP–21 provides critical changes and increased funding, but changes can be made to further enhance the program: reinforce that 49 percent of eligible project costs are allowed under MAP–21; streamline the letter-of-interest phase and enforce strict deadlines for the review of LOIs; incorporate the TIFIA application process with project procurement, in order to maximize competition.

Again, I appreciate the opportunity testify today on the success of partnering with the private sector to deliver transportation projects in Texas. P3s in Texas have and will continue to play a vital role in how we deliver critical transportation projects.

And I look forward to answering any questions.

Mr. DUNCAN. Well, thank you very much, Mr. Bass. I had the privilege of chairing the Highways and Transit Subcommittee when we wrote MAP–21, so I appreciate some of your favorable comments there.

Mr. Washington?

Mr. WASHINGTON. Chairman Duncan, Ranking Member Capuano, Mr. Shuster, members of the Panel on Public-Private Partnerships, I want to thank you for the opportunity to present our testimony and our story in Denver on P3s.

Various P3s have been very crucial in the success of our program called the FasTracks Program, which I believe is still the single largest voter-approved transit expansion program in this country.

We encourage Congress to increase the focus on P3s to spur faster development of transit assets. We believe the new transportation reauthorization bill is a great vehicle to assist in that. We also strongly urge Congress to preserve and expand the financing tools that make P3s possible, those being TIFIA and private activity bonds.

What I would like to focus on today is some of the innovative public-private partnerships approaches that we have employed in Denver. One is the Eagle P3 project. This is a design, build, finance, operate, maintain, or DBFOM P3 buildout over 36 miles of commuter rail that will connect downtown Denver to the Denver International Airport. The second one is our Denver Union Station project. This will be the new intermodal hub of our system. And what's very unique there is the enhanced real estate value of the land adjacent to the transit assets is being used to pay off the transit development.

And while not discussed extensively here today, we are in partnership with the Colorado Department of Transportation on a P3 to deliver a high-occupancy toll lanes project, or BRT system, bus rapid transit system, between Denver and Boulder.

RTD Denver, in that FasTracks program, this is 122 miles of additional light rail and commuter rail, 18 miles of bus rapid transit, and 57 new stations, which brings into— brings the opportunity of transit-oriented communities, as well.

The RTD's Eagle program, which is a line to the airport, or two-and-a-half lines, we pursued this as a public-private partnership because of the efficiencies that we believe could be attained through the P3 approach. This Eagle project is being procured through a concession agreement between RTD and the Denver transit partners to design, build, finance, operate, and maintain these components for a 34-year period. The agency will retain all assets—ownership of all assets at all times, set the fares, fare policy, keep all the project revenues. We will make payments through what is called availability payments to the concessioner, based on established performance metrics. That project is about 60 percent complete. And funding consists of Federal dollars, a full funding grant agreement, TIFIA, private activity bonds, and, of course, private sector equity.

The Denver Union Station project, which is the hub of our system, is a huge engine for transit-oriented communities and downtown Denver, significant expansion of mixed-use neighborhoods surrounding that station. It has been the catalyst in attracting some $1 billion in development around that station, which, as I mentioned earlier, is helping to pay off the transit elements and the loans.

The TIFIA loan program, along with the railroad rehabilitation improvement fund, or RIF program loans—the TIFIA loan is for $145 million, RIF is $152 million. Those are the backbones of financing of this project, and they constitute about 64 percent of this $500 million program, which is the hub of our system.

Finally, let me say that with the P3 delivery method and other financing mechanisms previously mentioned, we are moving forward with plans for the construction of these projects that I mentioned. However, we don't see them as a substitute, of course, for the strong support for the general transportation investment, or the new transportation reauthorization bill.

I will say that the jobs that have been created, the transit-oriented communities that have been created around these projects, is extraordinary. I invite the panel to come out on May the 9th for the opening of this Denver Union Station hub to see firsthand a public—successful public-private partnership that will open on May the 9th.

I look forward to your questions.

Mr. DUNCAN. Well, thank you very much. And from all reports, your project has been very successful, so we will look forward to hearing your answers to some of our questions.

Mr. Fierce?

Mr. FIERCE. Chairman Duncan, Ranking Member Capuano, and members of the Panel on Public-Private Partnerships, I am Richard Fierce. I am a senior vice president at Fluor Corporation, speaking here today on behalf of Associated General Contractors. Fluor has been a proud member of AGC for many years. AGC represents over 26,000 firms in our industry.

I also serve presently as the president of the Association for the Improvement of American Infrastructure, AIAI, an organization that was formed a little over a year ago, a nonprofit advocacy group promoting the use of P3s in the United States.

A couple of introductory comments about Fluor and Fluor's history in P3s. We are a 100-year-old company with about $27 billion in revenues last year, and 41,000 employees on 6 continents. We have been involved in P3 delivery for over 20 years now, and have been involved with a number of firsts in the United States: the Conway Bypass in South Carolina; E–470 in Denver; the 895 project in Virginia, now known as Pocahontas Parkway; and segments 1 through 4 of SH 130 in Texas.

We are also proud to be presently delivering the Eagle P3 for Mr. Washington, and we recently completed the Capital Beltway HOT Lanes, here in the District of Columbia. We are also currently delivering the Tappan Zee Bridge in New York.

My comments about P3 are fairly simple. I don't want to oversell P3s, they are not a magic bullet that somehow convert projects that aren't feasible into showpieces. But they are an important tool in project delivery, we think an important tool that should be in every procurement agency's toolkit. And it is a tool that can help close financing gaps by delivering private sector debt and equity. But I don't like to focus on the finance gap; there is others eminently more qualified to speak to that than I am.

But I like to speak to a feature of P3 that I don't think as many people appreciate, and that is we truly believe that public-private partnerships deliver more project for the dollar. And you might say, "How does that happen?" It happens because of increased collaboration between the public and private sectors.

The private sector gets involved earlier in project definition, and is involved later through delivery of the project in operations and

maintenance. That early involvement enables construction and design and the public sector to communicate and help shape the project while you can still shape the project. It allows life-cycle costing to be taken into account while the design is underway. And then, that long-term involvement through operations and maintenance is, in part, the private sector's skin in the game.

So, how do we deliver innovation? We deliver innovation frequently through a process they refer to as alternative technical concepts. During the procurement process, the private sector comes up with ideas, ways to try to deliver a better project, a more economical project, a more efficient project. You might think that that collaboration could happen with any project delivery. But the fact of the matter is, when the private sector has skin in the game in the form of equity, when it has skin in the game in the form of a long-term operations and maintenance contract, we think the public sector is a little bit more receptive to our innovative ideas, because they know that we have to live with them for 30 years.

In addition to the harder issues of project scope, we also like to point to some of the soft issues. We believe public-private partnerships better deliver small, disadvantaged, and minority business content. We are very proud of the content we delivered on the Capital Beltway, over $540 million of DBE SWaM content on a project that started out at $1.4 billion. So we think that we deliver more project for the dollar, and better ability to deliver some of the soft items, as well.

Thank you, and I look forward to your questions.

Mr. DUNCAN. Well, thank you very much. You have been a very helpful and informative panel. And to have an expert here from the Congressional Budget Office, and a highway expert, and a transit expert, and an expert from the private sector added to the three witnesses we had at our first meeting a couple weeks ago, we have gotten off to, I think, a great start here.

We are doing this panel at the request of Chairman Shuster, who has been a great leader for this committee. And I would like to call on the chairman at this time for any comments or questions that he might have.

Mr. SHUSTER. Well, thank you very much. I appreciate that, and appreciate all the witnesses being here today. Just a couple of questions.

On the design-build—I think I ask this question every time I get in front of folks. And were you able to quantify the savings by design-build? Any of you that operate on them have an answer?

Mr. Kile, you want to start?

Mr. KILE. I am sorry, I don't have an immediate number in front of me, Mr. Chairman. But in the report we wrote in 2012, and in doing some research updating that for today, we did look at some of the design-build and the operate and maintain experience, and learned that they are somewhat cheaper to build, and come to fruition somewhat more quickly than under the traditional approach. And I think it is a matter of the communication that can go on between designers and builders and those who operate and maintain, and some additional reference to life-cycle costs of projects.

And I guess the only cautionary note I would throw on that is that the experience with these types of public-private partnerships

is relatively limited, and so it is difficult to apply the general lesson to any specific example.

Mr. SHUSTER. So there is a savings, but you just can't quantify, you can't say 10 percent, 20 percent?

Mr. KILE. I think that that is hard to say, and I think that that would depend on the specifics of the project at hand.

Mr. SHUSTER. Right, right. Mr. Bass, why don't you go, because you talked pretty extensively. And then I will go to Mr. Washington.

Mr. BASS. I would say, like Mr. Kile just stated, we don't have any objective figures to show. One of the things—we have comparisons to what we were—we would have estimated the cost to be under a design-bid-build, but since we didn't go that route and went with the design-build, it is really just speculation, compared to what our estimates were. But we have certainly seen by—under the design-build, allowing the overlap of design and construction to go on at the same time, rather than the historic sequential process, the project is being delivered sooner to the public than the traditional methods.

We also think coming with that is some cost savings, as well.

Mr. SHUSTER. Mr. Washington?

Mr. WASHINGTON. Yes, sir. I would comment on our design, build, finance, operate, and maintain Eagle project, where that project came in $305 million below our internal estimates. This was very interesting to us. Mr. Fierce mentioned alternative technical concepts, or ATCs. We began to see the ATCs that were submitted during the procurement phase, and we knew that we had tremendous savings there. So the ATCs really, really helped. The 305, no one anticipated that amount of savings from the internal estimate that we had on the books.

So, I would say, in that respect, tremendous, tremendous savings. And I would also add that us concentrating on the performance metrics, not so much being prescriptive with regard to the technical pieces—let the private sector figure out the technical pieces—I just want the train to get from downtown to the airport in 30 minutes. And so that helped us.

Mr. SHUSTER. Right. Mr. Fierce?

Mr. FIERCE. Yes, just offer a bit of anecdotal evidence here, a quote from the chairman of the New York State Thruway Authority Board, Chairman Milstein, describing our Tappan Zee design-build proposal, "produced a savings of at least $1.7 billion, compared with the original State and Federal cost estimates." So we do think that design-build, done properly, can really unleash value.

Mr. SHUSTER. What is your total on that bridge, the Tappan Zee Bridge?

Mr. FIERCE. Our contract value was $3.14 billion.

Mr. SHUSTER. And they were saying it is going to be closer to $5 billion.

Mr. FIERCE. That may include work on either—may include work outside of our contract.

Mr. SHUSTER. Right, right. And, Mr. Washington, you said the land that is being developed around your project, is that because of land values going up, tax base? Or is that because you own the land and you are selling it? How is that money coming into you?

Mr. WASHINGTON. That is tax-increment financing. So the development going on around by other parties are paying that TIF revenue into the project. This is a partnership between the transit agency, the city, and the DOT, as well.

Mr. SHUSTER. So it is land value increase, you are taxing——

Mr. WASHINGTON. Yes.

Mr. SHUSTER [continuing]. Getting property tax to fund it? OK.

Mr. WASHINGTON. Yes, sir.

Mr. SHUSTER. Thank you very much. I yield back.

Mr. DUNCAN. Well, thank you very much. And certainly you get a lot of attention when you talk about savings hundreds of millions, or even $1.7 billion on projects. So that is great for everyone concerned.

Mr. Capuano?

Mr. CAPUANO. Thank you, Mr. Chairman. I want to thank the panelists. I tell you, I love these panels. I am having fun with this, and I really want to have more of a conversation than anything else, because I have a lot to learn.

But when I first started this, when I was asked to chair this, honestly, I wouldn't have put design-build in as a P3. I mean I guess it is, but that is not my definition of one. I accept it as one. So I kind of look at design-build as almost its own separate entity. I look at—when I think of P3, I think of more the financing, the operating, and the maintenance aspect of it. So, to a certain extent, I distinguish that.

But I also want to remind people why design-build wasn't adopted—well, how we got to the system we have, the design-bid-build. We did it because a lot of people across this country stole money. And we, little by little over the years, separated it out so that the same guy who was designing it wasn't building it and stealing money.

Now, I am not saying—it was inefficiency intended to avoid malfeasance. Now, I am not saying it doesn't need to be tightened up, I actually think it is a good idea. But let's not forget how we got where we are, and what the potential downfalls are if we go too far down the road too quickly. It doesn't mean I oppose it, I actually like the idea, but I am conscious of not opening up the barn door and forgetting how we got where we are.

So, I want to take, for me, design-build and kind of put it to the side. I know it is, but in my mind it is not really the P3 that I am most interested in. And I want to chase something, particularly with you, Mr. Kile.

A couple of weeks ago we had some people from Indiana in, and I asked a simple question. The Indiana toll road was sold—and I am not sure I got my numbers exactly right—something like $3.8 billion for a 75-year lease, which works out to approximately $50 million a year that the State would be getting. And I asked a very simple question. How much do you get in tolls off the Indiana toll road? How much did you get before? How much do you get now? Because if you are getting $50 million a year, and the State is collecting $60 million, why would you sell it? Or, if you are getting $50 billion and you are only making $40 million, why would anybody buy it?

So, for me, honestly, the statement that you made—or the report made that you repeated—I want to quote directly from the very first page of the CBO report—"The cost of financing a highway project privately is roughly equal to the cost of financing it publicly after factoring in the costs associated with the risk of losses from the project, which taxpayers ultimately bear, and the financial transfers made by the Federal Government to States and localities." Now, you repeated that, and I am starting to see that more and more on some of these projects, not all of them.

Are there—did you—when you made this statement, were you able to get detailed financial reports on many projects, number one. And, number two, did you come up with a conclusion as to which projects might make more sense than others? We all know there has been some bankruptcies. We all know that we are still struggling of which—what projects are most subject or most open to a P3. Did you make any conclusions like, for the sake of discussion, tunnels are more—are better than bridges, or express lanes are better than tunnels, or anything like that? Were there any of those conclusions made?

Mr. KILE. So, in assessing the projects that we looked at, which are primarily laid out in tables three and four of the testimony and of the report, we looked at—there were a wide variety of projects with different amounts of both public and private financing involved with them. The private firms that are putting up money are presumably doing so with the expectation of returns on their investment. And those returns would ultimately come from either the government—a government, not necessarily the Federal Government, but a government—in terms of an availability payment, or through tolls imposed on users.

And so, from the investors' perspective, I would think that they would be most interested in making an investment, or they would be able to feel pretty——

Mr. CAPUANO. Are you able to distinguish which projects maybe make more financial sense than others?

Mr. KILE. So we did not look at, specifically, whether roads or tunnels or other kinds of—one type or another——

Mr. CAPUANO. Because for me that is—Mr. Bass, Mr. Washington, Mr. Fierce, have you been able to look at which projects—I mean you have had more experience with them than I have—which projects make more sense?

I guess my problem with always asking State or local officials is your job is to build things. Your job is not necessarily to worry about the long-term financial aspects of these things. And I understand that, and I don't think that is a bad thing. You have a different role than I do. So, to a certain extent, I understand why you want to build things right now and get the money any way you can. Don't blame you. But from my perspective, I got to be worried about the next generation of people building things, and whether they are going to have the money, or whether we are going to spend it all—which I know some of my friends on this panel are always worried about other things, but I am worried about everything, including transportation.

Look, I like spending money as much as the next guy, but I have kids. And hopefully some day I will have grandchildren. I want

them to have decent roads, too. And I don't want to waste it all—not waste it all—I don't want to use it all for my benefit and have nothing left. And I am just wondering. Have you had any experience of which projects might work better than others?

Mr. BASS. Well, one of the things, on the revenue sharing in Texas, unlike Indiana—my understanding is they took all of that future revenue stream in a single, upfront payment. What we have elected to do in Texas is, in some cases, take an upfront payment. But on all of our projects we also have revenue sharing. And if the project performance is greater than anticipated, over time the share of revenues that come to the State of Texas increases as well.

Mr. CAPUANO. Would you agree with CBO's conclusion that, over time, that the actual cost of doing most of these is approximately equal to the taxpayer? Do you agree with that or disagree with that?

Mr. BASS. No, I would agree with that. One of the things is the access to the capital. So one of the things we do in Texas when we have a proposal, or we are looking at a project, we will look at trying to deliver the project through the traditional method, but we will also look at, well, what if we just issued toll revenue bonds and did a design-build project.

What we find in many circumstances is that the traffic and revenue estimates from the public sector show that there is not enough demand to fully fund the project. So there is going to be a funding gap that would need to come from fuel taxes or registration fees. And when we look in our planning documents, there is no funding to fill that funding gap. What the private sector brings in many of these projects is that funding.

But then also, the partnership—one of the keys of the design, build, finance, operate, and maintain, as been mentioned earlier, that in the initial construction, when that same party is going to be responsible for maintaining it over time, they are building in life-cycle costs that, when it is segregated, design, build-build, and then operate and maintain over time, I am not sure that really gets integrated into the delivery of projects under the traditional method.

Mr. CAPUANO. I apologize, my time is way over. I appreciate the chairman's indulgence. And I want to come back to this, but I do want to conclude with that, to me, goes to my last point, which I will make later, but I want to just draw a big, bold line under it. Other than the quickness of being able to do these projects—which, I agree, the design-build does do—the other part of the problem is I am concerned about spending tomorrow's money today. But I am also concerned that what this really does is it draws a big, bold line under Government's inability or unwillingness to make tough decisions. And some of those tough decisions are to institute or increase tolls or other fees to bring those life costs into it. It doesn't mean we can't do it, we just don't do it. And so, therefore, we are shifting it off to somebody else to make that project.

I apologize, and I thank the chairman for his indulgence.

Mr. DUNCAN. Good questions. In fact, most people's main concern, or one of the main concerns about the public-private partnership is the question about whether we leave some of the taxpayers 20 or 30 or 40 years down the road left holding the bag.

But I want to go—I am going to reserve my questions to the end and go now to Mrs. Miller.

Mrs. MILLER. Thank you, Mr. Chairman. To the panel, particularly to the gentlemen from Texas and Colorado, I am just very excited about Chairman Shuster actually having the Federal Government taking sort of a lead, I guess, if I will, from the States, where—they are always the incubators of innovation, and really, creative thought, and creative financing, and all these kinds of things, because certainly our country—and every country, a really developed nation—doesn't have enough—it doesn't have adequate funding to do all the infrastructure investment that we want to. So, I was particularly interested to hear how you are doing in your States.

As you might be aware, there is—I think there are 27 States currently that even have legislation allowing for a P3. I am from Michigan. My State does not. And so, my question is sort of how could you—what kind of advice could you give to a State that is contemplating doing a P3, but yet we don't have any legislation yet?

You know, there must be some sort of best practices that you learned from your current legislation. Did you look at a particular State as a model, as far as their legislation is concerned, to assist their State legislatures or their DOTs in proceeding with a P3?

And then, in addition to that, was there anything in your particular legislation that was really helpful? Or, if you could go back and tweak your legislation, so sort of, you know, helping the others to come along behind you, and whether or not you think it is appropriate for us at the Federal level, I am all about the Tenth Amendment, and never want to get interfering with the State, but rather, helping them a bit. And perhaps we should be telling the States early on here that there is a strong possibility this kind of thing may be included in our transportation reauthorization, so they might be thinking about looking to their State associations, et cetera, to put legislation in place for the State so that they can advantage themselves of this kind of a P3, if they are interested. If they are interested.

So, I know it is sort of a broad-based question, but really wanting to position the various States. I mean, as I said, my State does not have P3 legislation. But I can think of a number of projects, one in particular, that I am going to be pushing here with my Governor and my State senators and House Members. And yet, I would like to be able to say, well, you know, you guys want to take a look at maybe Texas or Colorado, or some of the best States' practices, what they have done, and that could assist us in other States. So I throw that out there.

Mr. BASS. Well, I would first say many of the successes in the States wouldn't be possible without your assistance. A lot of our P3s would not have moved forward without TIFIA and private activity bonds. They just would not have been moving forward.

As far as other States' legislation, I believe we looked to—one of the forerunners in P3s in the U.S. was the State of Virginia. And so, we looked at that as perhaps a template.

What I would tell other States is that it is not a silver bullet. It won't solve all of the problems. There are risks, and with those

risks come pro and cons. For a while, the USDOT Office of Innovative Program Delivery had a group of P3 States that would meet and kind of share experiences, and was going to make those P3 experts, if you will, available to States that were considering P3 legislation, with the thought being that hearing from a colleague, rather than someone perhaps with a financial interest in it, they might be more comfortable with that.

Lastly, one of the benefits in our legislation in Texas currently is before we move forward with any P3 project, we have a committee of local stakeholders that receives information from the DOT on the risk allocation for the particular project. And those local stakeholders then give their approval for the project to move forward under one of the different forms of P3s. And I think that is very helpful for us, because you have the grass roots effort in support of the project, and then also an understanding of what the risk allocation are.

Mrs. MILLER. Yes?

Mr. WASHINGTON. And I would echo some of the things that Mr. Bass said. I think one of the big things is what this panel is doing right now. I mean you are bringing P3s out in the open. And so many States, it is thought to be some sort of black box, some sort of dangerous thing.

So, I think part of this is education, education of the various States, education of city leaders, State leaders, on what P3s are, and the understanding that this is just one tool in the toolbox that, in our case, and in many of the other cases, can get projects done quicker. And there is mechanisms to put in the program that protects—and all of us are doing this—to protect future generations when we talk about operating and maintaining, in our case, for a 28-year period, and looking at various performance metrics and assigning penalties and incentives through that 28-year period.

So, I think it is an education piece to educate the various States on the risk allocation and all those other things.

Mr. FIERCE. I would like to point out that—or offer that the AIAI would be happy to help and provide best practices. We are actively in the process of collecting best practices. And again, not only from all of the States that have enabling legislation, but also many of the members are active in P3 in other jurisdictions in Europe and in Canada, where it is much more prevalent.

And so, one of the goals of AIAI is to collect best practices and share that with States who are either looking to enact enabling legislation for the first time, or perhaps to amend existing legislation.

And I would also point out, as Mr. Bass said, Virginia's PPTA has absolutely been a model for the industry, and they have certainly gotten a lot of good projects out of their statute there in Virginia.

Mr. DUNCAN. All right.

Mrs. MILLER. Thank you very much.

Mr. DUNCAN. Thank you very much. Ms. Norton?

Ms. NORTON. Thank you very much, Mr. Chairman. This is a real learning experience, certainly for me, because all of my experience with public-private partnerships has been in real estate, which is far more traditional.

I must tell you that when it comes to building, with the Federal Government itself building, and we have to deal with the CBO, much of what I have heard today wouldn't fly past the CBO because of where the risk is.

Mr. Bass, I really want to take off from how you candidly answered just a few minutes ago that you did not think that you would have moved, or been able to move, without the TIFIA and the like. I would love to see what I have seen in real estate apply in this committee. Increasingly, I am coming away with the notion that there is no free money and no easy money anywhere in the public or private sector. And I am troubled, frankly, by the increasing reliance on public funds: the private activity bonds, the TIFIA, and the like.

You know, this is in an experimental stage, and I think we ought to let the experiments play out. I regard the Dulles Toll Road as very different and interesting, and perhaps instructive, but certainly not typical of what we have been talking about today. I regard Mr. Washington's project as far more typical.

And I must say, Mr. Washington, I had staff to compile the amount of Federal funding, and I am flummoxed by it, by the high level of public assistance involved. Of the $2 billion project, $1 billion from the Federal New Starts grant. I mean you have been very fortunate. It says a great deal about how well perceived what you are doing is. That is $1 billion, $280 million from a TIFIA loan, $396 million in private activity bonds. A private partner put in $54 million in equity. That is less than 3 percent of the project cost. I try to imagine my work in real estate and trying to get through CBO with that kind of risk transference.

The private activity bonds are expected to reduce the cost of financing. But I must say, compared to what? I mean, for example, compared to the cost of financing traditionally? I would like to see what control there would be.

I am not sure about the performance metrics—what would happen if they weren't met. Apparently, even the risk of ridership is not assumed by the private partner. I am left to wonder what risk there is. I think this is a good deal for the private partner, which makes me wonder whether it is an equitable or fair deal for the public, particularly when you consider how much Federal money is involved here.

And I would like to see how you would respond, Mr. Washington, and whether you would agree with Mr. Bass, that such a project as this could not have proceeded without the very high level of public funding and low level, frankly, of private risk. Yes, sir?

Mr. WASHINGTON. Yes, ma'am.

Ms. NORTON. I am just using you as a case study. Please forgive me. I happen to have some of the rundown of figures there, and they amaze me in some respects.

Mr. WASHINGTON. Sure.

Ms. NORTON. So I am trying to find out what the real advantage here——

Mr. WASHINGTON. Right.

Ms. NORTON [continuing]. Was of the public-private partnership.

Mr. WASHINGTON. Well, I will—thank you for the question, madam.

Let me say that the private activity bonds, the transit agency was the issuer. And the private sector is paying that back. So the $396 million, that is the arrangement there, that we are the—the Government agency is the issuer. So I would add that, actually, to the $54 million in equity. So that is one thing. And that was an arrangement that——

Ms. NORTON. So how much is that, $300 million? So if you add the amount they are going to pay back with interest?

Mr. WASHINGTON. Yes, ma'am.

Ms. NORTON. And that would be in what amount?

Mr. WASHINGTON. I believe it is about 6 percent, if you will. And I will get that exact figure for you. I believe it is about 6 percent.

So, that was the arrangement. So if you add those two up that the private sector is paying back on the $396 million, the public activity bonds, and then the private equity of $54 million that they brought to the table, you are up over $450 million or so. In terms——

Ms. NORTON. Still a fraction of the public contribution.

Mr. WASHINGTON. Pardon me, ma'am?

Ms. NORTON. Still a fraction of the public contribution.

Mr. WASHINGTON. Yes, yes, yes. There is no way that we could have done this project without the help of the Federal Government, both on the full funding grant agreement of $1.03 billion and also the TIFIA. We could not have done this project.

I think we were happy to be—to have been selected to go into FTA's Penta-P program back in 2007, 2008. This program was designed to expedite the New Starts process. And so, we are the only agency left, as I understand it, in that program to see if the private sector can be encouraged to invest in transit projects. And so, I think that had quite a bit to do with it, this pilot program, in our case, being the only agency left. And I am happy to say that we are about 60, 65 percent complete with the project, and about to open in less than 24 months. So I think that had a lot to do with it.

But there is no doubt that we could not have done this public-private partnership, had we not been in the Federal Government's pilot program, and without the funding that came with it.

Ms. NORTON. Just so long as the Federal Government knows what it is doing—that it has simply got to fund these projects. I do think that has to be on the record, if we want them to succeed, and whatever advantages accrue. Let me ask you, though——

Mr. DUNCAN. Well, and Ms. Norton, we will come back to you. I have got to get to some of the other Members.

Mr. Barletta?

Mr. BARLETTA. Thank you. You know, time is money. And I was mayor for 11 years, and when I was running for mayor, the main road in my city was going to be redone, total reconstruction. I was all excited, thinking how lucky am I, I am going to walk in, we are going to get a whole new downtown, everyone is going to think I had something to do with it. I served 11 years, and now the project is just starting. So the new mayor now is pounding his chest, he—the new road.

But the point is that 10 years, because of all the delays, this $10 million project became a $26 million project, and the scope of the project has been cut almost in half. So time is money.

You know, America's infrastructure needs to be fixed, and fixed in a hurry, our roads, bridges. You know, and we are struggling on ways on how to do that. At the same time, the private sector—my family was in the road construction business, as well—the private sector is sitting on the sidelines, dying for work, looking for work. And we all know competition drives down the price.

So, I want to go back to, Mr. Kile, your comment about the financing of the highway project privately is roughly equal to the cost of financing it publicly. And a couple things were going through my mind as—you know, for example, a 30-year—and that may work out on paper, but on a 30-year maintenance project, for example, where the private sector is obligated to maintain that road for 30 years, versus the public sector.

You know, maybe on paper, you know, the numbers may look different. But in reality, in that 30 years the public sector probably won't maintain the road, because they don't have the money to do it. And at the end of the 30 years, I believe it is going to cost the taxpayers a lot more money for reconstruction of that road, because it wasn't maintained, versus us doing that.

As well as, you know, this competition again, also in the private sector, forces them to use technology. For example, I know the contractor that is doing the I–75 down in Florida. They are doing toll maintenance, total control of I–75. And I know that the technology that they are using, that they are buying, the equipment that they are buying to be able to deliver that for less money, will allow the private sector to go out and bid these projects and be able to do these projects less, which is a savings to the taxpayer.

So, I guess what I am getting at is, Mr. Kile, in your analysis, does it take into account how P3s can provide, in the 30-year maintenance contracts, the security and the savings to the taxpayer? Does it take that into account?

Mr. KILE. So, in our review of existing studies, we did—I do note that we found that public-private partnerships that combine together elements of operations and maintenance with designing and building do tend to, on average, lower costs by a small amount. And I think that would be a reflection of some of the competitive forces of which you speak.

I would also presume that in any particular contract that includes a 30-year maintenance component, that that is bid into the price of the contract, as well. And I can't speak to whether or not any particular State or locality would be able to maintain or operate that road either more or less effectively than that particular bid would be, simply because we didn't look at that issue.

Mr. BARLETTA. Because I truly believe, in reality, that we are going to save the taxpayers a lot of money. When we get the private sector involved and doing projects, maintaining projects, and these public-private partnerships, and all different types that exist, I do believe the bottom line, because of the competition and how the private sector works, that there will be a savings to the taxpayer.

But I guess our biggest hurdle is scoring, and how we overcome that. And the problem is that Government is so rigid in the way we do things. And sometimes the way we looked at things was because of the way things were done for the last 30, 40, 50 years, but business and the private sector is more flexible. They are different, and it operates differently. And how do we get the Federal Government to begin—to be more flexible in realizing that, at the end of the day, in 30 years, we have saved the taxpayers money, but we may not be able to score and prove it to the Members of Congress here today who will decide whether or not we do that.

Mr. KILE. Right. So, any time the Federal Government would enter in a contract—and CBO doesn't normally assess the cost of any particular contract; we are, rather, assessing authorizing legislation—but to the extent that the Federal Government is entering into a long-term commitment, it is our job to try to present the information about the cost of that commitment upfront, and that is a principle that CBO has, and OMB has, and has actually preceded the existence of CBO as a long-held budgeting principle in the Federal Government. And I think the idea is that, by providing that information on a consistent basis, project-by-project, long-term, short-term, that allows you and your colleagues to assess the cost and understand the benefits that——

Mr. BARLETTA. But there are upfront costs where you are talking about—but how about over the 30-year time, 40-year time, 50-year time? How do we calculate that into——

Mr. KILE. So, again, as I said, we don't estimate the cost of any individual project. But in understanding the nature of a long-term commitment, it is our job to provide information to you about the cost of that long-term commitment, whether it is, you know, a few years, or 30 or 40 or 50 years. And hopefully that allows you the information that you need to have to judge whether or not the savings that would come from the alternative approach are valuable. And I think that that is a judgment that, ultimately, you and your colleagues need to make, and it is not something that comes directly out of the cost estimate.

Mr. BARLETTA. All right. Thank you.

Mr. DUNCAN. Thank you very much. Mr. DeFazio?

Mr. DEFAZIO. Thank you, Mr. Chairman. Mr. Washington, you didn't go into detail, and I wanted to get that, about the value capture district around Union Station. I am trying to understand that. How did that work?

Mr. WASHINGTON. Yes, thank you for the question. Denver Union Station, as I said, is the multimodal hub of our whole system. We purchased Denver Union Station in 2001, I believe it was, for about $50 million, with the idea of that being the hub. I would have to say at that time we did not anticipate that there would be—that that hub would be such a tremendous attraction for developers.

Mr. DEFAZIO. Right. I am just trying to get to—I understand that. I mean in Portland we have special taxation on light rail routes for beneficial property owners. What I am trying to get is the vehicle you are using for the value capture district. What is it? Is it property taxes? Is it—what is it?

Mr. WASHINGTON. Yes, it is tax incremental finance, so TIF revenue.

Mr. DEFAZIO. OK.

Mr. WASHINGTON. Yes, sir.

Mr. DEFAZIO. OK. That is what I was trying to get at.

Mr. WASHINGTON. OK.

Mr. DEFAZIO. OK. Just to all the panel, if you could, I think we have come a long way on P3s since I held initial hearings on this about 6 or 7 years ago. We have got best practices now that have been put out by DOT, or at least partially recently that I think are quite good and instructive, to avoid some of the early abuses, like with Mitch Daniels and Mayor Daley.

But given that, given that it is a useful tool and we know how to better use it now, what percentage—you all know how massive our infrastructure deficit is. I am sure you have both read the Commission reports from the Bush era, you know how far behind we are. What percentage of that can P3s realistically address? You have to have a revenue stream, or you can have availability payments. Otherwise, it is mostly tolling.

I come from the West, we are not going to toll the interstate system. Of the 140,000 bridges that need repair or replacement, we are not going to toll 140,000 additional bridges in America. What percent—because I just want to make the case here that P3s are a tool, part of the toolbox, but they aren't the solution. What percent could it address? Anybody got an idea? Go ahead, you are brave.

[Laughter.]

Mr. WASHINGTON. Yes, I would just have to speculate. I would think between 10 and 20 percent. I mean that is my best guess.

Mr. DEFAZIO. And that would be using all the tools—I mean that would be both tolling and/or availability payments or other methods.

Mr. WASHINGTON. Yes, sir.

Mr. DEFAZIO. Of leveraging. Yes. Mr. Bass, you wanted to——

Mr. BASS. For what it is worth, my guess would be less than that. As you said, you need unique characteristics in order for a P3 to work. Sometimes it needs to be a revenue-generating project. If you go to an availability payment model, in my opinion, at the end of the day that is just another way of the State issuing debt or borrowing money long-term, and there might be other, more efficient ways to do that within debt limits at the State level. So, I would probably say, overall, 5 percent or less.

Mr. DEFAZIO. Interesting. I am interested about your skepticism on availability payments. Mr. Kile, you addressed availability payments in your report, and you studied some of them. Do you have a—do you agree with his potential—his criticism and his concern there?

Mr. KILE. Well, so I certainly would say that, ultimately, if the private sector is putting out money, it is doing so in expectation of a return, whether that is tolls or availability payments. And to the extent that they are availability payments, they are really drawing on the resources of either a State and local government, or the Federal Government.

Mr. DEFAZIO. OK. Anybody else got a comment on that? Mr. Fierce?

Mr. FIERCE. Yes, I would like to make a comment on availability-style P3s.

One, it is not really an either-or. You can have a toll facility that is—where the private-sector concessionaire is compensated on an availability basis, rather than a real toll basis. But if you look at some of the nations where P3 is much more active, Europe and Canada in particular, the vast majority of their transportation P3s are done on an availability basis.

We believe that delivers all of the value benefits, the innovation, et cetera, without saddling the private sector with some things that are totally beyond——

Mr. DEFAZIO. Right, but how do they finance those availability payments? I think it is through massive taxation that would be somewhat objectionable here, like $3 a gallon, and things like that.

Mr. FIERCE. It would be taxation or, again, user pay in the form of tolls, but where the private sector is only exposed to keeping the facility open for——

Mr. DEFAZIO. Right, right. But do you agree that this is still—I mean the estimates we have had here, it is a tool, but it is a limited tool.

Mr. FIERCE. Yes, absolutely.

Mr. DEFAZIO. OK.

Mr. FIERCE. In fact, I tried to make that point in my verbal comments——

Mr. DEFAZIO. Yes, OK, great, thank you.

Mr. FIERCE. But I would agree with Phil's estimate, that 10 to 20 is probably not a bad ballpark for——

Mr. DEFAZIO. OK.

Mr. FIERCE [continuing]. The market.

Mr. BASS. If I could expand on the availability payments, I think it is a valuable tool. I am not a huge fan currently, at the current market price. What we have heard in many cases is there is toll revenue generated by the project. And if it is sufficient, then everybody gets paid. If not, the State steps in and fills in the funding gap, which, in other sectors, would be known as an appropriation risk.

Mr. DEFAZIO. Right.

Mr. BASS. Well, an appropriation risk in Texas is nowhere in the double-digit interest rates. It is much more at 5 percent or less. Even though the availability payment funding element may be 10 to 15 percent of the overall project, my understanding is that currently, the market pricing for that element is 10 to 11 percent.

Mr. DEFAZIO. Well——

Mr. BASS. To me, for the risk being assumed, an appropriation risk of various States, that seems a little expensive, given other options that might be available.

Mr. DEFAZIO. Well, I hadn't heard that number. Thank you.

Thank you, Mr. Chairman.

Mr. DUNCAN. All right. Thank you, Mr. DeFazio. Mr. Rice?

Mr. RICE. OK, I think we are kind of beating this—everybody is kind of asking the same question in a different form.

But if you have a properly structured design bill—let's just talk about a new construction project, just for simplicity—a properly structured design bill, the Government, theoretically, should be

able to replicate the time, compressed time, either with a PPP or without one, correct? Does everybody agree with that? Mr. Kile?

Mr. KILE. So I think that the advantage of—that the literature has found of linking together some elements—say design and build, just for example—is that it allows the designer to take into consideration issues that would not arise until the build. And, by putting those together, it may allow some savings that way.

Mr. RICE. But you could do a design-build with or without a PPP, correct?

Mr. KILE. I think that is probably correct.

Mr. RICE. And so, the time constraint should be the same, either way. Is that right, Mr. Bass?

Mr. BASS. Yes. I think it gets back to the earlier statement, whether or not you consider a design-build to be a P3 or not. I think it is a P3 101. But a design-build with or without financing from the private sector, you are still going to get the time benefits of accelerated delivery.

Mr. RICE. Right. Mr. Washington, do you agree with that?

Mr. WASHINGTON. Yes, I do. I would agree with that.

Mr. RICE. And, Mr. Fierce, you agree with that?

Mr. FIERCE. Yes.

Mr. RICE. All right. So, if it is not a time factor—and you should be able to replicate the cost savings, as well, assuming you have a properly structured design-build, whether you do it with a P3 or without a P3, is that correct, Mr. Kile?

Mr. KILE. So, again, I think that goes back to who bears the risk in these public-private partnerships. And——

Mr. RICE. Well, I am not talking about—I will get to risk.

Mr. KILE. OK.

Mr. RICE. I am talking about pure construction cost.

Mr. KILE. So again I go back to what we found earlier, that there is some evidence that the cost can be lower. That is a—taking into account the contracting issues. And presumably, those contracting issues are bringing together some communication that otherwise wouldn't have existed. That, in principle, could be replicated. Whether that happens in practice I think my colleagues on the panel would probably be in a better position to——

Mr. RICE. What confuses me is you could do a design-build without having a public-private partnership.

Mr. KILE. I think that is right.

Mr. RICE. You could use the same contractor with or without a public-private partnership. Why would the cost be lower with a public-private partnership than without one?

Mr. KILE. So I think it is just a matter of the experience shows that communication does actually in fact occur more with when those elements are coupled together than when they are not, and that the public-private partnership is the vehicle that has brought that together.

Mr. RICE. So you think it actually saves money to do a design-build inside of a P3, or coupled with a P3, versus a design-build without private financing?

Mr. KILE. All right. So, again, I go back to the studies, and the experience is relatively limited. As I mentioned in my statement, there are only about 100 of these in the United States that have

been over $50 million. And so the experience with them is relatively limited. But, based on that limited experience, they have been delivered slightly faster and slightly less expensively than they otherwise would have been.

Mr. RICE. Do you agree with that, Mr. Bass?

Mr. BASS. Yes, I would say one of the—on the design-build, if you are just talking those elements, again, I think the cost savings are going to be the same. Where it becomes savings to the State and the taxpayers, I think, is once the operation and maintenance responsibilities are packaged together in that. So you have private sector looking at the initial cost, knowing that they are going to be the ones responsible for maintaining whatever they build for 15, 30, 50 years, depending upon what variety of P3 is utilized. I think that is where you get a lot of synergy and you get overall—you get savings over time. Maybe not as much upfront in just the construction of it, but in the 30- to 50-year operations, that is where a lot of the benefits come.

Mr. RICE. So you think that comes from the—if a private contractor knows he is going to have to maintain it forever, maybe he is a little more careful when he builds it?

Mr. BASS. Yes.

Mr. RICE. And it should be that way, because if you do design-build either way, inside or outside of the——

Mr. BASS. Correct. And some of it gets—I think Mr. Washington was talking before—in the traditional design-bid-build, the State is very—generally speaking, the local government is very specific on the specifications. In a design-build and P3 over time, it is more—this is the maintenance standard that needs to be achieved. We are not going to tell you and proscribe how to get there. It is just this needs to be maintained and attained, and then that allows the private sector to look at it and figure out how they can do that most efficiently.

A lot of times the life-cycle cost from the public sector perspective, in my opinion, those life-cycle costs are not always integrated as well as they could be into the initial design.

Mr. DUNCAN. Mr.——

Mr. FIERCE. One comment on the timing. You had indicated is the time for procurement and project delivery the same, and all of us here nodded our heads. You also, though, have to look at when the project can be delivered.

So, I believe when we did the 895 project in Virginia, that project was on the State's wish list. We were able to bring it forward by about 17 years, and deliver the project earlier. So there you kind of get into the comment Mr. Barletta made earlier about waiting 10 years for this improvement to be made. So, not only do you deliver the project quicker, when costs are lower, but you also have that public sector benefit of there is 10 years that the traveling public is enjoying the congestion relief, and enjoying the asset that you have delivered earlier.

So the actual procurement might take the same amount of time, and the design-build may take the same amount of time as in a straight D–B delivery, but it may be that the P3 opens up funding much earlier, and they bring the project forward in time by many years. Again, I think on 895 it was estimated to be 17 years.

Mr. RICE. I understand the financing advantage of a P3, and that, you know, it is not public financing. At least some of it is private. And it would appear to me—I don't understand why, I guess—except that maybe the contractor pays a little more attention when he is building upfront—but why the cost would be any different if you did the design-build inside or outside of a P3. It would appear to me the cost should be exactly the same in a normal world.

But—so when you get into the financing mechanism, that financing costs money. Private companies are not going to—they are not going to put their money up unless they get a reasonable return.

Mr. DUNCAN. I am sorry, the——

Mr. RICE. The taxpayers are paying that—I am sorry. The taxpayers are paying that return as an additional cost on the project, in exchange for shifting risk.

Mr. DUNCAN. We have got to move on to——

Mr. RICE. Sorry.

Mr. DUNCAN. So Mr. Maloney?

Mr. MALONEY. Thank you all for being here. Thank you, Mr. Chairman, for convening the panel. I just have some questions on the Federal Government's role in all this TIFIA. Is TIFIA program the right size? Or should be bigger?

Mr. BASS. I think, under MAP–21, it is much closer to the right size than it was previously. And so I think, and would hope going forward, that you and your colleagues are able to continue it at least under the MAP–21 levels.

Mr. WASHINGTON. And I would agree with that. You know, bigger is always better. So I would say if we can increase it, that would be great. I think if—streamlining the process would be wonderful, both on the TIFIA, the RIF, and the PABs. The public activity bonds definitely, we would like to see that increased. I think that is a huge tool for P3s around the country.

Mr. FIERCE. Yes, we believe that TIFIA is a great program. I think the word "streamlining" is exactly what we would like to see happen there, make the process more efficient——

Mr. MALONEY. Could have been a little faster on the Tappan Zee?

[Laughter.]

Mr. FIERCE. The Tappan Zee was quite remarkable. But I would also echo everyone's comments on PABs, absolutely the life blood of P3 and transport in the United States. And we would love to see PABs topped off, or the cap lifted.

Mr. MALONEY. Mr. Kile, you have an opinion about that?

Mr. KILE. CBO doesn't have an opinion on the size of these programs.

Mr. MALONEY. Fair enough. Is—if $1 billion is about right, would $5 billion be better? Or is there an upper limit that you would like to see? In other words, what is the right size? Do you have a view on that for TIFIA?

Mr. WASHINGTON. On the—oh, TIFIA. Not sure what the right size is, but doubling it would be nice.

Mr. MALONEY. And what about the project—what about the percentage of the project that it covers? Is that—do we have that right, at 49 percent? Or is that too high, too low?

Mr. BASS. I think Congress has it right at 49 percent. However, the implementation remains at 33 percent. Even though MAP–21 allows for the participation to be up to 49 percent, I am not aware of any project that receives more than 33 percent. I am aware of a few that asked for the 49 percent and were told to reapply at 33 percent.

Mr. MALONEY. Right, right. And I take it, then, by your answers, which anticipated my question, that the cap on PABs, you would like to see that higher, as well?

Mr. WASHINGTON. Absolutely.

Mr. MALONEY. And is this a diminishing return? I mean and—I mean we—I think what people need to understand about TIFIA, right, is that it—that for the amount of credit assistance we are giving, the amount of project cost is a multiplier of that that we are supporting. And I think with 49 loans, we are at something like $59 billion of project costs that TIFIA has.

I mean let me just ask you all. Of those 41 loans that the TIFIA program has made, how many of those projects would be going forward without those TIFIA loans? Do you know? Do you have a sense of that? Is the answer none of them?

Mr. BASS. I can speak for in Texas, and without TIFIA assistance for the projects in Texas, I am not aware that any of them would be moving forward.

Mr. MALONEY. Certainly not the Eagle project, right?

Mr. WASHINGTON. No.

Mr. FIERCE. Few, if any.

Mr. MALONEY. Right. Is it fair to say that the TIFIA program has probably been the most successful Federal infrastructure policy of the last 15, 20 years?

Mr. FIERCE. I think we would certainly add our voice to that.

Mr. MALONEY. Let me ask about DOT's role. Would you—what do you think about the creation of a P3 unit within DOT to assist States with sort of best practices?

Actually, excuse me. Before I leave TIFIA—because I have only got a minute left—on SH 130, are we going to see—what is going to be—are we going to see a bankruptcy on that? And what is going to be the hit to the TIFIA program if we do?

Mr. BASS. I am not sure on the southern segments 5 and 6 on State Highway 130. Been reported and downgrades by Moody's rating agency for the bank loans that are on there. I think there is another payment coming up this summer, and after that, and it will be interesting to see if the developer and their investors are able to work to restructure. But I think we will know more by the end of this year.

Mr. MALONEY. Let me just ask you in the time I have remaining, Mr. Fierce, DBEs. Would you support increasing the prominence of the DBE requirement within an expanded TIFIA program?

Mr. FIERCE. Well, the devil is in the details, but we certainly see P3 as a platform that allows better delivery against those goals.

Some of the goals can be quite demanding already. Our goals on the Capital Beltway for DBE and SWaM content was 40 percent. So we are not here advocating let's continue to tighten, tighten, tighten. Let's actually deliver against the goals we have. Let's see better progress against what we are doing already. And we think

that P3, through the best value procurement process, really enables folks to give those programs their due. And we think they do deliver better results than conventionally delivered road and bridge programs.

Mr. MALONEY. Well, thank you, Mr. Chairman. My time has expired, but I—in a future opportunity, I would love to hear more about the role of DOT, creation of a P3 unit within DOT, what the proper Federal role is in assisting the States who are obviously on the front lines of this. And I appreciate the indulgence. Thank you.

Mr. DUNCAN. Well, thank you very much. Mr. Meadows, thank you for your patience.

Mr. MEADOWS. Thank you, Mr. Chairman. Appreciate your leadership. Thank each of you for your testimony, and sharing your ideas today.

Mr. Washington, I will start with you. Your written testimony was very detailed, extremely detailed, and so I want to compliment you on that and, obviously, ask you, in your experience, what is the greatest danger of a P3 becoming nothing more than a Big Government program with all the inefficiencies of perhaps Government agencies? Because I heard your testimony earlier. You said you really just care about getting somebody from one place to the other and it taking 30 minutes, which was refreshing to me, because as we add rules and regulations and review processes on top of it, you know.

So, what advice would you have for this panel on how we can avoid just becoming a bigger bureaucracy, as it relates to P3s?

Mr. WASHINGTON. Well, thank you for the question. I would say the greatest danger is not putting together a comprehensive concession agreement. I go to bed every night on Saturday nights reading the concession agreement for the Eagle project. I think where P3s get sort of sideways is not being very, very tight on what you expect, especially in the operating and maintaining phase.

Mr. MEADOWS. So what you are saying is to go with that concession agreement, to make sure that you have dotted your I's, crossed your T's, and that there is not things that are either left out, or cost overruns that say, well, that was not part of our concession agreement, we are going to charge you extra for that? Is——

Mr. WASHINGTON. Yes, sir.

Mr. MEADOWS. Put in laymen terms?

Mr. WASHINGTON. Yes, sir.

Mr. MEADOWS. OK. So let me bounce back to TIFIA and some of the questions as it relates to that. What—in terms of concurrent review with regards to TIFIA and speeding up the process, is that something that you think that we could do? Or is there a certain pecking order that must take place, or would that help?

Mr. WASHINGTON. Concurrent reviews are always welcome. We were really blessed to be, one, in the Penta-P program that DOT FTA put together, that streamlined approach. We have a term that we went from concept to contract in 3 years. And that is really unheard of, I think, when you look at new starts and projects and all of that. So, going into the Penta-P program, concurrent reviews, the fact that the Federal Transit Administration brought on a consultant team, a third-party consultant team, to review some of the submittals further, helped streamline that process.

So, I do believe that, in our case, the streamline approach was instrumental in our success, and I would encourage that to continue.

Mr. MEADOWS. All right, because we are all—each one of these projects are very different. And so, to say one is successful, and more successful because—it is comparing apples and oranges.

Mr. WASHINGTON. Right.

