AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

S. HRG. 114–50

EXPLORING OPPORTUNITIES FOR PRIVATE INVESTMENT IN PUBLIC INFRASTRUCTURE

HEARING

BEFORE THE

SUBCOMMITTEE ON
HOUSING, TRANSPORTATION, AND COMMUNITY DEVELOPMENT

OF THE

COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

ON

EXPLORING THE POTENTIAL FOR GREATER PRIVATE INVESTMENT IN PUBLIC TRANSPORTATION AND EXAMINING THE ROLE SUCH PARTNERSHIPS CURRENTLY PLAY IN THE DEVELOPMENT AND DELIVERY OF TRANSPORTATION AND INFRASTRUCTURE PROJECTS

APRIL 29, 2015

Printed for the use of the Committee on Banking, Housing, and Urban Affairs

Available at: http://www.fdsys.gov/

U.S. GOVERNMENT PUBLISHING OFFICE

95–736 PDF WASHINGTON : 2016

For sale by the Superintendent of Documents, U.S. Government Publishing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

RICHARD C. SHELBY, Alabama, *Chairman*

MIKE CRAPO, Idaho
BOB CORKER, Tennessee
DAVID VITTER, Louisiana
PATRICK J. TOOMEY, Pennsylvania
MARK KIRK, Illinois
DEAN HELLER, Nevada
TIM SCOTT, South Carolina
BEN SASSE, Nebraska
TOM COTTON, Arkansas
MIKE ROUNDS, South Dakota
JERRY MORAN, Kansas

SHERROD BROWN, Ohio
JACK REED, Rhode Island
CHARLES E. SCHUMER, New York
ROBERT MENENDEZ, New Jersey
JON TESTER, Montana
MARK R. WARNER, Virginia
JEFF MERKLEY, Oregon
ELIZABETH WARREN, Massachusetts
HEIDI HEITKAMP, North Dakota
JOE DONNELLY, Indiana

WILLIAM D. DUHNKE III, *Staff Director and Counsel*
MARK POWDEN, *Democratic Staff Director*

DAWN RATLIFF, *Chief Clerk*
TROY CORNELL, *Hearing Clerk*
SHELVIN SIMMONS, *IT Director*
JIM CROWELL, *Editor*

SUBCOMMITTEE ON HOUSING, TRANSPORTATION, AND COMMUNITY DEVELOPMENT

TIM SCOTT, South Carolina, *Chairman*
ROBERT MENENDEZ, New Jersey, *Ranking Democratic Member*

MIKE CRAPO, Idaho
DEAN HELLER, Nevada
JERRY MORAN, Kansas
BOB CORKER, Tennessee
TOM COTTON, Arkansas
MIKE ROUNDS, South Dakota
DAVID VITTER, Louisiana

JACK REED, Rhode Island
CHARLES E. SCHUMER, New York
JON TESTER, Montana
JEFF MERKLEY, Oregon
HEIDI HEITKAMP, North Dakota
JOE DONNELLY, Indiana

TRAVIS NORTON, *Subcommittee Staff Director*
BRIAN CHERNOFF, *Democratic Subcommittee Staff Director*
JACKIE SCHMITZ, *Democratic Legislative Assistant*

C O N T E N T S

WEDNESDAY, APRIL 29, 2015

	Page
Opening statement of Chairman Scott	1
Opening statements, comments, or prepared statements of:	
Senator Menendez	2

WITNESSES

Jane F. Garvey, Chairman, Meridiam Infrastructure Fund, North America	4
Prepared statement	19
Colleen Campbell, Board Member, Infrastructure Ontario	5
Prepared statement	22
Response to written question of:	
Senator Vitter	99
Calvin E. Hollis, Managing Executive Officer, Countywide Planning and Development, Los Angeles County Metropolitan Transportation Authority	7
Prepared statement	76

EXPLORING OPPORTUNITIES FOR PRIVATE INVESTMENT IN PUBLIC INFRASTRUCTURE

WEDNESDAY, APRIL 29, 2015

U.S. SENATE, SUBCOMMITTEE ON HOUSING,
TRANSPORTATION, AND COMMUNITY DEVELOPMENT,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Subcommittee met at 9:30 a.m., in room SD–538, Dirksen Senate Office Building, Hon. Tim Scott, Chairman of the Subcommittee, presiding.

OPENING STATEMENT OF CHAIRMAN TIM SCOTT

Chairman SCOTT. I call this Subcommittee meeting to order, and good morning to everyone. Thank you for taking the time to be here.

This is the first meeting of this Subcommittee, so before we begin, I would like to welcome all Members and, in particular, Ranking Member Menendez. I know that he has a deep concern for the issues in our jurisdiction, and I look forward to working with you on housing, transit, and community development issues.