Mr. MEADOWS. Can you help this panel and this committee actually work with the chairman to define some of those what is a—how do we define success, you know? Is a 3-year approval process success? Is a 5-year? Can you help us, based on the success of your project, define those limits, in terms of where we should look more for concurrent review and approval processes?

Mr. WASHINGTON. Well, to define success, some of the things that I put in my report talked about those performance specifications, rather than detailed design specifications. Establishing a rigorous schedule and timelines. I think a lot of times we get sidetracked, as public agencies, with missing deadlines.

Mr. MEADOWS. So you would suggest that procurement and those timelines be tied to the TIFIA application and procurement process, then?

Mr. WASHINGTON. As best as you can, I would say. But the schedule that I am talking about is just the general, overall procurement schedule.

Mr. MEADOWS. Right.

Mr. WASHINGTON. And that could be extended to reviews by DOT and other entities, as well, sticking to those.

Mr. MEADOWS. My time is about to expire. I will yield back, Mr. Chairman. I thank you for your leadership in this matter.

Mr. DUNCAN. Well, thank you very much, Mr. Meadows. We will go—Mr. Barletta, do you have anything else you—all right. We will go back to Mr. Capuano, and then I will conclude at the end.

Mr. CAPUANO. Thanks, Chairman. And, again, gentlemen, thank you. I think this stuff is great. I like this much better than the typical hearings we have. I have actually stayed awake, and alert, and involved.

[Laughter.]

Mr. CAPUANO. But I do want to raise a couple of, obviously, issues that both are on my mind, and some of them that came up in the meantime.

I just want to be clear that everybody here understands. Private activity bonds exist because, and solely, because of Federal tax policy. And, by the way, for those of you who haven't read it, the—Chairman Camp's proposal would repeal private activity bonds. And his estimate—actually, not his estimate, the estimate of the Joint Committee on Taxation—is, over the next 10 years, that would raise—by repealing, it would save our paying out $23.9 billion of taxpayer money.

So, when you say that private activity bonds are not taxpayer-funded, they are. They only exist because the Federal taxpayers are actually giving tax dollars to investors. Otherwise, those investors go someplace else and make more money. Natural thing. So I just want to be clear about that, that is a big, bold line I want to draw under that.

I also want to go back to what I said, Mr. Bass, Mr. Washington, especially the comment you made, Mr. Washington. I know—I am a former mayor. Your job is to build things and to move people. I get that. My job is a little bit different. And that is why I don't blame you for taking the money from any place you can get it. Mr. Fierce, you are in the private sector. Your job, your people's job, is to build things. You get the money from anywhere you want.

But there is a big problem to me—at least a big question coming on these things. I am getting the feeling slowly that private activity bonds and TIFIA and P3s are all because we, in Congress, don't have the courage to put the money into things that you need: a Highway Trust Fund, transit fund. And I would just simply ask you, would you really, Mr. Washington and Mr. Bass, forget the policy and the philosophy? If you want to build things, wouldn't it be just easier if we did what we need to do, and find a way to fund the New Starts program? I am looking at your Eagle. Half the money is coming out of New Starts. That is traditional.

Mr. Bass, I looked at some of your numbers, though not as clear, but the same idea. Most of your money is coming out of traditional financing on State and Federal Government thing. Wouldn't it just be easier if we fully funded the Highway Trust Fund, or if we fully funded the New Starts program, or some of the other traditional programs that we have, rather than trying to come up with all these fancy ways to avoid us doing something that no politician wants to do?

Mr. BASS. I would say yes. Generally, the most efficient way to purchase anything is with cash. However, I didn't purchase my house with cash, because I am not in that position——

Mr. CAPUANO. But even the traditional way is not cash. States almost always float bonds on these, but they are traditional bonds in the traditional sense of the word. They are straightforward. They are not secondary, backed up by taxpayers another way. They are straightforward State bonds.

Mr. BASS. Right. And so, I would perhaps argue with the $23.9 billion savings, because if private activity bonds weren't there, would States then issue—still at tax-exempt rates, so the Federal Government is still not receiving the income——

Mr. CAPUANO. That is a fair point.

Mr. BASS. Or, conversely, do the projects just not happen?

Mr. CAPUANO. Well, see, that is the other thing——

Mr. BASS. And what does that do to the overall economy?

Mr. CAPUANO. I understand. But if we put more money on the table, these projects would happen. And that is part of the problem, is that—Mr. Fierce, you say 17 years on a project. Well, of course, if I put more money on the table, projects are going to happen quicker. And it may not be 17 years, it may be a different prioritization. But the fact that we are putting money on the table, even directly or indirectly, makes projects happen faster shouldn't come as a surprise to anyone.

And I tell you, Mr. Fierce, be careful of your examples, because the one you picked, the Pocahontas, is in trouble, and we all know it. So I don't want to nitpick, because I don't have a real problem with the ones that are in trouble, I really don't. I am not afraid

of all of us making a mistake and hopefully learning from whatever mistakes we make.

But I also want to talk to Mr. Kile. When you did these things, I mean some of the things—we talked about cost. First of all, it bothers me a little bit to say that future elected officials won't do their jobs. I am a former mayor. I maintained my roads. Now, I will tell you that I did make difficult decisions. Some of those difficult decisions? Yes, some maintenance on roads or buildings didn't happen when I really wanted it to happen, because I had to hire another cop, or another teacher, or whatever it might be. So, yes, that is difficult.

But when we say that we don't trust future elected officials to do their job, we are also tying their hands in whatever crisis they may face 20 years from now. Some of the TIFIA bonds we are doing, the principle and interest don't become due for 15 or 20 years. Fifteen to twenty years from now, I don't know what Denver or what Texas is going to be facing. Maybe the Governor then will want to do something different with that money, and won't be able to, because the Governors today and the mayors today said, "We are tying your hands, we are going to do this."

Now, I think that is terrible of us to say that all future elected officials won't do their jobs as well as we do, we are better than them. That is ridiculous, it is insulting. And, to be perfectly honest, I always think that the next generation, hopefully, will do better than us. Not worse, but better.

But, Mr. Kile, I want to go back. When you did some of your numbers, did you take into account the tax losses given to investors for depreciation costs when they buy these things?

Mr. KILE. So on the specifics of the tax loss, the depreciation, that would be a JCT estimate. But I think the general principle that you are on here is that the TIFIA is a loan from the Federal Government, and it is a loan at——

Mr. CAPUANO. It is a great loan. I wish I could get one.

Mr. KILE [continuing]. At preferred interest rates——

Mr. CAPUANO. For my house.

Mr. KILE [continuing]. That they can't on the private market, and that that imposes costs on the Government.

And similarly, tax-preferred bonds like private activity bonds are a kind of debt instrument that does impose costs on the taxpayer.

Mr. CAPUANO. But did you—I apologize—did you take into—I mean, as I understand it, the people who invest in these things—Texas cannot, and Colorado cannot depreciate your highways, because you don't pay taxes anyway, so you don't get depreciation. Private investors get to deprecate their investment in these items. And I have—my old days, before I became a full-time elected official, I was a tax attorney, 100 years ago—so, you know, you don't want me doing your taxes any more, but I still remember the concepts.

I have never really liked the concept of depreciation, but that is a different issue. Whether you like it or not, it is a massive item when you invest in something on a tax sheet. And did you take—and that costs—that money comes directly out of the pockets of Federal taxpayers. If you get—if somebody else gets depreciation,

I, as a taxpayer, have to pay it. So did you take that into account, or did you not?

Mr. KILE. Yes. As a general statement, that is one of the things that equalizes the cost——

Mr. CAPUANO. So you did.

Mr. KILE [continuing]. Between public and private borrowing.

Mr. CAPUANO. And did you take into—for instance, I read in—I think it was your report, one of these reports—that both the people of Illinois and the people of Indiana, one of their complaints, or two of their complaints, one of which had to do with maintenance, they said that some of the private people weren't maintaining, but I will leave that alone. The other one, they were both pretty uniform that there was traffic diversion off of the roads that were sold, and on to other roads.

Now, again, I can't speak for individual projects, because, obviously, some projects don't divert traffic, but some projects do, especially when you raise toll rates. Did you take into effect the—any estimated costs on the increased cost to those local cities and towns, or to the States, or whoever maintains those roads, when you divert 10 or 20 or 30 percent of your traffic off of one road and you put it on another road? This other road now has to be maintained at a higher capacity. Were any of those costs factored in?

Mr. KILE. Right. So CBO actually generally does not assess the cost of any individual project. But I think the experience with the Skyway, for example, has shown that, as tolls have gone up, that some traffic has moved to other roads.

Mr. CAPUANO. I guess, again, for me, I love the idea of coming up with new tools in the toolbox, I really do. I know I am probably sounding like I am not a big P3 guy, but it is not really the fact. I actually like the idea, I just want to make sure that we are trying to find the ones that work, versus the ones that don't, and, in the long run, what is best for the taxpayers. And, in the long run, making sure that tomorrow—and, again, I come from Massachusetts, and I will tell you that we have had two major projects in my lifetime that have actually tied up Federal dollars because they ran into problems at the time and they had to put bonds out that basically said we will put up and we will pay for the next 10 or 20 years future Federal dollars.

Right now, today, the Commonwealth of Massachusetts is losing hundreds of millions of dollars each year directly from the Federal Government, because it comes from the highway fund and goes directly into paying for past activity, which means we don't get to build the bridges or the roads or whatever it is today that we would otherwise be doing.

And I am really concerned about that, because my big fear is you move a project up 17 years, yes, I get to use it. What happens 17 years from now when the next guy needs to do a road or a bridge? I have used their money. And I am really not interested in a drunken evening out, spending the family jewels to, you know, have a good time tonight. Now, don't get me wrong. Tonight it is going to be a great idea. But tomorrow it is not such a great idea.

And that is kind of what I am trying to do. I am trying to find out the financing of these things. And I would appreciate, Mr. Bass, Mr. Washington, any details you can send me on the financ-

ing—well, within reason, I don't want 10,000 pages, because my staff will get killed. But I would really like to see. Again, I am not trying to prove anything, I am just kind of trying to figure out where P3s really should fit and where they shouldn't. And we might not even be there yet. We may not be able to make that judgment. But, if you can, I really appreciate that.

Mr. WASHINGTON. Just a quick comment, and I really appreciate your comments. The PABs, TIFIA, all of these things are great programs. But I would just as soon not do them, and not have to do them. So, to answer your question whether the Congress can make this all easier by doing a new transportation reauthorization bill, amen and hallelujah.

So, I think the other piece of this is project management, good project management. I think that is a huge key. That is what I was getting to when I talked to schedule adherence, and all of those kinds of things. That is a whole other piece. When you mentioned the projects in Massachusetts, those projects are all over the country, I think, just bad project management leading to cost overruns and all those things.

But just to go on record, great programs, PABs, you know, we love those things. We are doing them because we have to do them, as I see it. And if we had a good transportation reauthorization bill, and New Starts programs, and all those things, we probably would not have to do these things, which I would welcome.

Mr. CAPUANO. Thank you, Mr. Washington.

Mr. BASS. I would echo that, and perhaps offer that some of the concerns you have with private activity bonds, or what I am hearing you say, is true whether that is a State general obligation bond or a State revenue bond or a State—the State is issuing debt and taking future revenues in order to get a project delivered today, whether that is associated with a P3 or not.

Mr. CAPUANO. Right.

Mr. BASS. And so, those policy decisions are being made at the State and local level every day, in part because of the funding challenges that they are faced with.

Mr. CAPUANO. That is true. Thank you very much, and I really appreciate the chairman's indulgence.

Mr. DUNCAN. Well, good comments. Thank you, Mr. Capuano.

Mr. Barletta, any additional thoughts?

Mr. BARLETTA. No.

Mr. DUNCAN. All right. Let me just say this. I am so pleased that we have had participation, active participation, by almost all the members of this panel, the congressional panel, and then we have had a great panel of witnesses. And you all have been, I think, very helpful, and have really impressed me.

But let me just say a few things. You know, this is my 26th year on this committee, and I had several chances to move to other committees, but I chose to stay here because I think the work of this committee is extremely important, and I am interested in all the things that we work on. It has been referred to over the years as the committee that builds America.

And I also have liked the bipartisan manner in which this committee has operated during most of that time. During that time—we have 6-year limits on chairmanships on the Republican side. So

I chaired the Aviation Subcommittee for 6 years, I chaired the Water Resources and Environment Subcommittee for 6 years, I chaired the Highways and Transit Subcommittee for 6 years. So all very different kinds of things. But probably the most frustrating thing to me during all of that time is the length of time these projects take, when I think they could be done—and everybody tells me they could be done in half the time or a third of the time. And some other countries are doing things much faster.

And then, also, I have noticed through the years that when we are forced to, we do these projects faster, like the Interstate 35 bridge in Minnesota, or some of the earthquake work in California, different things. But it is—in the past, it has always been the environmental rules and regulations and red tape that have held things up so much. And I have mentioned it many times in here.

I will never forget, years ago, the—in front of the Aviation Subcommittee one time the Atlanta Airport people said it took 14 years from conception to completion for their newest runway, which is now many—several years old. But it was all this environmental stuff. And then, when they finally got all the approvals, they did the runway in 33 days. Now, they did it in 24-hour days, they were so relieved to get all the approvals, so you could say 99 days.

And then, I chair the Highways and Transit Subcommittee, and the Federal highway people come to us and they tell us two different studies, the last two studies they had, it said it took 13 years from conception to completion, and another one said 15 years from conception to completion on the average highway project. And these weren't transcontinental roads, these were 9- and 12-mile projects, and so forth.

Mr. Bass, do you see any—hopefully, some of the things we put in MAP–21 have helped, but I will ask any of you if you want to make any comments on that. Are we—we paid lipservice for years to environmental streamlining. Are we finally starting to make some progress in that area? And how do you, Mr. Bass—how has Texas aligned the P3 process with all the environmental rules and regulations? Any comments?

Mr. BASS. Well, first, commenting on MAP–21, we are excited and in the process of taking over the lead responsibility, similar to what California did a few years ago, on the environmental review. And we think that is going to save a tremendous amount of time through the environmental process, as much as 25 percent is what I am hearing.

But you are exactly right. The—on the P3 side, it is critical as we go through the procurement, to make sure that the project is on schedule, or already has been environmentally cleared, so we don't get an elongated procurement with the private sector as we keep waiting for the next permit, or the next environmental review. But we are excited by the opportunity provided in MAP–21 for the State to take over that primary role.

Mr. DUNCAN. All right. Mr. Washington, you know from an earlier comment I made—and Mr. Capuano has been much more articulate about this—but I have great concern about, you know, a few years down the road, how these projects turn out. And what recourse—are you satisfied with the recourse that your agency has

if a private sector operator doesn't meet the contractual terms of service 5 years from now, 10 years from now?

Mr. WASHINGTON. Yes, sir, we are, because we have put together a very comprehensive concession agreement. This is a 28-year operating and maintaining agreement with penalties and incentives. The penalties are much harsher to the private sector than the incentives are. And so, there is great incentive, I believe, for the private sector to keep the system operating in a good state of repair.

One quick example that I thought was very, very relevant in preparing to come here is we had a couple of bridges that were not up to the requirements for the program. And because the concessionaire, the private-sector concessionaire team has, I think, to maintain and operate those bridges for a 28-year period, they came to us. It was really a combination of us and them coming to me and saying, "Hey, listen, we need to replace these girders."

Now, I have to think that some design-build firms would have tried to give me the key and walk away after the construction on that defective bridge. Not all of them, but that could have happened. But the incentive to make sure that bridge was ready, because they have to operate and maintain it for a 28-year period, and the specter of penalties, I think, provided some pretty good incentive to replace those bridges with no impact on schedule or cost.

And so, that example, when we talk about a full design, build, operate, maintain, and the life-cycle piece that Mr. Bass talked about, I think you get that if you put together a very good concession agreement, and there is great incentive to operate and maintain without being penalized.

Mr. DUNCAN. All right, thank you very much. Mr. Fierce, I thought Mr. Rice, Congressman Rice, asked a real good question. He asked, "How do we keep these very big P3 projects from becoming just another Big Government-type project?" And we heard Mr. Kile say that, basically, in the projects of the limited studies that they have been able to do so far, that the costs have been roughly the same in the private sector and the public sector.

Do you—you represent, or you work for a very large corporation. I know there are some economies of scale, but do you sometimes—does your company sometimes operate like a Big Government entity? And how do you keep it from doing that?

And, secondly, in any of the projects that you have firsthand knowledge about, do you think the public sector could have done them as cheaply or more cheaply than your company has?

Mr. FIERCE. Well, in terms of the risk of a large corporation acting like a large bureaucracy, that is very real. And, you know, we try to avoid that by driving down decisionmaking authority and accountability as much as we can into the smaller operating segments. Presumably, that same lesson works in Government, but that is probably way above my pay grade.

But in terms of kind of the big bureaucracy in terms of project delivery and how does it operate in one project to the next, yes, there is—some are better and more streamlined and less bureaucratic than others. It really does kind of devolve to the final P of the PPP, which is the partnership.

When we really hit it out of the park and have a great project that we are proud of, typically our public-sector partner is also very

proud of it, and it is because everybody has rolled up their sleeves and really acted in a collaborative manner, rather than—sometimes conventional project delivery tends to be a bit confrontational. And the best of the P3s tend to be very collaborative, and the partnership aspect of it really delivers value.

Mr. DUNCAN. Well, you did—Mr. Washington talked about a $300 million savings on his project, and you talked about the $1.7 billion in savings, if I understood you correctly, on the Tappan Zee. Is that correct, $1.7 billion?

Mr. FIERCE. Yes. I was quoting from Chairman Milstein.

Mr. DUNCAN. OK.

Mr. FIERCE. Against their internal estimates.

Mr. DUNCAN. All right. Mr. Kile, why—in your studies that you have done, why do you think other countries have gone so much more into public-private partnerships than we have, here in this country?

Mr. KILE. We really didn't—I don't think I have a complete answer on that. We really didn't look very carefully at the reasons that other—some other countries have used them more heavily than in the United States.

Mr. DUNCAN. Did you look—so did you look at public-private partnerships in other countries?

Mr. KILE. I am familiar with some, but I really haven't looked at them systematically.

Mr. DUNCAN. I think we are going to try to look into that a little bit.

Last week, Mr. Capuano and I and others went to an Aspen Institute breakfast with the president of the World Bank. And he was—he really impressed me. I thought he was one of the smartest men I have ever heard. And he was a former president of Dartmouth.

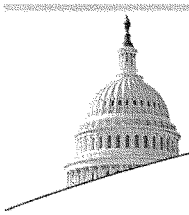
And, anyway, he said he was becoming obsessed with trying to figure out a way that the—to help the public sector be able to deliver benefits to the public as efficiently and at the same cost or—as the private sector. And he said right now we are a long ways from that. And he thought the main reason was—is that it is so hard, it is very difficult to get rid of poor, or bad, or incompetent employees in the public sector. I mean do you see that, or agree with that, or—you seem to say—or the impression I got was that you said the public sector was delivering efficiencies just as good as the private sector, or almost as good.

Mr. KILE. So we didn't look at that particular issue, with respect to employees. Basically, I think in our review of studies that have looked at both public and private partnerships in the traditional approach, as I said, they are a little cheaper and a little faster. And I think that that experience is probably a reflection of the communication that goes on and the coordination in different phases of the program. And that is the evidence for that conclusion.

Mr. DUNCAN. All right. Well, thank you. Thank you very much. I have really enjoyed this hearing, and I appreciate your hard work that you have put into your testimony. And you have provided a lot of good information to the panel.

And that will conclude this hearing. Thank you very much.

[Whereupon, at 11:51 a.m., the panel was adjourned.]



Congressional Budget Office

Testimony

Public-Private Partnerships for Highway Projects

Joseph Kile
Assistant Director for Microeconomic Studies

Before the
Panel on Public-Private Partnerships
Committee on Transportation and Infrastructure
U.S. House of Representatives

March 5, 2014

This document is embargoed until it is delivered at 10:00 a.m. (EST) on Wednesday, March 5, 2014. The contents may not be published, transmitted, or otherwise communicated by any print, broadcast, or electronic media before that time.

Chairman Duncan, Congressman Capuano, and Members of the panel, thank you for the invitation to testify on issues related to public-private partnerships. My testimony draws on an earlier report by the Congressional Budget Office (CBO) on this topic.[1]

Summary

The United States has a network of over 4 million miles of public roads. That system has faced increasing demands over time: The number of vehicle miles traveled (both passenger and commercial) rose from approximately 700 billion in 1960 to just under 3 trillion in 2012 (see Figure 1). In 2012, the federal government and state and local governments spent about $155 billion (in 2013 dollars) to build, operate, and maintain roads. (This testimony adopts the practice of the Federal Highway Administration in using the words "highway" and "road" synonymously.) Almost all of those infrastructure projects were undertaken using a traditional approach in which a state or local government assumes most of the responsibility for carrying out a project and bears most of its risks, such as the possibility of cost overruns, delays in the construction schedule, and, in the case of toll roads, shortfalls in the road's revenues.

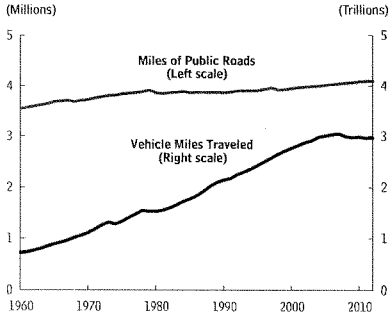
Some observers assert that an alternative approach, using a public-private partnership, could increase the money available for highway projects and complete the work more quickly or at a lower cost than is possible through the traditional method. Specifically, such a partnership could secure financing for a project through private sources that might require more accountability and could assign greater responsibility to private firms for carrying out the work. For example, a private business might take on the responsibility for specific tasks, such as operations and maintenance, and their accompanying risks.

This testimony addresses the potential role of the private sector in two aspects of carrying out highway projects: the financing of projects and the provision (that is, the design, construction, operation, and maintenance) of highways. In particular, CBO concludes the following:

- Private financing will increase the availability of funds for highway construction only in cases in which states or localities have chosen to restrict their spending by imposing legal constraints or budgetary limits on themselves. The reason is that revenues from the users of roads and from taxpayers are the ultimate source of money for highways, regardless of the financing mechanism chosen.
- The cost of financing a highway project privately is roughly equal to the cost of financing it publicly after factoring in the costs associated with the risk of losses from the project, which taxpayers ultimately bear, and the financial transfers made by the federal government to states and localities. Any remaining difference between the cost of public versus private financing for a project will stem from the effects of incentives and conditions established in the contracts that govern public-private partnerships.
- On the basis of evidence from a small number of studies, it appears that such partnerships have built highways slightly less expensively and slightly more quickly, compared with the traditional public-sector approach. The relative scarcity of data on public-private partnerships for highway projects, however, and the uncertainty surrounding the results from the available studies make it difficult to apply their conclusions definitively to other such projects.

Figure 1.

Miles of Public Roads in the United States and Vehicle Miles Traveled, 1960 to 2012



Source: Congressional Budget Office based on data from the Federal Highway Administration.

1. Congressional Budget Office, *Using Public-Private Partnerships to Carry Out Highway Projects* (January 2012), www.cbo.gov/publication/42685.

Table 1.

Stages and Types of Activities Involved in Providing Highways

Stage	Activities
Design	Completing plans for the project, which includes producing architectural drawings and selecting construction materials and the construction site.
Build	Constructing the road, which includes reviewing conditions at the building site, providing construction staff and materials, selecting equipment, and, when necessary, amending the design to address problems discovered during the construction phase.
Finance	Providing capital for the project, which may include issuing debt or equity and verifying the feasibility of plans for repaying debt or providing returns on investment.
Operate	Ensuring the continuing performance and availability of the highway, which includes removing debris and snow and collecting tolls and data on traffic.
Maintain	Keeping the project in a state of good repair, which includes filling potholes, repaving or rebuilding roadways, and ensuring the integrity of bridges and highways.

Source: Congressional Budget Office.

Approaches to Carrying Out Highway Projects

Highway projects comprise five major stages of acrivity—typically referred to as design, build, finance, operate, and maintain—that either the public or the private sector can carry our (see Table 1).

The Traditional Approach

The traditional approach to providing roads, known as the design-bid-build approach, is used nearly uniformly across the United States. It is mainly a public-sector endeavor, in which state or local governments pay for projects with some combination of their own funds, funds provided by the federal government, and borrowed funds that are ultimately repaid by revenues from taxes or tolls. Once funds are secured, a public manager—generally a state department of transportation or other public authority—either designs the highway project itself or contracts with a private firm to design ir. A different private entity, which is usually selecred on the basis of the lowest-cost bid, then carries out the project. A public agency manages the longer-rerm operarions and maintenance of the highway, although rhat public entity may, again, contract with a private firm to perform some of those tasks.

Under the traditional approach to highway projects, private firms that have signed contracts to construct a road or perform other project-related tasks take on only a limited amount of risk. For example, they retain the ability to pass on to the public agency any increase in their costs as a result of unforeseen changes in the scope or details of the project, a feature of the traditional approach that increases the chances that the private firm's costs will exceed its bid price. For its part, the public agency retains a high degree of control over the highway during its useful life.

Public-Private Partnerships

The term "public-private partnership" refers to a variety of alternative arrangements for highway projects that transfer more of the risk associated with and control of a project to a private partner. That transfer is achieved in part by bundling some of the elements of providing a highway. Some observers apply the term "public-private partnerships" only to projects that include capital from private sources. For this testimony, however, CBO has adopred a broader definition of the term to include any contractual arrangement thar transfers more risk from the public secror ro the private sector than is tbe case under the traditional (design-bid-build) approach. That definition allows consideration of potenrial increases in

Table 2.

Number and Value of Public-Private Partnerships for U.S. Highway Projects, 1989 to 2013

(Billions of 2013 dollars)

	Value of Contract
	Design-Build Projects[a] (Number: 69)
All Projects	36.6
Average	0.5
Largest Projects	
Tappan Zee Bridge (New York)	3.1
I-15 Reconstruction (Utah)	1.9
State Highway 130, Segments 1 to 4 (Texas)	1.7
	Design-Build-Finance Projects (Number: 13)
All Projects	4.3
Average	0.3
Largest Projects	
Northwest Corridor (Georgia)	0.6
I-75 Collier/Lee County (Florida)	0.5
Route 3 North (Massachusetts)	0.5
	Design-Build-Finance-Operate-Maintain Projects (Number: 16)
All Projects	19.6
Average	1.2
Largest Projects	
I-635 LBJ Freeway (Texas)	2.9
North Tarrant Express (Texas)	2.2
I-495 HOT Lanes (Virginia)	2.1
	Total Public-Private Projects (Number: 98)
All Projects	60.5
Average	0.6

Source: Congressional Budget Office based on "U.S. and Canadian Transportation Projects Scorecard," Public Works Financing, vol. 285 (September 2013), pp. 30–33, http://pwfinance.net/.

Notes: Only projects with a value greater than $50 million are included in the table.

HOT = high occupancy/toll.

a. Covers projects with and without a warranty in which the contractor guarantees the integrity and quality of the finished product and covers projects that may also include operations or maintenance responsibilities but not financing.

efficiency from the private sector's involvement in ways that do not include private financing.

The use of such partnerships for providing highway infrastructure is limited in the United States. Between 1989 and 2013, the value of contracts for all such projects whose costs exceeded $50 million was only about $61 billion, representing about 1.5 percent of the approximately $4 trillion (in 2013 dollars) that was spent on highways during that period by all levels of government. The use of public-private partnerships is increasing, however; about half of that $61 billion was committed in the past five years.

Three main types of public-private partnerships have been used in the United States:

- **Design-build projects,** the most common type of public-private partnership, are set up as fixed-price contracts between one private entity and a public agency to jointly manage the design and construction of a new road. Under such an arrangement, the private party accepts most or all of the risk of increases in costs associated with the project.[2] The ultimate source of capital for a project comes from tax revenues or tolls, and the public partner retains ownership of the highway and control of the revenues dedicated to the project and its operations and maintenance. According to *Public Works Financing*, a monthly newsletter that has reported on public-private partnerships for roughly 25 years, private firms and government agencies jointly undertook 69 design-build projects with a value of $50 million or more between July 1989 and September 2013 (see Table 2), with about one-half coming within the past five years.

- The same type of contract that is used for a design-build effort can be used in a **design-build-finance** arrangement except that in this case, the private partner provides the necessary up-front capital and is generally repaid through tolls or by a state or local government in a series of installments. Between July 1989 and September 2013, public-private partnerships undertook 13 design-build-finance projects with a value of $50 million or more, with about one-third coming within the past five years.

2. In some projects, the private partner also provides a warranty guaranteeing the integrity and quality of the finished product.

- The broadest private role encompasses the elements of the design-build-finance structure but also includes operations and maintenance performed by private firms. Those types of partnerships, known as **design-build-finance-operate-maintain** arrangements, use the same kind of contract as that used for design-build-finance projects except that in this case, the private partner agrees to perform operations (such as the removal of snow and debris and the collection of tolls) and carry out maintenance on the highway for a specific period. The contract spells out how the private partner is to be repaid for up-front and ongoing expenses through future tolls or other fees imposed on users of the road or through "availability payments" from state or local governments, which are financed by receipts from income or other taxes that are not linked to the use of the road. (Such projects may also be called **build-own-operate-transfer** partnerships because the private partner initially builds and owns the road but then transfers ownership to the public partner.) Between July 1989 and September 2013, public-private partnerships undertook 16 privately financed projects with a value of $50 million or more involving private responsibility for operations and maintenance, with about three-quarters coming within the past five years.

The type of organization that serves as the private partner in a public-private partnership varies widely depending on the size of the project and the scope of the private sector's role. For design-build public-private partnerships, the private partner in many cases is a joint venture between a design firm and one or more construction firms; occasionally, one firm provides both services. In many partnerships that include private financing, those joint-venture entities contract with banks or other private lenders to provide capital. For highway projects that include operations and maintenance, the private partner is generally a consortium of firms, led by a project development and management company that in many instances is a large multinational corporation. That company delegates such tasks as construction, operations, and maintenance to subsidiary firms or other parties and bears most of the risks associated with the project.

In a partnership, the contractor assumes greater risks than it would under the traditional approach because the terms of the partnership's contract generally limit the private firm's ability to renegotiate the contract in the event of higher costs. Nevertheless, that advantage to the public sector of transferring the risk and control of a project to a private firm may have a downside: It may limit the government's ability to respond to changing conditions or to achieve other objectives that might improve the welfare of the state's or locality's citizens but reduce the private partner's profits.

Private Financing of Highways

Most highway projects are paid for with current state or federal revenues and are not financed through borrowing. But sometimes a project is large enough that the state or local government, or other public authority, must borrow money to move the project forward. When that is the case, the public entity can provide financing either through traditional public borrowing—by issuing government bonds, on which investors are generally willing to accept a relatively low rate of return because the bonds are backed by the taxing authority of the public entity—or by joining with a private partner to obtain private financing.

The total cost of the capital for a highway project, whether that capital is obtained through a government or through a public-private partnership, tends to be similar once all relevant costs are taken into account. Assessments of the experience with private financing of highways in the United States suggest that turning to a private partner does not typically yield additional financing, although it may speed its provision. Private financing can provide the capital necessary to build a new road, but it comes with the expectation of a future return, the ultimate source of which is either taxes or tolls.

Cost of Financing

A fundamental question about public-private partnerships that use private financing is whether the private approach can reduce the cost of a project's financing, and thus its total costs, when compared with traditional financing. Answering that question requires a comprehensive measure of the cost of financing, which should encompass the following:

- The cost of the risk borne by taxpayers, including the required returns on the investments of all claimants to the revenues from the project, whether they be debt holders or equity holders (the taxpayers, in the case of publicly financed projects);[3]
- The cost of interest subsidies provided when interest rates are lower than they would otherwise be, either because the federal government provides financing at lower-than-market rates or because the interest paid on municipal debt is tax-exempt;
- The forgone revenues from depreciation allowances that allow the private partner to reduce its federal income tax liability; and
- Transaction costs, such as the cost to issue bonds, the cost of monitoring and enforcing the terms of contracts, and any legal costs associated with obtaining the financing.

Broadly speaking, the comprehensive cost of financing a highway project privately is usually about equal to the cost of financing it through the traditional public approach if the cost of providing taxpayers with a fair return on their equity investment is taken into account. How a project is financed, though, may affect who bears its costs. Financing a project with bonds whose interest is exempt from federal taxation or with funds that reflect other subsidies from the federal government shifts the project's costs from state taxpayers to federal taxpayers. It does not, however, reduce the total cost of the project's financing.

Incentives

Although the comprehensive costs of financing a highway project with private capital or with public borrowing are largely the same, the incentives associated with private financing may encourage the partners in the project to reduce its costs and shorten its schedule. In particular, giving a private partner an equity stake in a project as well as control over the project's execution generally encourages more efficient management than the traditional approach affords. Under the traditional approach, a contractor may have only a limited incentive to control costs because cost increases in many cases can be passed on to the government. In contrast, holders of equity claims usually have more of an incentive to control a project's costs because they are the last to be paid on a project and will receive a payment only if the cash flows—from the state or local government directly or from toll revenues—are sufficient to cover costs.

However, equity financing is not the only way to provide incentives to contractors to manage projects efficiently. Governments can use the traditional approach in conjunction with other mechanisms to achieve the same ends. Alternatives include incentive payments or penalties that are contingent on the private contractor's meeting specific milestones regarding costs or the project's completion.

Experience With Private Financing

Only a small number of highway projects in the United States have involved public-private partnerships that included private financing. Assessments of those projects indicate that such partnerships may accelerate the provision of financing—for example, by circumventing states' self-imposed limits on borrowing—but they do not generally result in additional financing. Of the projects that have been completed, some of those that were financed through tolls have failed financially because the private partners overestimated the revenues that the project would generate and were thus unable to fully repay the project's debt. Perhaps in response to that history, projects that are still under construction rely less on tolls for revenues; more commonly now, private partners are compensated through a state's general revenues, thus limiting their risk of not being repaid. Public-private partnerships have also increasingly replaced the funds obtained through private means (at market rates) with tax-exempt bonds or bonds that provide a credit against taxes owed. That change has brought the projects more in line with the traditional approach, lowering the private partners' costs at the expense of federal taxpayers and increasing the amount of the government's implicit equity and risk. In doing so, newer projects may have diminished the incentives associated with private financing to control costs and to be completed quickly.

3. For example, revenues from a project might fall short of promised payments on the debt, and in the case of publicly financed projects, the government would have to raise taxes or reduce spending to make up for the shortfall.

In addition, more-recent agreements have reduced private partners' debt-service payments—that is, interest payments on any money borrowed to finance the projects—by increasing the share of financing provided by the state or locality or by the federal government. Accordingly, financing provided by the federal TIFIA (Transportation Infrastructure Finance and Innovation Act) program and tax-exempt private activity bonds issued by municipalities (to finance projects of private users) have become increasingly prominent sources of funds for highway projects involving public-private partnerships.

The history of privately financed roads in the United States encompasses 29 projects that are either under way or have been completed during the past 25 years. The value of the contracts for those projects totals $24 billion, a little more than one-half of 1 percent of the approximately $4 trillion that all levels of government spent on highways over the period. (Both of those amounts are in 2013 dollars.) In the past several years, the number of partnerships for road projects that have private financing has increased; two-thirds of the $24 billion in contracts has been committed in the past five years.

The amount of risk that was transferred to the private partner varied from project to project. In some instances, the financial risk was still borne primarily by taxpayers, who were responsible for repaying debt incurred by the private partner. For example, under a design-build-finance program in Florida, private firms finance each project entirely with private debt, which is to be repaid over a predetermined time—usually five years—with future grants from the federal government, state funds, and revenues from tolls paid by users of the completed road. The state's guarantee of repayments eliminates much of the transfer of risk that takes place with other projects that use private financing. Thus, the financing for those projects is essentially public, and the public-private partnership structure of those projects is similar to that of the design-build approach.

In other instances, the private partner bore more of the risk of the investment—specifically, that its money might be lost if the project did not produce the revenues that were expected. Over the past 25 years, 10 such projects, which varied in size but which all involved contracts of more than $50 million, have been completed (see Table 3). A review of those projects offers little evidence that public-private partnerships provide additional resources for roads except in cases in which states or localities have chosen to restrict their spending by imposing legal constraints or budgetary limits on themselves. To varying degrees, the projects that made use of private financing took place in states in which the government could have issued bonds to finance the work through traditional means. In some cases, however, the use of a public-private partnership accelerated the project's access to financing by circumventing restrictions that some states have imposed on themselves and that limit their ability to issue additional debt. (Earlier financing of a road project adds value when it allows the public to enjoy the benefits of the new road sooner than would otherwise be possible.)

Several such projects are still under construction (see Table 4). New public-private partnerships have sought to reduce their borrowing costs by relying on publicly subsidized borrowing through the TIFIA program and through private activity bonds (PABs) issued by local municipalities; the PABs have tax advantages that lower the private partner's debt-service payments.[4] All but one of those ongoing projects have made use of federal subsidies through TIFIA. That choice of financing constitutes a return to some features of the traditional approach in which the public sector retains greater risks, especially the risk of default, as occurred in the South Bay Expressway bankruptcy. Those projects also typically secure loans or grants from states or localities as part of their financing.

In the other cases, though, project managers responsible for a project's financing have had to take out bank loans. That source of private capital had become more attractive than usual for project managers because during the recent economic downturn, the yields for bonds in municipal bond markets (including those of PABs) greatly increased relative to those on alternative investments, making it

4. A private activity bond is a bond issued by or on behalf of a state or local government to finance the project of a private business. By giving some PABs tax-preferred status—generally by making the bonds' interest tax-exempt—the federal government provides a form of credit assistance.

Table 3.

Completed Highway Projects That Used Public-Private Partnerships With Private Financing

	Dulles Greenway	SR-91 Express Lanes	Camino Colombia Bypass	Atlantic City-Brigantine Tunnel	Southern Connector	Pocahontas Parkway	Route 3 North	South Bay Expressway (S. Section)	SH-130 (Segments 5 and 6)	I-495 HOT Lanes
					Description of the Project					
Date of Opening	1995	1995	2000	2001	2001	2002	2005	2007	2012	2012
Location	Va.	Calif.	Tex.	N.J.	S.C.	Va.	Mass.	Calif.	Tex.	Va.
Sources of Revenues	Tolls	Tolls	Tolls	Tolls/Taxes	Tolls	Tolls	Taxes	Tolls	Tolls	Tolls
Type of Public-Private Partnership	DBFO	DBFO	DBFO	DBF	DBF	DBFO	DBF	DBFO	DBFO	DBFO
Length of the Road (Miles)	14	10	22	2	16	9	21	10	40	14
					Financial Structure and History					
Bankruptcy Declared	No	No	Yes	No	Yes	No	No	Yes	No	No
Public Buyout of Private Partners	No	Yes	No	No	No	No	No	No	No	No
					Sources of Financing (Millions of 2013 dollars)					
Private										
Debt	462	161	96	155	260	690	506	421	737	0
Equity	59	33	19	0	0	0	0	220	227	376
Public										
TIFIA program	0	0	0	0	0	0	0	174	462	633
Other	0	0	0	300 [a]	0	0	0	0	0	1,072 [b]
Total Project Cost	521	194	115	455	260	690	506	815	1,427	2,081

Source: Congressional Budget Office based on data from the Federal Highway Administration.

Note: HOT = high occupancy/toll; DBFO = design-build-finance-operate; DBF = design-build-finance; TIFIA = Transportation Infrastructure Finance and Innovation Act.

a. The project relied on a casino's future contribution to the Casino Reinvestment Development Authority as well as on funds from the South Jersey Transportation Authority and the New Jersey Transportation Trust Fund Authority.

b. The project included private activity bonds and loans or grants from states or localities.

more costly to finance projects by using bonds. At the peak of the financial market's troubles in late 2008, the difference between the interest rate on municipal bonds and that on TIFIA loans, which are perceived to be a safer alternative, had increased by nearly 4 percentage points. That rise in rates reflected people's concerns about the ability of state and local governments to pay off the bonds they were issuing.

Private Provision of Highways

If a public-private partnership arrangement is chosen for a highway project, the government involved must design, implement, and monitor contracts that allocate risk and control between the public and private partners. Although contracts of that kind are difficult to create because the parties involved cannot anticipate all contingencies, they are essential to establishing the right incentives to perform the work efficiently and manage the project's associated risks. In particular, contracts that bundle two or more elements of the work may facilitate quicker or cheaper completion if the greater control afforded the private partner through such arrangements gives it stronger incentives to constrain costs and meet established schedules than the traditional approach offers. A few studies have looked at the use of public-private partnerships as an approach to designing, building, operating, and maintaining highways. The research has found that, compared with the traditional approach, public-private partnerships have slightly reduced the time required to complete the design and construction phases of road projects and lowered construction costs by a small amount, on average.

Table 4.

Ongoing Highway Projects That Use Public-Private Partnerships With Private Financing

	I-595 Managed Lanes	North Tarrant Express Segments 1&2	Port of Miami Tunnel	I-635 LBJ Freeway	I-95 HOV/HOT Lanes	Midtown Tunnels	Presidio Parkway	Ohio River Bridges East End Crossing	North Tarrant Express Segement 3A
				Description of the Project					
Start of Construction	2009	2010	2010	2011	2012	2012	2013	2013	2014
Expected Completion Date	2014	2015	2014	2016	2015	2017	2015	2016	2018
Location	Fla.	Tex.	Fla.	Tex.	Va.	Va.	Ca.	Ind.	Tex.
Sources of Revenues	Tolls/Taxes	Tolls	Taxes	Tolls	Tolls	Tolls	Taxes	Tolls/Taxes	Tolls
Type of Public-Private Partnership	DBFOM	DBFOM	DBFOM	DBFOM	DBFOM	DBFOM	DBFOM	DBFOM	DBFOM
Length of the Road (Miles)	11	13	1	13	29	1	2	8	6
				Sources of Financing (Millions of 2013 dollars)					
Private Financing									
Debt	829	0	362	0	0	0	167	0	0
Equity	231	452	85	713	280	272	46	78	413
Public Financing									
TIFIA program	640	690	362	902	300	422	150	0	524
Private activity bonds[a]	0	422	0	643	253	675	0	677	271
Other[b]	246	609	329	520	90	719	0	395	169
Total Project Cost	**1,946**	**2,173**	**1,138**	**2,779**	**923**	**2,089**	**365**	**1,150**	**1,377**

Source: Congressional Budget Office based on data from the Federal Highway Administration.

Note: HOV = high-occupancy vehicle; HOT = high occupancy/toll; DBFOM = design-build-finance-operate-maintain; TIFIA = Transportation Infrastructure Finance and Innovation Act.

a. A private activity bond is a bond issued by or on behalf of a state or local government to finance the project of a private business.

b. Mostly loans or grants from states or localities.

Information and Incentives

A common problem with the traditional method of providing highways is that it does a relatively poor job of addressing the risks that arise from privately held or incomplete information. One way to address the problem of privately held information is to consolidate design, construction, operations, and maintenance under the control of one project manager. In that case, nothing would be gained by strategically withholding or misrepresenting information because all the potential benefits from the project would accrue to one party. Consolidating multiple tasks would also help in the coordination of a project whenever full and reliable information was necessary for a smooth transition from one task to another (such as the transition from the design to the construction stage). The managing party could be held responsible for any problems that arose during a transition and then work to eliminate them.

The drawbacks of a lack of consolidation and coordination are laid out in a study by the National Cooperative Highway Research Program published in 2006.[5] That research suggests that using two separate contracts (one for design and the other for construction of a road) imposes "constructability risk" on the project's owner (the public-sector partner). In other words, the owner

5. See Sidney Scott III and others, *Best-Value Procurement Methods for Highway Construction Projects*, National Cooperative Highway Research Program Report 561 (Washington, D.C.: Transportation Research Board of the National Academies, National Cooperative Highway Research Program, 2006), www.trb.org/Main/Blurbs/158046.aspx.

shoulders the risk that the design produced for the builders is not the most efficient option or may not match the builder's abilities. If such a mismatch occurs, the owner of the project must first pay the builder to fix the resulting problem and then attempt to collect any added costs from the designer—which may be difficult because the owner must first prove that the designer has legal liability stemming from a design that became more difficult and costly to complete than had been expected.

A contract that consolidates responsibility for a project's design, construction, operations, and maintenance in the hands of one contractor may also better align that contractor's incentives with the project's goals over the long term. Separate contracts for construction and maintenance may encourage the private builder to construct the road at the lowest possible cost but offer no incentive to consider and potentially improve the highway's long-term performance (for example, by initially using more expensive but longer-lasting materials). A more transparent exchange of information about the project—specifically, the disclosure of expected long- and short-term project costs—between the private firm and the public partner might reduce the cost of operating and maintaining the road in the future. One study found that for every dollar spent on preventive maintenance, between $4 and $10 was saved (depending on how soon the maintenance was undertaken) when the road eventually had to be rehabilitated.[6] Thus, assigning the risk of higher long-term costs for maintenance to the builder through a public-private partnership contract would provide the incentive to use whatever materials or methods that minimized such costs over the entire life of the highway and not just during the construction phase. Indeed, using a public-private partnership to complete a highway project may be most cost-effective in instances in which potentially large savings can be gained by managing the risk of higher-than-expected costs over the life of the road.

6. "Gilbert Y. Baladi and others, "Cost-Effective Preventive Maintenance: Case Studies," *Transportation Research Record: Journal of the Transportation Research Board*, vol. 1795 (2002), pp. 17-26, http://dx.doi.org/10.3141/1795-02.

Control

A drawback of a partnership arrangement for the public sector, however, can be its loss of control of a project. Contracts for public-private partnerships may in some cases turn over some toll-setting authority to the private sector. Higher tolls are likely to result, an outcome that may conflict with other public-sector goals. A loss of control may also lead to conflicts about and renegotiations of the terms of the contract, which may be costly for the public sector. More generally, less control of a project by the public partner over the long run may make attainment of the government's future objectives more costly; it may also complicate efforts to adhere to a contract written many years—or even decades—earlier and still protect the public's interests.

Experience With Private Provision

Assessments of whether public-private partnerships can provide highway infrastructure more efficiently than traditional methods are challenging, in large part because of limited data and research.[7] Only a few studies have focused on the private provision of a highway project—that is, on design and construction as well as on operations and maintenance. That research found that the use of the design-build type of public-private partnership slightly reduced the cost of building highways relative to the cost under the traditional approach and slightly reduced the amount of time required to complete the projects. The studies typically estimated that the cost of building roads through design-build partnerships was a few percentage points lower than it would have been for comparable roads provided in the traditional way. (However, estimates of such savings are quite uncertain, and the effect on costs of using design-build arrangements in the future could differ significantly from what the estimates in those studies imply.) Studies also found that for projects with contracts valued at more than $100 million, the total time required to design and build the road declined by as much as a year on some projects—in part because the public-private partnership bundled the design and construction contracts and so eliminated a second, separate bidding process for the additional tasks.

7. For additional details, see Congressional Budget Office, *Using Public-Private Partnerships to Carry Out Highway Projects* (January 2012), pp. 22–25, www.cbo.gov/publication/42685.

Information about using public-private partnerships to operate and maintain roads is limited. In recent years, two older highways built in the traditional way, the Chicago Skyway and the Indiana Toll Road, have been converted to private management, making them subject to control by the private sector. Comparing the cost of operations and maintenance for those highways under public and private management indicates that both roads experienced reductions in costs after a private firm assumed control. A variety of factors in addition to the transfer of control, such as the recent recession and the associated reduction in traffic, probably contributed to that result.

This testimony updates *Using Public-Private Partnerships to Carry Out Highway Projects*, a report that the Congressional Budget Office (CBO) released in January 2012, written by Alan van der Hilst (formerly of CBO). Joseph Kile and David Moore (formerly of CBO) supervised that work. Chad Shirley updated the work in collaboration with Sarah Puro. In keeping with CBO's mandate to provide objective, impartial analysis, this testimony contains no recommendations.This testimony and the earlier report are available on CBO's website (at www.cbo.gov/publication/45157 and www.cbo.gov/publication/42685, respectively).

Overview of Public-Private Partnerships for Highway and Transit Projects

Testimony before the House Transportation and Infrastructure Committee Panel on Public-Private Partnerships

March 5, 2014 10 a.m.

2167 Rayburn House Office Building

I. Introduction

The Texas Department of Transportation (TxDOT) appreciates the opportunity to provide written testimony to the Transportation and Infrastructure Committee's Panel on Public-Private Partnerships outlining our experience with, and thoughts about, public private partnerships (P3), including our involvement in using P3s in conjunction with the Transportation Infrastructure Finance and Innovation Act (TIFIA) program.

While I have the opportunity, TxDOT would like to thank the Committee for the Moving Ahead for Progress in the 21st Century Act (MAP-21). In terms of constructive benefit to the states, we consider it to be the most significant surface transportation legislation passed over the last 20 years. Since its passage, Texas has worked diligently to implement all the positive changes the legislation provides to the states. We will continually work to implement elements of MAP-21 in this second year of the bill. Texas intends to take full advantage of opportunities generated by the new law.

As the Committee is well aware, states are struggling with the lack of predictable funding for our transportation projects. The Surface Transportation Program, until very recently, was the most reliable of all federal undertakings. Now, it has joined the list of federal responsibilities that get fixed at the last minute. There are rescissions, earmark claw-backs, short term extensions, and a trust fund that can no longer fully replenish itself. This is not the best way to deliver projects because it impacts the planning process for agencies, local communities and our private sector construction and engineering partners.

Recognizing the shortage of traditional funds for transportation, the Texas Legislature authorized several tools that TxDOT uses to realize the benefits of private sector participation. Some examples are:

- Long-term Debt: TxDOT was provided the authority to issue long-term bonds paid back by state motor fuels tax revenue, state general revenue and other dedicated revenue streams.
- Toll Revenue Bonds: TxDOT has the ability to issue bonds for specific tolled projects and use toll revenue to repay the bonds.
- Comprehensive Development Agreements: Texas' version of public-private partnerships allows the state to partner with the private sector to finance and develop new, state-owned mobility projects.
- Private Activity Bonds (PABs): The Legislature passed legislation in 2005 to allow the state to issue PABs in order to keep a private developer's borrowing costs as low as possible. This was in direct correlation to Congress allowing PABs to be used for transportation projects as part of SAFETEA-LU.

In recent years Texas has looked to the private sector more frequently to help us not only pay for, but construct large scale projects that otherwise would be years away from construction. These P3s are enabling the state to leverage our resources and deliver projects to our citizens much more efficiently and expeditiously than with the standard pay-as-you go methods of the past.

II. Public-Private Partnerships in Texas

In Texas, P3s for transportation projects are entered into using a procurement process that allows TxDOT to select the proposal that provides the best value to the state. These agreements provide for the design and construction, rehabilitation, expansion, or improvement of a transportation project and may also provide for the financing, maintenance, or operation of such a project.

Through the use of P3s TxDOT has been able to narrow the gap between our transportation needs and our transportation assets, and has helped citizens to realize our transportation goals such as improved traffic flow and air quality in areas of greatest need and demand. Without the option of P3s, several projects would not be developed for a number of years, such as SH 130 Segments 5 & 6 in Central Texas and some long-awaited projects in the Houston and Dallas-Fort Worth regions. These projects are needed to improve mobility and reduce congestion.

Design-Build and Concession Models

There are different ways to structure a P3 agreement. The terms of these agreements vary based on the level of private sector participation.

A design-build contract allows for right-of-way acquisition, design and construction to occur simultaneously under one contract, but does not include financial participation from the private sector or a long-term lease of the facility. These agreements have many advantages, including:

- Single point of responsibility for design and construction;
- Contract is usually fixed price, allowing for earlier cost certainty;
- Expedited project delivery by overlapping portions of design, construction, and right-of-way (ROW) acquisition;
- Developer innovation through close coordination between the construction contractor and designer; and

- Shifting the responsibility of many of the inherent risks associated with design and construction to the private sector. Examples can include cost overruns, schedule delays, inclement weather, material shortages, etc.

A concession agreement gives the developer responsibility to perform some or all of the development, financing, operation and maintenance of a facility for up to 52 years. In exchange, the developer is provided a right to the revenue generated by the project. These projects can potentially provide for revenue sharing with TxDOT over the life of the contract. In some cases, such as SH 130 Segments 5 and 6 (detailed below in a case study), the agreement may also include an upfront lump sum payment from the developer to TxDOT. Other potential advantages of concession agreements include:

- Developer assumes the risk for cost, schedule, traffic and revenue, financing, and meeting state and federal standards;
- Removes the financial burden of operating and maintaining the facility from TxDOT; and
- Reduces or eliminates the amount of public funds needed to construct the project.

One of the benefits of building projects under a P3 is that substantial elements of risk are transferred from the public to the private developer. However, some risks are better managed by TxDOT rather than by the developer. One of our core principles is to allocate risk in such a way that we maximize the benefits of the P3 to the public. These risks are identified and allocated on a project-by-project basis. In general, individual risks should be allocated to the party best able to manage and mitigate that risk for the best overall value to the taxpayers.

TxDOT has made many project-by-project adjustments to its risk allocation provisions during the course of procurements. It does so by listening to the proposers; assessing the characteristics of the project, the competition and current market conditions; and carefully applying these principles and practices to the procurement.

III. TIFIA

A point that is generally missed in descriptions of MAP-21 is that the reinvigorated TIFIA program has the practical effect of adding at least an extra year of project delivery to the two year bill. According to the Federal Highway Administration (FHWA), each dollar of federal TIFIA funds can provide up to $10 in TIFIA credit assistance and leverage up to $30 in transportation infrastructure investment. If the entire $1.75 billion of TIFIA funds allocated in MAP-21 is leveraged at this 30x multiple, over $52 billion in much-needed infrastructure would be possible. Given this clear benefit, TIFIA is a valuable tool in the financing toolbox

but it should continue to be a supplement, not a complete substitute for conventional federal-aid highway, highway safety and transit grant programs.

MAP-21 solved key challenges that have historically held back the TIFIA program. We were very encouraged by the substantial increase in funding for the program, the increased share of project costs that TIFIA can finance, and the Congressional desire to make the TIFIA program more efficient.

Since TIFIA's inception in 1998 as part of the Transportation Equity Act for the 21st Century (TEA-21), Texas has been an early user of the program. We view TIFIA as a critical component in the delivery of our larger scale projects. Within the last 10 years, the Texas Legislature has enacted several innovative financing initiatives that may be used in conjunction with TIFIA to deliver projects sooner and more efficiently.

To date, Texas has received $4.2 billion in TIFIA assistance which, combined with state, local, and private investment, yielded over $13 billion in total project funding. Because TIFIA loans are scored at about 10 percent of the amount of the loan, the federal budget impact for these projects is estimated at only $420 million. Compared to the 80 percent that the federal program contributes to projects under the traditional formula funding system, the TIFIA program saved the federal government $10.4 billion to deliver the same projects. TIFIA is a great example of states doing more with fewer federal dollars.

According to FHWA TIFIA data, Texas is home to three of the largest TIFIA loans in the nation. These projects have been critical to relieving congestion and contributing to efficient movement of goods in heavily populated areas of the state.

IV. TIFIA and MAP-21

Prior to MAP-21, USDOT was allowed discretion to evaluate and choose eligible projects under specific criteria. USDOT also had authority to weigh and compare the relative merits of eligible projects under these selection criteria, and to choose those that scored highest under a weighted scoring system. Over time, USDOT continued to add criteria, such as liveability, to its list of selection criteria. These criteria, while seen by some as beneficial to help narrow down projects for funding, went beyond what was laid out in law. Too much discretion seemed to be permeating the process and made the program more about meeting subjective criteria, as opposed to finding the best credit-worthy projects to meet mobility demands.

MAP-21 eliminates discretionary selection criteria. It establishes a limited set of objective eligibility criteria that require a "yes" or "no" determination of satisfaction. In the new language, it expressly states:

> "a project shall be eligible to receive credit assistance ... if the project meets the criteria described in this subsection."

(§602(a)(1).)

> "... projects that are eligible to receive credit assistance ... *shall receive credit assistance* on terms acceptable to the Secretary, if adequate funds are available ..." (§602(b)(1)). (emphasis added)

TxDOT welcomed this change in MAP-21 because we believe that projects which meet credit requirements, maintain a safe and reliable transportation system, address congestion and foster economic opportunity should be selected to receive TIFIA funding. Congress can rightly point to this as a decision which created a level playing field designed to send funding exactly where there is demand. It is very close to succeeding.

Given that MAP-21 is only a two year bill, we have a compelling reason to get the TIFIA program back on track. MAP-21 provides critical changes and increased funding, but changes can be made to further enhance the program:

- Reinforce the 49 percent of eligible project cost allowed under MAP-21;
- Streamline the Letter of Interest phase and enforce strict deadlines for review of LOIs;
- Incorporate the TIFIA application process with project procurement schedules so as to maximize the competition that sponsoring agencies can stimulate.

V. Project Case Study SH 130 Segments 5 and 6

An example of a successful P3 in Texas is the procurement of the contract to develop SH 130 Segments 5 and 6. For many years, central Texans had planned a bypass to accommodate frustrated motorists plagued with ever-increasing traffic and safety concerns along the portions of Interstate Highway 35 from San Antonio to Georgetown. Funding for this project through traditional means would take decades to become available. Through bonding, local government participation, and state taxes and fees, the SH 130 toll road from Georgetown to the Austin-Bergstrom International Airport began in 2002. However, TxDOT did not have available funds and could not borrow enough money to complete Segments 5 and 6 from South Austin to Seguin. Therefore these segments were put on hold, again for decades, until traditional funding sources would become available.

Alternatives

When private contractors Cintra-Zachry proposed to fund Segments 5 and 6, TxDOT had already been considering other funding alternatives, including future construction on TxDOT's traditional pay-as-you-go basis, construction using traditional tax exempt municipal bonds and a new competitive P3 procurement.

The pay-as-you-go funding mechanism was not financially feasible as TxDOT did not have sufficient state highway fund revenues to afford Segments 5 and 6. Also, cost inflation would potentially further increase the needed amount of funds. The funding gap could have significantly widened over time, causing additional substantial delays to due to lack of funds.

Concurrent with procurement for Segments 5 and 6, TxDOT created a tool to determine whether to undertake a P3 or to pursue a traditional toll revenue bond financing method. The results showed that a traditional tax-exempt municipal bond financing method would require approximately $700 million from state highway fund dollars which were not available.

However, a public-private partnership offered multiple benefits. The project was being built with private financing, with no public funds subsidy of capital, operations, and maintenance costs. The Cintra-Zachry P3 included an upfront payment to TxDOT of $140 million. TxDOT has received payment and the funds are being targeted for other projects in the region. In addition, the State will receive roughly 5 percent of gross revenue from the start of the project's operation. The percentage of revenue shared with TxDOT could increase if the project's financial performance improves over time, with the State's share possibly reaching 50 percent. Also, Cintra-Zachry's estimated design and construction costs of $1.35 billion are similar to TxDOT's estimated capital costs. Finally, the project began construction years before it would have been able to using TxDOT's traditional project delivery and financing methods.

VI. Conclusion

P3s in Texas have, and continue to play a vital role in how we deliver critical transportation projects. Federal tools like TIFIA and PABs add to our tool box to leverage the ever shrinking fuel tax receipts. The private sector is flush with funds to invest in infrastructure projects and it is Congress' duty to continue to create an environment for those funds to be utilized to build and maintain our vast transportation network.

APPENDIX

SH 130 Segments 5 & 6

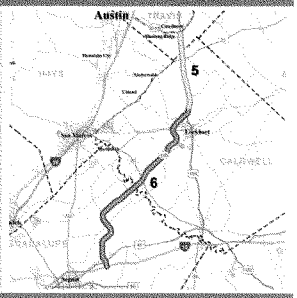
CDA Concession

Cintra-Zachry

Texas Department of Transportation

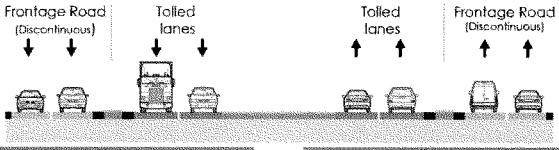
Project Description

Report Period	Jan-14
Stage	Operations & Maintenance
Project Scope	Segments 5 & 6 of the State Highway 130 form a 40-mile link through Travis, Caldwell, and Guadalupe counties to I-10 near Seguin. Segment 5 stretches from north of Mustang Ridge to FM 1185 north of Lockhart (11 miles), following the old US 183 alignment. Segment 6 runs from FM 1185 to I-10 northeast of Seguin (29 miles). Improvements consisted of constructing two toll lanes and two discontinuous frontage road lanes in each direction.



Proposed Typical Sections

US 183 to FM 1185



Estimated Capital Cost[1]

Design/Construction	$927,166,172 [2]
Right of Way	$377,464,172
Utilities	$44,000,000
Tolling/ITS	$18,369,656
Total Capital Costs	**$1,367,000,000**

Note 1: All costs are in nominal dollars

Note 2: $27.053M Upfront Concession Fee Included in Design/Construction Cost

Estimated Funding Sources

TIFIA Loan	$476,000,000
Developer Equity & Bank Loans	$891,000,000
Total Funding Sources	**$1,367,000,000**

Schedule

Contract Execution	March 22, 2007
Notice to Proceed 1	May 2007
Financial Close	March 2008
Notice to Proceed 2	April 2009
Substantial Completion	October 24, 2012
Service Commencement	November 11, 2012
Final Acceptance	May 8, 2013

All future dates are anticipated

North Tarrant Express (NTE) Segments 1 & 2W

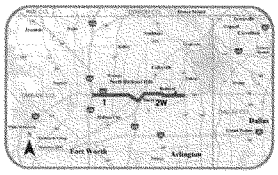
CDA Concession

Cintra-Meridiam

Texas Department of Transportation

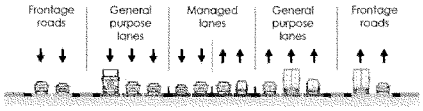
Project Description

Report Period	Jan-14
Stage	Design & Construction
Project Scope	The 13.3-mile NTE project will double the capacity of SH 121/183 and I-820, two of Tarrant County's most congested highways. It will provide 8 to 10 lanes, including both general purpose lanes and managed lanes, that feature dynamic pricing. This project is estimated to be completed by 2015.

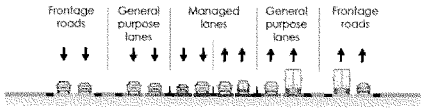


Proposed Typical Sections

SH 183/SH 121



I-820



Estimated Capital Cost[1]

Design/Construction	$1,327,112,429
Right of Way	$211,226,000
Utilities	$139,189,571
Tolling/ITS	$57,571,000
TIFIA Fees/Interest/Subsidy	$113,366,000
Sr Debt Fee/Interest	$156,742,000
Development and Advisory Fees/Bid	$102,230,000
Total Capital Costs	**$2,107,437,000**

Note 1: All costs are in nominal dollars

Estimated Funding Sources

Developer Funds (Shareholder Equity)	$426,027,000
Developer Funds (TIFIA)	$649,437,000
Developer Funds (Sr Debt/PABs)	$397,775,000
Developer Funds (Capitalized Interest)	$53,366,000
Public Funds (Federal)	$453,923,182
Public Funds (State)	$118,806,818
Public Funds Dedicated for CO's (Fed)	$21,479,968
Total Funding Sources	**$2,120,814,968**

Schedule

Contract Execution	June 23, 2009
Notice to Proceed 1	July 2009
Financial Close	December 2009
Notice to Proceed 2	December 2009
Substantial Completion	June 2015
Final Acceptance	September 2015

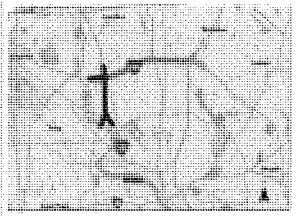
All future dates are anticipated

LBJ Managed Lanes

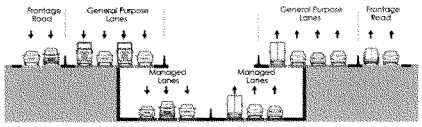
[redacted]

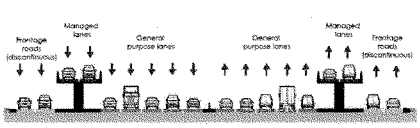
Project Description

Report Period	Jan-14
Stage	Design & Construction
Project Scope	The 16 mile LBJ managed lanes project includes the finance, construction, operation and maintenance of a corridor of frontage roads, general purpose lanes and tolled managed lanes from Greenville Avenue to Luna Rd on IH 635 and tolled managed lanes from Northwest Highway to Motorola Parkway on IH 35E.



Proposed Typical Sections





Estimated Capital Cost[1]	
Design/Construction	$2,485,456,000 [2]
Right of Way	$242,197,730
Utilities	$200,599,000
Tolling/ITS	$54,797,000
Total Capital Costs	**$2,983,049,730**

Note 1: All costs are in nominal dollars

Note 2: Design/Construction includes O&M - Construction, TIFIA Fees, Senior Debt Fee, Interest Development Fee, Bid Cost, Debt Services Fee and Major Maintenance Reserve

Schedule	
Contract Execution	September 2009
Notice to Proceed 1	September 2009
Financial Close	June 2010
Notice to Proceed 2	December 2010
Substantial Completion	December 2015
Final Acceptance	March 2016

All future dates are anticipated

Estimated Funding Sources	
Private Activity Bonds	$606,035,000
TIFIA Loan	$850,000,000
Equity	$681,407,000
Public Funds (ROW)	$242,197,730 [3]
Public Funds	$489,828,000
Contingency Fund (Fed)	$24,000,000
Contingency Fund (State)	$6,000,000
Toll Revenue During Construction	$17,036,000
Interest Income	$820,000
Capitalized Interest	$95,726,000
Total Funding Sources	**$3,013,049,730**

Note 3: All Right of Way acquired by TxDOT prior to procurement

North Tarrant Express (NTE) Segment 3A

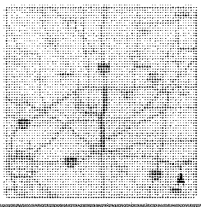
Concession

Cintra-Meridiam

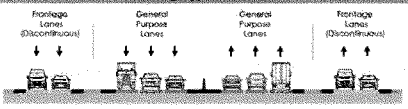
Texas Department of Transportation

Project Description

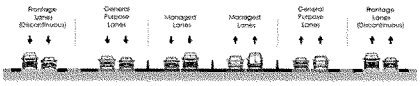
Report Period	Jan-14
Stage	Design & Construction
Project Scope	The 6.5 mile project extends along IH 35W from IH 30 to Fossil Creek Boulevard. The project will add frontage roads and managed-toll lanes, reconstruct general purpose lanes, as well as complete the construction of a new interchange at IH 35 W and IH 820. The project will be delivered as a Comprehensive Development Agreement.



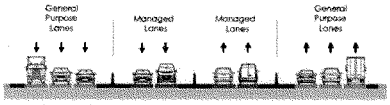
Existing Typical Sections



Proposed Typical Sections



North of NE 28th Street



South of NE 28th Street

Estimated Capital Cost[1]

Design/Construction	$984,600,000
Right of Way	$104,218,000
Utilities (TxDOT ONCOR)	$15,000,000
Tolling/ITS	$95,792,000
Total Capital Costs	**$1,199,610,000**
Reserves, Development Cost, Interest and Fees, Financing Fees and Financial Close Payment	$208,020,000
Total Project Delivery Cost	**$1,407,630,000**

Note 1: All costs are in nominal dollars

Estimated Funding Sources

Public Funds	$126,990,000
Senior Bond Debt (PABs)	$274,030,000
TIFIA Loan	$531,000,000
TIFIA Interest Capitalized	$46,530,000
Equity	$442,160,000
Interest Income	$320,000
ROW Strategy 102	$15,000,000
Sub Total	**$1,436,030,000**
Contingency Provided by TxDOT	$40,500,000 [2]
Total Funding Sources	**$1,476,530,000**

Note 2: Funding source not determined

Schedule

Contract Execution	March 1, 2013
Notice to Proceed 1	March 13, 2013
Notice to Proceed 2	September 15, 2013
Substantial Completion	September 2015
Final Acceptance	December 2016

All future dates are anticipated

SH 183 Managed Lanes

CDA

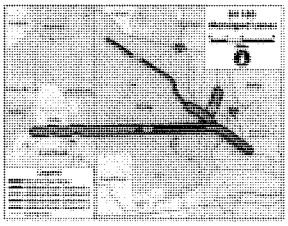
Texas Department of Transportation

Project Description

Report Period Jan-14

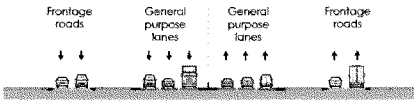
Stage Procurement

Project Scope The SH 183 Managed Lanes Project is comprised of 13.5 miles of SH 183 from near SH 121 to near Interstate 35E and portions of Loop 12 and SH 114 as depicted in Dallas and Tarrant Counties. The scope of the project may be expanded to include the additional scope components if the available funds support them. The project is being procured as a CDA with a long term (25 year) operations and maintenance component. (D.B.f.O.M.)

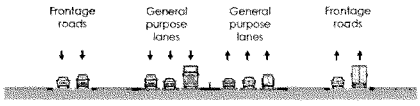


Existing Typical Sections

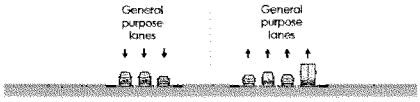
SH 183 from Industrial Blvd to Belt Line Rd



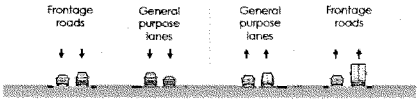
SH 183 from Belt Line Rd to Empire Central



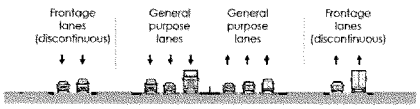
SH 114 from SH 121 to SH 161



SH 114 from SH 161 to SH 183

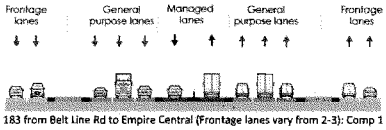


Loop 12 from SH 183 to I 35E

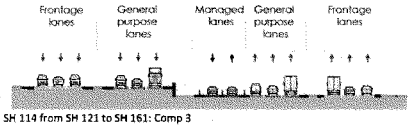


Proposed Typical Sections

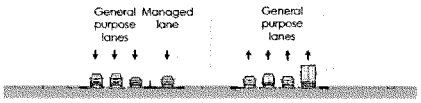
SH 183 from Industrial Blvd to Belt Line Rd



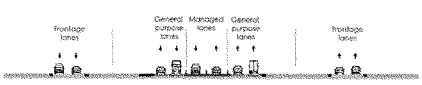
SH 183 from Belt Line Rd to Empire Central (Frontage lanes vary from 2-3): Comp 1



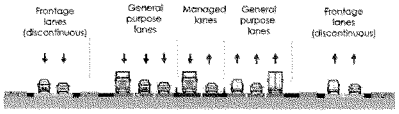
SH 114 from SH 121 to SH 161: Comp 3



SH 114 from SH 161 to SH 183: Comp 4



Loop 12 from SH 183 to I 35E



SH 183 Managed Lanes

CDA

Estimated Capital Cost[1]		
SH 183		
Design/Construction	$623,178,817	
Right of Way	$190,000,000	
Utilities	$85,863,418	
Tolling/ITS	$15,007,530	
Total Capital Costs	**$914,049,765**	2
SH 183 Component 1		
Component 1 Design/Construction	$76,000,000	
Component 1 Right of Way	$0	
Component 1 Utilities	$0	
Component 1 Tolling/ITS	$0	
Component 1 Total Capital Costs	**$76,000,000**	2
SH 183 Component 2		
Component 2 Design/Construction	$91,000,000	
Component 2 Right of Way	$0	
Component 2 Utilities	$0	
Component 2 Tolling/ITS	$0	
Component 2 Total Capital Costs	**$91,000,000**	2
SH 183 Component 3		
Component 3 Design/Construction	$85,585,257	
Component 3 Right of Way	$0	
Component 3 Utilities	$700,128	
Component 3 Tolling/ITS	$4,725,293	
Component 3 Total Capital Costs	**$91,010,678**	2
SH 183 Component 4		
Component 4 Design/Construction	$40,294,897	
Component 4 Right of Way	$0	
Component 4 Utilities	$700,128	
Component 4 Tolling/ITS	$970,260	
Component 4 Total Capital Costs	**$41,965,285**	2

Note 1: All costs are in nominal dollars

Note 2: Capital Costs do not include O&M, Lifecycle, or Tolling Operations Costs

Estimated Funding Sources	
TxDOT Funds	$190,000,000
UTP	$600,000,000
TIFIA Loan or Other TxDOT Funds	$250,000,000
Total Funding Sources	$1,040,000,000

Schedule	
Issue RFQ	February 20, 2013
SOQ Date	July 19, 2013
Issue Industry Review RFP	September 3, 2013
Issue Final RFP	November 7, 2013
Proposals Due	April 14, 2014
Conditional Contract Award	May 29, 2014
Contract Execution (NTP1)	November 2014

All future dates are anticipated

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April 22, 2014

The Honorable John J. Duncan
Chairman
United States House Transportation and Infrastructure Committee
Panel on Public-Private Partnerships
2165 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Duncan:

Thank you for the opportunity to testify before the Panel on Public-Private Partnerships on March 5, 2014. It was a great honor to represent the State of Texas and share with the Panel the innovative solutions we are finding to fund critical transportation projects in our state.

Enclosed please find my responses to your questions submitted on March 25, 2014. Should you have any questions about what we have provided you may reach me at 512-305-9515 or your staff my contact Robin Ayers, TxDOT Federal Affairs Office at 512-463-8345 or Robin.Ayers@txdot.gov.

Sincerely

James M. Bass
Chief Financial Officer

Transportation and Infrastructure Committee
Panel on Public-Private Partnerships
March 5, 2014
Follow-Up Questions for Written Submission
Mr. James Bass

1. *In your written testimony, you state that TxDOT determines the risk allocation between public and private sectors on a case by case basis. Can you give examples of how that allocation has differed between projects?*

Whether or not a given risk should be allocated in whole or in part to the developer depends on a number of factors, including the specific risk factors for a project, risk profiles of each proposer and its equity investors, and the type of Comprehensive Development Agreement (CDA) being utilized.

TxDOT and its consultants have established certain procedures for TxDOT's project planning and procurements in an effort to allocate risks appropriately. Such steps include TxDOT identifying risks for each project at the outset of the project planning process and conducting a workshop with TxDOT and its consultants to determine (a) which risks TxDOT should assume, (b) which risks the developer should assume, (c) which risks should be shared and (d) which risks could be more easily shifted to the developer through TxDOT performing additional engineering and other due diligence and sharing of that information with the proposers.

TxDOT considers current market conditions at the time of the procurement and obtains proposer input prior to submission of proposals through questions and answers and one-on-one meetings. TxDOT has also held workshops with sureties and insurers to understand the current state of the bonding and insurance markets as they pertain to these risks. As a result, the risk allocation profile for each project is refined throughout the procurement.

As risks are assessed, it is important to keep in mind that concessions provide the private party with an opportunity to establish and manage a long-term, project-specific business. The concessionaire is much more akin to a business owner than a service contractor. As such, the concessionaire is in a position to take on project business risks that a contractor cannot. Further, the concessionaire risk appetite is higher than the public sector and therefore wants an opportunity to earn a rate of return commensurate with these risks.

A great deal of the give and take that occurs in the question and answer and one-on-one meeting processes in TxDOT's procurements concerns appropriate risk allocation. TxDOT has made many project-by-project adjustments to its risk allocation provisions during the course of its procurements. For example, the private sector has 100% of the risk of archaeological impacts on NTE Segments 1 and 2 (Fort Worth), while the private sector's

risk was limited on IH 635 (Dallas) due to the fact that this project includes a depressed or tunnel-like section. Another example is that TxDOT bears toll collection risk on SH130 Segments 5 and 6 (Austin) while the private sector will be required to take this risk on the SH288 project (Houston) that is currently in procurement.

2. *Which risks are better managed by the private sector, and which are better managed by the public sector? How does TX DOT maximize the benefits to the public?*

Although P3 projects risk allocations can vary by project, the private sector is generally better able to manage construction and operational risks -- those activities which they will be performing. For example these risks could include cost and schedule impacts resulting from: financing, design and construction integration, cost overruns, construction delay, long term asset condition, and traffic/revenue risk.

While risk allocation is project-specific, certain risks are often more effectively managed by the public sector including the cost and schedule impacts of: environmental documentation and decisions under the National Environmental Policy Act, unknown utility information and subsurface site conditions, transporter and arranger liability for off-site disposal of hazardous materials, litigation risks arising out of environmental decisions or lack of governmental authority and movement in market interest rates between the time a proposal is made and the time for closing the initial financing.

Additionally it may be appropriate for the private and public sectors to share certain risks, for example, force majeure. Risks that cannot be controlled by either party generally fall into this category.

By utilizing the P3 structure, TxDOT has been able to transfer significant risks to the private sector, deliver transportation projects more quickly, and efficiently leverage limited state funds. TxDOT strives to ensure that risk transfer decisions balance TxDOT's policy objectives and responsibilities with the cost of transferring project risks to the private sector.

Evidence of TxDOT's effective allocation of project-specific risks can be seen in the very favorable results of each of TxDOT's P3 transactions. Specifically, TxDOT received a significant upfront payment on SH130 Segments 5 and 6 from the private sector even though the State's own analysis indicated the project was not financially feasible under a traditional delivery model. This resulted in the State of Texas receiving the benefit of these improvements at no cost and significantly earlier than it would otherwise have been built. Additionally, TxDOT allocated the upfront payment for use on other priority regional projects.

In the Dallas-Fort Worth region, through a P3 TxDOT was able to deliver significantly more miles of NTE Segments 1 and 2 than expected. The IH635 LBJ Managed Lanes project will be built with less in state funds than anticipated, thereby allowing TxDOT to use those savings to deliver other priority regional transportation projects.

If the risk allocation in these P3 agreements had been sub-optimal it is likely that these

projects would still have been delivered but at a potentially higher cost of limited state funds or with a smaller scope.

3. How does TxDOT identify a project that may be a good candidate for a P3?

As noted earlier, a Comprehensive Development Agreement is the tool TxDOT uses to enable private investments in the Texas transportation system. It provides a competitive selection process for developing regional projects, usually toll roads. A CDA opens the door to accelerated financing, design, construction, operation and/or maintenance of a project. So what factors are considered when developing a project as a P3 project?

Suitability – Is a CDA the best alternative for financing, delivering and operating the project? Are there non-quantitative factors that support or detract from using a CDA? TxDOT typically compares the financial feasibility as measured by the amount of state funds that would be required to fund the project under traditional delivery methods and the P3 model. If the P3 analysis yields a significantly lower amount of state funds, then the project is considered a candidate for P3 delivery.

TxDOT also considers the following factors in determining suitability for toll and P3 projects:

Feasibility - From an engineering perspective, is it a project that can be built?

Traffic Demand Trends - Will there be enough traffic to support the toll road?

Economic Strength - How susceptible is the local economy to economic downturns? How many industries make up the employers in the local region?

4. Texas has been able to bring several major P3 projects to close; what does TxDOT believe it is the key to success in Texas that has allowed so many projects to go forward?

Through the use of CDAs, TxDOT has been able to help citizens to realize our transportation goals including improving mobility and reducing congestion even though there is limited public funding. Without the option of CDAs, several projects would not be developed for many years, including SH 130 Segments 5 and 6 and the long-awaited IH 635 LBJ Managed Lanes, and North Tarrant Express facilities in north central Texas.

One key to success has been buy-in from local communities. Once the need has been established, and traditional funding mechanisms are not available, TxDOT works with its local partners and Metropolitan Planning Organizations to identify locally acceptable terms that can be used in procuring a public-private partnership.

Another absolutely essential key to success is having a viable source of project funding. P3s, however, do not fully address the lack of funding. Private investors and lenders will not invest or loan unless convinced they will be repaid and have a reasonable opportunity to earn a return for the risks taken. Tolling of projects is an important ingredient and a

fundamental part of concessions within TxDOT's CDA program. But tolling alone is not always sufficient to finance all project costs and provide a reasonable return for the risks taken. Federal and state funding, therefore, are other important elements of a successful P3 program. Federal funding provided under the TIFIA program has been a key to TxDOT's P3 program success to date and will continue to play critical role in the future

5. In your written testimony, you suggest legislation should be enacted to "incorporate the TIFIA application process with the project procurement schedules." Could you describe situations TxDOT has experienced that such a provision would seek to address?

The competitive procurement process is integral to TxDOT achieving the best value for the State. The current TIFIA loan procedures, however, are difficult to effectively incorporate into this process. For example, TxDOT is developing the SH288 project as a P3 project. The project is currently in a competitive procurement and TxDOT is in the credit assessment stage with TIFIA. The project is dependent on a TIFIA loan in order to be financially feasible.

Under the current process, an applicant must undergo a rigorous credit assessment prior to receiving Credit Council approval and an invitation to submit a TIFIA application. While TxDOT is working with TIFIA initially, the invitation will only be issued to the preferred proposer. This step does not occur until after selection of the preferred proposer at the end of the procurement. Because neither TxDOT nor proposers can have confidence that an invitation will be forthcoming TxDOT has had to agree to hold the preferred proposer "harmless" in the event a TIFIA loan is not awarded. Absent this commitment, proposers will not rely on TIFIA financing being available, effectively ensuring the project is not feasible unless TxDOT agrees to provide scarce funds. At worst, if no invitation is issued, TxDOT's only other option is to cancel the procurement and delay development of the project.

If, however, the credit assessment results in an invitation to the state sponsor to apply for TIFIA assistance earlier in the procurement process, the risk of TIFIA loan availability is somewhat mitigated. This would enable TxDOT to have greater confidence that a TIFIA loan will be approved for a project, subject only to the negotiation of final acceptable terms with the preferred proposer. Given the fact that TIFIA has done the majority of its credit work earlier in the process, less time will be needed to evaluate the preferred proposer's financial plan and the statutory time limitations on reaching loan closing should still be achievable.

Under the current process, TxDOT will be exposed to the risk that its procurement for SH288 may need to be canceled if TIFIA does not issue an invitation to the Preferred Proposer or TxDOT does not have state funds available to replace TIFIA in the finance plan.

6. How has the State of TX facilitated P3 projects? What authorities do you have in Texas that benefit p3 projects?

In 2003, the State legislature passed and the Governor signed into law specific authority for TxDOT to enter into Comprehensive Development Agreements. The Texas Transportation Code both authorizes the department to enter into Comprehensive Development Agreements and specifies some of the methods by which such agreements are entered into.

The Transportation Code provides for the general steps in the procurement process for Design Build and CDA Projects. The department has adopted the following procurement approach that facilitates robust competition while ensuring the department's interests are protected:

Request for Qualifications

- If authorized by the Commission, TxDOT publishes a Request for Qualifications (RFQ) to develop a specific project. The RFQ describes the project and sets forth criteria for professional experience, technical experience, technical competence, and capability to complete a proposed project, and any other information TxDOT considers relevant or necessary to assess developer's qualifications or abilities to develop a particular project.
  - TxDOT can choose to furnish conceptual designs, details, technical studies, or detailed plans in the RFQ.
  - The RFQ may request one or more conceptual approaches to successfully deliver the project.
  - The RFQ includes the criteria TxDOT will use to evaluate each qualification submittal and the relative weight given to the criteria. The criteria are developed by TxDOT for each project in order to ensure that the evaluation achieves the project goals and meets the unique project requirements. These criteria can include an entity's financial condition, management stability, technical capability, experience, staffing and proposed organizational structure.

Shortlist

- Interested developers submit their experience and qualifications, known as statements of qualifications or SOQs, to TxDOT for review and consideration.
  - TxDOT evaluates all SOQs using the evaluation criteria as described in the RFQ and shortlists entities that are considered most qualified to submit detailed proposals for a proposed project.
  - TxDOT's evaluation of SOQs considers qualities deemed relevant to meeting the project goals and addressing the unique project requirements. These qualities can include an entity's financial condition, management stability, technical capability, experience, staffing and proposed organizational structure.

Draft Request for Proposals (Industry Review)

- After the shortlist is announced, TxDOT releases a Draft Request for Proposal (RFP) to the shortlisted teams (proposers). The RFP includes instructions to proposers which identify all the information that the proposer must submit and sets forth other terms and conditions of the solicitation, the complete form of concession agreement and related documents, and the complete form of technical provisions that will govern project design, construction, operations and maintenance.
- The proposers review the Draft RFP for business terms, general project approach and draft technical provisions and discuss these with TxDOT through confidential one-on-one discussions.
- This stage allows TxDOT to hear back from the industry on their concerns related to the proposed project, the proposed contract terms and the general approach.

Final Request for Proposals

- If authorized by the Commission and the Federal Highway Administration, TxDOT will issue a RFP to shortlisted entities. The RFP may require entities to submit information relating to:
  - Proposer's qualifications and demonstrated technical competence;
  - Feasibility of developing the project as proposed;
  - Detailed engineering or architectural designs;
  - Proposer's ability to meet schedules;
  - Proposer's approach to quality assurance and quality control;
  - Detailed financial plan, including costing methodology, cost proposals and project financing approach;
  - Pricing, including for most projects the amount of public funding for capital costs required under the proposer's financial plan; and
  - Other information the Department deems relevant or necessary to assess each proposal's satisfaction of project requirements and goals.

- Most RFPs also allow for proposers to submit Alternative Technical Concepts (ATCs). These ATCs are subject to TxDOT approval.
- The RFP identifies specific evaluation criteria that TxDOT will use to assess each proposal. The criteria are developed by TxDOT for each project in order to ensure that the evaluation achieves the project goals and meets the unique project requirements.
- TxDOT may conduct one or a series of confidential review meetings with each proposer to discuss the RFP requirements and the procurement process.
- Final proposals from shortlisted teams are typically due within 90 to 120 days after the RFP is issued, depending on the complexity of a project.

Determination of the Best Value

- Once proposals are received, TxDOT conducts a thorough evaluation and analysis of the submittals. This process will typically take 30 to 45 days, depending on project complexity and the amount of information requested in the RFP. TxDOT evaluates proposals based on criteria TxDOT considers most appropriate for the project, which can include items such as the following examples:
  - Reasonableness of any financial plan;
  - Reasonableness of the project schedule;
  - Reasonableness of assumptions, such as those related to ownership, legal liability, law enforcement, and the operation and maintenance of the project;
  - Financial exposure and benefit to the TxDOT;
  - Likelihood of obtaining necessary approvals and other support;
  - Cost and pricing;
  - Scheduling;
  - Environmental impact;
  - Project coordination; or
  - Quality of the finished product.

- Based on the evaluation criteria set forth in the RFP and the evaluations conducted by TxDOT staff, TxDOT will rank all proposals that are complete, responsive and in conformance with the procurement process and Texas Administrative Code. TxDOT

may select the entity whose proposal offers the apparent best value to the State for the project.

- TxDOT submits a recommendation to the Commission regarding approval of the proposal determined by TxDOT evaluators to provide the apparent best value to the state.
    - The Commission may approve or disapprove the recommendation.
    - If approved, the Commission will award the CDA to the apparent best value proposer. The award may be subject to the successful negotiations between TxDOT and the apparent best value proposer, any necessary federal action or any other conditions identified in the RFP or by the Commission.
    - TxDOT notifies proposers and the public about the rankings.
    - If the Commission disapproves the recommendations, TxDOT will formally end negotiations with that proposer and either:
        - reject all proposals;
        - modify the request for proposals and begin again the submission of proposals; or
        - proceed to the next most highly ranked proposal and attempt to negotiate a comprehensive development agreement with that entity in accordance with this paragraph.

- If authorized by the commission, TxDOT will attempt to negotiate a final CDA with the apparent best value proposer. TxDOT has the right to require such proposer to enter into the form of the contract documents set forth in the RFP, without negotiation.
    - If the CDA cannot be negotiated with the apparent best value proposer, or if during negotiations it appears the proposal will not provide TxDOT with the best overall value, TxDOT will formally end negotiations with that proposer.
    - TxDOT has sole discretion to reject all proposals, modify the RFP and begin again, or proceed to the next most highly ranked proposal and attempt to negotiate a CDA with that entity following the same process.

- If negotiations are successful in reaching a final CDA that is mutually acceptable to TxDOT and the proposer, the parties will execute the CDA.
- TxDOT pays unsuccessful, responsive proposers a stipulated amount for costs incurred in preparing detailed proposals. The stipulated amount is set forth in the RFP and may not exceed the value of any work product contained in the proposal that can be used by TxDOT in the performance of its functions.

7. MAP-21 provided additional funding to the TIFIA program as well as programmatic changes. What additional changes would you recommend for the TIFIA program?

TxDOT provided extensive written comments to the Secretary of Transportation on implementation of the TIFIA program under MAP-21 in August 2012. A copy of those comments is attached. We summarize and reiterate below the key points as well as additional points not contained in those comments.

A. Reauthorize the TIFIA program at current levels of budgetary authority.

P3 projects typically bring together one-third financing from Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance, less than one-third

from Private Activity Bonds (PABs), and about one-sixth each from private equity and government grants. Miscellaneous funding makes up the remaining 3 to 5 percent.

Two years ago, Congress increased the authority of the TIFIA program, helping to accelerate P3 projects toward a record 12 projects this year, worth over $15 billion. More than 20 additional projects are in the pipeline over the next 1-2 years, and would fund $20 billion in highway and public transit projects. Longer term nearly $60 billion of projects are planned. Attached is a spreadsheet of anticipated P3 projects. Demand for the TIFIA program is high and is anticipated to continue.

The TIFIA program is important to the financial viability of most P3s. The cost of TIFIA debt, combined with the flexibility of terms, makes it one of the most effective subordinate financing options available in the global financial markets, and can spell the value difference between using a P3 vs. waiting to use conventional delivery. TIFIA financing usually reduces the amount of federal grant funding needed for projects.

To fulfill this extraordinary promise of P3 financing, maintaining the current statutory authority for TIFIA credit is essential. For these reasons, we urge Congress to reauthorize the TIFIA program at the current level of $1 billion in annual budgetary authority for at least the next several fiscal years. This will enable TxDOT and other agencies to reliably assume TIFIA will be available at early stages when TxDOT is determining whether potential projects will be financially feasible.

B. Reconsider the 33 percent ceiling on eligible project costs.

As part of MAP-21 Congress allowed the USDOT to provide TIFIA funding for up to 49 percent of the total project cost. USDOT has indicated that, except under undefined exceptional circumstances, it will not consider TIFIA credit assistance for more than 33 percent of the total project cost. We would like the USDOT to follow Congress' mandate and allow TIFIA funding up to 49 percent, which would allow for increased project financial feasibility.

C. Streamline the Letter of Interest (LOI) phase and enforce strict review deadlines.

Other than reauthorizing TIFIA at current levels, this is the most critical change that needs to be addressed. The USDOT now requires too much information at the LOI stage. While trying not to over-simplify the point, this could be reduced to a check-the-box procedure to determine if a project met the criteria set forth in the law to move forward to the application process.

A lower threshold for approval needs to be created in order to allow applicants more certainty when reaching out to financial partners for funding. In particular, the credit assessment phase now appears to occur during the LOI phase which requires near final versions of financial models and financing documentation. We believe this should occur in the application phase which has the benefit of the mandated time lines. Requiring the completion of the financial plan and documentation before the application is submitted significantly slows down the entire process, introducing uncertainty to private partners and/or investors and additional cost and risk to public sponsors.

The current process of conducting the credit assessment during the LOI stage delays the process so significantly that borrowers may be encouraged to pursue applications only for those projects which would be financially feasible without TIFIA.

One recent example in Texas is the Grand Parkway Project in the Houston area. It has incurred some added costs because the TIFIA process cannot be matched with the project's procurement schedule. TxDOT began the TIFIA process in August of 2012 with its initial LOI. Based on credit and financing structure discussions with the TIFIA Joint Program Office, a revised LOI was submitted on January 4, 2013. Additionally, the required investment grade rating indication letters from two rating agencies were received and provided to TIFIA on May 3, 2013. To keep the project on schedule, TxDOT issued debt to fully fund the project. These bonds were priced on July 16, 2013 and were successfully closed on August 1, 2013.

The estimated direct cost resulting from issuing additional debt in advance of a TIFIA loan is $2.3 million. However, there were other associated costs that are harder to quantify, but nonetheless had an impact on the project financing. Examples of these costs are:

- The cost to TxDOT resulting from the added liability on its finite financial resources which were utilized to provide credit support for the additional debt;
- Added additional investment risk to the investors of the non-TIFIA debt component of the financing. Increasing investment risk ultimately has the result of increasing the interest rate of the borrowing;
- Added financing complexity to a "green field" toll road financing that required additional investor education necessitating a greater level of marketing effort;

Due to not having a TIFIA commitment at the time of pricing, additional time and effort was required by TxDOT staff, Legal Counsel, Financial Advisors, Consulting Engineers, and other working group members, to facilitate a marketable and feasible financing plan that could fully fund the project and accommodate the possibility of receiving or not receiving a TIFIA loan in the future.

D. Incorporate the TIFIA application process with project procurement schedules to maximize the competition. The USDOT's process can force a project sponsor to miss the cost and time savings opportunities associated with competitive procurements. States are trying to deliver projects on a timely basis but USDOT's TIFIA process can cause unnecessary procurement challenges. As discussed above, this is especially a problem for P3 procurements where the TIFIA borrower will be the selected proposer.
E. Greater transparency of standard TIFIA loan terms to facilitate the development of realistic finance plans. As TIFIA's credit assessment approach and policies are constantly evolving, it is difficult for public and private borrowers to predict whether their TIFIA loan structuring assumptions will be acceptable. TxDOT understands that each project needs to be evaluated on its own merits, however if TIFIA would consider making their credit benchmarks, approach and criteria (similar to the rating agencies) publicly available this would greatly reduce risk and assist in effective planning.

TxDOT presented the USDOT with proposed procedures to better integrate USDOT's TIFIA process with P3 procurements. It is attached. If the USDOT does not adopt the streamlining measures proposed under item C above, TxDOT urges the USDOT to at least implement these procedures for P3 procurements.

8. Does TxDOT have any recommendations for PABs?

Growing demands on the transportation system and declining public funding have led to greater private sector involvement in surface transportation infrastructure through "public-private partnerships" or "P3s." P3s inject resources into highway and public transportation systems while reducing costs, project delivery time and government risk.

P3s are projected to finance nearly $95 billion in highway and transit projects over the next several years. But unless Congress acts to maintain the financial foundation of P3s, about $80 billon of that amount will fall back on taxpayers and the Highway Trust Fund (HTF), which is expected to fall below its statutory minimum balance in mid-2014.

To fulfill this extraordinary promise of P3 financing, it is equally important to increase the cap on surface transportation PABs. PABs are tax-exempt securities, originally capped at $15 billion for surface transportation facilities in the 2005 highway bill. Only about $5 billion in PABs remain available under the original cap and that amount is likely to be consumed by sometime in 2015.

Congress should consider increasing the PAB volume cap by the amount needed to keep P3s working for the duration of any 2014 highway bill; current deal projections would justify about $5 billion per year. If Congress chooses to pursue a five-year bill, that would suggest a $25 billion boost in the cap.

If Congress fails to increase the cap on surface transportation PABs, the ability of P3 projects to answer public demand for transportation financing is likely to fade substantially. The loss of PABs would increase the cost of funds, damaging the ability of P3s to deliver the greatest value for the taxpayer.

A failure to increase the cap would shift financing from the private sector to taxpayers and the HTF. Given its current condition, the HTF won't be able to fund the $80 billion of projects that is currently forecast for P3 financing over the next several years.

Improvements to increase the utilization of PABs include: (1) increasing the statutory cap on PABs by $5 billion per year (if a surface transportation bill authorizes programs for five years, for instance, the increase would total $25 billion); (2) removing application of the alternative minimum tax, (3) allowing highway transportation PABs to be issued as capital appreciation bonds; (4) changing the limitation on use of highway transportation PABs for land acquisition

from 25 percent of the bond proceeds to 25 percent of total facility costs; and (5) repealing the prohibition on using highway transportation PABs proceeds to acquire existing property not in need of rehabilitation. The last adjustment would allow PABs to be used to reimburse a government sponsor for prior costs of developing a facility.

9. Moody's recently downgraded the rating on SH 130 due to lower than expected traffic. How is TxDOT working with the operator to improve the outlook for this road?

As indicated, the Moody's downgrade was a response to traffic and revenue performance significantly below the private operator's initial projections. Because toll revenues are the sole source for payment of this project's debt, bondholders face increased risk of default absent a workout.

One of the key benefits to TxDOT of its toll concessions is that the private equity investors and the developer's lenders solely bear traffic demand and revenue risk. TxDOT generally cooperates with the developer in the administration of the concession agreement but plays no direct role with regard to the lenders or their security and has no direct liability for the developer's debt. The developer may face a liquidity shortfall in the near term or consider a restructuring of the lenders' debt or reorganization in bankruptcy. The lenders, including the TIFIA lender, are able, to the fullest extent authorized by law and relevant agreements, to utilize their security and remedies under direct agreements with the lenders. TxDOT will give notice of and opportunity to cure any developer default under the concession agreement that could give rise to TxDOT' s termination rights. At this time TxDOT has no reason to believe that it will need to use its remedies and has every expectation that the developer will continue to carry out its obligations toward TxDOT.

TxDOT is engaging with the developer and lenders in order to closely monitor the liquidity situation, ensure the timely flow of information in connection with any restructuring discussions, and assert its rights as owner of SH 130.

I0. Do you believe the cost of submitting a bid discourages some interested parties from submitting a proposal? Would expanding the eligibility of Federal funds to include reimbursement for costs associated with submitting a bid be helpful?

TxDOT is authorized by state law to reimburse proposers under the conditions cited below in the Texas Transportation Code. Relaxing federal restrictions, if any, on use of federal funds for this purpose would provide greater flexibility. We are seeing stipends for P3 projects range from $500,000 to $1.5 million per proposer, depending on the complexity of the project and the proposal submission requirements. Our experience is that this level is sufficient to sustain healthy competition and quality proposals for P3 projects, although as P3 project supply increases nationwide it could be necessary to increase stipends to attract interest to a project and sustain competition.

Sec. 223.203(m) - The department may pay an unsuccessful private entity that submits a responsive proposal in response to a request for detailed proposals under Subsection (f) a stipulated amount in exchange for the work product contained in that proposal. A stipulated

amount must be stated in the request for proposals and may not exceed the value of any work product contained in the proposal that can, as determined by the department, be used by the department in the performance of its functions. The use by the department of any design element contained in an unsuccessful proposal is at the sole risk and discretion of the department and does not confer liability on the recipient of the stipulated amount under this section. After payment of the stipulated amount:

(1) the department owns with the unsuccessful proposer jointly the rights to, and may make use of any work product contained in, the proposal, including the technologies, techniques, methods, processes, ideas, and information contained in the project design; and

(2) the use by the unsuccessful proposer of any portion of the work product contained in the proposal is at the sole risk of the unsuccessful proposer and does not confer liability on the department.