Today's hearing is entitled, "Exploring Opportunities for Private Investment in Public Infrastructure." I would note that Congress will meet in a joint session at 10:40 this morning. I have had the opportunity to share that with the witnesses already. So I will limit my remarks and ask the Ranking Member and our witnesses to do the same.

Last week, the full Committee heard testimony from the Acting Administrator of the FTA and transit industry experts about our Nation's transit needs. We learned that there is an $86 billion backlog of repair and maintenance costs for existing transit assets. According to FTA Administrator McMillan, this backlog grows by $2.5 billion a year.

Even though we cannot take care of our existing infrastructure, the Federal Government continues to invest in new infrastructure. Some of these new investments are in the same transportation systems that contribute to the massive repair backlog.

I think last week's hearings made clear that we need to reset our priorities in transit policy. We need to be smarter about the way we use our Federal transit dollars. MAP–21 made some progress in this area by requiring the FTA to do more to facilitate private investment in public infrastructure.

In a traditional model, a public entity contracts separately for the design, engineering, construction, maintenance, and operation of a transit system. In a P3, or a public-private partnership, some

or all of those responsibilities, and sometimes even the financing, are undertaken by a private sector entity with experience and expertise in the transportation industry. Properly encouraged, the private sector entity uses the synergies derived from managing all phases of the project to deliver the project on or ahead of schedule and oftentimes under budget. P3s have shown a lot of promise in other countries for improving project delivery and operation, and at the same time reducing the role of Government in infrastructure funding. The question is: Why aren't we seeing more of them in the United States? I do not believe the FTA has made the best use of its P3 mandates from MAP–21.

As this Committee looks forward to a reauthorization bill, I am interested to learn what more we can do to encourage private investment in public infrastructure and, where possible, joint development. At a time when our national debt is a little over $18 trillion, and with the current repair backlog of $86 billion, we need to start getting very serious about innovative methods of providing Government services.

I look forward to hearing the testimony of our witnesses, and I look forward to hearing Ranking Member Menendez.

STATEMENT OF SENATOR ROBERT MENENDEZ

Senator MENENDEZ. Well, thank you, Mr. Chairman, and congratulations on your role as Chairman of the Housing, Transportation, and Community Development Subcommittee. I look forward to working with you on all of these issues. The Subcommittee has an impact on people's mobility, its access to jobs, its quality of life, and these are critically important issues.

Today we are little bit more than a month out from the expiration of the Federal transit programs. During the development of MAP–21, we worked to enact a number of bipartisan policy reforms, programs, streamlining performance measures to enhance—to ensure, I should say, that Federal dollars were targeted to where they were needed the most, and that they were being used effectively and efficiently.

But MAP–21 failed to address, from my view, the central problem: a lack of adequate funding. The Banking Committee has heard from disparate groups—the Chamber of Commerce, labor, transit agencies large and small. Every one of them has testified that current funding levels are grossly inadequate. It does not matter whether you are talking about a major metropolitan heavy-rail system or a light-rail line serving a growing community or a bus route running through a small town. We need to invest more.

At some point all the efficiencies, all the cost savings, and all the reforms are simply not enough to make up for a lack of investment. Everything we have heard tells us we have reached that point.

The topic of today's hearing is exploring opportunities for private sector involvement in public transportation projects, and I am particularly interested to hear from our witnesses today what they have done in leveraging, for example, real estate assets to support transit projects that improve foot traffic for local businesses, attract new residents to a neighborhood, something in which the private and public sector have a shared stake.

One of the programs I worked to include in MAP–21 was a transit-oriented development pilot program. The Federal Transit Administration is still working to select recipients, but I believe it is an area that holds a lot of promise for the future.

But even the transit projects with some of the largest roles for the private sector still include significant amounts of public capital. If we want the types of private sector partnerships we will be hearing about today to work, we need to step up as well. The private sector on its own cannot build and maintain a nationwide transit network. And given that many of the existing transportation P3s are large, complex, mostly metropolitan mega projects, I think we should all be concerned about the potential that too great a focus on private investment runs the risk of leaving behind smaller or rural communities, low-income populations, the elderly, and persons with disabilities.

So it is my hope that we can look for ways to work with the private sector when appropriate and make certain the environment, workers, and social equity are protected and enhanced.

Mr. Chairman, thank you. I look forward to hearing from our witnesses.

Chairman SCOTT. Thank you, Ranking Member.

We will go to introducing our witnesses. I would like to say welcome to Senator Warren, who is not a part of the Subcommittee, but always part of the Banking Committee—thank you for being here; and Senator Crapo, who is a Member of the Subcommittee.

Our witnesses today, we have a fantastic group this morning. The first witness is Ms. Jane Garvey. She is the North America Chairman of Meridiam Infrastructure. In 2008, Ms. Garvey served on the transition team for President Obama with a focus on transportation policies. From 1997 to 2002, she was the Administrator for the FAA after earlier positions as Deputy Administrator of the Federal Highway Administration, Director of Boston's Logan International Airport, and Commissioner of the Massachusetts Department of Public Works. Ms. Garvey is currently Chairman of the Board for the Bipartisan Policy Project in Washington, DC.