Sec. 223.249. STIPEND AMOUNT FOR UNSUCCESSFUL PROPOSERS. (a) The department shall pay an unsuccessful proposer that submits a responsive proposal a stipend for the work product contained in the proposal that the department determines can be used by the department in the performance of the department's functions. The stipend must be a minimum of twenty-five hundredths of one percent of the contract amount and must be specified in the initial request for proposals, but may not exceed the value of the work product contained in the proposal that the department determines can be used by the department in the performance of the department's functions. If the department determines that the value of the work product is less than the stipend amount, the department shall provide the proposer with a detailed explanation of the valuation, including the methodology and assumptions used by the department in determining the value of the work product. After payment of the stipend, the department may make use of any work product contained in the unsuccessful proposal, including the techniques, methods, processes, and information contained in the proposal. The use by the department of any design element contained in an unsuccessful proposal is at the sole risk and discretion of the department and does not confer liability on the recipient of the stipend under this subsection.

(b) In a request for proposals, the department shall provide for the payment of a partial stipend in the event that a procurement is terminated before the execution of a design-build contract.

TESTIMONY OF

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REGIONAL TRANSPORTATION DISTRICT
DENVER, COLORADO

BEFORE THE

PANEL ON PUBLIC-PRIVATE PARTNERSHIPS
OF THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

HEARING ON

OVERVIEW OF PUBLIC-PRIVATE PARTNERSHIPS FOR HIGHWAY AND TRANSIT PROJECTS

MARCH 5, 2014

Submitted by

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Chairman Duncan, Ranking Member Capuano, and Members of the P3 Panel, I thank you for the opportunity to present this testimony as your panel seeks to examine P3s being pursued and, in the Denver Regional Transportation District's (RTD) case, being implemented by public agencies in order to provide transportation solutions for the people of our regions. Various P3s have been crucial to the success of our ongoing FasTracks program, the single largest voter-approved mass transit system expansion in the United States.

We would encourage Congress to increase its focus on P3s and other alternative financing and project development methods and to spur faster development of transit assets. The new reauthorization bill could be the vehicle to assist and reward transit agencies using these innovative methods—perhaps through even more streamlined processing of the projects. In MAP-21, Congress authorized a pilot program for the expedited delivery of New Starts projects. We would hope this provision could serve such a purpose, and we encourage continued focus on this concept to ensure it captures and reflects the lessons of the previous Public Private Partnership Pilot Program (Penta-P) as well as the lessons developed through this special Committee—and ultimately facilitates and fosters effective P3s. We also strongly urge Congress to preserve and expand the financing tools that make innovative P3s possible: TIFIA and Private Activity Bonds (PABs). Finally, as discussed below, RTD's Denver Union Station project utilized value capture methodologies to fund transit assets. We would urge Congress to dedicate specific focus to the opportunities and impediments involved in leveraging development around federally funded transit assets as another innovative financing tool. Of course, we fully support all efforts to provide technical assistance and similar resources to help communities understand, evaluate and move forward with P3 approaches.

I. Introduction

The transportation sector is an undeniably critical component of the economy. It allows for the movement of people and goods between destinations and provides the essential mobility which is fundamental to the well-being, health and welfare of the passengers and end-users which it serves. Transportation investments drive economic development as well as our overall economic competitiveness. Unfortunately, the demand for significant transportation infrastructure investment currently exceeds the available funding.

Given state and local fiscal pressures and increasing competition for federal funding, it has become increasingly challenging to finance, deliver and operate critical transportation elements. The scarcity of funding options makes innovative funding approaches a necessity for the providers of transportation systems. As demands increase, transportation agencies are looking to take advantage of all existing approaches and are increasingly looking to the private sector to assume some responsibility in financing, delivering and operating projects.

Traditionally, public transportation entities have relied on a design-bid-build approach to project delivery, with the distinct phases of project development progressing in a linear fashion. This method of project management is time consuming and may add significant cost to projects versus other approaches which are being increasingly utilized in today's construction market. Additionally, the design-bid-build approach keeps much of the responsibilities and risks of the projects on the public entity sponsor.

This paper is intended to outline some of the innovative public-private approaches Denver RTD has employed, focusing on our (1) EAGLE P3 commuter rail project, a design-build-finance-operate-maintain (DBFOM) P3 building over 36 miles of new commuter rail that will connect

downtown Denver to Denver International Airport; and (2) our Denver Union Station project, the new intermodal hub of our system, which captures the enhanced real estate value of land adjacent to transit assets to fund transit development. While not discussed extensively below, it is also important to note the RTD's partnership with the Colorado Department of Transportation on a P3 to deliver a high occupancy toll lanes project that will include new Bus Rapid Transit (BRT) service between Denver and Boulder. All three of these projects have been developed and utilized in order to more effectively deliver transportation assets to the Denver metro region's end-users. While this paper deals primarily with transit, the tools described may be employed to maintain and expand other infrastructure needs, as well.

A. About the Regional Transportation District

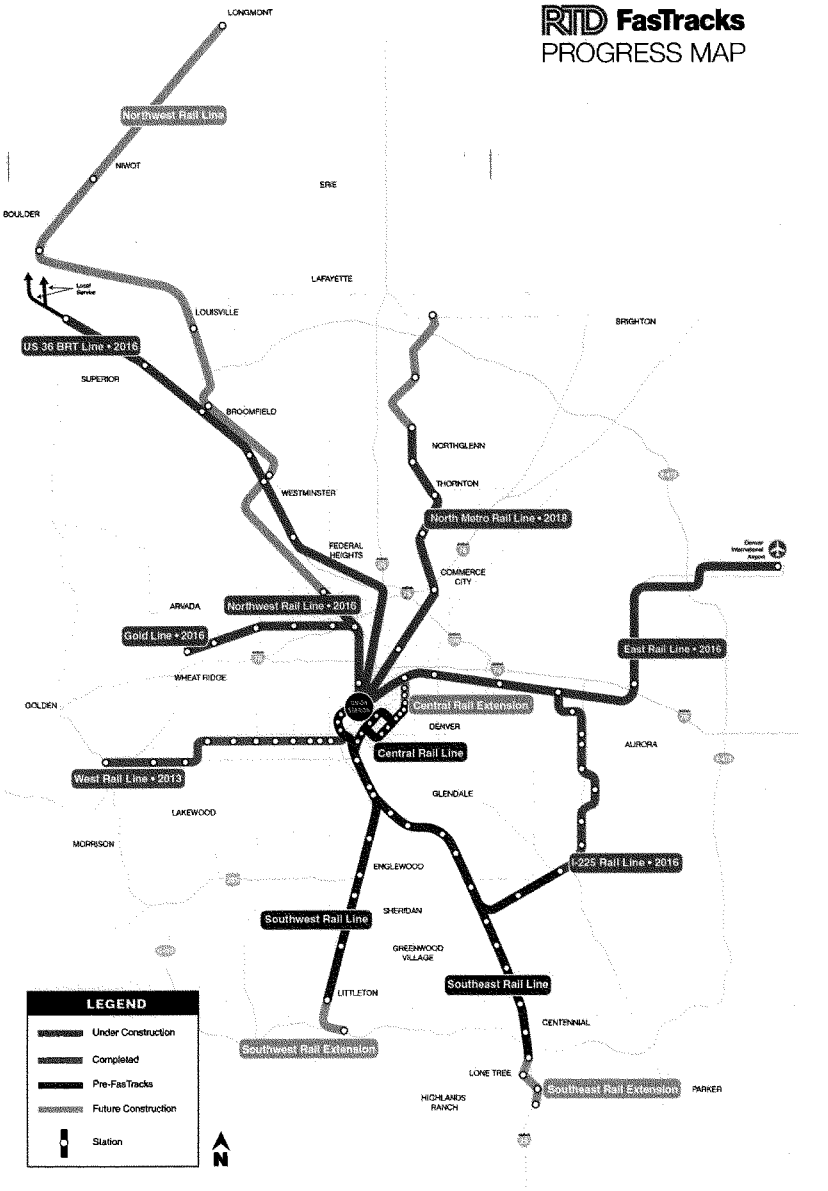
The Regional Transportation District (RTD) is an operating entity responsible for developing, maintaining and operating a mass transportation system for the benefit of the inhabitants in its service area. RTD's service area encompasses portions of an eight-county region comprising the Denver metropolitan area. RTD's area consists of the City and County of Denver, most of the City and County of Broomfield, the Counties of Boulder and Jefferson, the western portions of Adams and Arapahoe Counties, the southwestern portions of Weld County, and the northeastern and Highlands Ranch areas of Douglas County. RTD currently services 2,340 square miles and 40 cities and towns. RTD is governed by a fifteen-member elected Board of Directors with each member elected from one of the fifteen districts comprising RTD's geographical area.

The RTD is currently pursuing a transit expansion plan known as FasTracks (map on page 3). The FasTracks plan includes:

- 122 miles of new light rail and commuter rail track, including six (6) new rail corridors and enhancements to three (3) existing light rail corridors
- 18 miles of bus rapid transit infrastructure
- 57 new transit stations
- 21,000 additional parking spaces
- Expanded bus service throughout the Denver metro area

The FasTracks transit expansion program was approved by 58 percent of the voters within the district and is funded from a sales tax increase of 0.4 percent which became effective on January 1, 2005. FasTracks had strong regional political support, benefitting from the backing of all metro mayors and enjoying backing from the Denver Metro Chamber of Commerce, industry and the general business community.

Since the passage of the FasTracks initiative, the RTD, like most agencies, has experienced escalating program costs along with lower than forecasted sales taxes. Taken together, the increased costs and reduced revenues resulted in a significant funding gap in the FasTracks program. This funding gap has pushed RTD to examine every possible approach which could be used to maximize the number of program elements which may be constructed and operated within the boundaries of the 8-county RTD.


RTD FasTracks
PROGRESS MAP
LONGMONT
Northwest Rail Line
NIWOT
ERIE
BOULDER
LAFAYETTE
Local Service
LOUISVILLE
US 36 BRT Line • 2016
SUPERIOR
BROOMFIELD
BRIGHTON
NORTHGLENN
THORNTON
WESTMINSTER
North Metro Rail Line • 2018
FEDERAL HEIGHTS
COMMERCE CITY
Denver International Airport
ARVADA
Northwest Rail Line • 2016
Gold Line • 2016
East Rail Line • 2016
WHEAT RIDGE
GOLDEN
Union Station
Central Rail Extension
DENVER
Central Rail Line
AURORA
West Rail Line • 2013
GLENDALE
LAKEWOOD
MORRISON
ENGLEWOOD
I-225 Rail Line • 2016
Southwest Rail Line
SHERIDAN
GREENWOOD VILLAGE
Southeast Rail Line
LITTLETON
CENTENNIAL
Southwest Rail Extension
LONE TREE
Southeast Rail Extension
PARKER
HIGHLANDS RANCH
LEGEND
Under Construction
Completed
Pre-FasTracks
Future Construction
Station
N

B. About Public-Private Partnerships

Public-Private Partnerships (P3s) have been successfully utilized in delivering and/or operating various transportation assets in the United States and abroad, including toll roads, airports, bridges, tunnels, transit projects and ports. At its most basic level, a P3 involves a contract between a governmental entity and a private firm or consortium in which the private partner assumes substantial financial, technical, delivery and/or operational risk on the project.

There exists a spectrum of P3 models which range from design-build contracts on public projects to private ownership of infrastructure assets. The specific form of P3 utilized in the delivery of infrastructure investments depends upon the particular policies, needs and desires of the public entity sponsor.

Some of the more established forms of P3s are:

- Design-build
- Design-build-operate-maintain
- Build-operate-transfer
- Design-build-finance-operate-maintain
- Build-own-operate (private ownership)

Each P3 approach transfers certain risks to the private sector which would normally be borne by the public sector transportation provider. As evidenced in the list of P3 alternatives above, any of a number of project risks may be transferred to a private participant. The risk allocation matrix on the project ideally assigns risk to the party (public or private) which can most effectively manage it and can therefore most efficiently price it. It also holds the private sector partner responsible for certain elements inherent in project delivery and/or operation and involves financial compensation dependent upon efficient delivery, performance or non-performance of the involved asset. ***With properly written contracts, the public sector transportation provider retains a high degree of control over crucial elements such as safety and training requirements, operational standards, fares, and other items to ensure the private contractor provides a transportation product that meets the public agency's standards and expectations, and provides for seamless service to the public.***

In addition to effective risk transfer, P3s provide a new source of capital for state and local governments and may result in additional benefits such as:

- More predictable construction and operations and maintenance costs
- Increased efficiencies in cost and delivery through innovative design and construction techniques and performance incentives
- Increased financial flexibility (freed up capacity/funding to be utilized on other projects)
- External resources and specialized expertise

RTD believes the model developed for RTD's Eagle Project and other innovative P3 projects can be leveraged for other transit projects around the nation. Having said that, it is RTD's firm recommendation that each project be viewed as a unique project and assessed for its suitability for delivery using a P3 model and that the objectives of each project be carefully identified so that an RFP may be tailored to assure achievement of those specific objectives and to address the unique characteristics of that project.

II. RTD's Public Private Partnerships

A. RTD's EAGLE Project

1. Overview

In order to maximize the components built out as part of its FasTracks program, and in order to deliver transit components in the most cost effective manner possible, the RTD pursued a public-private partnership for two of its planned commuter rail corridors (the East Corridor and the Gold Line) along with a segment of the Northwest Rail Corridor, a commuter rail maintenance facility, and the electrical systems at Denver Union Station. This P3 for the East And Gold Line Enterprise is known as the EAGLE P3.

The East Corridor is a 23.6-mile commuter rail transit corridor between Denver Union Station and Denver International Airport (DIA). The Gold Line is an 11.2-mile rail transit corridor from Denver Union Station to the vicinity of Ward Road in Arvada, passing through northwest Denver, unincorporated Adams County, Arvada and Wheat Ridge. The electrified section of the Northwest Rail Corridor is a commuter rail line which originates at Denver Union Station and terminates at 71st Street in South Westminster. The commuter rail maintenance facility will be designed and constructed to repair, maintain, and store the vehicles that will serve all FasTracks commuter rail vehicles. Taken together, these transit improvements make up the "EAGLE Project."

The Eagle Project is being procured through a concession agreement between RTD and Denver Transit Partners to design, build, finance, operate, and maintain the project's components for 34 years. RTD will retain ownership of all assets at all times, set fares and fare policies, and keep all project revenues. RTD will make availability payments to the concessionaire based on established performance metrics.

The EAGLE Project is nearly 60 percent complete. Funding for the EAGLE Project consists of federal funds, local contributions, private capital (including both debt and equity) and RTD funding. RTD contributions to the project include costs related to the acquisition of right of way, construction payments and service availability payments which will be made to the concessionaire over the operating term of the concession. The total cost of the federal project is $2,043.1 million, which is financed as follows:

- FTA New Starts Full Funding Grant Agreement - $1.03 billion, awarded in August 2011
- Private Activity Bonds - $396.1 million
- TIFIA loan - $280.0 million
- Other federal grants - $57 million
- RTD sales tax revenue - $128.1 million
- Revenue bond proceeds - $56.8 million
- Local/CDOT/other contributions - $40.3 million
- Equity - $54.3 million

Through the utilization of this procurement methodology, RTD is availing itself of financial resources (in the form of concessionaire-provided debt and equity) which would otherwise have not been available to it and making the project deliverable to transit riders throughout the region. This has and will result in substantial direct economic as well as transportation benefits, of particular note as the project was initiated during the heart of the economic downturn. As of December 2013, the economic impacts of the EAGLE project include:

- $1.388 billion invested (payments to prime and subcontractors for the design and construction of the project)
- Approximately $232 million in commitments to 160 Disadvantaged Business Enterprise/Small Business Enterprise (DBE/SBE) companies
- Approximately $840 million in commitments to a total of 390 Colorado businesses
- 1,250 jobs created
- 43 Workforce Initiative Now (WIN) participants working on project (WIN is an innovative collaborative partnership that helps job seekers, businesses and communities by developing career opportunities in transportation and construction).

Under the EAGLE P3 contract, RTD successfully transferred financing risk, construction risk and operating risk to the private party concessionaire. The EAGLE project is structured as an availability-based concession, under which RTD will make availability payments beginning upon the commencement of revenue service in 2016 and continuing for a 28-year operating term. Construction payments on the project consist of annually capped amounts based upon earned value. These payments are due each month as work is completed on the Project.

Upon the commencement of revenue service, RTD's monthly availability payments to the concessionaire which will be calculated based on the percentage availability of the transit assets and the performance and achievement of RTD specified service, maintenance and operating standards. Penalties will be netted against availability payments for failure to achieve the standards set under the contract. It is important to note that, under the contract, the concessionaire is not allocated ridership/revenue risk due to the desire of the RTD to maintain control over passenger fares and service frequencies. Additionally, the security of passengers, staff and assets will be a joint effort under RTD's direction.

2. The Penta-P Program

RTD was honored when, in 2007, its EAGLE P3 was selected as part of the FTA's Public-Private Partnership Pilot Program (Penta-P) and worked closely with the FTA in delivering the project. The FTA's Penta-P Program was authorized by Congress in 2005 to demonstrate the advantages and disadvantages of P3 approaches in transit and to determine how FTA's New Starts program could be modified or streamlined to accommodate the P3 project structure. Selected Penta-P projects were made eligible for a simplified/accelerated federal review process envisioned to reduce both time and costs related to New Starts transit projects. In addition to these benefits of Penta-P designation, the FTA, through the Penta-P program, included modified project requirements, oversight and/or risk assessments. This was due to the fact that the private concessionaire, having a significant financial stake in the project, is incented to perform in order to achieve the service and delivery objectives delineated in the concession

agreement. RTD staff worked diligently with the FTA in streamlining, as much as possible, the New Starts process on the EAGLE Project in order to complete the project without procedural delays and associated time-related cost increases.

We believe the Penta-P program provided the following significant benefits to the EAGLE P3 project:

- *Effective streamlining of New Starts approvals.* RTD entered the Penta-P program in the summer of 2007. RTD applied to FTA to enter Preliminary Engineering (PE) in September 2008 and was granted entry into PE in April 2009. RTD submitted the Final Design (FD) application to FTA in September 2009 and received entry into FD in April 2010. RTD received the Full Funding Grant Agreement (FFGA) in August 2011. RTD believes this represents a materially expedited process.

- *The opportunity to discount private at-risk equity in the cost effectiveness calculation*, protecting the public interest while facilitating project development and New Starts funding opportunities.

- *Limitation of certain FTA New Starts risk assessments* as a result of risk transfer to the private sector.

- *Strong FTA staff support and flexibility* to address challenges.

The challenges/impediments include:

- *Uncertainty of the timing of the FFGA award*, requiring RTD to split the project into two phases and FTA to grant a Letter of No Prejudice (LONP) for the first phase of the project, in advance of the FFGA award.[1]

- *The focuses of the P3 deal on meeting performance criteria – as opposed to implementing detailed design specifications – to facilitate innovation and cost savings.* This meant there were some variances in scope as the project moved through the New Starts process, which is different from the traditional process which is based on identifying a defined project capital scope early on in the process.

3. The Benefits of the P3 Approach

Why did RTD decide to implement a P3 on this project? Considerations included:

- *The ability to be part of FTA's (then new) Penta-P program* that would accelerate project reviews and approvals, and thus expedite project development while seeking a Full Funding Grant Agreement.

[1] Because, as of August 2010, the RTD had not yet been awarded an expected $1 billion in federal funding under an anticipated FFGA, it was necessary to proceed with the EAGLE Project in phases, with Phase I commencing before award of the FFGA and the Phase II notice-to-proceed following the award of an FFGA on the Project. Phase I of the project was funded through a combination of private finance by the concessionaire team, Denver Transit Partners, and consisted of both debt and private equity, and RTD sales tax proceeds and other local contributions.

- *The ability to leverage private equity and debt* to address emergent shortfalls in the overall FasTracks financing plan. In addition, a P3 would allow RTD to spread the cost of the project over a longer time period via the availability payment model to address cash flow choke points.

- *The ability to utilize private versus public debt.*

- *The value for money.* As detailed below, RTD saved over $300 million from RTD's internal estimate in substantial part due to "Alternative Technical Concepts" or innovations that allowed the private sector to achieve performance outcomes in innovative and cost effective ways. A competitive procurement process provided the incentive between bid teams to drive down capital and operating costs on the proposals to their most economical levels while meeting specified performance standards.

- *Transfer of financing risk, construction risk and operating risk* to the private party concessionaire as detailed below.

- *The resulting powerful incentives for budget and schedule adherence* to give an assured completion date and assure the project could be delivered within available resources.

Ultimately, the DBFOM approach maximizes contractor innovation and participation. Private financing requires an extended payback term; that gives a real stake to the concessionaire. The concessionaire team has a long-term commitment to the P3 project, so they have a vested interested in creating a quality project that meets procuring agency performance specifications while minimizing life-cycle costs and realizing efficiencies in capital, operations and maintenance costs. Contractual terms ensure high standards for performance in the operations phase and achievement of RTDs' specified service, maintenance and operating standards.

While the P3 procurement allows for these significant advantages, it can have its drawbacks. Among those are some reduced day-to-day control over the project, significant transaction costs and increased financing costs due to higher return requirements in the private sector versus tax-exempt debt. Reduced project control can be mitigated somewhat through the structuring of the concession agreement such that the expectations and operational requirements are well defined and availability payments are structured to incentivize the concessionaire to meet or exceed those requirements. The concession agreement which accompanies the RTD EAGLE Project outlines clear standards and expectations in regard to ongoing operations and maintenance requirements and assigns penalties to the concessionaire (in the form of reduced availability payments) for unsatisfactory performance. Because the returns on private equity contributions are tied to performance in this way, members of the consortium are motivated to efficiently design, build, operate and maintain the project over the entire course of the contract term. RTD declined to transfer revenue risk because as a public agency with an elected board of directors it would not transfer control of fare setting and service parameters.

With respect to increased transaction and financing costs, the significant transaction costs associated with P3 procurements (i.e., legal fees and advisory fees) along with increased financing costs were offset by the efficiency and savings provided to RTD. Further, as RTD did, the public entity project sponsor can take critical steps to reduce P3 financing costs by availing the project concessionaire of innovative tools including PABs.

RTD-Concessionaire Risk Allocation Matrix

RTD Risk	Concessionaire Risk
• Timeliness of third party design reviews • RTD requested changes to project requirements • Delay in gaining access to the site • Unforeseen archaeological risks • Errors/omissions in environmental reports • Unidentified and dry utilities • RTD permits • Discriminatory legislative changes • Ridership and fare evasion risk • Interface conflicts between new and established RTD services	• Design fails to meet the specified requirements • Design delays • Construction delays • Cost overruns • Additional land requirements • Compliance with environmental requirements • Geological obstructions • Safety and security • Accuracy of reference data • Concessionaire permits • Concessionaire or subcontractor default • Final completion delays • Third party claims • Security during the construction period • Repairs or maintenance work affecting availability • Failure to meet operating performance standards • Operation and maintenance costs • Condition of system at the end of concession period • Wet utilities • Compliance with railroad agreements
Shared Risk	
• Third party design reviews – disputes • Non-discriminatory legislative change • Force majeure	

4. The Keys to RTD's Successful P3 Procurement

The keys to our successful procurement of the Eagle P3 Project were:

- *Developing performance specifications rather than detailed design specifications* that has been the norm for our past transit projects. We strongly emphasize the value of maximizing proposer flexibility through the use of performance level specifications and allowing for Alternative Technical Concepts (ATC) to allow the private sector to innovate and come up with cost-effective solutions to meet performance and outcome requirements. Allowing the future concessionaire to develop the detailed specifications, combined with ATCs, can result in greater confidence a P3 project can be delivered at the most favorable cost and in the minimum time.
- *Establishing, and rigorously adhering to, a Request for Proposal (RFP) schedule.*
- *Providing a stipend to the proposers* to incentivize their participation in the costly process of proposal development, defray some of the costs of proposal preparation, and at the same time ensure RTD owns the approach and ATCs created by both the winning and unsuccessful proposers.
- *Learning from earlier P3 projects both here and overseas.* Select management and key staff positions have been filled with highly experienced professionals with direct experience on successful overseas P3 projects—projects that are structured similarly to the Eagle P3 Project—and in the delivery of major transportation projects.

- *Retaining overall ownership and control over key aspects of the completed project*, including: ownership of assets; control over revenues generated; control over fare policies, structure and the operating plan.

- *Setting high standards for performance criteria* and resulting availability payments based on performance against established metrics.

5. *Eagle P3 Project — Unique Procurement Challenges*

The Eagle P3 Project procurement provided RTD with some interesting challenges since this was RTD's first direct experience with this methodology. The previous projects in the U.S. were limited in the parallels and lessons learned we could apply. We counterbalanced some of the challenges by carefully recruiting an internationally experienced group of managers and technical experts, but some challenges remained unavoidable or unforeseeable. The most critical of these challenges were:

- *Procuring the Eagle P3 Project with only two teams competing.* The P3 procurement started with three potential concessionaire teams in the Request for Qualifications phase. One proposing team dropped out shortly after the draft RFP was issued due to concerns about the team structure and ability to manage a project of this size—valued at over $2.0 billion with nearly 30 years of O&M responsibilities.

- *Finding and applying relevant lessons learned from similar, but not identical, procurements.* RTD has now completed three related Lessons Learned reports in the past five years—one for the completed T-REX Project, one for the first five years of the FasTracks Program of projects, and one for the Eagle P3 Project Procurement. Each of these reports was used as references for this document and may be helpful to other transportation agencies considering P3s.

- *Maintaining an ambitious procurement schedule.* Our team and the proposers worked hard to ensure that we did meet our published date—June 15, 2010—for recommending the Eagle P3 Project Concessionaire Agreement to the RTD Board of Directors.

- *Incentivizing the proposers.* The proposal preparation process was going to be lengthy, complicated, and expensive. As a result, we provided the proposers that actually responded to the final RFP with a multi-million dollar stipend to help offset their costs. Underscoring RTD's commitment to this innovative project, RTD also offered a $20 million compensation payment to the successful bidder if for some reason the District did not implement the project.

6. *The Lessons Learned — A Summary*

- *A successful P3 procurement is heavily dependent on the commitment and support of a broad base of entities* including procuring agency personnel, agency management, and board members.

- *Involving excellent legal counsel, financial managers, and technical advisors at the start of the procurement process* is critical for a P3 since it is at the core a business deal rather than a traditional construction contract.

- *Involve all levels of management, including legal counsel, at all stages of the procurement process.* P3 procurements are complex and must be led by a strong and experienced Project Manager (PM) to keep the process focused and on schedule. The PM must be supported by staff experienced in P3 in key roles including technical, O&M, financial, and legal.

- *Provide P3 project proposers with maximum design flexibility.* RTD saved significant money (approximately $300 million) without compromising our ability to meet operational requirements.

    - The use of ATC provisions was a key element to give both the transportation agency and the proposers the confidence that the project could be designed, delivered, operated, maintained, and financed at an acceptable cost. ATCs are valuable to both the proposer and the agency. Proposers gain flexibility and a potential competitive edge since the information was not shared with other proposers. RTD got a better, lower-cost design and RTD owns the ATCs from all proposers without incurring the design costs or associated risks. This is similar to the results of Value Engineering without the potential delay and cost of performing Value Engineering.

- *Keep the procuring agency's focus on performance standards rather than design or infrastructure aspects of the procurement.* The agency should restrict its specifications to those related to performance, safety, user experience (e.g., station access), cost-effectiveness, and reliability. Develop the performance standards and availability parameters so the proposed system allows applying quantitative metrics to the evaluation process. The use of performance specifications and availability criteria reduces the agency workload and provides proposers with freedom to propose a project that they feel is feasible and cost-effective to deliver under DBFOM. The use of performance specifications and availability criteria gave the proposers the ability to be innovative, using ATCs and industry best practices, and reduced the capital costs associated with the Eagle P3 Project while still ensuring the performance standards RTD required would be met.

- *Develop a risk allocation model that reassures the proposers as to which entity will assume crucial risks*, thereby reducing the proposers' need to reserve for all possible risks.

- *Provide stipends to proposers* to partially offset the costs associated with the complex and expensive P3 proposal process, which was key in corporate decision-making at different stages of the procurement.

- *Qualify teams early* so that they can be involved in the development process and understand the agency's goals and expectations. Bring potential proposers—primes/major subcontractors and SBE/DBE firms—into the RFQ/RFP development process as early as possible. Allow teams to organize to their strengths, but always be led by their equity participants to maintain life-cycle focus.

- *Keeping to the established schedule* was very valuable in establishing and maintaining our credibility with the proposing teams and their financing partners. Schedule adherence is critical to meet the unique aspects of the DBFOM project delivery and establish/maintain agency credibility. Staying on schedule is crucial to the financing entities on each proposing team.

- *Using the best value approach* is a good way to ensure quality technical proposals.

- *Ensure all parties—stakeholders, board members, agency staff, and area residents are kept fully informed of the process and decisions* and provide them appropriate venues for expressing their views and opinions. Stakeholder involvement is critical to the overall success of a project. Obtaining their concurrence with project requirements is essential. Their insights benefit the project. Regular communication with all stakeholders is essential to obtaining community support of any project. The agency's board must be "on board" from the outset of the procurement process if a DBFOM/P3 approach is to work. Their unequivocal support is essential. Strong public sector support reduced the financing costs by five to eight basis points by increasing confidence.

- *Peer review is essential* given the limited number of P3 projects in the U.S.

- *Be prepared to go forward with only one qualified proposing team*, but work hard to maintain competition with more than one team.

- *Actively involve the FTA*—P3 was/is new to the agency too.

- *Early coordination with affected railroads and other key stakeholders* is essential to ensure right-of-way (ROW) and corridor issues are identified, mitigated, and/or resolved as early and cost-effectively as possible. ROW identification and acquisition need to begin as early in the procurement process as feasible.

- *Successful P3s embrace the partnership ideal* from day one; neither party can be successful without the other.

B. Denver Union Station

The Denver Union Station project is the new intermodal hub of our system and an engine for transit oriented development in Downtown Denver. Along with the design and construction of transit infrastructure, the project includes significant expansion of a mixed-use neighborhood surrounding Denver Union Station, integrating a sustainable mix of rail, bus and urban development. Denver Union Station has been the catalyst in attracting some $1 billion in development around the station.

The project reflects several innovations in project finance and delivery. This includes capturing the enhanced real estate value of land adjacent to transit assets to fund transit development and operate facilities. It also includes leveraging and successfully integrating TIFIA and RRIF loans as core elements of the project financing, with the value capture district providing one of the repayment streams.

The funding and financing plan for Denver Union Station was achieved by negotiating with a master developer early in the project, using negotiated prices based on appraisal with an acquisition schedule to be set, and then allowing land sales and the associated taxes following development to be programmed into the TIFIA and RRIF loan repayment schedule. This "ultimate" value capture model can be better facilitated in federally funded transactions by allowing land values to be established at the time of the signing of the contract between the public and private entity and allowing land sale proceeds to be immediately reinvested in the project development. We would be pleased to provide more information on this aspect of the transaction upon request.

In order to further the development and construction of RTD's transit hub at Denver Union Station and the surrounding area, the Denver Union Station Project Association (DUSPA), a governance organization which includes representatives of RTD, the City and County of Denver, the Colorado Department of Transportation (CDOT), and the Denver Regional Council of Governments (DRCOG) along with board members nominated by the Mayor of the City and County of Denver and approved by City Council, applied for and was ultimately awarded a TIFIA loan. The TIFIA loan (for $145.6 million), along with a loan made available through RRIF program (for $152.1 million), served as the backbone of the financing of the project.

The TIFIA and RRIF loans will be repaid with funds received from a variety of sources including annual payments made by RTD, revenues received through property, sales and lodging taxes collected in the Denver Union Station area and mill levies pledged by Metro Districts within the larger 40-acre district which surrounds Denver Union Station. In addition, the City and County of Denver has provided a moral obligation commitment on the debt.

Additionally, RTD successfully executed a deal that allows a developer team, Union Station Alliance (USA), to lease the historic building for 60 years, plus one-20 and one-19 year option (up to 99 years). The building is being renovated into a 112-room hotel that will house food and beverage, retail, and transit (Amtrak space). Benefits of entering into a 99-year lease include:

- The Historic Station Building is a treasured Denver icon and will receive substantial investment and refurbishment from non-RTD sources.
- RTD has transferred the operational risk and cost of maintaining the historic building to the lessee while preserving RTD's operational needs for internal and external customers.
- The establishment of a capital reserve mitigates the risk that the building will deteriorate over the term of the lease.
- RTD has the potential to receive significant revenue over the term of the lease.
- The proposed uses will bring significant activity and amenities back to the station which will benefit transit users and the RTD District as a whole including potential increased ridership.
- The proposal by USA provides for complete renovation of the building in a way that preserves the historic fabric and has been reviewed and approved by the National Park Service and local and state historic preservation agencies.
- Transit users will benefit from a high level of amenities for the full term of the lease including transit passenger seating and food and beverage service.
- Amtrak space has been seamlessly integrated into the building and RTD has received official Amtrak approval on the location, size and layout of the space.
- Hotel and commercial uses have been well integrated with transit operational needs, including the preservation of the Great Hall as a gathering place for transit and the broader Denver region.
- The hotel will establish more of a 24/7 environment in the Historic Building which will benefit RTD customers.

Currently, the Denver Union Station project is 96 percent complete, and RTD will host an opening ceremony for the huge underground bus concourse on May 9, 2014. The P3 Panel is invited, and RTD urges members to come to Denver to see first-hand the successful financing, building, and opening of massive multi-modal transportation hub which is a P3.

III. Innovative Financing Tools

As referenced above, federal innovative financing tools were integral to the successful development of each of RTD's P3 projects. Denver Union Station was the first multi-modal project to successfully combine RRIF and TIFIA financing. The EAGLE P3 project leveraged both TIFIA and PABs. And TIFIA financing is a critical component of both Phase I and Phase II of the US 36 Managed Lanes/Bus Rapid Transit that will provide new transportation choices and rapid transit service between Denver and Boulder. We strongly urge these tools be preserved and expanded.

A. Transportation Infrastructure Finance and Innovation Act (TIFIA)

In the current market environment, TIFIA remains the most cost-effective and flexible source of subordinated financing for projects and can substantially reduce the level of additional public monies that would otherwise be required to complete such projects. Benefits provided through the use of TIFIA funding include flexible repayment terms and the ability to lock in funding at rates available to the U.S. Treasury for comparable maturities. TIFIA allows for a maximum borrowing term of 35 years following substantial project completion with the ability to defer debt service for up to five years following the completion of the project. Additionally, as mentioned above, TIFIA loans may be subordinated to other project borrowings although the lien level may be increased upon the occurrence of a bankruptcy or other significant credit event.

We would like to highlight briefly the benefits of the TIFIA program to the EAGLE P3 project and Denver Union Station.

- In 2011, RTD entered a TIFIA loan agreement for $280 million as part of the plan of finance for the EAGLE project. The interest rate on the TIFIA loan is 3.1 percent with principal and interest payments anticipated to begin in 2021 and final maturity expected in 2045. The TIFIA loan complements other sources of financing, resulting in a lower cost of funding than would have otherwise been available in the capital markets. Although the TIFIA loan requires more administrative effort than issuing traditional tax exempt bonds, there are significant financial advantages. RTD delayed its first draw against the loan until late 2013, taking advantage of one of the benefits of the TIFIA loan which is that interest does not start to accrue until the loan is drawn.

- RTD combined a $145.6 million TIFIA loan and $152.1 million RRIF loan (which together constitute 64 percent of the nearly half billion dollar project cost) to make the Denver Union Station project possible. TIFIA financing benefited the Denver Union Station project in several ways. First, the ability to defer principal payments past project completion allows DUSPA to institute and accumulate the tax revenues which will, along with RTD's payments, serve to repay the loan. Second, the attractive rates offered by the TIFIA loan reduce the debt service burden placed on the project. Third, interest-only debt payments on the TIFIA loan during construction allow DUSPA to match principal repayment to the anticipated total revenue stream, which is expected to grow significantly as commercial and residential development in the area expands. Without the attractive features and flexibility offered through the TIFIA (and RRIF) programs, the Denver Union Station Project would not be able to achieve its potential as a model intermodal transit hub incorporating sustainable, mixed-use, transit-oriented components.

B. Private Activity Bonds (PABs)

Public transportation issuers have typically financed large infrastructure investments with tax receipts and proceeds of tax-exempt bonds. Until recently, the U.S. tax code limited the amounts of private activity associated with the issuance of tax-exempt bonds such that private development and operation of transportation projects could not benefit from the tax-exemption otherwise available to the transportation entity.

In 2005, pursuant to the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Congress amended the U.S. tax code to allow qualified highway or surface freight transfer facilities issued by state or local governments for the benefit of private partners to enjoy the same tax exemption provided to public transportation entities through the issuance of Private Activity Bonds.

This modification to the U.S. tax code provided the U.S. Department of Transportation with up to $15 billion in Private Activity Bond allocation for qualified transportation projects including any surface transportation project which receives federal assistance under Title 23 of the United States Code. The tax exemption allowed through this provision serves to dramatically reduce the cost of capital for private parties involved in transportation infrastructure projects, thereby allowing them to make more cost effective proposals to the public sponsors.

On the EAGLE P3 project, in order that the selected concessionaire could have access to lower cost tax-exempt funding, RTD requested a portion of the U.S. Department of Transportation's Private Activity Bond allocation. Ultimately, $380 million in volume cap was utilized by Denver Transit Partners, the successful consortium, in lieu of alternative, and more expensive, taxable financing vehicles. The reduction in cost of financing offered by PABs is expected to amount to approximately $400 million over the life of the project (approximately $190 million in savings on a present value basis). Under this structure, the RTD acted as conduit issuer on the debt while repayment on the PABs will be the sole responsibility of Denver Transit Partners, the successful bid team. In addition to the lowered cost of capital provided through PABs financing, PABs reduced market capacity concerns about raising the amount of private capital required.

The availability of PABs allowed a public-private partnership to obtain low interest rates on its bonds and avoided stringent private activity limitations that would have cost the EAGLE project more, or limited the ability of the public agency and private concessionaire to enter into this partnership. It was a very valuable tool that we recommend be not only preserved, but expanded, in the future.

C. Railroad Rehabilitation and Improvement Financing (RRIF)

The Railroad Rehabilitation and Improvement Financing Act (RRIF) was established in TEA-21 and amended by SAFETEA-LU. Similar to TIFIA, the RRIF program provides direct federal loans and loan guarantees to finance development of railroad infrastructure. Direct RRIF loans may be used to fund up to 100 percent of project costs, have repayment terms of up to 35 years from date of execution and are funded at U.S. Treasury equivalent borrowing rates.

A direct loan under the RRIF program of $155 million was combined with a TIFIA loan to finance the majority of the Denver Union Station project. The RRIF loan will be repaid through the same revenue sources as pledged for TIFIA, namely, annual RTD payments, tax and lodging revenues, and mill levies placed upon Metro Districts in the surrounding 40-acre district.

As with TIFIA funding, the RRIF loan benefits the project in that it provides flexible loan terms at attractive interest rates, allowing for the development of the project and growth of associated taxes and revenues over time. We believe that Denver Union Station remains the only multi-modal project in the country that has combined the use of both TIFIA and RRIF loans on one project. We strongly encourage Congress to prioritize and pursue reforms to continue to improve the RRIF process and facilitate the utilization of this tool for intermodal rail projects and other eligible rail projects nationwide. A continued emphasis on opportunities for passenger rail and intermodal facility development with this program will support mass transportation development, grade separation costs, safety enhancements, and shared corridor and shared track rail uses. We strongly encourage the continued progress between FTA and FRA to pursue integration and cooperation to provide the maximum benefit of this loan program for intermodal and passenger rail use.

IV. Conclusion

Without the P3 delivery method and other financing mechanisms previously mentioned, RTD would not have been able to move forward with plans for the construction of the EAGLE P3 Project, the development of Denver Union Station, nor the U.S. 36 toll/BRT project. To facilitate the continued build out of the FasTracks plan and other projects around the country, we encourage Congress to lean further forward with P3s, along with other innovative financing methods in the new transportation reauthorization bill.

We perceive significant opportunities in authorities such as the Pilot Program for Expedited Project Delivery, as we believe RTD and FTA working together showed how the Penta-P program could work to deliver an effective, innovative P3 with significant risk transfer and private investment. We also strongly urge Congress to continue providing a robust TIFIA program and to preserve and expand PABs, the financing tools that make innovative P3s possible. Finally, we urge Congress to dedicate specific focus to the opportunities and impediments involved in leveraging development around federally funded transit assets as another innovative financing tool. Of course, we fully support all efforts to provide technical assistance and similar resources to help communities understand, evaluate and move forward with P3 approaches.

As the demand for infrastructure increases and traditional funding resources become more difficult to obtain, more creative solutions become necessary in addressing critical transportation needs. RTD strongly supports the efforts of this Committee and all stakeholders to identify additional policies and methods needed to deliver the transportation projects of the future and address the needs which are critical to the economy and health and welfare of this country.

April 10, 2014

The Honorable John J. Duncan, Jr.
Chairman
Panel on Public-Private Partnerships
Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Duncan:

As requested in your letter dated March 25, 2014, we are pleased to provide you with written responses to the additional questions which resulted from the testimony provided on March 5, 2014, at the "Overview of Public-Private Partnerships in Highway and Transit Projects" hearing.

1. How did RTD determine the 35-year time frame for the Eagle P3 concession?

Response: The 34-year time frame was fundamentally driven by the term of financing. When we issued the Request for Proposals (RFP), the RFP anticipated the end date to be 2056 as a result of JP Morgan/Goldman Sach's projections of a need to finance over 40 years based on the cost estimate. During the procurement, one team offered an Alternative Technical Concept (ATC) that reduced the term from 46 to 34 years. After the evaluation, which was carried out on the full 46-year term to assure an identical basis of comparison, and selection of Denver Transit Partners (DTP) as the preferred proposer, we were able to exercise the offered ATC when DTP's bid was affordable with 30-year financing. This gave RTD improved flexibility and eliminated the challenges associated with rolling stock life and replacement.

2. If ridership is not as strong as the RTD forecast suggests, how will RTD ensure it is able to make the required monthly payments to the contractor?

Response: RTD is paying its contractor (Concessionaire) out of a combination of pledged sales tax and general fund revenues. Repayment to the contractor is for its capital investment, return on that capital investment, and ongoing costs of operation and maintenance. RTD's farebox revenues are approximately twenty percent of its annual operating cost across all lines of service. Mass transit operations in the US generally require a subsidy and neither RTD nor its contractor intended to be reliant on farebox revenues to repay concessionaire investment and cost of operations. Payments to the Concessionaire (contractor) are partially in the form of a bond paid by a trustee that collects all RTD sales revenue to pay debt service, and partially through annual appropriation. If RTD is required to cut service during the course of the Concession Agreement (CA) it may, and the annual appropriation portion of RTD's payment to the Concessionaire would be reduced. The extent of the service cut may result in a formula change to the payment or a negotiated change.

3. What recourse does RTD have if the private sector operator does not meet the contractual terms of service?

Response: RTD has a variety of remedies under the CA depending on the nature and level of deviation from performance standards. The CA sets out requirements, generally performance based, for design, construction and operation of the rail lines and rolling stock. There are a number of prerequisites to the Concessionaire's receiving authorization to commence revenue service. Failure to meet those requirements precludes the commencement service, and therefore the Concessionaire's right to receive service payments. Once service has started, Operation and Maintenance requirements must be met for the Concessionaire to receive 100% of its availability payment each month. Service related penalties can reduce the availability payment up to 20% each month. Penalties may be imposed for delays, insufficient numbers of cars in service, or station unavailability. Service deductions do not exceed 20% in any month as financing of the project was in part dependent on the Concessionaire having sufficient income to meet its debt service and other financing requirements. Other deduction may be made based on an assessment of points for failure to meet cleanliness, safety, maintenance snow and ice, and fare enforcement requirements. Deductions for those matters may reach a total of 5% per month.

Default sufficient to result in termination can occur for a variety of pervasive or serious failures on the part of the Concessionaire. Those include failure to complete the project, failure to obtain the right to commence service after a correction period, bankruptcy, loss of material subcontractors without replacement, and failure to meet at least 80% of performance standards for a period of six months in an eight month period. If an event that could result in termination occurs the Concessionaire or its Lender may take certain step to remedy the default. If a cure cannot be effected, termination may occur. In the event of termination RTD has the obligation to make payments to the Concessionaire on the RTD bond. In that event however, RTD is left with the constructed assets.

4. **Your written testimony indicates that RTD found the Penta-P program useful for coordinating the development of a P3 concurrent with securing an FFGA, though challenges did remain. Based on that experience, does RTD have suggestions for how to better coordinate the FFGA process with P3 procurements? In your experience, should the New Starts process be accelerated?**

Response: One of the main focuses of the Public Private Partnership Pilot Program (Penta-P) was to determine whether transferring risk to the private sector could potentially reduce the level of due diligence required by the FTA. RTD's Eagle Project benefited from this through accelerated reviews of deliverables and a streamlined risk assessment approach (which RTD developed and FTA accepted). However, challenges remained due to the fact that the procurement process moved more quickly than the New Starts process. The primary reason for this related to when and how the final scope for the Eagle Project was defined. As with many P3s, RTD developed specific performance based criteria for this project (e.g., number and location of stations, level of service, etc.) but allowed flexibility to the concessionaire to determine specific technical requirements to meet the performance criteria (e.g., single track vs. double track, etc.). So, while we encouraged creativity and innovation by the contractor, this made FTA's technical reviews challenging because the scope of the project varied somewhat between RTD's internal designs and the final project scope included in the bid from the successful concessionaire, although the operational capacity remained the same.

To address this timing challenge, RTD worked with the FTA to break the Eagle Project into two phases under the same contract. Phase 1 of the project, which was locally funded (and would

have been built whether or not RTD received an FFGA) and Phase 2, which was released only once the FFGA was received. FTA issued RTD a Letter of No Prejudice for all of the Phase 1 work (allowing RTD to maintain federal eligibility for the entire Eagle Project). RTD greatly appreciated FTA's flexibility and support on this issue. However, because FTA needed to review the scope identified in the final bid documents, the FFGA was awarded one year after issuing the Notice to Proceed (NTP) for Phase 1. Due to cost escalation provisions included in the P3 contract, and required by the private lenders to mitigate the uncertainty of the Phase 2 release date, this resulted in a $40 million cost increase to the Eagle Project.

One suggestion to address this issue in the future would be to allow FTA to base a decision on whether a project is eligible for an FFGA based on the agency's internal designs and cost estimates, with final approval for the FFGA based on receipt of a successful bid that is within the agency's financial parameters. Allowing FTA to issue a Letter of Intent to award an FFGA prior to receipt of the final P3 bids would remove financial uncertainty and risk for the concessionaire, potentially even reducing the overall bid costs. It would also allow agencies to issue an NTP for the entire project simultaneously, removing the risk of additional cost escalation due to a delay in receiving an FFGA.

In May 2014, RTD will formally submit a white paper to the T&I Committee that will include additional thoughts and ideas for streamlining the New Starts process. We applaud the streamlining that has already occurred through the revisions in MAP 21 and look forward to working with your committee to further enhance the New Starts process in the next reauthorization bill for transportation funding.

5. RTD believes using the P3 process for the Eagle Project helped save $300 million in costs. Could you describe how those savings were realized?

Response: We do believe that most of these savings were the result of a P3 approach. The procurement emphasized performance specifications rather than prescriptive requirements. The concessionaire is responsible for providing a specified level and quality of service. The specific means for achieving that service level is largely determined by the concessionaire. This provides the maximum ability for innovation. In addition, the bidders for the concession subjected each project element to a life cycle cost analysis, limiting the potential to over-specify engineering and operational facilities.

RTD also facilitated the use of Alternative Technical Concepts (ATC) which allowed proposers to offer technical solutions that did not meet all of the criteria included in the RFP. Where RTD determined during the proposal process that an ATC was acceptable, the proposer was able to use that solution and benefit from the cost savings in the competition. Such cost savings may have been in either the capital or life cycle costs, both of which were evaluated as part of the determination of the preferred proposer.

The concessionaire was also able to make risk-reward tradeoffs that enabled a lower cost. The concessionaire's future availability payments are partially based on providing service at specified levels. If these operational metrics are not achieved, their availability payments can be reduced by up to 25 percent. The P3 approach provides a strong incentive to build a project that provides reliable service, but still gives the concessionaire the flexibility to avoid costly facilities that provide little added benefit. It should also be noted that the concessionaire sometimes also provided facilities that were not contemplated by RTD, but were incorporated

into their proposal because they would provide a more efficient and reliable service in the long run.

Some specific examples of cost savings that were provided through a P3 approach were additional single tracking, lighter rail weight, station platform lengths that were shorter but still provided for 2035 passenger demand and off-the shelf rail vehicles.

6. What was the benefit of TIFIA to the Denver Eagle Project as well as other projects in Denver?

Response: TIFIA loans are being used on two transit projects in Denver.

The Denver Union Station Project Authority (DUSPA) is an entity that was formed with the single purpose of financing, designing and constructing a multi-modal transit hub in downtown Denver known as the Union Station Transit Center. This transit center will be the central connection point for RTD's bus, light rail, commuter rail and downtown shuttle services as well as Amtrak's Denver station. RTD will own, operate and maintain the project elements which will be completed and opened to the public in May 2014. The $480 million project was financed, in part, by a TIFIA loan of $145.6 million. Second, the $2.1 billion RTD Eagle Project includes TIFIA loan funding of $280 million.

The benefit of both TIFIA loans is multi-faceted compared to other potential funding sources. TIFIA loans allow the borrower to draw funds at a time when those resources are needed, with interest accruing at the time and only on the amount of the funds drawn rather than the entire loan authorization amount as in a bond issue. This is beneficial in reducing overall financing costs when compared to a traditional bond borrowing in which the entirety of the proceeds are received at the issue date with interest accruing on the full amount of the bond issue. In addition, TIFIA loans offer competitive interest rates, at the relative credit agency ratings, with a DUSPA TIFIA coupon rate of 3.99 percent and an RTD Eagle TIFIA coupon rate of 3.14 percent.

TIFIA loans also may allow for the deferral of principal and interest payments. The DUSPA TIFIA loan was structured to allow for the deferral of principal and 92.5% of interest due until 2015 (one year after construction of the project is completed) and final maturity in 2040 to allow for the surrounding private development to be completed which will generate tax increment financing revenues for debt service. Principal and interest payments on the RTD Eagle Project TIFIA loan are structured to be fully deferred until 2025 with final maturity expected in 2045 to accommodate projected debt service cash flow availability.

TIFIA may also provide an opportunity when commercial financing is limited for reasons other than the credit worthiness of a specific proposed project. The Denver Union Station project, for example, originally contemplated only commercial financing. Overall tightening in the credit markets in 2007-2009 made federal loans attractive because of their availability. As federal and commercial funding opportunities vary over time due to political and commercial considerations, having both sources available may provide alternatives when one funding source or the other is restricted.

7. How important was RTD's ability to provide stipends to the prospective partners during the bidding process to ensure a good selection process?

Response: Provision of stipends benefited in two ways. First, it allowed RTD to benefit from the unique features included in any unsuccessful proposal and at least one important feature was included into the successful teams' technical solution after selection. Second, and most importantly in a P3 process, it demonstrated RTD's commitment to the process and was seen by the proposing teams as a level of seriousness with which RTD was addressing the project. As an example, when RTD faced a delay to the process, we recognized that the delay would cause an increase in the costs incurred by the proposing teams and we increased the value of the stipend to recognize that fact. In addition to the traditional stipend, RTD offered a compensation agreement that would be payable to the selected team if RTD decided for any reason not to proceed with the project. This was in recognition that a number of P3 proposals had failed after a team had been selected and was a further demonstration of the serious intent on behalf of RTD to close the deal. Since RTD did indeed close the Eagle Project deal, the up to $20 million compensation agreement was never paid, but was recognized by the proposing teams as a sign of RTD's serious intent and project commitment.

8. **Do you believe the cost of submitting a bid discourages some interested parties from submitting a proposal? Would expanding the eligibility of federal funds to include reimbursement for costs associated with submitting a bid be helpful?**

Response: Our understanding is that the cost to submit a bid for the Eagle Project was in the range of $15-$20 million. Obviously, this amount has the potential to restrict the number of potential bidders.

However, we found that for a strong project, like the Eagle Project, that the high cost to submit a proposal did not prevent a good bidding environment. Three groups submitted qualifications statements to bid on the project. Although one team dropped out (they preferred to be called an "inactive participant"), our understanding is that was based on internal team issues rather than the cost to prepare the bid. In addition, our goal from the start was to shortlist to three teams so that we could better focus our procurement efforts while also providing each team with a greater chance of success.

We did provide a stipend of $2.5 million to non-successful bidders to partially offset the cost of preparing their bids. RTD received feedback that while this stipend only covered a small percentage of their bid preparation cost, it demonstrated the commitment of the owner and was a major factor in encouraging their team to submit a responsive bid. Therefore, we strongly recommend that the cost of a reasonable stipend be eligible for federal funding.

Further, we do not believe the cost of proposing is a hurdle to any serious proposers as long as they have confidence in the agency's leadership to move forward with the deal. We also suggest that failing that confidence, proposers would not be persuaded to continue with the process even if their costs could be reimbursed since it is an opportunity cost that would be incurred that has a far greater impact on their businesses.

Finally, one of the key factors driving up bid costs is keeping the bidder consortiums staffed and working during the time between the start of procurement and contract award. Minimizing costs and encouraging participation, and therefore competition, is actually dependent on keeping to a finite and advertised schedule. Agreeing on all federally required submittals, schedule adherence by federal oversight agencies, set times for review, and committed dates for

availability of federal funds allows teams to internally budget for costs including payment of subcontractors while awaiting agency determination of award.

9. Your testimony states that under the availability payment concession, RTD begins payments in 2016 at the beginning of revenue service. What happens if the project is delayed or the project cost changes? How much has RTD provided to the concessionaire to date?

Response: The availability payments start when the concessionaire has made the project available for passenger service in accordance with the concession agreement requirements and certified as such by the independent engineer. If that certification is delayed the availability payments are equally delayed, and importantly never paid, thus forming a powerful incentive for on-time completion far greater than any form of liquidated damages. The capital cost has no impact on the availability payments, only changes to the operations and maintenance needs affect the availability payments. RTD has not paid any availability payments to date. RTD has provided $853 million to the concessionaire to date in the form of construction payments as originally anticipated in the concession agreement as modified by the changes to the contract agreed between the parties for changes in scope.

10. Your written testimony suggests that under the concession agreement, RTD controls fares and service frequencies. Can you explain how those are negotiated with the operator?

Response: RTD determined that as a matter of public policy RTD would retain the right to set the fares and the quality of service on the Eagle Project as part of the integrated fare structure and service plans for all RTD transit services. The concession agreement includes the service frequency, hours of service and capacity required to be provided for each of the three lines included in the project. If RTD determines that these criteria need to be modified, RTD will initiate a change request and negotiate the impacts of such changes. The agreement allows for certain additional services, such as special event services, at a predetermined additional cost.

11. Why did RTD decide not to transfer revenue risk?

Response: RTD's fare box revenue across the RTD system is relatively low compared to its operating expenses, which is typical of all transit systems. The fare box revenue provides, on average, funding for approximately twenty percent of our operating cost with the balance of the funding for operations coming from sales tax and grant revenue. RTD determined during the project development phase that transferring the revenue risk to the concessionaire would result in lower recovery due to the risk premium that proposers would apply to revenue projections. This was particularly important as RTD decided to retain the right to set and modify the service quality and actual fares, thus removing any realistic ability from the concessionaire to influence the actual revenues received. The ability for RTD to set fares was an important factor for our Senior Leadership Team and directly elected Board of Directors, who were concerned about a public backlash if a concessionaire had the ability to raise fares. In addition, some potential proposers indicated that they would not bid on the Eagle Project if they had to accept revenue risk.

12. Your written testimony mentions that the transaction costs for a P3 in terms of the financing cost can make a P3 project more expensive. How do these costs compare the efficiencies and savings RTD received?

Response: A P3 is a more expensive procurement than a conventional procurement. Additional costs include those for a financial advisor, legal advisor and higher interest rates than can be obtained by the public sector. However, we believe that these costs were more than offset by the $300 million savings in the bid.

Under the RTD Eagle P3, the concessionaire issued approximately $400 million in Private Activity Bonds (PABS) with a Fitch credit rating of BBB– in addition to contributing $53 million of equity to the project. The credit and construction risk as well as the unsecured equity contribution resulted in a higher financing cost than RTD traditional sales tax bonds secured by pledged sales tax revenues and issued with RTD's higher credit rating.

Although financing costs of a P3 may be higher than publicly issued debt, RTD has seen efficiencies in terms of attention to life cycle costs, maintenance and safety as a result of the design-build-finance-operate-maintain arrangement. Any work of questionable quality is ultimately the Concessionaire's responsibility to maintain and operate. It is difficult to evaluate the savings of avoided warranty claims but an example is bridge repair during construction due to potential construction defects. On a simple design-build contract, the contractor may have delivered products questionably meeting technical quality specifications and risking litigating claims. On RTD's Eagle Project, when the same contractor is responsible for those assets over 30 years, the contractor made repairs on its own. Also, to ensure rigorous oversight by the equity investors throughout the term of the Concession Agreement (CA), the CA does not allow change in ownership without RTD authorization prior to project completion, and RTD retains some authority over ownership changes after start of operations.

13. How did PABS enable the project concessionaire to save money? Does RTD have any policy proposals for PABs?

Response: The issuance of the PABs allowed the concessionaire to timely issue debt and start construction sooner, thereby avoiding increased material costs due to inflation. Under the P3 arrangement, RTD will repay the concessionaire for the PAB issuance through pass-through costs. PABs incur a lower cost of financing for the private sector due to their tax exempt feature. PABs do have a higher financing cost than can be obtained through a direct tax exempt bond issuance where that is an option.

RTD recommends that future transportation legislation increase the availability of PABs.

14. MAP-21 provided additional funding to the TIFIA program as well as programmatic changes. What additional changes would you recommend for the TIFIA program?

Response: The TIFIA program is a mutually beneficial program on both the federal and local level in that the federal government recovers its investment plus interest as opposed to grant funding. At the local level, the TIFIA program offers many appealing and flexible financing options (see question #6).

A primary recommendation on TIFIA loans is to encourage the streamlining of federal administrative and reporting requirements. Under the TIFIA program, these requirements generally parallel grant funding requirements which can be onerous to the borrowing agency. While a regimented regulatory environment is desirable under any financing arrangement, TIFIA loans provide the additional guarantees of repayment with interest and are secured by a revenue source at the local level which takes seniority over subordinate obligations. As such, these circumstances mitigate the federal financial risk exposure in the project being funded and could ideally dictate a lower level of ongoing federal oversight and related compliance efforts at the local level. A review of the oversight requirements could result in cost savings at the federal and local level while delivering quality projects.

15. Your testimony mentions that there are excellent examples of P3 projects overseas. Which projects would you suggest this panel review?

Response: Manchester Metrolink in England, Arlanda Rail Link in Sweden and Canada Line in Vancouver.

We are available to answer any additional questions that may result from the responses provided above. Please feel free to contact me at (303) 299-2300 or at Phil.Washington@RTD-Denver.com.

Sincerely,

Phillip A. Washington
General Manager and CEO

Testimony of

Richard Fierce
Senior Vice President
Fluor Enterprises, Inc.

on behalf of
The Associated General Contractors of America

presented to the

Committee on Transportation & Infrastructure
Panel on Public-Private Partnerships

on the topic of

Overview of Public-Private Partnerships in Highway and Transit Projects

March 5, 2014

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My name is Richard Fierce and I am a Senior Vice President with Fluor. For more than 100 years, Fluor Corporation has partnered with its clients to design, build and maintain many of the world's most challenging and complex capital projects. Fluor has a global network of offices on six continents, with more than 41,000 employees. Headquartered in Irving, Texas, Fluor ranks 110 on the FORTUNE 500 list, with 2013 revenues of $27.4 billion. I am the head of sales for Fluor's Infrastructure business line. In that role I have global responsibility for sales, marketing and business development for transportation, commercial & institutional, telecommunications and offshore wind projects. I am here today representing the Associated General Contractors of America (AGC), a national association of 26,000 businesses involved in every aspect of construction, with 94 chapters representing members in every state.

In addition, I am the President of the Association for the Improvement of American Infrastructure (AIAI). AIAI is a non-profit organization whose mission is to help shape the direction of the national Public Private Partnership marketplace. AIAI membership represents consists of leading construction firms, investors, developers, service firms, designers, planners and academics.

I appreciate the opportunity to provide testimony to the Committee on Transportation & Infrastructure's Panel on Public-Private Partnerships (P3 Panel) to provide an overview of the use of Public-Private Partnerships (P3s) in Highway and Transit Projects. Fluor provides a unique perspective on the use of P3s having been active in this space for twenty years, including projects in the United States, Canada, the United Kingdom and elsewhere in western Europe.

Federal Transportation Funding

Before we get into the subject matter for today's hearing, I must make a point about the pending insolvency of the Highway Trust Fund (HTF) and the reauthorization of Moving Ahead for Progress in the 21st Century (MAP-21).

Fluor, like other contractors involved in the transportation construction market, relies on the predictability of the public sectors' bidding schedules to target opportunities that determine our resource and capital investment allocations throughout the country. Returning to a four or five-year, inflation indexed funding program in the upcoming reauthorization is critical to the continued build-out of the nation's surface transportation needs. Greater predictability in funding will enable contractors such as Fluor to invest in hiring, training and developing our workforce to build our nation's infrastructure.

Like other construction companies in the transportation business, Fluor supports continued federal investment in highway and public transportation. The level of investment that is currently provided from the HTF is in jeopardy. The Congressional Budget Office estimates the Highway account of the trust fund will have difficulty meeting obligations sometime during the latter half of Fiscal Year 2014, requiring an infusion of cash into the trust fund at some point this summer. The transit account of the HTF is projected to meet all of its obligations in FY 2014, but will be unable to meet obligations during FY 2015. Even worse, the CBO prediction last year before this committee still holds true – without a general fund transfer or additional revenue into the HTF there will be no new obligations in 2015. Every dollar going into the HTF in 2015 will be used to pay prior year obligations. In simple terms, there will be no new construction projects funded with federal-aid highway and transit dollars from the HTF next year.

These are real problems that Congress must address. While it is not central to this hearing, the funding uncertainty weighs heavily on the minds of the thousands of AGC members who have worked for decades to build the world's best transportation network.

The solution to meeting our transportation infrastructure needs is twofold. First, Congress and the Administration must work together in a bipartisan way to increase user fees and identify new revenue sources to address the solvency of the HTF, both now and in the future. Second, there must be more private-sector involvement in the construction of transportation projects. There is a growing interest in P3s and other innovative financing tools that can help deliver many of our nation's most challenging transportation needs, and federal credit programs like TIFIA can help attract private investors for these projects. It must be stressed; however, that P3s and programs like TIFIA should never be considered as a substitute for the "user pays" funding system. The number one priority for Congress and the Administration must be to ensure the short-term and long-term solvency of the HTF.

P3s - The Basics

As investment in our nation's roads, bridges, and transit systems continue to decline at the federal, state and local levels, leaders are looking toward P3s and other innovative financing options to bridge the gap between the needs of our transportation network and the realities of decreased funding. Although, the United States is relatively late to the P3 game, officials at all levels of government are increasingly recognizing that a properly executed P3 can produce a win-win solution for the public and private sectors.

The P3 market in the United States is more than 20 years old. However, we still lag far behind other counties in our use of P3s to address infrastructure needs. To date, $24.3 billion has been invested in transportation infrastructure projects that included some private sector role in the project's financing. This reflects 34 projects in 16 states. Since 2007, P3s have become more popular, with a total of $22.7 billion in public and private funds dedicated to P3 projects between 2007 and 2013. Yet P3s only accounted for 2 percent of overall capital investment in our nation's highways during that same period.

It is important to remember no two P3s are the same. P3s differ from project to project, state to state, and municipality to municipality. Some of this variability is necessary because of needs and challenges unique to a given project, geography or industry segment, although much of it is driven by the fact that we have 50 state Departments of Transportation responsible for delivering these projects, not counting transit agencies or other local organs of government. This variability is one of the challenges that the nascent U.S. P3 market must overcome.

P3s for transportation projects are summed up best by the Federal Highway Administration's (FHWA) P3 Toolkit as differing "from conventional procurements where the public sponsor controls each phase of the infrastructure development process- design, construction, finance, operations and maintenance. With a P3, a single private entity (which may be a consortium of several private companies) assumes responsibility for more than one development phase, accepting risks and seeking rewards."[1]

Some might consider the most basic form of a P3 to be Design-Build project delivery, where contractors are responsible for designing and building projects for a fixed price. More complex P3s include the private sector assuming responsibility for finance, operations, and maintenance, through a long-term concession from the public sponsor. In some instances, as in a Design-Build-Finance procurement, the private sector will design, build and provide aspects of the finance for the project, while the public

[1] FHWA P3 Toolkit Value for Money Assessment for Public-Private Partnerships: A Primer

agency operates & maintains the asset. In a Design-Build-Finance-Operate-Maintain (DBFOM) transaction, the private sector entity will also provide operations and maintenance services for the asset. These DBFOM transactions may entail the private sector partner bearing revenue risk for the project. In other transactions, revenue risk may be retained by the public sector, with the private entity's reimbursement tied to the availability of the asset to service.

AGC and Fluor would tend to agree with the following assessment by FHWA: "P3s are complex transactions, and determining that a P3 is likely to provide a better result than a conventional approach is not simple. There are many factors that must be considered when determining the best procurement approach for a given project, including long-term costs, myriad uncertainties, risks both now and in the future, and complicated funding and financing approaches." [2] The bottom line is that P3s don't work for every project, but there is real potential for a significant increase in the use of P3s for highway and transit construction.

P3 projects are complex. Since the first DBFOM project in 1989 only eighteen projects have reached financial closure. The majority of these projects have taken place in California, Texas, Virginia, and Florida. But as transportation funding continues to be outpaced by needs there is real potential for growth in the P3 markets. There are currently 30 proposals in the pipeline for DBFOM projects. In addition to the traditional states active in P3s, several states are trying P3s for the first time. These states include Alaska, Arizona, District of Columbia, Louisiana, Maryland, Mississippi, North Carolina, Ohio, Oregon, and Pennsylvania. Thirty-three states (DC and Puerto Rico) have taken the first step in securing P3 work by developing state enabling legislation. [3] Having good P3 enabling legislation is a necessary – but not sufficient – condition to success in this space. The most necessary ingredient remains strong leadership and political will at the state or agency level.

P3 Benefits and Challenges

The most obvious benefit from the use of P3s in the construction of highway and transit projects is the ability to help bridge a financing gap for a given project. A P3 may allow a state to conserve funding for other projects in a time where dedicated funding at all levels of government is on the decline. In addition, a state can avoid the up-front-costs of borrowing needed to bridge the gap until toll collections become sufficient to pay for the cost of building the asset and paying the interest on the borrowed funds. A P3 may enable the state to avoid the limits that govern the amount of outstanding debt that it can have. The quantum of private sector finance, whether debt or equity, and the timing of such finance, can give states much needed flexibility in allocating resources, prioritizing projects, and accelerating delivery of much needed improvements, sometimes by many years. This allows the public to experience the benefits of the increased efficiency and safety that comes from the improvement.

An equally important benefit, though not as obvious, is that P3 project delivery can be expected to deliver more project for each dollar of anticipated revenue. This is accomplished when the public and private sector participants collaborate earlier in the lifecycle of a project, bringing constructability concepts and lifecycle costing into consideration while the project is still being defined and designed. With the long-term equity commitments, and "skin in the game" by way of long-term operations and maintenance exposure, taxpayers can be sure that corners are not being cut while innovation and "alternative technical concepts" are being vetted. The anticipated innovation from P3 delivery is also

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[2] FHWA P3 Toolkit Value for Money Assessment for Public-Private Partnerships: A Primer

[3] NCSL Public Private Partnerships for Transportation: A Toolkit for Legislators February 2014 Updates and Corrections

more likely to materialize given the nature of the competitive landscape around such procurements. Take a look at the shortlisted bidders on any U.S. P3 procurement, including concessionaires, constructors, dedicated subcontractors, consultants, financial and legal advisors, and you will find a who's who of the most experienced and creative design, construction and finance professionals from around the world. These projects regularly benefit when these world class players import best practices from a wide variety of market segments and geographies.

P3 project delivery also allows best in class performance against goals for workforce engagement and small and minority contractor participation. The selection criterion for P3 projects, with emphasis on "best value" and the ability to set the balance between price, technical competency, and other considerations, allows workforce engagement and Minority and Women Owned Business Enterprise participation to be given appropriate consideration. Fluor is very proud of the Workforce Initiative Now program on the Denver Eagle P3 project, where it collaborates with the Denver RTD and the Urban League to promote local hiring. We also delivered more than $545 million in Disadvantaged Business Enterprise/Small, Women-owned, and Minority owned participation, against an original contract value of just over $1.4 billion, on our Capital Beltway P3 here in the Nation's capital. The large and sophisticated players that tend to lead these projects take these contracting goals very seriously, often delivering outstanding results where possible.

In terms of challenges, one cost factor and potential hurdle impacting contractors participating in P3s on transportation projects are the costs associated with putting together a proposal. Proposal costs are a factor on all design-build projects but are more significant on P3 projects because of the many different parties that are involved on the concession teams. While much of the construction industry works with standard form contracts or at least a common contract framework, it is common for P3 projects to have the various legal and transaction documents newly created for each project. This reinvention of the wheel tends to be very costly for contractors and concessionaires who must have a team of legal, financial and insurance experts review, comment on, edit and negotiate each of these documents. These costs are not borne solely by the private sector – the public sector partners are also running up unnecessary costs when starting over from a blank slate on each project. These costs will be reflected in the overall cost of the project and may also limit competition. While it is understood that each project is unique and therefore will require many different contract terms, it is also reasonable to expect that many contract terms and conditions need not change from one project to another.

MAP-21 directed the FHWA to craft model P3 transaction documents to address this concern. Much to its credit, FHWA held "Listening Sessions" with a broad array of stakeholder groups and also solicited written comments on how it should approach this Congressional mandate. The message was delivered loud and clear in these two sessions that on the one hand FHWA should not create standard documents and mandate their use. Such an action was viewed as a detriment to P3s moving forward. On the other hand, there was also a call for the development of an educational guide that included recommended contract language. The reasoning behind this recommendation is that contingency costs associated with construction risks could be better managed and owners need to understand this. A number of industry groups, including both the AGC and the AIAI, strongly support the idea of collecting and disseminating best practices in terms of P3 transactional documents.

FHWA recently released a guide document for concessions using tolling as the revenue source. AGC's initial reaction to the document is that FHWA did a good job of balancing the desire for not mandating contract language with the equally strong desire to make P3s more uniform from a risk allocation point of view. Once FHWA finishes all of the documents associated with this mandate, the challenge will be to get the guide used. This is an issue that this committee should be interested in monitoring because it has the potential for significantly impacting the P3 market for transportation projects in the future.

A related challenge is that closing a P3 deal, even after selection is not always guaranteed. It is certainly not uncommon for these deals to fall apart after significant time and money has been invested in the process by the selected proponent. The reasons for this vary widely, but very often it tends to be driven by loss of political will. This does much damage to the market, and has been known to dissuade otherwise qualified participants from further activity in the market. Given that the typical transportation P3 project will often entail bidding costs of several million dollars, the costs of a project that fails to make it across the finish line because of political concerns (as opposed to issues related to technical or financial feasibility) must be borne equitably by all appropriate participants.

TIFIA and PABs

Two extraordinarily important components of any P3 agreement for transportation projects are Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance and Private Activity Bonds (PABs). TIFIA and PABs coupled with private and other sources of funding and financing, help states better prioritize their funding to focus on their respective transportation needs.

In the last Congress, there was bipartisan recognition of the benefits of TIFIA. By increasing the budget authority of TIFIA to $1 billion in 2014, MAP-21 began laying the foundation for the approval of more TIFIA loans. In addition to the increase in budget authority, MAP-21 made meaningful reforms to TIFIA with the goal of streamlining the application process and expanding the pool of eligible projects. These reforms included: increasing the coverage of eligible costs that can be financed through TIFIA from 33 percent to 49 percent; rolling the application process; eliminating selection criteria; and adding eligibility for rural infrastructure projects.

These and other reforms to TIFIA appear to be very helpful and would likely result in greater opportunities for companies like Fluor to put its employees to work on major projects; however, the guidance from DOT on how the program has changed since MAP-21 has been slow coming. More guidance from the agency on these reforms would greatly help states understand the process. The criteria in MAP-21 for TIFIA assistance was simple, clear and flexible enough to allow a variety of different projects to be approved. But in order for the program to succeed, grow, and gain more credibility - as was the intent of MAP-21 - it would also be very helpful if there is significant geographic diversity and transparency in the project selection process.

In addition, to get the best proposals from the industry, it is important that there is increased certainty that projects will move forward. AGC believes that TIFIA credit assistance approval reduces the uncertainty and therefore adds to the likelihood that P3 projects will move forward. Streamlining the approval process using concurrent reviews as proposed in other sections of MAP-21 would also enhance the efficiency of project delivery, and reduce overall costs.

Despite the clear priority that was given to the TIFIA program in MAP-21, AGC is concerned that there has been a noticeable slowdown in the award of TIFIA financing since MAP-21 was enacted. It appears that DOT is being extremely cautious in approaching the approval of TIFIA financing. AGC recognizes that DOT must take seriously its fiduciary responsibility in managing the funds in this program and overseeing projects that are awarded TIFIA financing. Awarding financing to a project that ultimately has financial problems and puts the government at risk for a financial loss is not in the best interest of the program. However, it is equally problematic to be overly cautious, slow, and bureaucratic in making the financing decision.

Private Activity Bonds which are tax exempt securities issued by state or local governments or other permitted issuers, were originally authorized for $15 billion for surface transportation projects and rail truck transfer facilities in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). No substantive changes have been made to the program since SAFETEA-LU, and as a result there only remains slightly over $5 billion in PABs available. Considering PABs are an integral part of many P3 agreements, Congress must make it a priority to increase the availability of these bonds before capacity runs out sometime in FY 2015. The market is already seeing some impacts arising from the uncertainty of the future of PABs. As state DOTs evaluate the costs and benefits of P3 project delivery for new projects entering the procurement pipeline, they need some certainty with respect to PABs availability. We believe the PABs authority should be "topped off" to prior authorized levels, or the cap itself could be lifted.

Lessons Learned

Fluor's experience is that project value is enhanced when there is earlier communication and innovation between disciplines (planning, design, construction and O&M) and participants (public and private sector partners, including financiers). The public sector can and will accommodate more in terms of "alternative technical concepts," with the assurance that lifecycle costing has been considered and with some level of private sector skin in the game over the life of the concession. The best value selection criteria employed in P3 procurements are flexible enough to reward this innovation, and can also further the goals of local labor engagement and disadvantaged business participation. As such, P3 project delivery can offer excellent results.

Conclusion

P3s have become an important tool to finance and deliver public infrastructure projects. With current and future public funding challenges at all levels of government, P3s offer the promise of delivering high-quality infrastructure in a timely and cost effective way, and can provide up-front capital for projects that could not be done otherwise. If done correctly, P3s can be an effective means for delivering transportation infrastructure. We are encouraged by the work of this committee and the P3 Panel in taking a deeper dive into the role of P3s in transportation projects. As you seek to identify the role P3s play in the development and delivery of projects, I would like to leave you with five important points when it comes to the use of P3s: (1) P3s or any other type of innovative financing tool must be viewed as just that – a financing tool. There is no replacement for direct federal funding, and the number one priority for Congress should be to ensure there are long-term sustainable funding sources in place for our federal surface transportation programs. (2) Projects need to be technically feasible, publicly supported and financeable. Any P3 project requires a reliable revenue stream for the project to be viable. As our members like to say, no amount of magic makes an un-financeable project financeable. (3) P3s are not a panacea. Private finance may help close a funding gap, and P3 project delivery is likely to deliver more project for a given dollar of revenue, but P3s do not eliminate all risks or possibilities for conflict or claims. The same challenges that face a publicly funded project can also occur on a P3. Efficient allocation of risk is important to creating P3 value. (4) Good state-enabling legislation, expertise among state administrators, federal administrators (including advisors) and a track record of success will help build support for P3 development. (5) Facilitate the use of P3 model contract documents similar to what is being developed by FHWA as directed by MAP-21 for collecting and disseminating best practices.

Again, thank you for your leadership on this important issue. AGC, Fluor, and AIAI stand ready to work with you and the other members on the committee to ensure P3s continue to responsibly fill the void between traditional public infrastructure funding and our nation's growing infrastructure deficit.

Richard Fierce – Fluor/AGC
Questions for the Record – March 11, 2014
House Committee on Transportation and Infrastructure
Panel on Public-Private Partnerships
Hearing on "Overview of Public-Private Partnerships in Highway and Transit Projects"

Responses to Questions for the Record

1. **Are there examples of projects that have provided incentives to bidders and if so, can you please describe how those incentives help?**

In our experience, disincentives are much more commonly found in P3 projects than incentives. One notable exception has been the occasional use of schedule incentives to shorten the construction period, which in turn provides earlier beneficial use of the facility. Incentives could also be an effective tool during the operating period to encourage service levels above the minimum required performance specifications.

2. **Can you please describe the projects that Fluor has participated in, and the benefits the private sector has brought, to those projects?**

Public-private partnership approaches can deliver projects sooner and decrease the total capital costs, while transferring a significant portion of the risk to the private sector. DBFM and DBFOM approaches provide the added potential benefit of offering life-cycle cost savings through private sector maintenance of the new facility. Benefits of a P3 approach include:

- **Efficient risk allocation.** In addition to design and construction, private sector also retains the risks of financing, technology, project management, operations and maintenance, and life-cycle risks (including condition of asset at the end of the contract term).
- **Earlier construction start and completion.** The DB approach provides the most efficient procurement process, while the overlap of design and construction provides significant synergies that reduce both the cost of the project and the implementation schedule.
- **Whole-life cost approach and greater efficiency.** Construction costs are optimized in relation to routine and long-term operations and maintenance costs.
- **Significant innovation opportunities.** Output specifications can be more performance-based and less prescriptive, without the risk of sacrificing construction quality, service quality, or maintainability.
- **Enhanced public management.** Government officials focus on service planning and performance monitoring, instead of managing day-to-day delivery of the design, construction, or services.

Fluor has participated in more than $13 billion of P3 projects, as shown in the table below:

Fluor Infrastructure P3 Projects

Project Name/Location	Total Installed Cost (in US$)	Type of Financing	Fluor Equity % in DB/JV's in Concessionaire	Financial Closing Year	Duration of Project Phases
E-470, Denver, Colorado, USA	$26 million	• 63-20 structure • Partner subordinated debt	49.75	1995	2 Years DB 39 Years O&M

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Project Name/Location	Total Installed Cost (in US$)	Type of Financing	Fluor Equity % in DBJV/% in Concessionaire	Financial Closing Year	Duration of Project Phases
Pocahontas Pkwy, Richmond, Virginia, USA	324 million	• 63-20 structure to sell tax-exempt toll revenue bonds • Federal funding • State infrastructure bank loans • Partner subordinated debt	60 / 0	1998	4 Years DB, 33 Years O&M
London Connect, London , UK	2 billion	• Senior bank debt • Partner equity and sub debt	100 /18	1999	20 Years OPS
High Speed Line, Netherlands	2.26 billion	• Senior bank debt • European investment bank debt • Partner equity and sub debt	11 / 10	2001	5 Years DB, 25 Years O&M
State Highway 130, Austin, Texas, USA	1.1 billion	• Subordinated debt • Bond issue by Authority • TIFIA loan	45 / 0	2002	6 Years DB, 3 Years Cap Maintenance
A59 Freeway, Noord Brabant, Netherlands	206 million	• Senior bank debt • Partner equity	10 / 10	2003	3 Years DB, 15 Years Maintenance
National Roads Telecomm System, United Kingdom	784 million	• Senior bank debt • Partner equity and sub debt	100 / 45	2005	2.5 Years New Build, 8 Years O&M
A8 Autobahn, Augsberg to Munich, GDR	338 million	• Senior bank debt • Mezzanine debt • Partner equity and sub debt	25 / 25	2007	55 Mo. DB, 27 Years O&M
Capital Beltway, Fairfax County, Virginia, USA	1.936 billion	• TIFIA loan from USDOT • Private Activity Bonds • State funding • Partner equity	65 / 10	2007	5 Years DB, 75 Years O&M
Eagle Commuter Rail, Denver, Colorado, USA	2.086 billion	• Private Activity Bonds • Federal funding (FTA) • Partner equity	50 / 10	2010	6 Years DB, 30 Years O&M
Windsor-Essex Parkway, Windsor, Ontario, Canada	1.230 billion	• Senior bank debt • Equity bridge loan • Partner equity	33 / 33	2010	50 Mo. DB, 30 Years O&M
I-95Express Lanes Fairfax, Prince William, and Stafford Counties, Virginia, USA	923 million	• TIFIA loan from USDOT • Private Activity Bonds • State funding • Partner equity	65 / 10	2012	3 Years DB, 72 Years O&M

3. Can you please describe the benefits of a project sponsor identifying the performance outcomes opposed to project specifics? What innovation can the private sector bring to the table?

It is always a challenge to the procuring authority to find the right balance between prescriptive specifications that provide a high level of certainty of the final project design but significantly reduce possible innovation, and flexible performance-based output specifications that maximize the private sector innovation but potentially lead to materially different technical solutions that are more challenging to evaluate on a competitive basis. The procuring authority and its advisors should, early in the process, determine the critical project features that must be

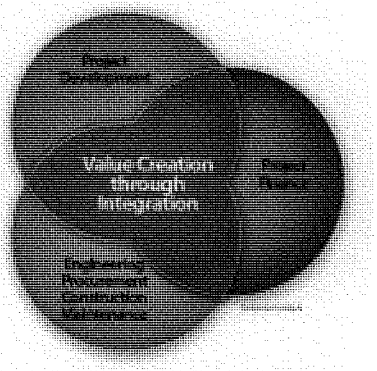
included in the final project solution and make these features clear and prescribed in the specifications. Where appropriate, performance outcomes should be specified, leaving the door open to private sector innovation. Technical solutions satisfying these output requirements should be allowed so long as they meet all other project requirements.

Fluor does not encourage our clients to develop the engineering any further than a conceptual level (approximately 10 percent) or the level necessary to obtain environmental clearance. There is a common misperception that solutions that are advanced further in design result in bids with less contingency or higher competition on margin, but that typically results in differences of a maximum of one to two percent of construction costs. Conversely, if engineering solutions are advanced too far, they often inadvertently eliminate potential innovative design and construction solutions that can cut significant (10 to 15 percent) cost and schedule savings from the project.

Innovation

There are numerous areas that the private sector will review and analyze in order to bring innovation and efficiencies to the project, including:

- Innovative construction phasing plans and schedule optimization
- Alternative Maintenance of Traffic schemes
- Pavement type and structure
- Uniformity of structural elements and aesthetic uniformity
- Material selection and economies of scale for material purchasing
- Earthwork balancing
- Utilization of local suppliers and subcontractors
- Addressable opportunities for MBEs, DBEs, and workforce training
- Minimize impact to known hazardous materials sites and utilities
- Minimize right-of-way requirements



The procurement of the Tappan Zee Hudson River Crossing provides an excellent case study in the advantages of performance-based vs. prescriptive outcomes. According to NYSTA Chairman Howard Milstein, "The price proposal from Tappan Zee Constructors was at least 20 percent lower than other bidders, requires less dredging and can be completed faster than the other proposals. Most importantly, the design-build process produced a savings of at least $1.7 billion compared to the amounts estimated by the Federal Highway Administration and our own original estimates." Additional information can be found at http://www.newnybridge.com/index.shtml.

4. How has alternative technical concepts benefitted the projects you participated in?

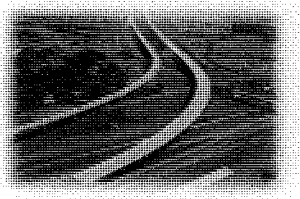
An important advantage of a P3 procurement is the opportunity for proponents to propose innovations in their design, construction, and operations means and methods that will bring cost, performance and/or schedule benefits to the project. These innovations are typically discussed through Alternative Technical Concepts (ATC) meetings, whereby the proponents are provided with feedback and are able to obtain preliminary approvals of their alternative solutions, prior to expending significant resources to fully develop these designs. The proposed innovations are kept strictly confidential during the proposal process, but typically become the property of the public sector upon payment of a stipend and can then be assigned to the preferred bidder. By this manner, the public gets the benefit of the best concepts of each proposal team, irrespective of which team is selected to deliver the project.

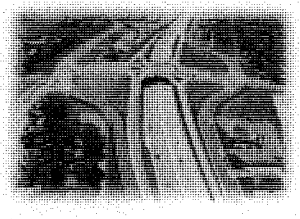
Denver Eagle P3 Commuter Rail Project. The Eagle Project is the first P3 for commuter rail in the U.S. to include design-build, financing, and long-term operations. It is also the first P3 project advanced through FTA's Penta-P P3 pilot program. ATCs and other innovations contributed to the winning bid coming in $300 million below the owner estimates. According to RTD, "the key to our successful procurement" included:

- "Implementing Alternative Technical Concepts (ATC) rather than a Value Engineering (VE) approach to enable proposers to effectively manage their anticipated project costs.
- "Providing for a stipend to the proposers to defray some of the costs of proposal preparation and at the same time ensure we own the approach and ATCs created by both the winning and unsuccessful proposers."

Source: Eagle P3 Project - Procurement Lessons Learned; August 2011

State Highway 130 P3 Project in Texas. Alternative Technical Concepts developed during the proposal and post-bid stages have provided cost savings in the amount of $40 million and $75 million, respectively, and more than $2 million in annual maintenance costs savings.





US Highway 52 (ROC 52) Design-Build Project in Minnesota. 30 Alternative Technical Concepts produced a savings of approximately six percent of the project cost and eliminated nearly one year from the schedule.

5. When assessing whether to invest in a P3 project, how does the private sector assess whether there is sufficient political support to invest in a project?

When assessing political support for a project, the private sector looks for consensus among local, regional, state, and federal stakeholders. Consensus building is often accomplished while progressing the environmental evaluation and the EIS activities can be an effective barometer for judging the readiness of a project for private sector investment

In the context of a P3 availability payment structure, a top concern for the equity investors and lenders is the reliability of the payment source(s). This includes the soundness of any funding commitments; the security of future availability payment streams; and the credit quality of the counterparties.

6. What advice would you share with a State DOT that does not have any experience with P3s or TIFIA? How should they get started? Should States establish stand-alone offices to manage P3s?

We advise State DOTs to approach P3 procurements with the following industry best practices in mind:

- Adopt good enabling legislation, such as Virginia's PPTA.
- Utilize a proven concession agreement template, but be flexible. Each project is unique and the development of the optimum agreement is very much an iterative process.
- Engage an experienced and capable team of consultants and advisors.
- Take a balanced approach to risk sharing.
- Establish a robust pre-qualification process that results in the selection of highly capable, proven teams (maximum of three) by considering such factors as financial strength and related large project experience. Be sure to give credit to reference projects from other jurisdictions, where P3 might be more common.
- Following the pre-qualification phase, allow sufficient time to engage with the bid teams to solicit input to the draft procurement documents prior to releasing the final RFP.
- Allow for two-way communication with bid teams during the RFP phase (part of the iterative process). An active ATC process at this time is critical to delivering maximum value.
- Establish clearly defined evaluation/award criteria.
- Ensure the public is informed on a regular basis. In short, the process should be transparent.

We believe that a stand-alone P3 office can be very helpful, but is not an absolutely necessary ingredient to a viable P3 program.

7. What rate of return is necessary for the private sector to invest in highway and transit projects?

There is not a uniform IRR threshold for equity investments in highway and transit projects. The target rate of return is project-specific and accounts for key variables such as:

- Payment structure (e.g., availability payment vs. real toll concession)
- Concession agreement risk transfer
- Counterparty risk (principally appropriations risk)
- Project complexity

8. What types of surface transportation projects are most attractive for the private sector to invest in?

The most attractive surface transportation P3 projects are those which have:

- A well-defined need
- Strong public and political support (reference response #5)
- Committed funding sources
- Well-developed project baseline, including clearly defined performance specifications and significantly advanced environmental approvals, geotechnical investigations, utility investigations, and right of way acquisition.

9. Do you believe P3 deals are stronger when the private sector contributes equity into a project?

Private sector equity contributions are a fundamental element of the risk-transfer mechanism, and ensure that lifecycle costs are given appropriate consideration. While private equity should be included in many P3 deals, the gearing ratio of equity to debt should be market driven by the lenders and not prescribed by the owner. In some instances, a straight ahead Design-Build procurement will be an appropriate solution, or perhaps a DBF where the private sector finance is shorter term debt. Both might be considered P3 project delivery, without an equity component, and both are appropriate in certain circumstances.

10. Please describe on-average how much it cost to put together a P3 proposal?

Shortlisted teams will typically spend between $5 million to $15 million to develop proposals for a major P3 opportunity. Having an adequate stipend for unsuccessful bidders (or in the event that the procurement is cancelled) strongly encourages shortlisted bidders to expend significant additional resources to develop innovations beyond the "base case" prescriptive specifications. Higher stipend amounts provide a significant incentive to bidders to dedicate additional resources to alternative solutions that ultimately benefit the public, regardless of whether individual bidders are successful in their pursuit (reference response #4). In addition, having an adequate stipend demonstrates that the procuring authority is committed to the procurement model and thereby creates a stronger competitive environment. Given the extraordinary expenses involved, and the need for bid stipends, we also believe it appropriate to limit the field of shortlisted bidders to three.

11. Please describe the ways in which concurrent reviews could be used in the TIFIA approval process. What additional changes would you recommend for the TIFIA program?

Currently, TIFIA applications will not be considered until the Record of Decision (ROD) has been issued, indicating that the NEPA process has been successfully completed. This process can be extraordinarily long. One of the key objectives in MAP-21 was to attempt to streamline the environmental review process. In particular, it called for concurrent review by resource agencies (Army Corps, Fish & Wildlife, EPA, etc.). The creditworthiness of a project is not dependent on what is included in the ROD and therefore TIFIA approval should move along concurrently with the NEPA review.

Other TIFIA recommendations:

- TIFIA is the largest lender in the US infrastructure market, but is staffed with a skeleton lending group which cannot manage the level of deal flow expected from Congress. The direct lending staff needs to be materially increased.
- There must be full transparency and predictability in the project selection process to encourage states to continue to make applications.
- TIFIA needs to develop an effective protocol to work directly with teams competing for concession projects involving multiple bidders. At present, TIFIA does not communicate directly with teams providing underwritten bids on transportation projects including TIFIA, increasing risk for bidders and materially increasing the time from selection of preferred bidder to financial close, oftentimes beyond the bid validity date.

12. Does Fluor have any recommendations for PABs?

PABs, along with TIFIA, are critical components to a P3. The uncertainty that is currently leaking into the market right now with concern to the capacity of PABs drying up is problematic. Fluor recommends that PABS authority should be "topped off" to prior authorized levels, or the $15 billion cap should be lifted.

To the extent that additional funding for infrastructure development can be allocated, it can most effectively be deployed by funding and expansion of the existing PAB and TIFIA programs, which have proven very effective at generating significant project support with modest budget appropriations. Given the established policy, application, and approval process for these programs, enhanced funding can result in immediate project delivery without the need to create a new agency, board, policy, staff and implementation process.

We believe the "cost" that some perceive with respect to the tax exempt nature of PABs is grossly overstated. If conventional bond financing is used as an alternative, those municipal bonds will also be tax free. In other cases, projects will not go forward at all absent such low cost debt financing. In either of those cases, the revenue lost to the tax exempt nature of PABs is zero.

13. Is the cost of submitting a bid a factor that your company considers when deciding whether to bid? Should the Federal government expand the eligibility of Federal funds to include reimbursement for costs associated with submitting a bid?

The cost of submitting a bid is a key factor that Fluor considers when deciding whether to bid, given the significant investment that is required (reference response #10). Another key factor is the level of political support for the project (reference response #5). Other fundamental factors include the status of environmental permitting, appropriate development of geotechnical investigation; identification of all potentially impacted utilities; and the status of right-of-way acquisition; each of which should be completed or substantially underway prior to the start of the procurement process.

The Association for the Improvement of American Infrastructure (AIAI) has developed model P3 legislation that States could use as a blueprint when looking to craft legislation. In it, AIAI proposes that a State or locality that has solicited proposals for a P3 should reimburse a private entity based on the dollar value of a project and the reimbursement amount shall not be less than 0.25% of that project value. The model legislation goes on to state that a State or locality shall pay a private entity that submits an unsuccessful proposal for the right to use the private entity's work product. AIAI is calling this the "fairness doctrine".

Regarding expanding the eligibility of Federal funds to include reimbursement for cost associated with submitting bids, we don't have a strong opinion one way or another. We believe that it should be the role of the State or contracting agency to reimburse for costs of the procurement. If, to help defray costs from local government, the federal government were to get involved, that would be acceptable, but we believe it should remain the ultimate responsibility of the local contracting agency.

THE INTERNATIONAL EXPERIENCE WITH PUBLIC-PRIVATE PARTNERSHIPS

(113–65)

HEARING

BEFORE THE

PANEL ON PUBLIC-PRIVATE PARTNERSHIPS

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

SECOND SESSION

APRIL 8, 2014

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April 4, 2014

SUMMARY OF SUBJECT MATTER

TO: Members, Panel on Public-Private Partnerships
FROM: Staff, Panel on Public-Private Partnerships
RE: Panel Hearing on "The International Experience with Public-Private Partnerships"

PURPOSE

The Panel on Public-Private Partnerships is scheduled to meet on Tuesday, April 8, 2014, at 10:00 a.m., in 2167 Rayburn House Office Building to review the international experience with public-private partnerships. The Panel will hear testimony from the Honorable John K. Delaney (MD-06); Dr. Larry Blain, Chairman of the Board of Directors, Partnerships British Columbia; Mr. David Morley, Vice President, Business and Government Strategy, Infrastructure Ontario; Mr. Cherian George, Managing Director, Global Infrastructure and Project Finance, Fitch Ratings; and Dr. Matti Siemiatycki, Associate Professor, Geography and Program in Planning, University of Toronto.

BACKGROUND

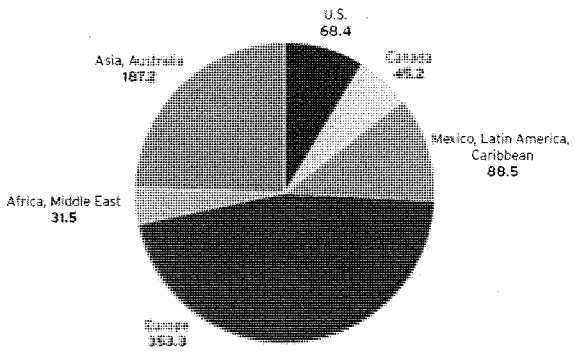
Overview

Across the world there have been thousands of public-private partnerships (P3s) in public infrastructure. There are many models that can be classified as P3s. The simplest form includes contracting with the private sector to complete a single aspect of an infrastructure project; on the other end of the continuum, the private sector designs, builds, finances, operates, and maintains the infrastructure project.

P3s have been a tool used by governments to deliver needed public infrastructure for centuries. Canals, ferries, rail, water systems, and roads have been built privately in exchange for tariff or toll-raising authority or government paid capacity-based revenue streams to private entities.

Between 2008 and 2013, governments around the world signed approximately 158 P3 agreements, with a total project value of $160 billion. Most of these agreements represent the

Figure 1. Public/Private Partnerships (PPPs) Worldwide, Nominal Total Costs (in billions $USD), 1985-2011



Note: Includes funded road, rail, buildings, and water projects through October 2011 in nominal dollars converted into U.S. dollars at the time of financial close. Excludes U.S. design-build projects.

Source: PWF, 2011

design, build, finance, and operate model, which has been limited in the United States compared to other countries. Only 15 of the 158 P3s were in the United States. According to the Brookings Institution, between 1985 and 2011, only nine percent of the total nominal costs of P3s were funded in the United States.[1]

A recent report from Fitch Ratings, titled *Global PPP Lessons Learned*, concludes that P3s can provide public value but need to be carefully crafted to address all stakeholder concerns.[2] Fitch's report identifies many of the challenges in designing a concessions agreement. Some of the key issues include: transferring risk associated with the financing, construction, operation, and lifecycle maintenance of an asset or service while maintaining flexibility;

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[1] Emilia Istrate & Robert Puentes, Moving Forward on Public Private Partnerships: U.S. and International Experience with PPP Units, Brookings Institution, December 2011, http://www.brookings.edu/~/media/research/files/papers/2011/12/08%20transportation%20istrate%20puentes/1208_transportation_istrate_puentes.pdf

[2] Cherian George, Nicolas Painvin, & Thomas McCormick, Global PPP Lessons Learned, Fitch Ratings, October 7, 2013, http://ibtta.org/sites/default/files/documents/IBTTA%20Publications/Fitch%20Ratings%20Global%20PPP%20Lessons%20Learned%202013.pdf

forecasting demand; and anticipating possible concession renegotiation. One critical issue is ensuring that risks are allocated properly between the public and private sectors, with one possible guiding principle being that risks should be allocated to the entity that can best manage them. Non-effective risk transfer can lead to renegotiated deals, partners walking away from a deal, a public asset falling into disrepair, and the public sector absorbing cost overruns and delays. Experts in the field have commented that Canada has a strong risk-transfer model and has been able to avoid extensive squabbles with private partners.

Because P3s are complicated transactions that involve extensive negotiations and detailed contracts, many foreign countries have set up national or sub-national P3 entities to act as the leader in negotiating, closing, and implementing P3 arrangements. Examples include Partnerships British Columbia (Partnerships BC), Infrastructure Ontario, Infrastructure United Kingdom, and Infrastructure Australia. These entities play a key role in consolidating the process of P3 actions.

Despite the fact that these transactions can be complex, evaluations by other governments around the world have shown that P3s can achieve construction efficiencies compared to traditional procurement. The National Audit Office of the United Kingdom found that 65 percent of P3 projects were completed on-budget, compared to 54 percent of public construction projects delivered to the contracted price. Canada's provincial procurement agencies estimate approximately $9.9 billion in savings realized from 121 P3 projects that reached financial close between 2003 and 2012.[3] These cost savings were estimated based on value for money (VFM) economic analyses of each of these projects, or studies conducted by the public sector to demonstrate whether a P3 can deliver a project at a lower life-cycle cost.

The Canadian province of Ontario systematically releases its VFM analyses to the public as part of an effort to ensure transparency in the P3 process. A recent study of VFM analyses (by Dr. Matti Siemiatycki) for 28 of Ontario's P3 deals found that the transfer of risk to the private sector is a key factor in how P3 deals are able to demonstrate cost savings. For these 28 projects, the base cost of delivering projects was, on average, 16 percent lower if done through a traditional procurement than through a P3. Only after a risk premium was attached to delivering the project by the public sector did the VFM calculation favor the P3 delivery method. Risk premiums represent the possible cost overruns and construction delays that large infrastructure projects have historically incurred in the traditional procurement method. The average risk premium was 49 percent – meaning that 49 percent of the project cost was added to the traditional procurement option to develop the comparative public sector project delivery cost.[4]

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[3] InterVISTAS Consulting Inc., 10-Year Economic Impact of Public-Private Partnerships in Canada (2003-2012), December 24, 2013, http://www.p3canada.ca/~/media/english/resources%20library/files/10-year%20economic%20impact%20assessment%20of%20public-private%20partnerships%20in%20canada.pdf

[4] Siemiatycki and Farooqi, "Value for Money and Risk in Public-Private Partnerships"; Journal of the American Planning Association, Vol. 78 No. 3, summer 2012.

Canadian Models

Over the last several decades, Canada has increasingly utilized the deployment of public-private partnerships to advance infrastructure projects. The Canadian P3 market is seen as a stable investment for pension funds and asset management companies. Canada has been successful in maintaining a consistent and predictable procurement process, which is highly desirable for the private sector. In particular, the provinces of British Columbia and Ontario have set up formal organizations to guide the development, procurement, and execution of public-private partnerships for transportation, housing, energy, and other projects.

Partnerships BC.

Created in 2002 by the Province of British Columbia, the mission of Partnerships BC is to 1) develop partnership proposals for projects that can achieve value for money; 2) implement such partnerships via best practices in procurement and market development; and 3) become a self-sufficient organization that provides support across different infrastructure sectors. It provides these services via a negotiated consulting contract based on a fee-for-service structure. Partnerships BC is wholly-owned by the Provincial Government, and its sole shareholder is the British Columbia Ministry of Finance. Its clients include public sector agencies at all levels of government.

Since its creation, Partnerships BC has participated in more than 35 projects with a total investment value of $12.5 billion, which includes $5 billion in private sector contributions. These projects have produced 242 miles of new highway lanes, 19 miles of new transit lines, and six new bridges.

Infrastructure Ontario

Established in 2004, Infrastructure Ontario is a corporation wholly owned by the Province of Ontario, and is charged with managing and delivering projects beyond the traditional design-bid-build method of infrastructure project delivery. Ontario's Ministry of Infrastructure assesses the province's overall infrastructure renewal program and budget and determines which projects will be assigned to Infrastructure Ontario for public-private partnerships (referred to as Alternative Financing and Procurement, or AFP).

After a contract is approved, Infrastructure Ontario manages the project, in coordination with the client ministry, and is responsible for negotiating and signing project agreements. A key step in the process is the requirement to conduct a value for money analysis, which compares the costs using traditional delivery methods and the public-private partnership orAFP model. Projects will proceed only if a third-party accounting firm verifies that the value of the alternative delivery method outweighs the traditional method.

Eighty-three projects have been assigned to Infrastructure Ontario, representing a total construction value of $5.5 billion. These projects include billion-dollar highway expansions, the construction of a large light rail system, and various courthouse and hospital projects.

WITNESS LIST

The Honorable John Delaney
United States Representative
Maryland

Dr. Larry Blain
Chairman of the Board of Directors
Partnerships British Columbia

Mr. David Morley
Vice President, Business and Government Strategy
Infrastructure Ontario

Mr. Cherian George
Managing Director – Americas
Global Infrastructure & Project Finance
Fitch Ratings

Dr. Matti Siemiatycki
Associate Professor, Geography and Program in Planning
University of Toronto

THE INTERNATIONAL EXPERIENCE WITH PUBLIC-PRIVATE PARTNERSHIPS

TUESDAY, APRIL 8, 2014

HOUSE OF REPRESENTATIVES,
PANEL ON PUBLIC-PRIVATE PARTNERSHIPS,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The panel met, pursuant to notice, at 10:02 a.m., in Room 2167, Rayburn House Office Building, Hon. John J. Duncan, Jr. (Chairman of the panel) presiding.

Mr. DUNCAN. I would like to go ahead and call this hearing to order here.

First let me welcome our distinguished witnesses and thank them for testifying here today. Our first witness will be a Member, Congressman John Delaney, and we are certainly happy to have him with us today. And, as tradition dictates, he will testify and then we will start the regular panel of witnesses.

This is the fourth event of the Panel on Public-Private Partnerships. We have investigated public-private partnership case studies. We have looked at the role they play in our highway and transit systems. And we have investigated their emerging role in the delivery of water systems. And we have other hearings and roundtable discussions coming up in the next couple of months.

We have had good discussions about the benefits public-private partnerships can provide. But we have also had frank discussions about the pitfalls and the challenges these complex arrangements can carry. The use of public-private partnerships in this country is fairly recent. Other countries have had a much more extensive history of partnering with the private sector to deliver infrastructure projects.

In fact, one of the leading countries is just to the north of us. Over the last two decades, Canada has become one of the most advanced and active markets for public-private partnerships. To date, there have been more than 200 projects there that are operational, under construction, or in procurement, and that would translate populationwise to, of course, something like 3,000 in this country. We will hear about the Canadian experience, along with testimony on the global trends in public-private partnerships.

This country can learn from other countries and their experience in how to identify projects well-suited for a public-private partnership, and how to invest arrangements that protect the public interest. In June we are scheduled to go to the United Kingdom and hear some of their experiences. We have earlier met with some members from the Transport Committee of the British Parliament.

Again I want to thank the witnesses for being here. And I would now like to recognize the ranking member, Mr. Capuano, for any statement he wishes to make.

Mr. CAPUANO. Thank you all for coming. I am looking forward to the testimony.

[Laughter.]

Mr. DUNCAN. Thank you very much.

We are always honored to have the chairman of the full committee, Chairman Shuster. And I would like to call on him at this point.

Mr. SHUSTER. Thank you, Mr. Chairman. I will be just a little bit longer than Mr. Capuano.

But I want to welcome our witnesses here, welcome our good friend from Maryland. His district borders mine in western Maryland, western Pennsylvania. I know he is just a freshman, but has had a lot of great ideas. We appreciate your thoughtfulness and appreciate you being here today.

And I look forward to hearing from the Canadian Government especially as we move forward on a surface bill but also looking forward to the future of the FAA reauthorization, looking to Canada and some of the great public-private partnerships they have done up there across the board. So once again, I thank everybody for being here, and yield back.

Mr. DUNCAN. All right. Thank you very much.

Mr. DeFazio?

Mr. DEFAZIO. That is fine, Mr. Chairman. Thank you.

Mr. DUNCAN. All right. Mr. Rice?

Mr. RICE. [Shakes head side to side.]

Mr. DUNCAN. Mr. Perry?

Mr. PERRY. [Shakes head side to side.]

Mr. DUNCAN. All right. Well, not anybody long-winded this morning. So Mr. Delaney, you may proceed with your testimony, and thank you very much for coming to be with us.

TESTIMONY OF HON. JOHN K. DELANEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MARYLAND

Mr. DELANEY. Thank you for having me, Mr. Chairman and ranking member and Chairman Shuster and the rest of my colleagues. I appreciate the opportunity to come and talk to you today about a very important subject for the country, investing in our infrastructure and developing smart public-private partnership frameworks to do that.

I have written testimony that I would like to submit for the record. Thank you.

Mr. DUNCAN. Yes. Without objection, so ordered.

Mr. DELANEY. So in my judgment, investing in our infrastructure should be our top domestic economic priority as a Nation. And I say that for three reasons.

First, investing in our infrastructure creates jobs. And it creates jobs that have a decent standard of living associated with them.

Secondly, it is incredibly important for our competitiveness, particularly in a global and technology-enabled world, where you need a competitive infrastructure to compete globally.

And third, it is proven to be a good investment. The data suggest that for every dollar we spend on infrastructure, we get $1.92 of economic benefit. So in my opinion, by any measure this should be our top domestic economic priority.

And we face a very significant challenge as a Nation as it relates to the quality of our infrastructure. But that challenge is also a very significant opportunity. The American Society of Civil Engineers estimates that we have about a $4 trillion hole or gap in our infrastructure investment. In other words, that is the amount of money we would have to spend as a Nation to bring our infrastructure up to world-class standards, which I think we all want to do if we want to compete in the world that we live in.

But to fill that gap—in other words, to increase investment in infrastructure—to that magnitude, you have to engage private capital against this challenge. Historically, infrastructure investment has been done by government—Federal Government, State government, local governments. But right now at this moment in time, most governments are financially challenged. Yet at the same time, the private sector has more cash, almost $5 trillion of cash, on its books than it has ever had.

So it seems to me very smart public policy involves engaging that private sector capital against this need, this challenge, this opportunity we have as a Nation, this need and this challenge that has typically been filled by the public sector. And that is why the work you are doing around developing smart public-private partnership frameworks to meet this challenge is so important.

And fortunately, there are bipartisan solutions to this challenge, one of which is something called the Partnership to Build America Act, which is a piece of legislation I introduced in the House about 10 months ago. Right now the Partnership to Build America Act has 30 House Republicans and 30 House Democrats as cosponsors of the legislation. In addition, about 2 months ago it was introduced in the Senate, and are a dozen Senators, also bipartisan, that have cosponsored the bill in the Senate.

So as it stands today, the Partnership to Build America Act is the most significant piece of bipartisan legislation in the Congress dealing with infrastructure. And in my opinion, by definition it is also the most significant piece of bipartisan economic legislation in the whole of the Congress.

What the Partnership to Build America Act does is create a financing entity called the American Infrastructure Fund, which is designed to be a permanent financing enterprise that can provide loans and bond guarantees to States and local governments. And it is particularly focused just on States and local governments. It cannot be used by the Federal Government.

It can finance all forms of infrastructure, all the food groups, if you will—transportation, energy, communications, water—and it will exist for 50 years. It is capitalized upfront with $50 billion of permanent capital that is put in the entity at its inception. So it is never subject to annual appropriations from Congress, and that capital will stay in the entity for 50 years.

That capital can be levered 15 to 1. So in other words, it will create a $750 billion revolving infrastructure bank bond guarantor to finance States and local governments for 50 years. We think that

money can turn two to three times; in other words, it will provide $2 trillion of infrastructure financing and create over 3 million jobs.

But in addition to being large scale and unique in terms of its financing capability, it is also unique in terms of how it is capitalized. The $50 billion is not put in by the Federal Government but is put in by companies. And the way they do that is they by 50-year, 1 percent nongovernment-guaranteed bonds.

And as an incentive to get the companies to buy these bonds, we say that for every dollar of these bonds that a company buys, they can repatriate a certain amount of their overseas cash back to the United States tax-free.

So what we are doing is we are tying into the huge amount of U.S. corporate cash that is sitting overseas. Almost half of U.S. corporate cash sits overseas. And we should be creating pathways for that money to come back as part of tax reform. But in the meantime, we are tapping into that money to capitalize this bank.

So this strategy will create a $750 billion revolving infrastructure fund for 50 years without any taxpayer spending to capitalize it at the inception. And one of the reasons it has been so bipartisan is because it fuses together two concepts that each party has talked about for a long time.

Democrats have talked about increasing our investment in infrastructure for 20 years, and we have been right about that. And my Republican colleagues have talked about creating paths for the overseas cash to come back to the United States so it can be invested in our economy, and they have been right about that. The Partnership to Build America fuses those ideas together to launch the American Infrastructure Fund.

So thank you, Mr. Chairman, for giving me an opportunity to talk about the bill. I would be happy to answer any questions to the extent Members have those.

Mr. DUNCAN. Well, thank you very much. By tradition and as a courtesy to our later witnesses, we do not ask questions of a Member since we have a chance to discuss these things with you at later times on the floor. And we know that you have many other things on your schedule. I will say that what you are talking about has great appeal to the members of this committee.

Mr. Capuano, do you want to say anything?

Mr. CAPUANO. No.

Mr. DUNCAN. Chairman Shuster, do you want to say anything?

Mr. SHUSTER. No, sir. I just appreciate Mr. Delaney being here. Again, we have sat a couple of times and spoke, and he is a true believer in infrastructure, as I am and members of this committee. And I appreciate all his hard work and effort. Thank you.

Mr. DUNCAN. Well, thank you very much.

Mr. DELANEY. Thank you, Mr. Chairman.

Mr. DUNCAN. Thank you.

All right. We will call up the first panel at this time. I understand that all the witnesses are here. So if they will go ahead and take their seats at the witness table.

Our first witness will be Dr. Larry Blain, who is chairman of the board of directors of an organization called Partnerships British Columbia. The second witness will be Mr. David Morley, vice presi-

dent for business and government strategy of Infrastructure Ontario.

The third witness is Mr. Cherian George, managing director of the global infrastructure and project finance of Fitch Ratings; and finally, our last witness will be Mr. Matti Siemiatycki, associate professor of geography and programme in planning at the University of Toronto.

Of all the hearings that I have chaired and participated in, I do not believe—in fact, I know—that I have never had one where we have three out of four witnesses being from Canada. This is extremely unusual, but we are pleased that all of you are here. And we know that with the experience that each of you have that you can give us a lot of good information and knowledge about the subjects with which we are dealing. So thank you very much for being here. And Dr. Blain, you may begin your testimony.

TESTIMONY OF LARRY BLAIN, PH.D., CHAIRMAN OF THE BOARD OF DIRECTORS, PARTNERSHIPS BRITISH COLUMBIA; DAVID MORLEY, VICE PRESIDENT, BUSINESS AND GOVERNMENT STRATEGY, INFRASTRUCTURE ONTARIO; CHERIAN GEORGE, MANAGING DIRECTOR (AMERICAS), GLOBAL INFRASTRUCTURE AND PROJECT FINANCE, FITCH RATINGS; AND MATTI SIEMIATYCKI, PH.D., ASSOCIATE PROFESSOR, GEOGRAPHY AND PROGRAMME IN PLANNING, UNIVERSITY OF TORONTO

Mr. BLAIN. Good morning. Thank you very much for having me. As Canadians, I can assure you we are not used to being invited to speak about our experience in Canada, so it is indeed a pleasure for us. I would like to comment today on our experience with the delivery of performance-based infrastructure, and within that, our particular experience in the Province of British Columbia.

In 2002, the Premier of British Columbia announced the creation of an agency, Partnerships BC, and me the CEO, to deliver a partnership program and to announce its first PPP project. This decision was essentially based on philosophic inclination and the experience in other countries demonstrating that the private sector could bring efficiencies and innovation to a major capital project; would take commercial risks that could be better managed by business rather than by Government, while ownership of the asset can remain with the Government as owner.

Their project was a hospital, and it was completed on time and on board, and led to a value-for-money proposition when compared to traditional procurement. The users of the hospital—the clinicians, the patients, the visitors—rave about the progressive design and user-friendly atmosphere.

Since 2002, the Canadian performance-based partnership market has evolved to becoming one of the most advanced and attractive in the world. To date, as the chairman mentioned, there have been more than 200 projects that are operational, under construction, and in procurement.

Of the 10 Canadian Provinces, 6 have agencies that are focused on PPP procurement, and local governments across the country are using performance-based procurement for major projects. The Federal Government formed PPP Canada. It is a crown corporation

that partially funds partnerships projects and also advises on the procurement of Federal projects. It is a new institution.

As Governments moved into performance-based procurement, the private sector responded. International developers set up Canadian operations. Canadian developers expanded their capacity to do partnership business. Canadian construction companies became members of bidding consortia rather than contracting directly with Government.

Business and legal advisors developed expertise. The Canadian banks developed a capital market for loans and bond issues. Canadian pension funds and life insurance companies seeking long-term high-quality investments added infrastructure to their asset allocations.

Looking back over this period of development, the core benefits of PPP infrastructure procurement that have emerged in the minds of the politicians and the Government leaders would be these.

Planning discipline and preparation: Many pitfalls are avoided before a shovel hits the ground because PPP requires more advance planning.

Certainty: Projects are on or under budget, on or ahead of schedule, and key risks are assumed by the private partners. These benefits are driven by financially motivated contracting.

Three, life-cycle asset management: A holistic approach to asset management over a 15-, 20-, 30-year period of time.

Four, efficiencies in innovation: Competition and the profit motivate can lead to startling results where the winning proposal provides solutions that the public owner never contemplated. This happens over and over again.

It is also important to emphasize what partnerships are not, at least in Canada. A partnership does not need to be associated with new source of revenue. We have PPP roads that are not toll roads, we have non-PPP roads that are tolled, and we have PPPs that are tolled but the public owner retains the risk—all variations.

And to be absolutely clear, a performance-based infrastructure project is not a free project. The obligation of the owner to make performance payments over the life of the contract is on the Government books.

And finally, performance-based infrastructure works best and generates the most benefits as new greenfield projects and should not be confused with the privatization of existing assets.

I would like to wrap up with a summary of what Governments can do to create a successful and attractive infrastructure market. These conclusions are based upon the Canadian experience, and I do not presume that they would apply in your context here.

First, a policy framework driven by political commitment is critical. In Canada at the Federal level and in many Provinces, including BC, the cornerstone of policy is the requirement that for projects over a certain amount—and in our case it is $50 million—a PPP approach has to be considered in the planning process. This provides a great deal of discipline across Government.

An interesting capital planning policy development within the United States that I am aware of taking place within the West Coast Infrastructure Exchange, which includes Oregon, California, and Washington, and also BC. Within the exchange, each jurisdic-

tion is examining its capital planning policy, and Oregon, for example, has recently passed a law which now requires performance-based screening for the Department of Treasury for projects over $50 million. So in Canada, we do not have legislation to do this, but it is done by policy.

Second, the six Provinces in Canada that are undertaking partnership projects and the Federal Government have created institutions that are focused on the planning and delivery of performance-based infrastructure. These organizations vary across the country, but what they have in common is that they provide services across Government in all sectors, and they provide technical expertise and a memory of guidance and documentation.

Each agency provides a single interface with the private sector and provides a consistent approach for that Government across all sectors. They talk to each other, which serves to provide a degree of consistency and standardization across the country—although, I repeat, we do differ.

The West Coast Exchange is contemplating an exciting approach to achieving the same end. It is proposing a certification process whereby projects and procurement can be certified by the exchange as following best practices, and this will provide great comfort to bidders in the market and thereby heighten the appeal for that market.

Finally, the greater the flow of partnership projects in a market, the greater the appeal of that market to bidders, that they can amortize the cost of entering and sustaining a presence in the market across a greater number of projects. Bidders typically do not limit themselves to a single sector, and therefore a market that has a multisector approach will be more appealing.

BC has a population of approximately 4 million, and since 2002 there have been more than 40 performance-based projects amounting to more than $17 billion in total capital cost.

Starting essentially with projects in the healthcare and transportation sectors, the range of projects has expanded to include rapid transit, a sports center, an electric generating powerhouse, water and waste water treatment plants, waste-to-energy plants, social housing, correctional facilities, a university campus, a workers accommodation facility, an airport, and a high-security Government building, all by the same organization. This approach gives BC much more attention in the market than would be warranted if the focus remained limited to just one or two sectors.

I hope I did not go over my 5 minutes. That completes my testimony. Thank you.

Mr. DUNCAN. Thank you very much, Dr. Blain.

Mr. Morley?

Mr. MORLEY. Thank you, Mr. Chair. I am honored to appear before this committee.

Infrastructure Ontario values the relationships that we are building with the United States, particularly as a member of the National Governors Association Panel on Public-Private Partnerships. On a personal note, working with American colleagues builds on my experience in the State Department's International Visitor Leadership Program. My goal today is to share information with

you about Infrastructure Ontario's approach to public-private partnerships, called alternative financing and procurement.

To start, Ontario is home to about 13½ million people, and the Government is investing a total of $12 billion per year between 2013 and 2016 to renew public infrastructure. Infrastructure Ontario, or IO, is the Government of Ontario's agency responsible for delivering large and complex infrastructure projects.

IO was created in legislation, is accountable to the Government, and is led by a board of directors. While we work on behalf of the public interest, the majority of our board members and our employees have significant private sector experience.

Using alternative financing and procurement, or AFP, IO has completed projects worth $6.5 billion in total construction value, has projects in construction worth $6.9 billion, and has projects in procurement worth $8.3 billion.

These numbers translate into real investments in the largest public transit project in North America, a highway to the Canada-U.S. border, 35 new public healthcare facilities, nearly 100 new courtrooms, close to 20 police detachments, and facilities for the 2015 Pan/Parapan American Games. These projects are changing citizens' lives in their communities for the better.

The AFP model is designed to deliver projects on time and on budget and in a manner that is consistent with the Government's long-term infrastructure policy. To be clear, the core of this policy is protecting the public interest and maintaining control and ownership of public infrastructure. There are a number of ingredients for success in how we invest in public infrastructure with the private sector.

First, risk transfer: Public payments during construction and long-term maintenance are conditional on performance. In the AFP model, the public sector establishes the described project outcomes and transfers design, construction, and life-cycle risk to the private sector.

Second, value for money: Each of our AFP projects undergoes a rigorous third party value-for-money assessment to determine if the AFP model offers better value than traditional procurements. IO does not use alternative financing and procurement unless value for money is positive. Value for money has translated into over $3 billion in savings to Government.

Third, standardized procurement processes and documents: Clients and bidders have come to understand our processes and rely on our template documents. Together, these shortened procurement timelines manage bidding costs, streamline schedules, and promote competitive tension between bidders.

Fourth, transparency: IO makes every effort to ensure transparency and maintain accountability while balancing commercial confidentiality. A third party fairness monitor is part of every procurement to ensure the credibility of the process. As well, key documents like detailed project agreements and third party value-for-money reports are published online.

Fifth, market updates: Publishing a market update at least once per her has increased both market capacity and competitiveness. This encourages market participants to partner and plan resources in order to bid for and deliver projects. There is over $18 billion

in our current pipeline of projects, which translates into over 18,000 jobs. The bottom line is always about high-quality results.

A third party study was done on our first 30 projects that reached substantial completion of construction; 29 of 30 projects were on budget, and 28 of 30 projects were delivered on time or within 3 months of the target date. The Government likes the certainty.

In closing, much of what we do at Infrastructure Ontario is consistent with what is presented in the World Economic Forum's 2014 Blueprint for Infrastructure Investment. Other studies by the Conference Board of Canada or the Canadian Council for Public-Private Partnerships conclude that there are economic benefits from delivering projects using alternative financing and procurement.

I hope that learning about Infrastructure Ontario and our ingredients for success contribute to your thinking about public-private partnerships in the United States. Thank you.

Mr. DUNCAN. Well, thank you very much.

Mr. George?

Mr. GEORGE. Good morning, Mr. Chairman and members of the committee. On behalf of Fitch Ratings——

Mr. DUNCAN. You will have to get a little bit closer to that microphone, I think. Are we sure it is on?

Mr. GEORGE. It was not on.

Mr. DUNCAN. All right. Good.

Mr. GEORGE. Good morning, Mr. Chairman and distinguished members of the committee. On behalf of Fitch Ratings, thank you for this opportunity to provide our views on the international experience with public-private partnerships. Fitch Ratings rates about 550 transactions on almost every continent, so we have a very broad and objective view in this space.

While PPPs have been a tool used by Governments to deliver needed public infrastructure for a long time, the track record has been mixed. Governments, at first in the developed world, but increasingly in the developing world, have embraced the concept, and while problems have occurred, they have chosen to make changes and continue to pursue PPPs.

Although there have been issues, this is not necessarily an indictment on PPPs, but instead, a reflection of the fact that the complexity of the assets and services presents challenges in finding the right public policy balance that fits within a business, legal, and financial framework to bring best value to all parties, most importantly citizens.

While one can view PPPs as a glass half full or a glass half empty, it is Fitch's view that the former is the better perspective. They can provide public value, but need to be carefully crafted to address all stakeholder concerns. When they are viewed to have failed, the issue is often inappropriate transaction design and application. Responsibility for problems at PPPs can be assigned to both the public sector and the private sector.

When issues of loss of control and too much profit arise, the responsibility lies squarely with the executive and legislative branches of the public sector that sets the rules. When issues arise from project cost overruns, delays in completion, or higher oper-

ating costs, the responsibility lies and is absorbed largely by the private sector.

In my view, success demands competence on both sides. A well-structured grantor team, public sector team, and a competent concessionaire are better positioned to respond and minimize the adverse effects to both parties. This is not always the case, and this unfortunately creates an asymmetrical risk.

Grantors are exposed to Government or political risk from unanticipated and unplanned obligations, which results in concessionaire delays and costs that may be further exacerbated with the possibility of being only partially compensated or not compensated at all.

While risks abound, PPP structures have proven to be resilient. One must keep in mind that most risks can be anticipated and mitigated. Many projects have been implemented in many jurisdictions.

While the market continues to face new pitfalls, Governments and the market have learned from prior missteps. The issues that arise are not deal-breakers, as sensible minds often prevail with enough mutual benefit remaining for both parties to take the transaction to term. Learning from the mistakes of the past is a good way to begin avoiding new ones in the future. Let me briefly mention a few examples.

Jarvis Concessions, a U.K. contractor, grew rapidly from a small contractor to Britain's largest engineering and construction firm. Problems in construction ensued; however, despite the severe stress, the projects were completed and the impact on the public was largely from delays, not costs, as other contractors took over.

407, the electronic toll road in the outskirts of Toronto, was awarded a tariff regime with no caps on toll rates. The 99-year concession came under considerable criticism a few years after the inception of the transaction. Toll rates have gone up considerably, and there is little recourse for the Province as legal challenges were largely fruitless.

The city of Chicago's concessions over the past decade for its Skyway Toll Bridge, municipal parking, and street parking were used to maximize upfront payments and subsidize city operational deficits with very liberal tariff regimes. These have come under considerable criticism.

Here are some final thoughts. The challenge for Government is transferring risk while maintaining flexibility. However, value can be garnered through advance planning and meaningful public involvement. And yes, there are limits to PPPs. Some projects are too large or complex for private parties to absorb all the risk.

Lastly, one must consider the likelihood that agreements may need to be renegotiated as time passes. The needs of the population and Government will evolve. So it should not come as a surprise that key terms may be subject to debate and renegotiation and possibly result in contract termination, with commensurate termination payments due from Governments for value received.

Mr. Chairman, thank you for the opportunity to present my views. I am happy to respond to any questions.

Mr. DUNCAN. Thank you very much, Mr. George.

Dr. Siemiatycki?

Mr. SIEMIATYCKI. Thank you. It is an honor and a privilege. And I want to thank you for pronouncing my name so well.

Mr. DUNCAN. I am not so sure. Thank you.

[Laughter.]

Mr. SIEMIATYCKI. You pronounced it the way I would pronounce it, too, so thank you very much.

It is an honor and a privilege to be with you today to speak about public-private partnerships. I have been studying public-private partnerships in Canada and around the world for the past decade, and what I want to do today briefly is reflect on some of my experiences, some of the observations I have made on both the strengths and the weaknesses to reflect on what our colleagues have told us, and maybe give you some ideas of the issues that you should be concerned about as you proceed with developing your own public-private partnership approach.

The first point to keep in mind is that public-private partnerships, at least in the Canadian model, are not a funding strategy. These are not for the most part bringing in new money to deliver infrastructure. This is a financing strategy. The private sector finances the infrastructure upfront, but most of these facilities do not have a user charge or a revenue stream that can directly repay the private money.

The money for these projects is coming for the most part directly for the taxpayers and the general revenue stream. So to think that public-private partnerships are going to fund new infrastructure has not generally been the experience in Canada, and I think that is important to keep in mind.

The second point is around which types of risks are being transferred. The Governments in Canada have primarily focused on construction risk, so that is the potential for costs to overrun and for projects to be delayed. Those are the main risks that are being transferred.

Availability risk over long-term concessions has been another aspect that has been focused on. But again, we are not transferring demand risk or revenue risk, the likelihood that a project does not meet its expectations in terms of the revenues that come in for these facilities. So this again is another aspect of the Canadian model.

I think the real strength of the Canadian model is in setting up institutions that have the skills to negotiate and structure deals alongside the private sector partners. We have very highly skilled organizations, Partnerships BC and Infrastructure Ontario being amongst them, who have in-house skills who are able to negotiate.

And keep in mind that on the public sector side, it is imperative that you have these skills. The public-private partnerships in Canada have not been a way of getting Government out of delivering public infrastructure.

So what public-private partnerships, as you have heard already, are really about is value for money. And value for money, as Dr. Blain mentioned, is driven by innovation, is driven by performance contracts, and is driven by risk transfer.

And if we really think about it, it is risk transfer, and primarily construction risk and certainty that projects are not going to balloon in costs, as has been the typical experience, and are not going

to be delayed for years and years, which has also been the typical experience.

Let me highlight now some of the challenges that my research has found to give you a sense of what some of the issues are that are out there in the Canadian marketplace.

The first is around the cost of public-private partnerships. This is not a cheap way to deliver infrastructure. Public-private partnerships have higher construction costs, they have higher financing costs, they have higher transaction costs, and they have a risk premium that the private sector will build into their bids if they are going to take on those risks.

So the only way you justify these is by the risks and the value of transferring risk from the public to the private sector. That is coming directly from a study that I conducted looking at the Government documents that review these types of studies, that review these types of projects.

Risk is the key driver. And the question then is how much are you willing to pay for that certainty? It is like buying an insurance premium. It is like buying a policy. And you have to know that the premium is worth what you are going to be getting to control that type of risk. So that is a major issue to keep in mind.

We can think of some of the other issues that have come up around community engagement. There is a high level of confidentiality and commercial sensitivity in these deals that we have to be aware of; and how your publics, how your constituencies, stakeholders, engage in that project planning can be challenged if all of the information that you would need to make a decision is not in the public realm when it is needed.

Innovation. What types of innovation? Are these for the public benefit? How is the public capturing the value of those innovations, both financially and socially?

Loss of flexibility. You have contracts that can last anywhere from 25 to 50, 99 years. Things change over that period. You have the issue of lock-ins and the potential that you will not have the flexibility to make changes, whether it is to user fees, whether it is to changing the structure of your facility, whether it is to renovating, if you have a contract that locks you in and does not give you the flexibility to change that over time.

Another issue is around the firms who are engaged in this. Public-private partnerships are large, bundled contracts, and there can be challenges about whether local firms are really able to engage in this at the high level to be able to deliver those projects. We have heard concerns about this. We are starting to try to do studies to really tease out whether that is an issue to be concerned about.

And the last one I would mention is whether public-private partnerships are the only game in town. Public-private partnerships have the capacity to deliver value when they are appropriately structured and when they are used for the right types of assets at the right times.

We want to be creating institutions and organizations that have the flexibility to, on the one hand, choose public-private partnerships when they are appropriate, and on the other hand say traditional build and traditional approaches would be the best approach for this type of project.

And so you really want to avoid creating institutions that have the incentive, that are only structured, to deliver public-private partnerships. You want to create situations where all of the different types of procurement models are open and are being evaluated at the time, and each of them can be chosen equally.

So those are my comments. Thank you, Mr. Chair.

Mr. DUNCAN. All right. Thank you very much. All if you have been very helpful.

My practice is always to go last so I can get our Members involved in it before they have to leave, and I will go first to Mr. Barletta.

Mr. BARLETTA. Thank you, Mr. Chairman.

Dr. Blain and Dr. Morley, this morning Mr. Blain had discussed the benefits of infrastructure banks. It is my understanding that the Canadians are also considering the benefits of an infrastructure bank.

Can you tell me what you see as the strengths and weaknesses of the banks? And additionally, how do we as policymakers prevent infrastructure banks from being bogged down in bureaucracy, making them unable to rapidly issue loans?

Mr. BLAIN. The system in Canada is that the Federal Government support Provincial and local government projects through grants. And these are available under a variety of programs.

All of the Canadian Provinces have very high credit ratings. British Columbia is AAA. They all have access to capital. So I do not see the need for an infrastructure bank because the idea of a public-private partnership is that you optimize the combination of the public contribution upfront, grants or otherwise, and the private sector capital, and therefore, there is no problem accessing capital.

If there is a market breakdown of some kind, if you have no access to capital, then I can see the need for different kinds of infrastructure banks that would fund that. But in Canada, there is no need for such an organization, in my opinion.

Mr. MORLEY. Thank you very much for the question. I think there are a range of tools that can be used to fund and finance infrastructure. As my colleague said, the Federal Government has initiated public-private partnerships. Canada is doing two things. One, it is investing in grants to public-private partnership projects in cooperation with other levels of Government. Secondly, it is investing in its own Federal projects using a P3 model.

So they are helpful partners to us. But the Provinces have really taken a leadership role here. In the case of Infrastructure Ontario, we have definitely charged ahead with a strong program around alternative financing and procurement, and the key thing is that we have the expertise to translate the public interest into private sector terms. It levels the playing field in terms of the negotiations, the procurement processes, and the contracts that are put in place. That is very important.

I would like to expand. Infrastructure Ontario is not only the lead agency for alternative financing and procurement. We also have a loan program, and that is for infrastructure projects largely for smaller communities that have smaller projects where they may not have the opportunity to participate in alternative financing and procurement.

And so I think we have to look at the suite of tools that are available to structure the best investments in public infrastructure projects. And for Infrastructure Ontario, we use both alternative financing and procurement as well as loans.

Mr. BARLETTA. Thank you. To all, and maybe we can go backwards starting with Dr. S. One of my concerns is that public-private partnerships need to be structured in a way that allows local subcontracts to get a chance to participate in a project.

Do any of you have best practices regarding the role of small businesses in these big P3 projects?

Mr. SIEMIATYCKI. Thanks for the question. This is certainly an issue that has come up in the Canadian context in onto. There has been a lot of concern about which firms and whether they are local firms, how they become engaged.

One of the things that can be done is you can write that into the bidding documents, that local firms have to be used at various stages and at various scales of the enterprise and of the concession team. The challenge is that as you write those in, the concessionaire will price that.

So they will price that into their board, and especially if there is additional risk, if you have smaller consortiums and smaller firms that may not be as skilled, that will end up being in the price of the project. So the issue of local contractors is really one that is finding that balance between getting those folks involved, making sure that the bundles are not too big, that local firms or even regional firms can participate in them.

We are seeing projects now where the bundle of services in there can be upwards of $1 billion, $2 billion, $3 billion. Many of these projects are simply too large for the small and medium-sized firms to be engaged in, and even in some cases, some Canadian firms. And we are seeing many international firms coming in. So this is becoming the terrain in which debates around public-private partnerships and who is engaged in them are taking place.

I should just add, there needs to be ongoing research on this. This issue has bubbled up recently, and there is still a need for research to really understand who is working on these jobs, how local are they, and what really is defined as local.

Many international firms are now setting up offices in Ontario. So do you consider that local? There are all sorts of different dimensions. And also tracking which workers are engaged—are they international workers or are they local as well? So this issue of the workforce is one that I think now comes before and needs more research to really get a handle on.

Mr. BARLETTA. Thank you. My time is up. Maybe I will come back in a second round.

Mr. DUNCAN. All right. Thank you very much.

Mr. Capuano?

Mr. CAPUANO. Mr. Chairman, I think I am going to follow your lead and pass on to my colleagues.

Mr. DUNCAN. All right.

Mr. DeFazio?

Mr. DEFAZIO. Thank you, Mr. Chairman.

So the Federal Government provides funding, and then the Provinces—and then we have the study which shows that we are as-

suming a huge risk premium, which means you must have some history of really bad contracting in Canada where the public totally failed, through design-build contracts, to deliver contracts on time. Is that the case? What problem are you solving here?

Our problem is we do not have the money, and we do not have the guts to raise the money. Our problem is not necessarily contracting. It is in certain cases, like procurement of IT; we can look at that with the recent rollout of the ACA. Or we can look at the Pentagon. We can look at the FAA. We have got lots of bad contracting.

But how are you improving on a good design-build contract, which has penalties if something is not delivered on time, incentives if it is delivered ahead of time, and you have got an innovative design and innovative delivery, and it would be apparently substantially cheaper, from the analysis we have from Dr.—and I did not get the pronunciation—Siemiatycki? OK.

Mr. SIEMIATYCKI. Siemiatycki.

Mr. DEFAZIO. She has a challenged name, too, so I think you are related.

[Laughter.]

Mr. DEFAZIO. Could someone answer that? One of you guys answer that first. What is here?

Mr. BLAIN. I have been in this business since 2002, and I have been looking since 2002 to find some statement of evidence about the performance of traditional procurement. You will not find it; at least, I have not been able to find it. I do not——

Mr. DEFAZIO. But how is this different than a design-build, where a design-build——

Mr. BLAIN. I am just saying that you cannot point to a lot of evidence, in British Columbia or elsewhere in Canada or anywhere else in the world, where traditional procurement is really evaluated in terms of what were the cost overruns? Were they on time? Et cetera. So we do not have that as——

Mr. DEFAZIO. Well, then, how did you come up with the 49 percent? You are paying substantially more, but you do not have a body of evidence that the previous system did not work.

Mr. BLAIN. We do a line-by-line analysis of the project, and we look at all the consequences. If this project is 2 months late, what would the consequences of that be? What would the cost implications of that be?

Mr. DEFAZIO. But in a design-build, you can say the consequences of being 2 months late is $500,000 a day.

Mr. BLAIN. Yes. Design-build has better results than traditional procurement, DBB procurement.

Mr. DEFAZIO. Right.

Mr. BLAIN. And DBFM, design-build-finance-maintain, is just another step along the spectrum. But there are benefits, exactly as you allude to, from doing design-building contracts in comparison to DBB contracting.

Mr. DEFAZIO. Right.

Mr. BLAIN. So it is just one is even better to lock it in on a 30-year basis.

Mr. DEFAZIO. Yes, but what I am struggling with here is we had, you know, a PPP panel a few weeks ago where we were mostly

talking about water. You know, I said, OK, what percent of America's, the United States of America's infrastructure problems could you optimistically resolve because they are dependent upon a cash flow.

We are not going to toll every bridge in America. We are not going to toll all of our interstate system. You are not introducing in most places new tolling because you are getting the money from the Federal Government.

So what you are saying is you are using a more efficient construction method. So, I guess that is the bottom line here, a more efficient and innovative—yes, Mr. Morley.

Mr. MORLEY. If I could add, there are a number of things that we feel are very beneficial with the alternative financing procurement approach. First off, there is much more rigorous budgeting at the front end of the project. So when we engage with a public sector client, there is an extreme amount of due diligence around the budgeting.

We see a benefit in——

Mr. DEFAZIO. Right, but we are now back to contracting.

Mr. MORLEY. Right.

Mr. DEFAZIO. So would you say that if you had a good design-build contract that you were delivering more value here to justify the much higher cost, up to 49 percent?

Mr. MORLEY. So if I can take you through a little bit more——

Mr. DEFAZIO. No. I do not have time. You are going to have to distill.

Mr. MORLEY. I think the other thing that is really important here, and you will see it in the third party study that we did on our first 30 projects, if that there is much more control over scope changes during projects, and we have——

Mr. DEFAZIO. Right. Now, we are back to crappy Government contracting practices. OK. We have got that. But I am just trying to say, you know, if we have a good design-build, and sometimes my Department of Transportation in Oregon does a good job with design-build with penalties and incentives, and things work out great. Sometimes they have got a huge disaster ongoing in the Coastal Hills where they interfered and mandated a design that did not work.

So we are really back to, you know, if we put it out to the private sector and say, "Get this done," do you want to pay that much premium or just say, "Here it is. You bid on it. Get it done."

I do not quite get it.

Thank you, Mr. Chairman.

Mr. BLAIN. I have got an example for you that might help. We just concluded a 30-year power generating project. So that was done at the DBFM. So the concessionaire has to hang in and look after that asset and has to work for 30 years.

If we just did a DB, he walks away when it is done and there is no warranty.

Mr. DEFAZIO. Right. Well, you can have a design-build-operate, you know, maintain, too, I mean.

Mr. BLAIN. Well, but that is a PPP.

Mr. DEFAZIO. Right.

Dr. SIEMIATYCKI. Can I add one note?

Not all of them are design-build-finance-operate-maintain. In my sample of 28 projects, 19 of them were build-finance, design-build-finance, and so if we are hearing that most of those or all of those are built on time and on budget, that is a good sign that that initial part, the part of the project that public-private partnerships at least in Ontario are really focusing on is the construction risk, and you might not need the 30-year financing period where the cost of finance really goes up quite substantially.

If the aim is to get that construction on time and on budget, you might be able to do it through either design-build or include some amount of private finance, keeping in mind that that money is all going to be or most of it is going to be paid back through direct Government sources anyway.

Mr. DEFAZIO. Mr. Chairman, if you will indulge, one more.

Dr. Blain, where did the money come from for the dam?

Mr. BLAIN. It was financed 60 percent by the concessionaire and 40 percent by grants from the utility.

Mr. DEFAZIO. OK. Thank you.

Thank you, Mr. Chairman.

Mr. DUNCAN. Thank you very much.

Mr. Rice.

Mr. RICE. To continue along the same line of questions, and I will give this out there to all of you, to get involved in this, a private company is going to want to make a profit. Otherwise they are not going to get involved in it. So what level of profit do they look for, number one, and, number two, is that offset by efficiencies that the private company brings to the table?

Because if it is not, it has got to cost more. So that is my question. What level of profit do private companies look for, and two, is it offset by efficiencies?

I will start with you, Dr. Blain.

Mr. BLAIN. Most projects, the private capital tends to be highly levered. So it is, say, 90 percent debt, 10 percent equity, and the equity portion, returns are in the order of 11, 12 percent over the length of the contract, in that order of magnitude.

And the value for money analysis that we do compares the PPP with a traditional procurement, and we tend to average between 5 and 10 percent net present cost benefit of the PPP over the traditional procurement that is estimated over the life of the contract, say, 30 years.

Mr. RICE. So you are saying the profit cost is 11 percent and the efficiency is what did you say, 5 or 6 percent? So there is an additional 5 percent cost?

Do I have that backwards?

Mr. BLAIN. No, I think you have got it right. The return that the concessionaire expects when he enters into the contract, if everything goes well, he will earn 12 percent. If he does not perform, he will earn less than 12 percent.

When we then estimate the value for money of that contract from the owner's point of view, the Government, we compare the PPP to a traditional procurement. Take the present value of the whole lifetime contract expenditures, and in British Columbia, our analysis, we tend to average 5 to 10 percent savings.

Mr. RICE. OK. That 5 to 10 percent savings takes into account the profit of the private entity.

Mr. BLAIN. Yes, yes.

Mr. RICE. Do you agree with that, Mr. Morley?

Mr. MORLEY. Yes. So when we start a project, there is a set budget that includes all costs, and we do financial analysis on that, and then through the procurement process, we do the value for money assessment at three different stages.

We also tailor the value for money assessment to particular sectors and then to each specific project. So the rigor on the value for money is important.

The rate of return for the private sector partners is part of that overall budget.

Mr. RICE. What do you find that rate of return to typically be?

Mr. MORLEY. I think my colleague has kind of given you a range that is probably the market trend, but the reality is including that——

Mr. RICE. So the market trend you think is 11 or 12 percent?

Mr. MORLEY. We have definitely seen some that are lower than that.

The other aspect that I think is important here is that through the competitive bidding process, we are increasing from having 5 bidders on our projects to having 10 bidders on our projects.

Mr. RICE. OK. So just to cut to the chase because I do not have a lot of time, even taking into account the 10 to 12 percent or sometimes lower profit that the private company makes, it still costs less doing it with a public-private partnership.

Mr. MORLEY. Correct.

Dr. SIEMIATYCKI. Can I add something?

Mr. MORLEY. Our evidence is that value for money is positive even when you consider all costs.

Mr. RICE. Mr. George, what level of profit does a private company require in your experience?

Mr. GEORGE. For availability-based projects, I would say it is in the range of 10 to 12 percent because a lot of the risk is just mainly construction and operations. For demand-based projects, it is much higher because they take traffic risk.

I take a slight——

Mr. RICE. Say that again.

Mr. GEORGE. For demand-based projects, so, you know, a road like the Beltway managed lane project or the Chicago Skyway, et cetera, the risk is greater.

Mr. RICE. So it is contingent on demand?

Mr. GEORGE. And there is demand risk that——

Mr. RICE. They are taking more risk. So what profit are they looking to make there?

Mr. GEORGE. It is higher. It is probably in the high teens.

Mr. RICE. High teens?

Mr. GEORGE. Yeah.

Mr. RICE. OK. And then taking that profit into account, is it still cheaper, all things considered, in the long run for the Government to do it through a public-private partnership or not?

Mr. GEORGE. I think you can tell from this conversation it's difficult to tell, but let me offer you a different perspective. We have

projects today that are run by Government that are not maintained. Rather than maintain them and spend less because we do not have the money, we actually rebuild them because we did not do the maintenance.

The cost associated with that has not been factored into any of these conversations. The thought I would offer is that we have public sector entities, DOTs. Some do a very good job. Some do not do as good a job. We have public authorities, same thing. We have PPPs. We have some of the same issues.

What it does is it puts them in competition with each other. You think about entities like Florida that are doing PPPs. They are doing the traditional delivery, and they are doing PPPs. They now have discipline that has been established in the PPP that they can now infuse in the DOT.

Mr. RICE. OK. I am sorry I have to cut you off.

Finally, you, sir, I am past my time. So can you give me a quick answer?

Dr. SIEMIATYCKI. Very quickly. If you look at the value from our reports, and I have a quick summary of a few of them in my testimony, what you see is that the base costs are invariably higher for PPPs. That is, the cost of construction, the cost of operations, the cost of financing are invariably higher for the public-private partnership than traditional builds.

You also see that transaction costs are typically higher for public-private partnerships, and you see that the financing costs are higher.

So to say that this is a cheaper way of delivering in the structure is not accurate. It is after the risk. It is that you are controlling the likelihood or the potential of cost overruns or of costs coming back to Government. That is where public-private partnerships potentially see their benefit.

And I think that is really what we are debating, not whether they are cheaper or more expensive. The evidence produced by the Government shows they are more expensive to deliver, and they are more expensive to build.

Mr. RICE. Thank you, sir.

Mr. DUNCAN. All right. Thank you very much.

Mr. Larsen is next on the Minority side.

Mr. LARSEN. Thank you, Mr. Chairman.

Dr. Blain, I have got a meeting with you this afternoon. So I will let you off the hook for a little bit, till the end of my 5 minutes perhaps.

Dr. S., the last point you made, is it encapsulated by saying that just objectively it may cost more, but the project gets done? Is that the tradeoff that you are finding in the experience looking at the projects you have looked at?

Dr. SIEMIATYCKI. So you are saying it costs more, but it gets done. Yes, and I think there is both a planning and a Government rationale for that, and also a political rationale.

I went out and did interviews with politicians. They hate when projects go up in budget. You have to go back to your taxpayers and back to your constituents and ask for more money. So there is a certainty. There is a benefit to certainty for Government from a budgeting perspective. You know how much it is going to cost,

even if it is a bit more upfront or even quite a bit more upfront. You know, how much that is going to cost.

But there is also a political benefit to public-private partnerships, and that has been one of the motivations for using these as well.

Mr. BLAIN. I have to add just one comment, if you do not mind.

Mr. LARSEN. Did I not tell you that you have a meeting at 3 o'clock with me?

Mr. BLAIN. I know, I know.

Mr. LARSEN. So I control the time. So I get to ask questions.

So, Mr. Morley, are you planning in infrastructure in Ontario that certain projects are better for PPP and other kinds are not?

Mr. MORLEY. So we have done the assessment of our first 30 projects, and they range across sectors, hospitals, courthouses, detention centers. And we found that those are extremely effective. They take on different models. Some are design-build-finance-maintain, and some are design-build-finance. We found them to be very effective.

In the rare cases where they have been late, the majority of that risk and the responsibility and the cost associated with that has been the responsibility of the private sector. So that is good news for the public sector.

The other thing is that there is confidence in the case of design-build-finance-maintain project, where the asset will be maintained over the life, over 30 years, and that is important because it encapsulates life-cycle costs.

In those cases of hospitals, to address the question about local partnership, in fact, many of the employees maintain their employment with the hospital and have long-term employment in that contract. We also do a significant amount of work to engage local companies, and so we find that there are definitely benefits to using the AFP model.

Mr. LARSEN. Yes. Mr. George, could you comment on that from Fitch's rating experience?

Mr. GEORGE. Sure.

Mr. LARSEN. Are there certain kinds of projects that work better than not?

Mr. GEORGE. Yes. I think the key is that you are able to define scope and that you have an objective way in which you can measure performance.

Mr. LARSEN. Does that apply whether it is a hospital or a road?

Mr. GEORGE. It does. What we are talking about is infrastructure, which is easier to assess, but if you are looking at providing qualitative services like, you know, in a prison or like security services and, you know, clothing and things like that, it becomes much more qualitative, and then there is more area of disputes between parties, and that is when it could break down.

Mr. LARSEN. Yes, OK. Dr. Blain.

Mr. BLAIN. I just wanted to add a comment about the cost of construction. We typically assume 5 to 10 percent savings comparing the construction cost between a DBB and a design-build, just from the integration of the design with the building and the efficiencies of the private sector.

So I would disagree with Matti a little bit on that one because our empirical evidence is that it is cheaper, and also the long-term maintenance tends to be cheaper than if the public sector does it.

Mr. LARSEN. But that is comparing just DB to——

Mr. BLAIN. Just the construction side, yes.

Mr. LARSEN. Just the construction side.

Mr. BLAIN. Yes.

Mr. LARSEN. OK. All right. In British Columbia thought, Dr. Blain, you ran off a list of hospitals.

Mr. BLAIN. Yes.

Mr. LARSEN. And then I read online that you are trying to build a jail in the Okanagan.

Mr. BLAIN. Correctional facility.

Mr. LARSEN. Correctional facility. So you are trying to build this jail in the Okanagan.

[Laughter.]

Mr. LARSEN. And there is delay and there is a delay in any financing for it. Are there some issues that you are finding in British Columbia, or it is easier to do a certain kind of project versus a different kind of project?

Mr. BLAIN. There are no issues that I can think of where we have not attracted the financing. So I am not sure what you are referring to there.

But typically, the kind of project that lends itself best to a PPP is a big project with lots of risk. The more risk is in it, the more engineering challenges, the scope for innovation, those are where you get the benefits and, therefore, those are the kinds of projects.

As the projects get smaller, there is a lot of overhead in doing a PPP, and the benefits are more difficult to achieve. The bigger the project, the hairier it is, the more the scope to get the benefits.

Mr. LARSEN. Just finally, does that not support Dr. S.'s point about a lot of success is being able to transfer risk?

Mr. BLAIN. Yes. Transfer risk and innovation, yes.

Mr. LARSEN. Thank you.

Thank you, Mr. Chairman.

Mr. DUNCAN. Thank you very much.

Mr. Perry.

Mr. PERRY. Thank you, Mr. Chairman. Thank you, gentlemen.

I guess I will start with Dr. Blain, and I will see you a little bit later as well, but I am wondering anything the than the profit that has been talked about here a little bit that drives the cost higher for the P3? I think you kind of went through it a little bit, but I just want to codify it and repeat it if necessary, as many times for us to get it.

Anything other than the profit?

Mr. BLAIN. There is more upfront planning, to be sure, much more thoughtfulness goes in, much more rigor. So the budget to get a PPP ready to go to the market is higher than if Government does a traditional procurement, and I think it is money really well spent, but it is more expensive.

Mr. PERRY. So then when you do the upfront planning because that saves money down the line on the construction, et cetera, or maybe just the plain long-term operation of the concession, if it is one, are there any other efficiencies?

Because once you do the design of the thing and the financing, the construction, whether it is the Government or whether it is the private sector, is that generally the same or are there significant differences that we need to know about?

Mr. BLAIN. For each particular risk that you are transferring to the private sector, some of the risk the concessionaire will just build that into their return on equity, which is higher than the Government's borrowing cost. Other risk they will actually price into their bid.

They will say, "If we are going to take that risk, we are going to add this much to the actual bid price." And so that cost of that insurance, if you will, it is added on above what the traditional budget would have in it, but it is insurance.

Mr. PERRY. Mr. Morley, can you talk to any of those risks and any differences that there might be?

And I am looking in terms of maybe, you know, in America, in the State that I come from, we talk a lot about project labor agreements. We talk about the Federal wage requirements and some of those inefficiencies.

Are you bound by all or any of that? Is it a first dollar situation or if it is a P3 where 50 percent of the funding comes from the private sector or 50 percent or more, is there anything that we need to know that we can include in our efficiencies or concerns here in that regard?

Mr. MORLEY. Thank you very much.

There is a range of things in the budgeting process, in the definition of outcomes and output specifications for a project, in the analysis of the risk matrices for a value for money where we drive into the details of each of the risks. And so the types of things that are really important: environmental risk; change in Government policy risk. There is significant due diligence with third party experts, technical advisors and financial advisors on projects. Those are all very important.

We translate those risks that are in the value for money into our project agreement, and so that is the binding mechanism to ensure that the rights of the Government and the public interest are preserved, and that there are mechanisms, whether it is in construction or through the maintenance period, when we talk about performance based that the Government can exercise those rights to ensure that if the risk is not being transferred or addressed adequately or if the project is being delayed, that that risk remains with the private sector.

So it provides more of a certainty and guarantee and confidence to the public sector.

Mr. PERRY. So from my standpoint where I disagree with the one gentleman down the line here, it is not that we do not have the guts to do what needs to be done here. We are not getting the value for whatever the fee increase is or the policy change is that drives the increases or fares or whatever would be associated. There is not the value there.

If the value were there, I think the people, the citizens would be much more apt to support it. As policymakers, how do we mitigate?

And do you have a specific list, set of risks that—well, you already do. You already talked about them—but policies to address

those risks that are available where you come from that are not available here?

Mr. MORLEY. Absolutely. So I was happy to see the Representative from Maryland here. Through our work with the National Governors Association, we are collaborating with different States, and we are taking them through our methodology in terms of budgeting; output specifications for projects; specific details of our value for money.

We would invite you to come to Canada, to come to Ontario to work with us. We would be happy to transfer some of that knowledge to you because every project goes through this disciplined process, and that is what gives our board of directors confidence to approve it, and it is what gives the Government confidence to invest in it.

Mr. PERRY. Thank you, Mr. Chairman. I will yield.

Mr. DUNCAN. Thank you very much.

Mr. Maloney.

Mr. MALONEY. Well, thank you all for being here, and thank you for your testimony.

I was curious about this issue, Dr. S., that you say in your testimony about the risk premium and how that factors into the colloquy you are having about whether the value for money analysis makes any sense.

I mean, so my colleague's questions, which I share, Congressman Rice's concern about at the end of the day is this better or not, which of course was the subject of your study.

Can you explain the risk premium factor? Because that sort of tilts the scale pretty significantly, does it not, sir?

I mean, I understand your colleagues at the other end of the table would assert that the value for money analysis is better in every case, and yet your testimony seems to suggest it is not unless you add the risk premium, and then, of course, the size of that risk premium either makes it more or less expensive.

So can you illuminate us on that subject a little bit?

Dr. SIEMIATYCKI. Yes, I think you nailed it. I mean, we went out during this study to try to understand what underpins the value of public-private partnerships. We added up the cost of construction. We added up the transaction cost. We added up the cost of financing where it was available.

And as the documents show, in each case those are less for traditional build than for public-private partnerships. It is only after you consider this issue of risk, and risk, I think we need to be really clear about what risk is. Risk is costs that will come back to Government if something happens. So it is the cost of cost overruns. It is the cost of change orders. If you have a long-term operating period, it is the cost of the facility not being available.

Mr. MALONEY. Sure, and I am sure you do not deny that that risk is a real thing.

Dr. SIEMIATYCKI. Very real.

Mr. MALONEY. And neither would any of us. The question is what is the magnitude of that risk and how do you calculate it and is it being done properly. And what is your conclusion there?

Dr. SIEMIATYCKI. So in my study we asked for the risk matrices and for all the documents behind that so we could check. It is

called a risk register where they will look at all of the projects that have been done in the past to try to see what actual risks happened in the past.

We asked for that documentation and were not given it as academics. So I write that in the paper. We could not validate whether the risk premium was appropriate or not. We know that traditional built projects have cost overruns that are quite large, but we are not sure if the average overrun or the average additional cost to Government would be 49 percent or less.

There are some studies from the Auditor General that suggest that it might be less than that, but there are also experiences where there is more. So we could not find that evidence, and we wrote that in the paper. As academics——

Mr. MALONEY. And I saw that, but is it also fair to say that you also did not take into account the risk of doing nothing, right, or the cost associate with doing nothing?

In other words, one of the things that we struggle with, right, and my colleague from Massachusetts who is not here today has expressed this several times, is there is a risk that things just do not get done, and there are costs associate with not doing them, and there are all sorts of ancillary and nonlinear economic activity that is lost because we just dither instead of doing something.

That is not factored in, however, to that risk premium, right?

There is no opportunity cost factored into.

Dr. SIEMIATYCKI. No, and if you keep in mind the way that public-private partnerships are working in Canada, they are not replacing private money. This is not new money. So the project——

Mr. MALONEY. I want to talk about that, but yes.

Dr. SIEMIATYCKI. If you take at their word that this is a study between the public-private partnership and the traditional, if their traditional looks better, they could have built the traditional. They have the skills. They could have gone out with the procurement.

Mr. MALONEY. Right.

Dr. SIEMIATYCKI. They have the money together. So our alternative——

Mr. MALONEY. That is the difference between Canada and the United States, yes. But it is, right? I mean we are often in the world of "if not this, nothing." In other words, as you point out, this is not a substitute for traditional. This is not a solution to find new funding in Canada. Here it is very often, and so it is more relevant here, it seems to me.

But in the remaining minute I have, I just wanted to give your colleagues an opportunity to talk about this risk premium issue. I take it you have a different view of this.

Mr. BLAIN. Actually I do not really disagree. I just think that when you incorporate the risk premium, and we calculate it accurately the best we can, you end up with value for money and you end up with——

Mr. MALONEY. Who has custody of the information that Dr. S. has been unable to obtain?

Mr. BLAIN. Well, he did not ask us for it, but——

Mr. MALONEY. So you would be happy to disclose that?

Mr. BLAIN. No, we would not because——

[Laughter.]

Mr. BLAIN [continuing]. You know, when you give out the risk matrix to the bidders, you are revealing your personality. You are revealing your risk aversion. You are revealing how much you value every risk.

Mr. MALONEY. Well, on a particular project, sure, but in the aggregate, and you could "anonymize" it across multiple projects. Sure, if you are in the context of a bid, I appreciate that, but in the context of 28 projects that are backward looking, and if everybody does it and it is anonymized, what is the harm?

Mr. BLAIN. We have given out risk matrices that are sort of made nonspecific to a specific project, more like average type estimates. That is easy, but for a specific project, no, because it is commercially sensitive.

Mr. MALONEY. Fair enough, but you would agree that we should have that information to get a true assessment of whether the risk premium makes any sense or not?

Mr. BLAIN. I would give it to you.

[Laughter.]

Mr. MALONEY. Well, my time has expired. So we will leave it there. Thanks.

Mr. DUNCAN. All right. Well, I am curious about this, Mr. Morley and Dr. Blain. Dr. Siemiatycki says that these projects, in his testimony, are 16 percent more than a comparable project would cost using conventional tendered contracts. This is mainly because private borrowers typically have higher financing costs than Governments. Transaction costs for lawyers, consultants, management costs and project monitoring also add 2.2 to 5 percent to the final cost, and the private concessionaire charges a premium on facility construction, so forth and so on.

He says the main factor that is not really figured in is the risk or the advantage. Yet, Mr. Morley, you say in your testimony, the Ontario Government through infrastructure in Ontario is delivering over 80 projects using the AFP model valued at about $35 billion and with an estimated $3 billion in value for money savings.

What do you say to Dr. Siemiatycki?

Mr. MORLEY. So he is a friend from Toronto, and we have definitely had lots of good dialogue with him, and in fact, to speak to value for money, based on 8 years of work, we are currently doing a refresh of our value for money because we have learned some things and will continue to improve that.

The bottom line though is when a budget is set and we compare a traditional project with an alternative financing and procurement project, we have found positive value for money. We only get approval from our board of directors to proceed with the project when there is positive value for money.

To give further credibility to our risk process, there are a number of steps that we take. There is an identification of the risks. There are workshops with the client group to ensure that we understand what the outcomes of the project should be and what risks that will result in and how do we transfer those risks appropriately.

Our models have been done by external advisors and also validated by internal auditors within the Government, and so there is a significant amount of discipline about that. We are always going through continuous improvement. We are doing what we call a

VFM refresh at this point in time, and it allows us to tailor projects.

Although we have a significant history in social infrastructure around hospitals, we also are growing our business around civil infrastructure, transit and highways. And so we have risk matrices and value for money assessments for each of those areas and for each specific project.

If I could give you a few facts from our study of our 30 projects, and this gives a comparison of budgets that were set by the Government, and we have to live within that budget and the results that we have seen.

So awarded contract amounts are 20 percent lower than the approved budgets. Awarded contract amounts are 5 percent lower than winning bids. Awarded contract amounts are 15.5 percent lower than average bids. And awarded contract amounts are 26 percent lower than highest bids.

And so the competitive tension that we are seeing after we do our due diligence within a set budget means that we are getting better value for money, and it is saving taxpayers money.

Mr. DUNCAN. All right. Dr. Blain, what do you say about what Dr. Siemiatycki said?

Mr. BLAIN. Well, I think I would say almost the same thing. The one thing I could add is that you have in Canada five Provinces that calculate value for money on all of their projects, and their methodologies in the different Provinces are a little bit different. We are not all the same, but we all end up with similar conclusions. We are all still doing PPPs and we all still are generating value for money.

But there is no right answer to it, but they are all in the same ballpark.

Mr. DUNCAN. I know that Canada has a national debt of only about a third of what we have per capita. How are most of these infrastructure projects financed? Is it more Federal? Is it State, local? What kind of combination? How does it compare to what we do here in the U.S.?

Mr. BLAIN. Most capital projects are done at the Provincial level or local government level. The Province of British Columbia, if we do a project, it would typically be maybe half financed with private capital and half would be a grant from either the Province or the Federal Government or from local government.

Mr. DUNCAN. Well, that is my question. Is your Federal Government, your national Government spending on infrastructure, is it comparable to the U.S.?

Mr. BLAIN. Oh, I am not sure about that.

Mr. DUNCAN. You do not know?

Mr. BLAIN. No. Do you?

Mr. MORLEY. I would say that, first off, the Provinces have been taking a lead in Canada on investing in infrastructure. I think that is a firm fact. I think relative to the U.S. we could do that assessment and provide that to you.

Mr. DUNCAN. All right.

Mr. MORLEY. If I could offer one additional question or comment.

Mr. DUNCAN. Sure.

Mr. MORLEY. The benefit of AFP, while we focus largely on investments that the Provincial government is making in hospitals and courthouses and roads and transit systems, we are now seeing growing appetite from local governments, from municipalities, and so they have their own governance structure through municipal councils. They have to decide their policies. They have to decide how they are going to invest their dollars, and increasingly the large municipalities are coming to Infrastructure Ontario asking for our input, asking for our advice, and asking us to be their procurement advisor on large transit projects.

And so I would say that is a further validation that this is a growing trend and a positive way of delivering large projects that have a significant amount of risk.

Mr. DUNCAN. Dr. Siemiatycki, Dr. Blain says that when a private partner gets involved that there is much more analysis and study and expert financing and so forth paid to the project, and that leads to savings in the end.

What do you say about that when the Government does it under traditional Government methods?

Dr. SIEMIATYCKI. I think the key benefit that the public-private partnership model has brought forward is due diligence upfront, and the question that I would ask is: why are we not applying that to all of our projects? Why are we having agencies whose role is only to do that on PPP projects?

In Canada, the vast majority of projects, even though the high-profile ones may be public-private partnerships, the vast majority are being done a traditional build projects. I think we could be applying many of the same learnings from these folks and from their agencies and organizations to traditional build projects.

The question about risk is really at the core of this, and I think a question in that realm is: could we manage risks rather than transfer them if we have these skilled folks on the Government side of the table?

If we have the experts who have private sector experience in-house with Government, could we be applying models that managed those risks and used their expertise, used their due diligence so that we do not pay the very high cost of risk transfer that we are paying at the moment?

Mr. DUNCAN. I need to go to Mr. Capuano, but just one more thing. Mr. George, you say in your testimony that the World Bank has identified almost 5,000 PPP projects since 1984, and there have been 700 in the United Kingdom since the mid-1990s.

And you say here that Governments like Australia, Canada, Chile, Spain, France, Belgium, the Netherlands, Mexico and the United Kingdom have all embraced the concept.

Are any developed nations moving in the opposite direction? You have stated these are all over the world. Is there any country that has gone into public-private partnerships and decided that they were not good deals and they are going in the opposite direction?

Mr. GEORGE. I cannot think of one where somebody is moving completely in the opposite direction. These have been challenged even in Canada. In Ontario they were challenged, but they basically reformed the system and came up with a proposal that kept

PPP, as a core portion of PPPs in place, but they made changes to make the public happier with the process.

The same thing is happening right now in the U.K. with the PFI initiative. It has happened where they have challenged that because they are having problems with some financings.

I think the key here if you think project by project, you can be right on the value for money or wrong on the value for money or the risk premium. If you think programmatically, this adds a level of tension to the point that the professor made, that it actually makes sure that Government goes back.

The same agencies that are doing PPPs are doing traditional procurement. Why are they doing them differently? If you can change that, I think you can make Government better, but I think keeping PPPs to keep that tension or that creative tension is probably a good idea.

Mr. DUNCAN. Well, most countries have gone in the direction of PPPs because they just felt like they could not come up with enough money to do things the traditional way, yet Dr. Siemiatycki says that it provides no new money.

Do you agree with that?

Mr. GEORGE. I completely agree. It allows you to use your existing resources more efficiently.

Mr. DUNCAN. OK. All right. Thank you.

Mr. Capuano.

Mr. CAPUANO. Thank you, Mr. Chairman. I want to thank the panel.

I particularly want to thank my three Canadian friends. Boston has a long tradition of friendship with Canada, mostly the Maritimes, but I particularly want to thank the gentleman from Ontario for Bobby Orr. It was probably the greatest natural resource you ever sent us.

[Laughter.]

Mr. CAPUANO. And we will be forever grateful.

I will tell you that I continue with my frustration in one aspect of this whole discussion that has been growing, and that is what is the definition of a P3. Honestly when I agreed to do this panel, I did not think of it as design-build. I think of design-build. I know it is now, but that is not what I thought P3s were. That is a separate category.

So to a certain extent I want to take design-build off the table for the discussion because I look at it as different, and by the way, I always like to remind people how we get to so-called traditional financing. I do not know the history in Canada, but I do know in the United States, we got there over generations of corruption. Generations of corruption with politicians and builders and designers ended up in jail because they colluded to steal taxpayer dollars, and we ended up with a system that was convoluted for the pure intention of making it more difficult. And now we are trying to tone that back a little bit, and I think that is a fair thing.

Absent the design-build, which I do agree that if it works well, on time and on budget is better with design-build. I think everybody accepts that as a fact.

I will tell you that the other thing I am growing more and more frustrated with is the complete lack of transparency on numbers.

Every panel that has been here I have asked for statistics to show me because to me it is twofold. I actually do think we are here because we do not have the courage to provide the funding we need to provide.

But at the same time, even if we had all of the money in the world to do it, I still want it used in the most efficient manner. So this does not mean that P3s should be off the table. It means, OK, funding is a reason.

And to be honest, let us be serious. That is why we are here, because we do not have the courage to do the funding mechanism, but nonetheless, we still should have this discussion.

So on the efficiency stuff, it is hard to do efficiency without numbers. Mr. Siemiatycki, you are the first one that I have seen with actual numbers on it, and I have been told it is because Toronto or Ontario actually provides these numbers in a public way, yet nobody else does.

Is my understanding correct?

Dr. SIEMIATYCKI. Generally, yes. Partnerships BC provides some of these numbers. I work at the University of Toronto. So I am closer to the Ontario case, but Partnerships BC has some of these numbers.

Keep in mind these are only the summary numbers, and I could not get the numbers behind those to really get at——

Mr. CAPUANO. I will tell you that as a Member of the United States Congress I am having the exact same problem, getting numbers, and I am a numbers guy. I mean, all of the philosophy in the world, it is great on the campaign trail, but when it comes to this kind of stuff, nobody is going to elect me or un-elect me because I embrace P3s. They are going to elect me or un-elect me if I want to use their money efficiently.

And I cannot make that judgment without fair numbers, and I will tell you that the risk premium of 49 percent that you came up with, that is a number that you worked backwards to find. Am I correct on that?

Mr. George, in your world, if someone were to say, "Forget everything else. What do you think the risk premium is on a non-design-build P3?" would you put a 49 percent number if you just came up with it or would you put a lower number, a higher number?

Mr. GEORGE. I would not know how to come up with a number.

Mr. CAPUANO. So it is flexible. It is unknowable, and that is the thing that gets me. Depending on how you measure these things, and I guess, Mr. George, for you, when you came up with your numbers, some of the things I have found them not to include is the numbers I have seen do not include the cost of diverted traffic when you do a highway. How much does it cost when you move traffic from this road to that road and you do not maintain the new road that they are doing or you lose tolls?

Did the cost of diverted traffic come up in your analysis?

Mr. GEORGE. We do credit ratings. So we are not looking at those things.

Mr. CAPUANO. I understand.

Mr. GEORGE. But I would agree with you that we are not looking at the entire cost to the system.

Mr. CAPUANO. Fair enough. And, again, I do not know the Canadian tax system. In the United States, we do a real P3 and we move it off. There are massive tax benefits to the investors. They get to write it off, and it comes directly out of the Federal Treasury, not the State treasury.

I do not know how Canada works. Does it work the same way in that, number one, investors get to write off, and if so, does that money come out of the Province treasury or does it come out of the Federal, the National Treasury?

Mr. BLAIN. Most places that are doing PPPs, they will make an adjustment for tax transfers. It is called competitive neutrality, and we do make an adjustment for it. It is hard to estimate exactly because the money goes from investor to the Federal Government to the Provinces, and goes around in a circle, and you have to kind of calculate it. But we do.

Mr. CAPUANO. But the money comes out of the National Treasury. The tax credit is applied to a national tax as opposed to a Province tax?

Mr. BLAIN. We take into account all of the taxes. The Provincial tax, of course, stays in the Province.

Mr. CAPUANO. I understand that. Again, I am trying to analogize with the United States. You get a credit everywhere, but the bulk of the money comes out of the net because our Federal taxes are higher than our State taxes or local taxes.

Mr. BLAIN. Fair enough.

Mr. CAPUANO. Is that the same case in Canada? I am asking because I do not know.

Mr. BLAIN. They are about the same, yes.

Mr. MORLEY. So I think a helpful study to look at may be the recent Canadian Council for a public-private partnerships analysis which looked at the economic benefits, and it actually calculated some of the Provincial or State and Federal tax revenues as a result of public-private partnerships. It also quantified income that is generated from these projects, and so——

Mr. CAPUANO. See, part of the problem I have is that when they do it, I do not mind doing it. It is fine. Tax credits are fair, but it is an unaccounted item directly out of the Federal Treasury that basically takes money out of the Federal Government, namely, the Highway Trust Fund or whoever else it comes from, and puts it into the hands of private companies that goes to a certain State that might find these things as opposed to allowing us, the U.S. Congress, making a national policy as to what we think is appropriate to do.

I do not mind. I am a former mayor, and to be perfectly honest, if I can find a way to put my hand in the pocket of the Federal Government, I would have done it. So I do not blame anybody for doing it, but now I am on the Federal side, and I do not like people reaching in our pocket unless we know it and approve it, and I think that is what is happening at the moment.

Mr. MORLEY. I think, if I could add——

Mr. CAPUANO. Of course.

Mr. MORLEY [continuing]. I think your initial question is how do you define a public-private partnership. It is connected to the gov-

ernance and whether or not it is on book versus off book, and accordingly the tax treatment.

And this is an area where I think there are probably a number of fairly material differences between Canada and the U.S.

Mr. CAPUANO. Right, and obviously, I have been spending more and more of my time trying to figure out where these P3s work best and where they do not. I actually kind of accept the fact that they might work best on complex, unique situations like a water situation as opposed to a road, which does not take a whole lot of maintenance after the fact. It takes some maintenance. I get that. It is not the same kind of maintenance as a machine, a big, huge machine generating water, power or whatever it might be.

So I kind of accept that, but I have got to tell you I am getting more and more skeptical because of the lack of information, and I understand exactly what you said, Mr. Blain, about the need to keep these numbers private. I get that, but it makes my job almost impossible when everybody is saying that, to actually make a legitimate judgment.

It forces me back into my philosophical corner, which I am trying to get out of, and I would like everyone to get out of because let us be serious. I mean, we can pound our chest all day, like I said. I am not going to get elected or un-elected on the basis of this issue. I am just trying to find out what is right and, if so, what is right in what category, and without numbers I cannot do it. I mean, I cannot do it honestly. I am back in my philosophy corner, and really we do that enough around here, and I am trying to find a way to not do that.

Mr. BLAIN. If I could just make one point on that. What we did, and I do not know if you have the ability to do it here, is that the auditor to the Province of British Columbia, which is a Government auditor, audited our analysis. So our politicians got some comfort from the fact that the analysis was audited by——

Mr. CAPUANO. Well, I appreciate that, but that still does not tell me what the auditors have taken into account. And, again, it does not necessarily work there, but it has worked clearly in Chicago and Illinois and Indiana. How many cars were taken off the Indiana toll road and put onto separate roads?

No one will tell me. I am not even sure they have asked, and what was the cost of maintaining those roads? And how much are they paying in tolls before; how much are they paying in tolls now? No one will tell us.

And to be perfectly honest, when people play hide-the-pea on me, I kind of walk away and think, "OK. Hide the pea all you want. I am not playing."

I know what works, and I am willing to take these risks, particularly in design-build, and I am willing to do this, but if people are not going to share detailed information with me to make my own analysis, including audits, but I want to see the Government's audit; I want to see Fitch's audit; I want to see independent auditors; I want to see neutral auditors, and balance them all together. That is how you make policy.

And I am not capable of doing that with the whole P3 concept now because everybody is sitting here with numbers. I understand

why, but obviously I am getting a little frustrated and way over my time.

I apologize to the chairman and appreciate his indulgence.

Mr. DUNCAN. All right. Mr. Barletta.

Mr. BARLETTA. Thank you.

Dr. Blain, you mentioned that in Canada, the project is accounted for on the Government's books. One of the problems that we face, particularly in regards to using P3s for social infrastructure is the upfront scoring issues here. How does Canada account for performance-based infrastructure projects?

Mr. BLAIN. It basically would be the present value of the payments over 30 years. So if we assume that the owner, the Government, is going to make full payments, like there is a performing contract and we are going to make full payments over 30 years, the present value of that becomes the liability of the Province.

Mr. BARLETTA. Mr. Morley?

Mr. MORLEY. So there are a number of things that we do, as I mentioned in my testimony. Three is a long-term infrastructure policy that is in place. That translates to the Provincial fiscal framework, and currently there is a piece of legislation before our legislature which would reinforce the idea of 10-year long-term infrastructure planning with automatic renewals every 5 years, and that is a way to ensure that we are planning the policy, assessing the evidence and planning the fiscal impacts accordingly.

Mr. BARLETTA. If I could go back to finish my very first question, how do you structure these projects to see that the local subs can have an opportunity to participate in the bigger deals?

Mr. BLAIN. We do not go that far because our experience has been that the local contractors all get involved anyway. There is so much subcontracting literally hundreds of subcontracts from a very large concession agreement that there is lots of business that is given out locally.

The one thing that we do require is that when the major concessionaires are responding to the Request for Qualifications that they have to show us that they understand the local market, that they understand British Columbia and what is here, and so we do evaluate them on that.

And then the next step is once we start a process, we have major business sessions where everybody comes and meets each other and they talk to each other and they, you know, speed dating and everything.

Mr. BARLETTA. Mr. Morley?

Mr. MORLEY. I can add to that. There are a number of things that we are doing to try to encourage partnerships. First and foremost, we feel that we are a partnership organization, and so the first thing is on some projects the partnerships happen naturally where if they are in different parts of the Province, a project lead will automatically engage more local contractors.

At the same time we have had some larger projects that are concentrated in urban centers, particularly urban transit projects, where through our RFQ and RFP processes, we have given the opportunity or created an incentive for the bidders to actually engage with local providers who will have local knowledge, local experience, and that we feel translates into better projects.

Another aspect is that there are obviously important skill trades that are involved in all of these projects. Building that capacity is critical, and so involving apprentices in projects is increasingly important to us so that we have the labor force.

And lastly, there are often job fairs that will translate into local jobs for local companies.

Mr. BARLETTA. Dr. Siemiatycki?

Dr. SIEMIATYCKI. The local industry—I will speak only for Ontario—the local industry has been concerned about the place of public-private partnerships and what it is doing to local firms and local jobs. Over the summer they started making noises in the media about bundling and projects becoming too large for many of these firms to become involved in.

We heard it also from the Architects Association in Ontario. All of these concerns about the scale of the projects getting bigger. So no one is saying do not build infrastructure. These are industries that make a living off infrastructure, but they are saying they are feeling concerns about whether they are able to access these types of concessions.

So it does not mean these issues are not resolvable, but again, the data is not there to really evaluate and step back and say, "Is this actually happening? To what extent are you being excluded? How much of change is there between traditional and PPP?"

We are not able to get that data to really create those assessments. That is the type of work that I have been trying to carry out as an academic, to provide evidence that can then be used to set policy and come up with solutions if there really is a problem.

Mr. BARLETTA. Mr. George?

Mr. GEORGE. I think the issue you have is that there is a need, with these large projects, there is a need for a large credit worthy counterparty to wrap the risk. That, by definition, rules out some of these smaller subcontractors.

Now, they can play at the level underneath the contractor. So that is an issue, but what I think you can look at is smaller projects where they can, in fact, play. But those are not best suited for PPPs. The question is if one can create a Center for Excellence which actually can help these smaller projects be developed with some of the same discipline of a PPP, but be done without necessarily the private sector involvement, you know, the way it is done on a PPP so that you can get the best of both worlds.

Mr. BARLETTA. Thank you.

Thank you, Mr. Chairman.

Mr. DUNCAN. Thank you.

Mr. DeFazio.

Mr. DEFAZIO. Thank you, Mr. Chairman.

Mr. Chairman, I would just like to put in the record because I was raising the issue of revenues and there are some who think somehow this is a free lunch program, and I will get to that in a moment, but the Federal gas tax in Canada is 40 cents a gallon, imperial gallon. So what is that, 37 cents here?

The total tax in Vancouver, BC, is $1.55 a gallon; Victoria, $1.33 a gallon. So you know, that is part of the issue here. They are making an effort to maintain and build their transportation infrastruc-

ture. Their taxes are phenomenally higher than ours in the U.S. are. Ours have not been adjusted since 1993 at 18.4 cents.

So, Dr. Blain, you mentioned that these are best used for green fields, and then you talked about a half public, half private example. Does that apply to surface transportation without a toll?

And if so, how does that private half get repaid?

Mr. BLAIN. It could be applied to an availability type of transportation project, yes.

Mr. DEFAZIO. So the Government would pay the private person back on an annual basis. So essentially you are booting it out into the future with some sort of a revenue stream. You are paying back their half plus 11 percent.

Mr. BLAIN. And the Government would put in their half just as an upfront grant or perhaps it could go in at the end of construction. It can go in at some point.

Mr. DEFAZIO. Right, but again, these are green fields. We are not talking about maintenance-repair kind of things here.

Mr. BLAIN. The Green Field Project includes a construction, the design——

Mr. DEFAZIO. No, I am talking about we have a totally deteriorated 20th-century infrastructure in this country.

Mr. BLAIN. Right.

Mr. DEFAZIO. We have, you know, over a trillion dollars of deferred maintenance. That is not really what we are talking about here.

Mr. BLAIN. Not what we have done, no.

Mr. DEFAZIO. No. OK. And then, here is an example for Ontario. We just built a new courthouse in Eugene, Oregon. It came in on budget, $89 million, a little bit extravagant, in my opinion, but anyway, hey.

You built a courthouse for $351 million that could have been built for $255 million. What is the risk in building a courthouse if you have a good contractor and you have a good design and you come in on budget?

You paid 37 percent more. That would have meant here in America if we adopted this model and we imputed some risk that did not exist because we had a contract that came in on time, on budget; we would have paid another 40 million bucks for it.

Mr. MORLEY. So I think we could definitely talk about specific examples. I think in general——

Mr. DEFAZIO. No, but let us talk about the courthouse. What is the huge risk that we are shifting that needed to be shifted to pay a huge premium?

Mr. MORLEY. So I would probably not agree with it that you have a huge premium. I think a number of things that we have done around our courthouse projects have been quite positive. We actually——

Mr. DEFAZIO. Oh, ours is winning international awards. It is very positive. The point is we had a design. In this case it was not design-build. We bid it out competitively to the private sector. We got a good price. They came in and they met the contract. So we did not add in some huge risk premium. Why would we want to add in a risk premium for something as simple as building a courthouse?

Mr. MORLEY. Well, I would say congratulations. That is an excellent project.

What we have found is that there has been concerns in doing these projects, particularly because we have also been consolidating courthouses from different regional areas to create more efficiencies, to save on life-cycle costs over the lifetime of the——

Mr. DEFAZIO. Right. Well, thank you.

But the bottom line is, and I just go back to Dr. Siemiatycki. I mean, what do you think about the courthouse example? I am just trying to understand why I would want to do that, why I would want to impute risk and pay more to someone to do it that way.

Dr. SIEMIATYCKI. I think that is an ideal example of if you can manage risk, it is a lot cheaper than transferring it, and it does not mean that every example and every experience will be as good as yours, and we know that projects do often go over budget.

Mr. DEFAZIO. Right.

Dr. SIEMIATYCKI. But if you have the skills to manage them and you use the best contracting approaches, you will be getting cheaper infrastructure. Public-private partnerships are not a cheap way to deliver infrastructure, and so what I have been advocating is come up with better ways to manage those risks. Use ways that do not require expensive private financing, expensive transaction costs, expensive risk premiums built into those agreements.

And if you look at my paper, the Auditor General of Ontario for an earlier hospital program commented that they thought 13 percent risk premium was too high. They said that the Peterborough Regional Health Centre, a hospital built under traditional procurement approach during the same period, was built for about 5 percent of the total contract value.

So it is the same issue that you are raising, that if we can get that for lower cost and we can actually deliver what we say, there is savings to be had there. Public-private partnerships are not cheap. They give you certainty, but you pay for it.

Mr. DEFAZIO. Thank you.

Thank you, Mr. Chairman.

Mr. BARLETTA [presiding]. Thank you. Any more questions?

First I would like to thank all of the panel today. It was very interesting, and we appreciate your time and your insight.

With that the meeting is adjourned.

[Whereupon, at 11:43 a.m., the panel was adjourned.]

Delaney Opening Statement for P3 panel April 8, 2014

Chairman Duncan, Ranking Member Capuano, and esteemed colleagues on the P3 Panel:

Thank you for inviting me today to speak about public-private partnerships, the international experience, and my legislation to create a large-scale infrastructure finance entity to finance infrastructure projects here in the United States.

As today's subsequent panelists will no doubt explain in great detail, other countries have taken the lead in using public-private partnerships to build their infrastructure, and we in the U.S. are just starting to catch up. Public-private partnerships can be used to provide a much needed capital boost to fund our infrastructure projects in certain circumstances. But in looking at the international experience around P3s and private capital held overseas alongside our infrastructure needs here at home, I thought it might be productive to highlight my legislation which uses a public-private model to provide up to $750 billion of infrastructure financing for our infrastructure projects.

My bill, H.R. 2084: the Partnership to Build America Act, creates a $50 billion infrastructure financing entity that isn't capitalized in the traditional way, by the government putting in the money. Instead this entity, called the American Infrastructure Fund, is effectively created as a public private partnership, with the $50 billion of capital being put in by the private sector in exchange for a one-time tax break. Specifically, the American Infrastructure Fund would sell 50-year bonds that pay a fixed interest rate of only one percent. The bonds in and of themselves would be a bad investment, but U.S. based multinational corporations will be incentivized to buy them because for every dollar of bond they purchase, they will be able to repatriate a certain amount of their overseas earnings tax free. That multiplier of how much they repatriate compared to bonds purchased will be determined by auction, but we expect that ratio to be around 4:1. The company can then sell the bonds—which you'll remember are a bad investment on their own—at a huge loss. If they sell them for around 20 cents on the dollar, then the "effective tax rate" of their loss on the bonds over the tax free repatriation will be in the 10%-15% range. This brings about $200 billion back from overseas into the U.S. economy in addition to the capitalizing the American Infrastructure Fund.

The $50 billion of capital in the American Infrastructure Fund can be safely leveraged at a 15:1 ratio to provide $750 billion of infrastructure financing, mostly in terms of low-cost bond insurance for muni-bonds, but also for low-cost loans. Access to low cost capital is important for states and municipalities to build their infrastructure, and expanding this access will pave the way for the increased infrastructure investment we desperately need. Additionally, the Partnership leverages private capital by encouraging public private partnerships by requiring a certain percentage of the projects to be PPPs.

The legislation is very bipartisan. In the House, we have 31 Republicans and 31 Democrats on the bill. In the Senate, they have 6 Democrats and 7 Republicans. The bill is also supported by a bipartisan group of think tanks and other stakeholders. As we look for ways to move the Surface Transportation Reauthorization forward and ensure solvency for the Highway Trust Fund, we

should do so from the starting point that we need to INCREASE our infrastructure investment, not merely maintain the status quo which has left our infrastructure in its current deficient state. The bipartisan Partnership to Build America Act is teed up to do just that.

I know that two cosponsors of the bill are on this panel, Congressman Sean Patrick Maloney and Congressman Scott Perry. I'd like to end by thanking them for their support on this legislation, and thanking the panel for allowing me to testify. I'd be happy to answer any questions you have about the bill.

Testimony of

Dr. Larry Blain, Chairman of the Board of Directors

Partnerships British Columbia

On

The International Experience with Public-Private Partnerships

Before the

Transportation & Infrastructure Committee of the U.S. House of Representatives

April 8th, 2014

April 2, 2014

Good morning.

I would like to comment today on Canada's experience with the delivery of performance-based infrastructure and, within that, our particular experience in the Province of British Columbia.

In 2002, the Premier of British Columbia announced the creation of an agency (Partnerships BC) to deliver a partnership program, and its first PPP project, the Abbotsford hospital and cancer centre. A private partner would design, build, finance the project and maintain the facility for 30 years. The public health authority would retain ownership of the building and would provide the clinical care and be accountable for programming decisions. The government's decision was based on international experience demonstrating that the private sector could bring efficiencies and innovation to a major capital project, and would take commercial risks that could be better managed by business rather than the government.

At the time, experience with the performance-based approach to the procurement of infrastructure was in the United Kingdom and Australia. So to undertake the project, Partnerships BC examined documents and best practices from the UK; hired Partnerships UK as an advisor; and used design and legal advisors from Australia. Bidders came from outside Canada and combined with local Canadian-based construction companies. The financiers and the capital came from outside Canada from more mature markets.

The hospital project was completed on time and on budget, and led to a value-for-money proposition when compared to traditional procurement. The users of the hospital - clinicians, patients, visitors - rave about the progressive design and user-friendly atmosphere.

Since 2002, the Canadian performance-based partnership market has evolved to becoming one of the most advanced and attractive in the world. To date, there have been more than 200 projects that are operational, under construction and in procurement. Of the 10 Canadian provinces, six have agencies focused on partnership procurement. Local governments across the country are using performance-based procurement for major projects. The Federal government formed PPP Canada as a crown corporation to partially fund partnership projects proposed by provincial, territorial and local governments, and to advise on the procurement of major Federal capital projects.

Based on a review of partnership projects in operation or under construction from 2003-2012, a recent report from the Canadian Council for Public-Private Partnerships highlights the following cumulative economic impacts:

- 517,430 total full-time equivalent (FTE) jobs, including 290,680 direct FTE jobs
- $32.2 billion in total income/wages and benefits, including $19 billion in direct income/wages and benefits
- $48.2 billion in total gross domestic product (GDP), including $25.1 billion in direct GDP
- $92.1 billion in total economic output, including $51.2 billion in direct economic output
- $9.9 billion in cost savings
- $7.5 billion in tax revenue to government.

As governments moved into performance-based procurement, the private sector responded. International developers set up Canadian operations. Canadian developers expanded their capacity to do partnership business. Canadian construction companies became members of bidding consortia rather than contracting directly with government. Business and legal advisors developed performance-based expertise. The Canadian banks developed a capital market for loans and bond issues. Canadian pension funds and life insurance companies, seeking long-term high quality investments, added infrastructure to investment allocations.

Looking back over this period of development, the core benefits of performance-based infrastructure procurement that have emerged for elected leaders and public sector project owners are:

1. Planning discipline and preparation. Performance-based infrastructure projects require comprehensive and long-term definition, costing and risk assessment. Many pitfalls are avoided before a shovel hits the ground.
2. Certainty. Projects are on or under budget, and on or ahead of schedule, and key risks are assumed by the private partners. This is a key benefit of performance-based, financially-motivated contracting.

3. Life-cycle asset management. In a performance-based approach the private partners have to maintain and rehabilitate the asset over 15-30 years, and they have to leave the asset in the required condition or face financial penalties.
4. Efficiencies and innovation. Competition and the profit motive can lead to startling results, where the winning proposal provides solutions that the public owner never contemplated. This happens over and over again.

It is also important to emphasize what partnerships are not, at least in Canada. A partnership does not need to be associated with a new source of revenue. We have performance-based roads that are not toll roads. We have non-performance-based roads that are tolled. And we have partnership projects for bridges that are tolled but the public owner takes the toll risk. And to be absolutely clear: a performance-based infrastructure project is not a free project. The obligation of the owner to make performance payments over the life of the contract becomes a debt obligation or a contingent liability of the owner. The project is accounted for on the government's books. Finally, performance-based infrastructure works best, and generates the most benefits, as new, greenfield projects, and should not be confused with the privatization of existing assets.

I would like to conclude with a summary of what government can do to create a successful and attractive performance-based infrastructure market. And a market that is successful and attractive is one that can be characterized as having an informed and disciplined owner; fair and transparent procurement processes, and an ample supply of aggressive and competitive bidders. The conclusions here are based upon the Canadian experience, and I don't necessarily prescribe them in your context here.

First, a policy framework driven by political commitment is critical. In Canada, at the Federal level and in many provinces, including British Columbia, the cornerstone of policy is the requirement that for projects over a certain amount ($50 million in B.C.) a performance-based approach has to be considered in the planning process. This provides a great deal of discipline across government. An interesting capital planning policy development within the United States is taking place within Westcoast Infrastructure Exchange, which includes Oregon, California, and Washington (and also British Columbia). Within the Exchange, each jurisdiction is examining its capital planning policy, and Oregon, for example, has recently passed a law which now requires performance-based review by the Department of Treasury for projects above $50 million.

Second, the six provinces in Canada that are undertaking partnership projects, and the Federal government, have created institutions that are focused on the planning and delivery of performance-based infrastructure projects. These organizations vary across the country but what they have in common is that they provide services across government in all sectors and

they provide a memory of guidance documentation. Each agency provides a single interface with the private sector, and provides a consistent approach for that government across all sectors. They also talk with each other, which serves to provide a degree of consistency and standardization across the country, although, I repeat, they do differ. The Westcoast Exchange is contemplating an exciting approach to achieving the same end. It is proposing a certification process whereby projects in procurement can be certified by the Exchange as following best practices, which will provide great comfort to bidders and thereby heighten the appeal of that market.

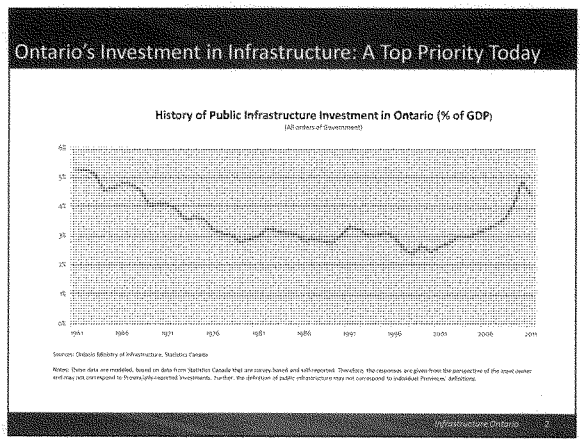
Third, the greater the flow of partnership projects in a market the greater the appeal of that market to bidders, as they can amortize the cost of entering and sustaining a presence in the market across a greater number of projects. Bidders typically do not limit themselves to a single sector and, therefore, a market that has a multi-sector approach will be more appealing. British Columbia has a population of approximately 4 million, and since 2002 there have been more than 40 performance-based projects amounting to more than $17 billion in total capital cost. Starting essentially with projects in the health care and transportation sectors, the range of projects has expanded to include: rapid transit, sports centre, an electric generating powerhouse, water and wastewater treatment plants, waste-to-energy plants, social housing, correctional facilities, a university campus, worker's accommodation facilities, an airport, and a high security government building. This approach gives B.C. much more attention in the market than would be warranted if the focus remained limited to just one or two sectors.

Finally, technique in the design of performance-based infrastructure procurement can have a powerful effect in generating value-for-money. For example, it is critical to the effectiveness of a performance-based contract that equity investors and lenders provide capital such they are fully exposed to the risks they take, and that government as owner is not exposed to these risks. It is equally important that the amount of private financing be "optimized" such that investors do not receive a return on capital that is not at risk. Accordingly, B.C. projects are characterized by combinations of private capital and public grant contributions, the latter typically financed by government borrowing.

Another example is in the evaluation process, where bidders are given "price adjustments" if they come up with an innovation that reduces costs unrelated to specific project, say by lowering clinical costs through an innovation in hospital design. Improved technique in project design is a by-product of having an agency with experience and expertise.

This completes my testimony and I appreciate the opportunity to appear before the Committee.

Testimony of David Morley, Vice President,
Infrastructure Ontario



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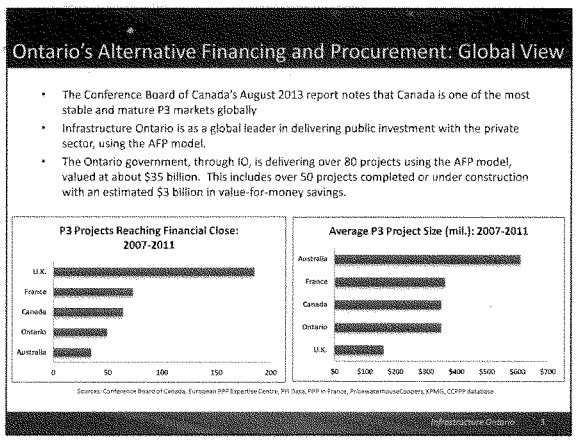

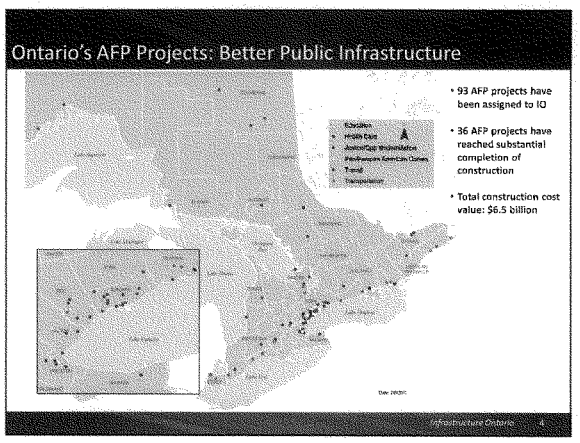

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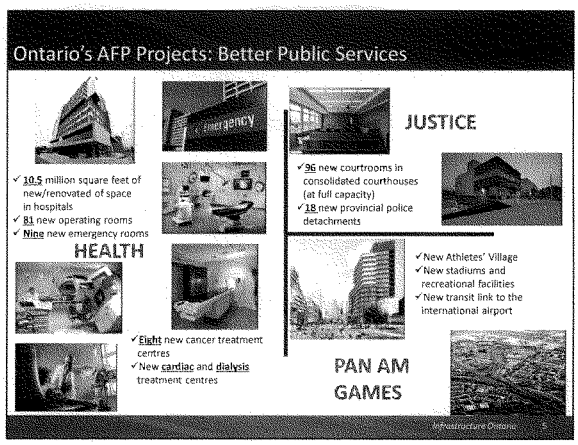

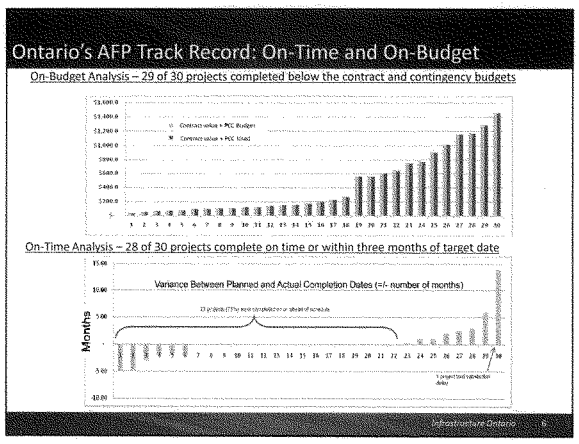

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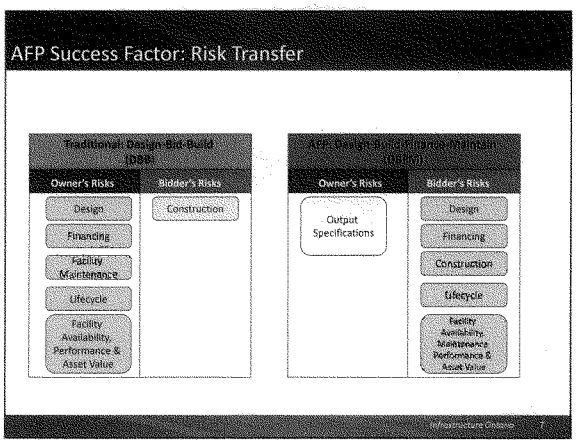

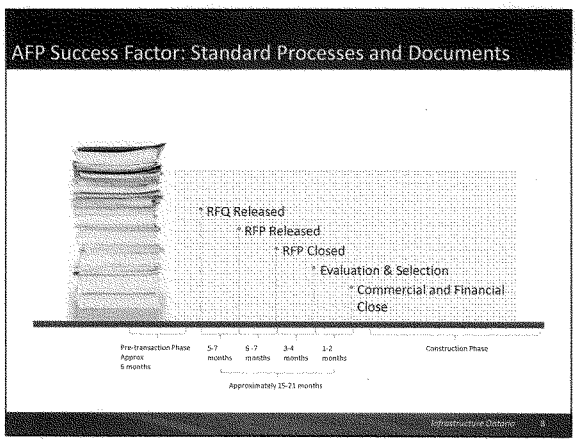

Testimony of David Morley, Vice President,
Infrastructure Ontario

Public-Private Partnerships in Canada: Economic Benefits

Total Economic Impacts of the Total P3 Project Value of Infrastructure P3 Projects in Canada, All Sectors, 2003-2012

(Intervistas for the Canadian Council for Public Private Partnerships)

Type of Impact	Employment (Full-Time Equivalent Jobs)	Income/ Wages & Benefits ($ Millions)	GDP ($ Millions)	Economic Output ($ Millions)
Direct	290,680	$19,010	$25,140	$51,170
Indirect	133,690	$8,440	$12,510	$23,860
Induced	93,060	$4,760	$10,410	$17,050
Total Canada	***517,430***	***$32,210***	***$48,160***	***$92,080***

Notes
* Results are based on total P3 project value of projects and are presented in 2013 dollars.
** Applies to 121 projects with financial close dates between 2003 and 2012. Results reflect data available as of August 2013.

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Positive Third-Party Statements

InfraAmericas US P3 Infrastructure Forum 2013

Infrastructure Ontario turns to large LRT projects to keep P3 pipeline moving

"Ontario successfully addressed the need for new hospitals with P3s. Now it is addressing the need for urban transit lines."

THE JOURNAL OF COMMERCE

Public-private partnerships working as intended, new report finds

PROJECT FINANCING

Infrastructure Ontario is the deal flow leader

"Infrastructure Ontario managed to close seven projects during the worst of the financial crisis last year."

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Testimony of
Cherian George, Managing Director (Americas)
Global Infrastructure & Project Finance, Fitch Ratings

On

The International Experience with Public-Private Partnerships

Before the

Transportation & Infrastructure Committee of the U.S. House of Representatives

April 8th, 2014

Good morning, Mr. Chairman and distinguished members of the Committee. On behalf of Fitch Ratings, thank you for this opportunity to provide our views on the international experience with Public-Private Partnerships.

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The PPP Landscape

PPPs have been a tool used by governments to deliver needed public infrastructure for centuries. Canals, rail, ferries, water systems, power networks and roads were built privately in exchange for tariff or toll-raising authority or government paid capacity-based revenue streams. Western governments following the Great Depression and post-World War II reverted to a public finance and procurement model for the development of large rail, road, port and airports. They used the public balance sheet and spread costs through the tax system.

The recent trend towards use of PPPs with public payment (availability-based) structures dates back to the Project Finance Initiative (PFI) of the U.K. government with more than 700 PFI transactions completed in the U.K. since the mid-1990s. Over the same period, a smaller but still substantial few hundred PPP projects, were financed in continental Europe. The World Bank, using a broad definition of PPP identified nearly 5,000 private infrastructure projects in low- and middle-income countries since 1984. These include management or lease contracts, concessions, greenfield projects and divestiture of public enterprises. These also include more than 800 water and sewerage projects, more than 1,400 transportation projects and more than 2,600 energy projects.

The track record has been mixed. Governments like Australia, Canada, Chile, Spain, France, Belgium, the Netherlands, Mexico and the U.K. have embraced the concept, and while problems have occurred, they have chosen to make changes and continue to pursue PPPs. The U.S. has been slow to embrace PPPs, but momentum finally seems to be building.

Although there have been many issues with PPPs , this is not necessarily an indictment on PPPs, but instead a reflection of the fact that the complexity of the assets and services presents challenges in finding the right public policy balance that fits within a business, legal and financial framework to bring best value to all parties, most importantly citizens. Further, local sentiments and conditions cause the public policy,

business, legal and financial considerations to differ from jurisdiction to jurisdiction, asset type to asset type, and from project to project. Added challenges are layered on by the political imperatives and schedules of elected officials that can create less than ideal PPP frameworks, and the profit objectives of private parties that justify participation despite inappropriate levels of risk.

While one can view PPPs as a glass half full or as a glass half empty, it is Fitch's view that the former is the better perspective. PPPs can provide public value, but need to be carefully crafted to address all stakeholder concerns. When PPPs are viewed to have failed, the issue is often inappropriate transaction design and application.

Responsibility Lies with Both Parties

Responsibility for problems with PPPs can be assigned to both the public sector (the grantor of the concession) and the private sector (the grantee of concession rights and responsibilities or the concessionaire). When issues of loss of control and too much profit arise, the responsibility lies squarely with the executive and legislative branches of the public sector (i.e. the grantor) that sets the rules of the game. When issues arise from project cost overruns, delays in completion, weaker demand, higher operating costs, lower profits, debt default and concessionaire bankruptcy, the responsibility lies largely with the private sponsor (i.e. the concessionaire).

A key tenet of a PPP is that most risks (permitting, land expropriation, preexisting site conditions, third-party commitments, unproven traffic and revenue, uninsurable event risks) that cannot be commercially mitigated at reasonable cost should be borne by the grantor and those that can be commercially borne at reasonable cost (completion, predictable traffic and revenue, operations, lifecycle maintenance, financing, insurable event risks.) should be borne by the concessionaire. The nature of a PPP also requires considerable interfacing between the two parties given the inability to anticipate every eventuality as the infrastructure is built, operated and maintained during the life of the PPP. This can result in friction when actual conditions differ from what might have been expected.

Success Demands Competence on Both Sides

A well-structured grantor team and a competent concessionaire are better positioned to respond and minimize the adverse effects to both parties. That is not always the case and this unfortunately creates an asymmetrical risk. Grantors are exposed to government/political risk from unanticipated and unplanned obligations, which results in concessionaire delays and costs that may be further exacerbated with the possibility of being only partially compensated or not compensated at all.

The concessionaire is then in the precarious position of deciding each time whether its claim or dispute is worth declaring an event of default. Dispute resolution mechanisms agreed to by the parties can significantly reduce this asymmetry. Nonetheless, an experienced concessionaire would likely build this risk into its required return profile. Concessionaire inexperience and poor performance is also a concern and can result in misestimation of its risk and ability to perform. In this case, the grantor is not obligated and not likely (except in exceptional circumstances where there is mutual benefit) to bail out the concessionaire (and its lenders).

Lastly, there are instances when risks are asymmetrically borne by lenders and not the grantor or the concessionaire. In some cases, grantors reserve their right to change their mind about the nature of the original transaction, which can result in changed scope with a renegotiation between the parties. The incentives of equity and debt may not be properly aligned here. The equity sponsor may be willing to accept lower or even some negative returns on a single project to secure a broader and longer term relationship with the grantor across other profitable projects. Lenders do not often benefit in that equation. In the absence of a requirement for lender approval, changes may be crammed down on lenders.

PPP Structures Have Proven to Be Resilient

While risks abound, one must keep in mind that most risks can be anticipated and mitigated. Many projects have been implemented in many jurisdictions. While the market continues to face new pitfalls, governments and the market have learned from prior missteps. The issues that arise, while problematic, are not deal breakers and sensible minds often prevail with enough mutual benefit remaining for both parties to take the transaction to term.

Defaults in PPP transactions have largely been the consequence of weak project economics (e.g. overestimated demand or poorly estimated costs) rather than friction between the parties or outright default by the grantor. However, there have been instances of grantors retroactively altering the economics of the concession to the detriment of equity and lenders. On balance, Fitch notes that most governments have a large infrastructure deficit and they see PPPs as a way to facilitate progress. This puts much needed pressure on key decision makers to plan better and hold up their end of the bargain as much as possible.

Aggressive Leverage Is a Vulnerability

PPPs and publicly managed assets globally have been vulnerable to the risks of over-leverage. This is further exacerbated in periods of extreme economic or financial stress. In instances of high leverage, the credit decline was greatest when projects with traffic and revenue forecasting risk significantly underperformed their revenue projections. In the U.S., these include the San Joaquin Hills toll road, SouthBay Expressway, Southern Connector, Santa Rosa Bay Bridge, Dulles Greenway, Indiana toll road and Pocahontas Parkway. In Europe, they include the Madrid Radiales in Spain and toll projects in Portugal. The Tequila Crisis in the mid-1990s caused numerous projects to default on their debt in Mexico. In Australia, the Cross City and Lane Cove tunnel projects were also exposed to this risk.

Lessons Learned

Learning from the mistakes of the past is a good way to begin avoiding new ones in the future. As a rating agency, we think about it from the perspective of the risks we analyze. Select examples follow:

Ownership and Sponsors -- Jarvis PLC Concessions, U.K.: Rapid growth from a small contractor to Britain's largest engineering and construction firm in 10 years. It began with its role in the British Rail privatization, then pushed aggressively into PFI projects (motorways and social infrastructure) achieving preferred bidder status by underbidding the risks, even when its finances were strained. Problems in construction ensued as did operational and safety issues, subsequent investigations and financial stress culminated in it having to divest its concessions.

Ownership and Sponsors -- Inversiones Alsacia,Chile: The state made changes to the concession framework post-financing to increase the exposure to demand risk and increase operational performance requirements. The equity sponsor was amenable to the changes to protect its market position to the detriment of lenders who face an elevated risk profile.

Legal and Regulatory -- 407 ETR, Canada: The established tariff regime with no caps or restrictions and the 99-year concession came under considerable criticism a few years after the inception of the transaction. The province challenged the ability to raise tolls unilaterally under the concession and refused to deny license plate renewals for toll violators. The legal challenges by the province went through the full appellate process and the concessionaire won every round. There was a final settlement with the concessionaire making some improvements and setting aside some funds for toll discounts.

Legal and Regulatory -- Chicago Concessions, U.S.: The city of Chicago executed a series of concessions over the past decade for its Skyway toll bridge, municipal parking garages and street parking. Long, 99 and 75-year concessions to maximize upfront payments to subsidize city operational deficits and very liberal tariff regimes have come under considerable criticism. Legal disputes in response to adverse city actions related to the garage and street parking transactions have resulted in an arbitration panel ruling against the city and requiring a $57.8 million compensation payment in the former case and a negotiated settlement with some give backs from both sides in the latter case.

Completion -- Jarvis PLC Concessions, U.K.: Underbidding of contracts resulted in financial strain; construction schedules began to slip and Jarvis blamed its subcontractors for the problems and did not pay them in certain instances leading to further cost increases, delays and legal disputes. However, despite the severe stress, the projects were completed with additional funding from Jarvis divestitures and additional project debt. All major project parties were adversely affected.

Completion -- Dudley Group Of Hospitals, U.K.: The project encountered additional costs during construction due to additional works being required as part of the refurbishment process. The contractor disputed the costs with the concession grantor, but continued to complete the project as required under the concession documents and design-build agreements. The contractor reported losses nearing GBP100 million on completion in 2005. It subsequently sued to recover costs from the grantor and is reported to have settled for GBP23 million.

Revenue -- Taiwan High Speed Rail, Taiwan: Actual traffic and revenue significantly below projections. Forecasting error on greenfied projects is a legacy issue that continues to manifest itself.

In Summary

Complexity Provides Strength; Challenges Remain: The challenge is transferring risk associated with the financing, construction, operation and lifecycle maintenance of an asset or service while maintaining flexibility. The protection to all parties is built into a complex suite of legal provisions that allocate risks to the party, theoretically best able to handle those risks. However, the unique nature of each asset or service and the unpredictable nature of future events can make the risk allocation subject to criticism in hindsight.

Value Garnered When Risks Anticipated: The public sector makes the rules, but sometimes it has trouble living by those very rules. Transactions that have significant advance planning and meaningful public involvement to identify key long-term public policy objectives and acceptable tradeoffs create a better risk reward balance, benefiting both the public and private sectors in the long run, and consequently, debt investors.

Legal Frameworks Are Key: When risks are allocated to parties best able to manage them economically, then the incentives of all parties are better aligned towards succesful execution. Key project risks in constructon or operation from unanticipated or changed conditions do occur and can be managed. When all parties have appropriate levels of risk, they are better incentivized to work together to find an amicable solution.

Size and Complexity Affect Deliverability: The larger the project and the greater the technical complexity, the more important it becomes that constructors and operators have the technical and financial wherwithal to bear the risk they are taking. At some level of size and complexity, the pool of qualified players and the ability to allocate risk can be limited such that the risk of nonperformance falls back on the public sector and consequently on lenders. An independent, qualified technical assesment of risk is very important to understanding this risk.

Forecasting Demand Is a Key Vulnerability: The probability of over-estimation remains high despite decades of experience with forecasting demand on transportation projects. Many greenfield projects over the years across many jurisdictons have suffered from this exposure. While other risks have been manifested in many cases, defaults on debt have largely been driven by undeperformance relative to original projections.

Macro and Industry Risks Remain: A key assumption is that a normal environment will prevail. However, severe recessions prior to project opening, political risk from high tariff increases, changes in approach from new administrations, lack of fulfillment of third-party commitments, among others, can all have a meaningful effect on the performance of a PPP.

Concession Renegotiation Risk Must Be Addressed: As time progresses and the needs of the population and government evolve, it should not come as a surprise that key terms may be subject to debate and renegotiation. It is important that adverse changes to terms be subject to lender approval. The alternative is often optional grantor concession termination, which is often unaffordable. Concession termination scenarios should be understood. While most concessions tend to to go to term, understanding the options available to government in the event of termination is important. For governments, very often this scenario is not a viable alternative given the lack of identifiable resources to pay compensation.

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Mr. Chairman, thank you for the opportunity to present our views. I am happy to respond to any questions you and the members of the committee may have.

FitchRatings

Infrastructure & Project Finance

Global

Global PPP Lessons Learned

Special Report

Fitch defines the term public-private partnerships (PPPs) broadly as any instance where certain rights and responsibilities — to finance, construct, expand, operate, and/or maintain a publicly controlled infrastructure asset, and charge user fees under an established tariff regime or receive a prescribed stream of public sector payments as compensation — are transferred to the private sector in frameworks including concessions or private ownership structures. This would include availability payment structures, as well as structures where price and demand risks are borne by investors.

Framework Provides Strength; Challenges Remain: The challenge is transferring risk associated with the financing, construction, operation and lifecycle maintenance of an asset or service while maintaining flexibility. The protection to all parties is built into a complex suite of legal provisions that allocate risks to the party, theoretically best able to handle those risks. However, the unique nature of each asset or service and the unpredictable nature of future events can make the risk allocation subect to criticism in hindsight.

Value Garnered When Risks Anticipated: The public sector makes the rules, but sometimes it has trouble living by those very rules. Transactions that have significant advance planning and meaningful public involvement to identify key long-term public policy objectives and acceptable tradeoffs create a better risk reward balance, benefiting both the public and private sectors in the long run, and consequently, debt investors.

Proper Risk Allocation Is Key: When risks are allocated to parties best able to manage them economically, then the incentives of all parties are better aligned towards succesful execution. Key project risks in constructon or operation from unanticipated or changed conditions do occur and can be managed. When all parties have appropriate levels of risk, they are better incentivized to work together to find an amicable solution.

Size and Complexity Affect Deliverability: The larger the project and the greater the technical complexity, the more important it becomes that constructors and operators have the technical and financial wherwithal to bear the risk they are taking. At some level of size and complexity, the pool of qualified players and the ability to allocate risk can be limited such that the risk of nonperformance falls back on the public sector and consequently on lenders. An independent, qualified technical assesment of risk is very important to understanding this risk.

Forecasting Demand Sometimes a Key Vulnerability: The probability of over-estimation remains high despite decades of experience with forecasting demand on transportation projects. Many greenfield projects over the years across many jurisdictons have suffered from this exposure. While other risks have been manifested in many cases, defaults on debt have largely been driven by undeperformance relative to original projections.

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Related Research

U.K. Social Infrastructure Performance Update (April 2012)

High Speed Rail Projects: Large, Varied and Complex (April 2010)

Large Projects, Giant Risks? — Lessons Learned — Suez Canal to Boston Big Dig (May 2009)

U.S. Toll Road Privatizations: Seeking the Right Balance (March 2006)

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The PPP Landscape

PPPs have been a tool used by governments to deliver needed public infrastructure for centuries. Canals, rail, ferries, water systems, power networks and roads were built privately in exchange for tariff or toll-raising authority or government paid capacity-based revenue streams. Western governments following the Great Depression and post-World War II reverted to a public finance and procurement model for the development of large rail, road, port and airports. They used the public balance sheet and spread costs through the tax system.

The recent trend towards use of PPPs with public payment (availability-based) structures dates back to the Project Finance Initiative (PFI) of the U.K. government with more than 700 PFI transactions completed in the U.K. since the mid-1990s, concentrated in social infrastructure. Over the same period, a smaller but still substantial few hundred PPP projects, were financed in continental Europe. The World Bank, using a broad definition of PPP identified nearly 5,000 private infrastructure projects in low- and middle-income countries since 1984. These include management or lease contracts, concessions, greenfield projects and divestiture of public enterprises. These also include more than 800 water and sewerage projects, more than 1,400 transportation projects and more than 2,600 energy projects.

The track record has been mixed. Governments like Australia, Canada, Chile, Spain, France, Belgium, the Netherlands, Mexico and the U.K. have embraced the concept, and while problems have occurred, they have chosen to make changes and continue to pursue PPPs. The U.S. has been slow to embrace PPPs, but momentum finally seems to be building.

Although there have been many issues with PPPs , this is not necessarily an indictment on PPPs, but instead a reflection of the fact that the complexity of the assets and services presents challenges in finding the right public policy balance that fits within a business, legal and financial framework to bring best value to all parties, most importantly citizens. Further, local sentiments and conditions cause the public policy, business, legal and financial considerations to differ from jurisdiction to jurisdiction, asset type to asset type, and from project to project. Added challenges are layered on by the political imperatives and schedules of elected officials that can create less than ideal PPP frameworks, and the profit objectives of private parties that justify participation despite inappropriate levels of risk.

While one can view PPPs as a glass half full or as a glass half empty, it is Fitch's view that the former is the better perspective. PPPs can provide public value, but need to be carefully crafted to address all stakeholder concerns. When PPPs are viewed to have failed, the issue is often inappropriate transaction design and application.

Responsibility Lies with Both Parties

Responsibility for problems with PPPs can be assigned to both the public sector (the grantor of the concession) and the private sector (the grantee of concession rights and responsibilities or the concessionaire). When issues of loss of control and too much profit arise, the responsibility lies squarely with the executive and legislative branches of the public sector (i.e. the grantor) that sets the rules of the game. When issues arise from project cost overruns, delays in completion, weaker demand, higher operating costs, lower profits, debt default and concessionaire bankruptcy, the responsibility lies largely with the private sponsor (i.e. the concessionaire).

A key tenet of a PPP is that most risks (permitting, land expropriation, preexisting site conditions, third-party commitments, unproven traffic and revenue, uninsurable event risks) that

cannot be commercially mitigated at reasonable cost should be borne by the grantor and those that can be commercially borne at reasonable cost (completion, predictable traffic and revenue, operations, lifecycle maintenance, financing, insurable event risks.) should be borne by the concessionaire. The nature of a PPP also requires considerable interfacing between the two parties given the inability to anticipate every eventuality as the infrastructure is built, operated and maintained during the life of the PPP. This can result in friction when actual conditions differ from what might have been expected.

Success Demands Competence on Both Sides

A well-structured grantor team and a competent concessionaire are better positioned to respond and minimize the adverse effects to both parties. That is not always the case and this unfortunately creates an asymmetrical risk. Grantors are exposed to government/political risk from unanticipated and unplanned obligations, which results in concessionaire delays and costs that may be further exacerbated with the possibility of being only partially compensated or not compensated at all.

The concessionaire is then in the precarious position of deciding each time whether its claim or dispute is worth declaring an event of default. Dispute resolution mechanisms agreed to by the parties can significantly reduce this asymmetry. Nonetheless, an experienced concessionaire would likely build this risk into its required return profile. Concessionaire inexperience and poor performance is also a concern and can result in misestimation of its risk and ability to perform. In this case, the grantor is not obligated and not likely (except in exceptional circumstances where there is mutual benefit) to bail out the concessionaire (and its lenders).

Lastly, there are instances when risks are asymmetrically borne by lenders and not the grantor or the concessionaire. In some cases, grantors reserve their right to change their mind about the nature of the original transaction, which can result in changed scope with a renegotiation between the parties. The incentives of equity and debt may not be properly aligned here. The equity sponsor may be willing to accept lower or even some negative returns on a single project to secure a broader and longer term relationship with the grantor across other profitable projects. Lenders do not often benefit in that equation. In the absence of a requirement for lender approval, changes may be crammed down on lenders.

PPP Structures Have Proven to Be Resilient

While risks abound, one must keep in mind that most risks can be anticipated and mitigated. Many projects have been implemented in many jurisdictions. While the market continues to face new pitfalls, governments and the market have learned from prior missteps. The issues that arise, while problematic, are not deal breakers and sensible minds often prevail with enough mutual benefit remaining for both parties to take the transaction to term.

Defaults in PPP transactions have largely been the consequence of weak project economics (e.g. overestimated demand or poorly estimated costs) rather than friction between the parties or outright default by the grantor. However, there have been instances of grantors retroactively altering the economics of the concession to the detriment of equity and lenders. On balance, Fitch notes that most governments have a large infrastructure deficit and they see PPPs as a way to facilitate progress. This puts much needed pressure on key decision makers to plan better and hold up their end of the bargain as much as possible.

Aggressive Leverage Is a Vulnerability

PPPs and publicly managed assets globally have been vulnerable to the risks of over-leverage. This is further exacerbated in periods of extreme economic or financial stress. In instances of high leverage, the credit decline was greatest when projects with traffic and revenue forecasting risk significantly underperformed their revenue projections. In the U.S., these include the San Joaquin Hills toll road, SouthBay Expressway, Southern Connector, Santa Rosa Bay Bridge, Dulles Greenway, Indiana toll road and Pocahontas Parkway. In Europe, they include the Madrid Radiales in Spain and toll projects in Portugal. The Tequila Crisis in the mid-1990s caused numerous projects to default on their debt in Mexico. In Australia, the Cross City and Lane Cove tunnel projects were also exposed to this risk.

Lessons Learned

Learning from the mistakes of the past is a good way to begin avoiding new ones in the future.

Fitch's Rating Criteria for Infrastructure and Project Finance (August 2012), together with specific-sector criteria addressing transportation and energy infrastructure, identify the major risks that projects face. When analyzing the project, Fitch considers factors such as project rationale, the sponsor and legal structure, completion risk, technology risk, operating and maintenance risk, plus risks to project gross revenue from volume, price or availability. Sovereign, political and industry risks are also considered together with future capital expenditure and information quality. Risk allocation is a key feature of project finance and Fitch assesses its impact on the project company, as appropriate for each risk factor, which in most cases will include a minimum level of creditworthiness consistent with the significance of the allocated risk.

The criteria lists typical stronger, midrange and weaker attributes associated with each major risk factor. Investment-grade ratings are typically associated with projects, structures and instruments displaying predominantly stronger or midrange attributes. The stronger attributes associated with the relevant risk factors and a select set of examples from lessons learned on PPPs that illustrates these risks in the following tables.

Project Risk: Ownership and Sponsors

Relevant Stronger Attributes — **Market leading "trade" owner/sponsor; deep experience of similar projects; history of support for investments; essential public service sponsored by central government; minimum ownership and change of control covenants through debt life; "long-term" business model; strong financial capacity.**

Project	Country	Positive/Negative Developments
Jarvis PLC Concessions	U.K.	Rapid growth from a small contractor to Britain's largest engineering and construction firm in 10 years. It began with its role in the British Rail privatization, then pushed aggressively into PFI projects (motorways and social infrastructure) achieving preferred bidder status by underbidding the risks, even when its finances were strained. Problems in construction ensued as did operational and safety issues, subsequent investigations and financial stress culminated in it having to divest its concessions.
Southbay Expressway	U.S.	Disputes with contractor in construction due to inadequate contract provisions. Sponsors contributed significant additional equity to complete.
Colombia Concessions	Colombia	High dependence on toll revenue from ongoing operations during initial years of a concession to make the financial plan work. This permitted concessionaires to reduce upfront equity or have no real equity at risk while revenue underperformance and concession performance risks were borne squarely by lenders. To guarantee completion of the projects to minimum standards, payments to concessioneires are now subject to projects becoming operational and achieving service and quality standards.
Inversiones Alsacia	Chile	The state made changes to the concession framework post-financing to increase the exposure to demand risk and increase operational performance requirements. The equity sponsor was amenable to the changes to protect its market position to the detriment of lenders who face an elevated risk profile.
Las Vegas Monorail	U.S.	The project significantly underperformed traffic and revenue. Debt default was inevitable; however, as a not-for-profit corporation with no long-term private or public equity, it lacked any institutional commitment to the asset once it was built leaving it "orphaned" with few incentives to work constructively with lenders for a satisfactory resolution. The casinos were the primary beneficiaries, but had little skin in the game.

Source: Fitch.

Project Risk: Debt Structure

Relevant Stronger Attributes — **Senior-ranking debt – interest and principal; fully amortizing debt; no de facto subordination; scheduled amortizing principal commencing after completion; interest deferral on junior debt; no cross default or acceleration; fixed interest rates; marginal or no bullet debt in the financing structure; nominally some bullets, but rating case cash flows show no or limited balance at nominal bullet maturity.**

Project	Country	Positive/Negative Developments
Indiana Toll Road	U.S.	Near zero interest rates caused the mark-to-market on the accreting swap (used to lower initial year debt service obligations) to spike well beyond expectations. The accreting liquidity facility increased rather than decreased the financial risk profile of the concession company.
Chicago Skyway	U.S.	This financing has a similar risk profile to the Indiana Toll Road with accreting swaps, but without short-term bank loan maturities that exacerbated the ITR transaction's risks. It does face refinance risk and is unlikely to benefit meaningfully from the monoline guarantee in place.
European Concessions	Europe	Exposure to refinance risk coupled with the timing of the recession caused high costs with material mark-to-market on swaps, which had longer maturities than the mini-perm debt.
Mexico Concessions (Pre-1994)	Mexico	Toll rate increases on a few projects were linked to foreign exchange movements in order to justify U.S. dollar-based debt. The Tequila crisis caused significant devaluation of the Mexican peso, which could not be reasonably passed on to users. This underscored the importance of financing public assets largely in local currency.

Source: Fitch.

Project Risk: Legal and Regulatory

Relevant Stronger Attributes — **Structure based on standard contracts or specific legislation supported by legal opinions; allocation of project and financial risk unambiguously evidenced by contracts; all relevant licenses, permits, or regulated status have been obtained and are valid to debt maturity; low structural complexity; legal framework includes financial rebalancing mechanisms in case of unforeseen events; strong track record of quick and fair resolution of litigation.**

Project	Country	Positive/Negative Developments
407 ETR	Canada	The established tariff regime with no caps or restrictions and the 99-year concession came under considerable criticism a few years after the inception of the transaction. The province challenged the ability to raise tolls unilaterally under the concession and refused to deny license plate renewals for toll violators. The legal challenges by the province went through the full appellate process and the concessionaire won every round. There was a final settlement with the concessionaire making some improvements and setting aside some funds for toll discounts.
Chicago Concessions	U.S.	The city of Chicago executed a series of concessions over the past decade for its Skyway toll bridge, municipal parking garages and street parking. Long, 99 and 75-year concessions to maximize upfront payments to subsidize city operational deficits and very liberal tariff regimes have come under considerable criticism. Legal disputes in response to adverse city actions related to the garage and street parking transactions have resulted in an arbitration panel ruling against the city and requiring a $57.8 million compensation payment in the former case and a negotiated settlement with some give backs from both sides in the latter case.
Elizabeth River Crossings	U.S.	Legal challenge on Commonwealth's authority to transfer right to toll crossings upheld in court. It is now under appeal and lenders are protected by concession terms placing the risks of this challenge on the grantor.
Spanish Concessions	Spain	The government is working with concessions to shore-up project companies'/minimize losses given aggressive government role in original concession arrangements. This fits with Spanish concession law that allows for economic rebalancing to compensate for unexpected events. However, it is unlikely to avoid some defaults/distressed restructurings given the severity of traffic decline.
Spanish Concessions	Spain	Lawsuits were filed related to land acquisition resulting in large, unanticipated land expropriations costs several years after acquisition.
French Concessions	France	Land expropriation risk, while a concessionnaire risk, is not a concern because the process relies on a robust legal framework for land valuation.
Perpignan-Figueras	France/Spain	The rail line between France and Spain was delivered on time, but Spanish authorities did not deliver the connection with the Spanish network. However, the concessionnaire received compensation and was kept whole.
Portuguese Shadow Toll Roads	Portugal	Government converted shadow toll roads into real toll roads with traffic risk borne by the government. The concessions were converted to availability-based structures. On balance, a good outcome for concessionaires given a lower risk profile, but returns were also lower relative to initial business plans
Hospital Sud Francilien	France	Litigation over delays and cost overruns mainly due to changes requested by the public sector. The main cause of disputes was driven by the political bias against PPPs and the fact that hospitals face chronic deficits, which is unrelated to the PPP. However, the size and complexity of the PPP affected its design and implementation making it a target for criticism; in retrospect not an ideal project for use of PPPs.
Chilean Concessions	Chile	The "Least Present Value Tender System" was created to protect public value by limiting concessionaire return while also incentivizing the concessionaire to perform and lower their risk by varying the length of the concession. Higher revenues than expected would shorten the concession and vice versa. While a good tool from a public policy standpoint, the public policy and credit framework was sound in that it insulated both the public and the private sector from the vagaries of revenue forecasting risk that neither party could control even though lenders faced some prepayment and delayed payment risk.
Inversiones Alsacia	Chile	The changes to the concession framework post-financing were not deemed to be adverse by the government so they were not accompanied by any compensation. Concession maturity was also unchanged. Lenders face a heightened risk profile in Fitch's view
SR 91 (Orange County)	U.S.	The high increase in toll rates in the first few years of the Managed Lanes operation was received poorly by users and increased the call by elected officials for the county to buy it back and lower the tolls. The county did buy it back in an amicable arrangement at what appears to still be a reasonable price 10 years later and even after the recent unexpected, deep recession. Elected officials in the county can be credited for understanding that the value of the asset is dependent on free flow traffic, which in turn is dependent on a de-politicized and systematic approach to tolling. The lanes continue to operate today with public acceptance that has resulted in a project to expand the lanes in neighboring Riverside County.

Source: Fitch.

Project Risk: Completion

Stronger Attributes

International engineering, procurement and construction (EPC) contractor; direct experience of similar projects; involvement of major local contractor; midrange to strong financial strength; facility management team with a history of delivering projects on time. Fixed price contract; cost risk appropriately allocated; substantial contingencies in cost budget; committed funding incorporates contingencies; cost estimates based on detailed upfront designs; well-conceived project management approach at existing facility substantially mitigating cost and delay risks; step-in rights; all permits, etc., in place; generous project schedule; contingencies for unexpected delays; little ground for public opposition; major parties have history of on-time completion; clear, binding and standard dispute resolution process; regular onsite inspection and detailed reporting; no connecting infrastructure risk; contractor experienced with technology.

Project	Country	Positive/Negative Developments
Jarvis PLC Concessions	U.K.	Underbidding of contracts resulted in financial strain; construction schedules began to slip and Jarvis blamed its subcontractors for the problems and did not pay them in certain instances leading to further cost increases, delays and legal disputes. However, despite the severe stress, the projects were completed with additional funding from Jarvis divestitures and additional project debt. All major project parties were adversely affected.
Metronet	U.K.	Model did not bring efficiency to the procurement and capital investment process because risks were not shifted through the contracts, and possibly by their nature could not have been. A failed, large PPP for modernization work needed to remedy decades of underinvestment in the London underground transit system. The National Audit Office concluded that the concession was unable to manage the supply chain, which was controlled by shareholders. Suppliers had power over scope of works, required payments for extra works undertaken and had a superior vantage point in understanding costs. Management could not control scope of works or cost evolution and could not support claims for compensation from London Underground for "efficient and economic works." Metronet went into receivership in 2007. Capital markets bondholders and monolines recovered fully, largely due to a 95% guarantee on certain debt amounts by London Underground supported by grants of 1.7 billion pounds from the department of transport.
East Lothian Schools	U.K.	The main contractor, Ballast PLC, went into receivership. Another contractor was engaged by the concession sponsors to step in and complete the project, which involved major refurbishment of the county's six high schools. Although delayed, the project was completed and delivered to East Lothian with no increase in cost to the grantor. Replacement and increased completion costs were met by a combination of surety bond, guarantees, debt and equity.
Southbay Expressway	U.S.	Significant delays, but contractor JV completed project while disputes were ongoing. Inadequate contract left project company exposed to additional costs that were not allocated to either the contractor or the grantor.
Eurotunnel	U.K./France	Delays and cost overruns due to complexity, the challenge of tunneling from two sides. Significant size, interfaces, technical issues. Cost overruns were significant and not clearly allocated to either the public grantor or to the contractors through fixed price contracts.
National Physical Laboratory	U.K.	National Physical Laboratory was the first PFI to default in 2004. In 1998, the Department of Trade and Industry entered into a 25-year PFI concession to build and manage new measurement laboratory facilities. Planned cost was GBP96 million funded through bank loans. Design errors and additional costs led to failure of the project and cancelation of the PFI contract. It is believed senior lenders experienced a loss of GBP18 million and the contractor lost considerably more.
Dudley Group Of Hospitals	U.K.	The project encountered additional costs during construction due to additional works being required as part of the refurbishment process. The contractor disputed the costs with the concession grantor, but continued to complete the project as required under the concession documents and design-build agreements. The contractor reported losses nearing GBP100 million on completion in 2005. It subsequently sued to recover costs from the grantor and is reported to have settled for GBP23 million.
Taiwan High Speed Rail	Taiwan	Suffered cost overruns and delays due to the hilly terrain, many tunnels and largely elevated structures. This raised financing problems and further delays with risk ultimately borne by the government.
Lane Cove Tunnel	Australia	This tolled tunnel project encountered significant construction issues when a geological condition caused the collapse of its roof in 2005 and damaged a multifamily residential building requiring its temperary evacuation. Design and installation issues were identified. It highlights the uncertainty of tunneling and in-the-ground risks. The contractor made the needed repairs and completed the project.

Source: Fitch.

Project Risk: Operations

Relevant Stronger Attributes

Management team with strong record of successfully managing asset; extensive experience with similar projects; international reach with local experience; multiple alternative operators available; ease of replacement; project is a "landmark" for the operator. No supply constraints for labor or materials; excellent transportation/utility infrastructure; connecting infrastructure in place multiple alternatives exist; commoditized nature of key supplies; low or no exposure to input costs.

Project	Country	Positive/Negative Developments
HSL Zuid	Holland	Operations were delayed due to required systems upgrades by the Dutch government.
Hospital Sud Francilien	France	Litigation over classification of expenditures as routine maintenance or vandalism. The former was required to be paid by the concessionaire while vandalism was a government/hospital risk under the agreement.

Source: Fitch.

Project Risk: Revenue

Relevant Stronger Attributes

Availability-based revenue from counterparty with strong financial capacity; limited deduction risk; limited delivery risk; fixed tariff "take-or-pay" contracts exceeding rated debt life; currency hedging; minimal reliance on demand or resource forecasts; matched costs and revenues; low-cost producer; demand at market prices; strong historical evidence of revenue patterns; lower volatility user-based revenues; diverse customer base; proven ability to pass on inflationary price increases.

Project	Country	Positive/Negative Developments
Southbay Expressway	U.S.	Actual traffic and revenue significantly below projections. Forecasting error further complicated by mortgage crisis and deep recession.
Pocahontas Parkway	U.S.	Actual traffic and revenue significantly below projections. Forecasting error further complicated by deep recession
Northwest Parkway	U.S.	Actual traffic and revenue significantly below projections. Forecasting error primarily.
SH 130 Segments 5 and 6	U.S.	Actual traffic and revenue significantly below projections. Forecasting error further complicated by deep recession.
Chicago Street Parking	U.S.	Public outcry from very high initial tariff escalations in the first few years.
Eurotunnel	U.K./France	Actual traffic and revenue significantly below projections. Forecasting error further complicated by emergence of low-cost airlines and a ferry war price.
Taiwan High Speed Rail	Taiwan	Actual traffic and revenue significantly below projections. Forecasting error.
High Speed 1 (Original)	U.K.	Actual traffic and revenue significantly below projections. Forecasting error and overestimation of socioeconomic benefits.
M1 Toll Road	Hungary	High toll rates for Hungarian standards while reasonable from a Western European standpoint.
Hospital Sud Francilien	France	The hospital is in dire straits and is struggling to pay the annual infrastructure charge. The private sponsor is seeking to renegotiate the scope and lower the charge with the government. Negotiations are in progress.
Lane Cove Tunnel	Australia	Optimistic traffic forecasts were made worse by high gas prices. The concession entered receivership in 2010. This default followed earlier PPP defaults on the AUD760 million Cross City Tunnel in Sydney and the AUD4.8 billion Brisbane Airport Rail Link also due to overly optimistic traffic expectations.

Source: Fitch.

Other PPP-Related Lessons Learned

Project	Country	Positive/Negative Developments
Colombia Concessions	Colombia	Artificially low bids with the goal of renegotiation a year or two after the concession is awarded and collusion among bidders. The government's inability to anticipate scope needs facilitated concession reopening and a return to profitability for the concessionaire. The government's PPP program has evolved over the years to limit this risk by establishing 20% limits to extensions and increased public resources and maximum 30-year concession terms.
Las Vegas Monorail	U.S.	The primary beneficiaries of the asset were casinos on one side of the Las Vegas Strip. There was the perception that it provided little value to the local population and consequently little community buy-in and limited commitment from elected officials to find a resolution or enhance investor recovery.
Stewart Airport	U.S.	Privatized airport sought to attract new carriers, which it was unable to do even during the strong growth years of 2002–2007. Despite large catchment area, the strong competition from well-connected major regional airports was a huge barrier. This indicated that to deal with future demand risks new airports initially need considerable public equity investment to become viable. While constrained, the existing airport network remains a competitor and a barrier to service at the new airport.
Indiana Toll Road	U.S.	State subsidies planned and still continuing to minimize public impact of toll rate increases and get public buy in. Long-term though, the public subsidies will end and users will face above-average toll rate increases due to the permitted toll regime.
Early California Concessions	U.S.	Though not a practical issue today, the state sought to limit equity returns by restricting the total rate of return on capital to 18%, but by not recognizing the role played by leverage and clearly defining capital as equity. The concession agreement effectively had no limit on equity returns.
UK PFI Concessions	U.K.	The "value-for-money" analysis done by the government to ensure that project finance initiative (PFI) was the most financially efficient procurement method, in retrospect, has been valid for only a small subset of projects. The problems included higher than expected equity returns and project scope that included the transfer of some risks that could have more efficiently dealt with by the grantor.
UK PFI Concessions	U.K.	To limit equity returns, Scottish Futures Trust (the authority responsible for procuring PFI projects in Scotland) has adjusted the PFI framework it uses with private sector equity investors earning a "reasonable" fixed return on their investment and with excess returns flowing back to the public sector.
UK PFI Concessions	U.K.	Newer PFI projects are notable for their significantly reduced scope with standardized and basic cookie-cutter designs (rather than state-of-the-art designs) for initial construction, the removal of "soft" facility maintenance (FM) services such as catering and security (which have been found to be extremely lucrative for contractors and equity sponsors) and leaving the only significant project responsibility post-construction as "hard" FM (i.e. building maintenance and renewal).
UK PFI Concessions	U.K.	Equity sponsors were observed flipping projects for significant capital gains post-construction, suggesting that the availability payment stream that the public sector grantor was locked into was overly lucrative once construction risks had been overcome. Later projects were notable for the inclusion of provisions allowing for the sharing of any realized capital gains in such a scenario with the public sector grantor.
DOIHI Hospital	Mexico	After almost two years of operations, the hospital is still operating at 15% of its capacity reflecting the lack of coordination in the public sector to direct patients to this much-needed facility. Meanwhile, the concessionaire benefits from a lower-cost profile and full contractual payments. Should this to continue, there is risk of political opposition to this transaction.

Source: Fitch.

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Committee on Transportation and Infrastructure
U.S. House of Representatives Testimony
April 8, 2014

Context

In recent years, public-private partnerships (PPPs) in Canada have received considerable international attention as a model that could be emulated abroad. There are some good reasons for this attention. Canada now has an active marketplace and established track record planning and delivering infrastructure PPPs. The current approach to PPPs in Canada can be dated to the mid 2000s, and primarily involves hospitals and health care facilities, followed by transportation infrastructure, prisons and courthouses, waste and water treatment assets, and education buildings. On projects delivered since the mid 2000s, Canadian PPPs have a strong reported record of projects coming in on-time and on budget; and to date there have been few of the forced contract renegotiations, public buyouts of failing projects, or outright project bankruptcies that have occurred with PPPs globally.

Key Success Factors

The success of the recent Canadian PPP approach lies in the application of partnership models that seek to leverage the comparative strengths of the public and private sector partners, and assign risks and responsibilities to the partner that is best able to manage them. This contrasts with PPP practices that are more explicitly designed to reduce the role of government and privatize infrastructure planning and provision. The Canadian approach to PPPs has a number of specific characteristics that contribute to its success.

First, in Canadian PPPs, government retains a significant role in identifying project priorities, developing performance specifications for projects that meet the public interest, and typically owning the underlying asset throughout the operating concession period. As well, PPPs in Canada are not seen as a one size fits all model where the same partnership approach must be used for all projects. Rather, various models of partnership and concession bundling have been selected for use depending on the characteristics of the project. This ranges from design-build-

finance type contracts where all private investment is repaid following the substantial completion of construction, to design-build-finance-maintain and design-build-finance-operate-maintain type deals that include long-term concessions lasting anywhere from 25-50 years.

Second, Canadian jurisdictions have set up special purpose agencies with the sole responsibility of evaluating the merits of PPPs for specific projects and procuring PPPs. These agencies are staffed with highly skilled procurement experts that have the experience to structure and manage complex deals. The agencies have also developed standardized procurement processes, bid documents and legal contracts that can speed up procurement and make the market more transparent, predictable and attractive to prospective bidders.

Third, PPPs are not being widely used as a way for cash strapped governments to raise new money for much needed public infrastructure. The overwhelming majority of PPPs in Canada do not include new user fees or other types of revenue raising tools that can directly repay all of the private sector capital investment and operating costs on the project. This is even the case in the highway sector, where tolls have been more common internationally. Rather PPPs are primarily a financing mechanism not a funding strategy, with initial private sector capital investment and operating costs repaid through government sponsored availability payments. The continued public investment in PPP projects means that Canadian governments can use PPPs to deliver all types of infrastructure that meet the public interest, rather than only a narrower range of projects that are able to recover their own costs through user fees.

Fourth, since Canadian PPPs are not primarily being driven by the objective of raising new private money for infrastructure, instead the leading motivation is achieving value for money. It is proposed that the public value of using PPPs is driven by a number of factors, including the realization of private-sector led innovation through the PPP procurement process; ensuring appropriate construction and project maintenance over a long-term operating period by only paying for performance; and perhaps most significantly, transferring project risks from the public to the private sector partner. To date, Canadian PPPs have focused primarily on transferring construction and asset availability risks to the private sector concessionaire, in an attempt to stem the trend of infrastructure mega-projects being plagued by endemic cost overruns and delays. Conversely, Canadian governments have commonly retained demand and revenue risks. By retaining demand and revenue risk, Canadian governments have been able to focus on integrating PPP infrastructure into the wider community, and reduce a common source of tension between the partners on PPPs internationally.[1]

Outstanding Issues with PPPs

Despite the identified strengths with Canadian PPPs, there remain some outstanding questions regarding their overall merits. First relates to the question of whether PPPs actually deliver value for money as compared to traditional project delivery and government financing. Based on a study that I conducted with Naeem Farooqi of government produced cost estimates of 28 Ontario PPP projects worth $7 billion, we found that PPPs have risk free base costs that are on average

[1] For a more thorough discussion of the impacts of transferring demand risk, see Siemiatycki, M. and Friedman, J. (2012). The Trade-offs of Transferring Traffic Demand Risk on Transit Public-Private Partnerships. Public Works Management and Policy, 17:2, 283-302.

16 per cent more than a comparable project would cost using conventional tendered contracts.[2] This is mainly because private borrowers typically have higher financing costs than governments. Transaction costs for lawyers, consultants, management costs and project monitoring also add 2-5 per cent to the final cost. And the private sector concessionaire charges a premium on facility construction and operations in order to take on the added risk of events that could lead to rising costs that would be their responsibility. A more detailed breakdown of estimated project costs and revenues for PPPs and a comparable traditionally procured project is provided for a sample of Canadian infrastructure assets below.

	Durham Courthouse, Ontario[3]		**Chief Peguis Trail, Manitoba[4]**		**Canada Rapid Transit Line, British Columbia[5]**	
	Traditional	PPP	Traditional	PPP	Traditional	PPP
Base Costs (CapEx/OpEx)	247	334	105.5	127.9	1,822	1959
Transaction/ Admin Costs	8	17	6.2	3.5	98	120
Financing Cost Premium	N/A	N/A	N/A	N/A	0	130
Revenue	N/A	N/A	N/A	N/A	(433)	(581)
Risk-Free Project Cost	**255**	**351**	**110.98**	**131.34**	**1,487**	**1,628**
Retained Risk By Government	157	25	67.8	16.4	263	30
Risk Adjusted Project Cost	412	376	178.78	147.8	1,750	1,658

In these comparative evaluations of PPPs and traditional procurement models, it can be seen that it is only after calculations of estimated risk retained by the government associated with each procurement model is considered that PPPs are assessed as providing better value than traditional procurement alternatives. Yet the 'risk premiums' assigned to the traditional procurement option when Canadian governments carry out *ex ante* value for money assessments have varied in size and sometimes been very high. For instance, the average risk premium added to the conventional procurement model in my study of 28 PPP projects in Ontario was 49% of the risk free base cost, making the PPP the better value on paper in every case examined. There is no publicly available empirical evidence that shows that this is the likely amount of risk based on past conventionally delivered projects. While it is advantageous to have cost certainty in project delivery, both politically and from a policy perspective, it appears that Canadian governments are paying a high price to achieve this in the absence of empirical evidence that can be publicly verified.

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[2] Siemiatycki, M. and Farooqi, N. (2012). Infrastructure Public-Private Partnerships: Delivering Value for Money? Journal of the American Planning Association, 78:3, 283-299.

[3] Infrastructure Ontario. (2007). Value for Money Assessment Durham Consolidated Courthouse. Retrieved March 5, 2014, from http://www.infrastructureontario.ca/What-We-Do/Projects/Project-Profiles/Durham-Region-Courthouse/

[4] Deloitte and Touche. (2011). Chief Peguis Trail Extension Project Value for Money Report. Retrieved June 7, 2013, from http://www.winnipeg.ca/publicworks/MajorProjects/ChiefPeguisTrail/PDF/2011-11-25-CPTEP-ProjectReportFinal.pdf

[5] CLRT. (2006). Canada Line Final Project Report. Retrieved June 7, 2013, from http://www.partnershipsbc.ca/files-4/documents/Canada-Line-Final-Project-Report_12April2006.pdf

There are other concerns that my research has identified with Canadian PPPs that I would like to briefly highlight. First, public accountability and engagement in decision making can be problematic during PPPs. Commercial confidentiality is often invoked to protect the integrity of the bidding process of the PPP procurement, and the capacity of the government partner to negotiate the best deal. This has made it difficult for members of the public to meaningfully assess the merits and trade-offs of projects in their communities while they are being planned.

Second, PPPs can be accompanied by a loss of public policy flexibility, even when the public sector partner retains demand and revenue risk. In cases where PPPs involve long-term concession agreements of anywhere from 25-99 years, this can lock in future public policy decisions. In particular, it can become difficult or costly to make changes to the facility structure or programing in the future, regardless of shifting community needs or the advent of new unforeseen technologies.

Third, there have been questions about whether PPPs are being presented as the 'only game in town' for governments of all level seeking to realize their infrastructure projects. In Canada, some agencies and municipal governments feel that they will not receive federal or provincial funding for their infrastructure projects unless they are structured as PPPs as opposed to other procurement alternatives. This is problematic because PPPs may deliver value in some setting but not others, and the choice of procurement model should be based on a project-by-project assessment.

Fourth, despite the important emphasis placed on PPPs as a driver of innovation, it is often unclear what improved innovations and efficiencies have been realized through the PPP procurement process, and whether these actually deliver public value. The value for money reports produced to assess the merits of each project do not commonly identify the specific innovations that were generated through the PPP procurement process, and how much savings or social benefit they deliver. Moreover, there are questions about whether similar innovations could be identified through a competitive design-build procurement process that involves the same private design and construction firms as when projects are delivered through bundled PPPs.

Conclusion

In sum, I see PPPs as a tool for delivering large-scale infrastructure projects, when appropriately designed and used in the appropriate settings. The key is determining in what settings PPPs make sense, and when traditional procurement or other alternative approaches should be used to provide better value. To enable such assessments, it is critical that United States policy makers have rigorous data on the frequency and magnitude of risk events on past infrastructure projects, specific project innovations that have been developed through PPPs, and the extent to which PPP procurements meet the public interest for transparency, community engagement in decision making, and long-term flexibility. As more PPP projects move through the delivery process and into operations, there is now a growing evidence base that policy makers and practitioners can draw on to learn the lessons from past experience, and tailor the next generation of PPP delivery to ensure that it delivers public value.

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