Ms. Colleen Campbell serves on the Board of Directors for Infrastructure Ontario and as Vice Chairman of the Bank of Montreal Capital Markets. Ms. Campbell has over 30 years of experience in investment banking and debt capital markets, most recently as global head of debt capital markets for BMO Capital Markets. She is recognized as a leader in the development of model for infrastructure bond financing in the Canadian market and was named as a top bond investment banker in Canada in the Brendan Wood Journal "Outperformance in the Capital Markets 2006."

Finally, Mr. Cal Hollis is the Managing Executive Officer for Countywide Planning and Development at the Los Angeles County Metropolitan Transportation Authority. Mr. Hollis joined Metro in May of 2011, following a 26-year career as an adviser in public-private real estate transactions and managing principal of Keyser Marston's Los Angeles office and a 2-year stint as acting CEO and COO of the Community Redevelopment Agency of the city of Los Angeles. Mr. Hollis is the former Vice Chairman of the Urban Land Institute's Public-Private Partnership Council, a board member of

the Pasadena Heritage, and a member of Lambda Alpha. He and his wife are long-time residents of Pasadena, California.

Finally, without objection, your written statements will each be made part of the record, as will any extraneous materials that Members have for inclusion in the record. I would ask each of you to briefly summarize your testimony in 5 minutes or less.

Ms. Garvey, you are recognized.

STATEMENT OF JANE F. GARVEY, CHAIRMAN, MERIDIAM INFRASTRUCTURE FUND, NORTH AMERICA

Ms. GARVEY. Thank you very much, Mr. Chairman, Senator Menendez, Senator Warren, Senator Crapo. It is a real pleasure to be among you today.

I am the Chairman of Meridiam Infrastructure, and we are a long-term investor in public-private partnerships. Our investors are all public pension funds, and they are very committed to the notion of building public infrastructure. And while there is a broad range of definitions of P3s, P3s are fundamentally a legally binding contract between the public sector and a private company, which I will make the distinction this is not privatization. This is really public-private partnerships that we are talking about.

I will start by saying P3s are not for every project. As you mentioned, Mr. Chairman, P3s are best applied to large, complex, and very difficult projects. I would like to focus, for a minute or two, on the characteristics of what I have seen in my almost 30 years' experience in transportation as what constitutes successful P3 projects.

The first characteristic is that there has to be authorizing legislation in place, and this is true both for highways and for transit. There has got to be a clear sense and a clear message to the private sector of what is expected. Half of the States in the United States have the authorizing legislation, and many others are adding legislation as we move forward.

The second characteristic is choosing politically smart projects. What I mean by that is projects that are critically important to the community. The projects should be part of an overall or comprehensive and cohesive transportation plan. We are not interested in doing a sort of one-off project. We want a project that really is supported by the community. These are long-term partnerships that have to transcend several administrations, and having those sorts of partnerships and support in place is really critical.

That also implies that there has been a very robust discussion of public policy goals. It is important for the private sector to understand upfront what does the community want, what is the community's interests, what are the concerns about labor, what are the concerns about the environment, mobility, and if it is about economic development. Understanding those public policy questions up front is very critical and important.

Another aspect is a true understanding of risk sharing. I would say that is one of the most complicated issues when you look at P3s, understanding who is assuming what risk. Risk can be shared in many, many different ways. The public sector often takes the environmental planning and permitting risk while the private sector will assume the risks associated with design, construction, financ-

ing, operating, and maintaining the project through the life of the project.

The devil, though, is in the details. Sometimes the same sort of prescriptive approach that is used in traditional methods is applied to P3s, and I think that does cause delays and inefficiencies.

Certainly determining the revenue stream is critically important. We know what challenges transit faces. We know the wonderful programs that Congress has put in place, but often that is still not enough, and I would echo Senator Menendez's comment that a strong, robust Federal program is always needed for transit.

A number of localities have looked at this in a very different way and developed revenue streams at the local level. Los Angeles has done a great job with developing a sales tax that is dedicated directly to P3s in LA. We will hear more from Cal about that as well. So localities are taking on a number of these responsibilities themselves. Development rights, impact fees, the transit-oriented development—all I think offer great possibilities as well.

A final point I would say is the institutional capability of a community. Often we find that P3s are very complicated, difficult projects, and the first time a State or an entity has taken this on. So making sure they have the capability to do that, the kind of technical expertise is really critical and important. And I think that is something that Congress could help with as well.

I will end by saying, as I started, P3s are not for every project, and, frankly, if the only reason that a State is looking at a P3 is because of financial reasons, it is not the right reason. But P3s are one more tool. They provide fixed price for the public sector and allows the public sector to really think and plan as they move into the future. And it is really, I think—one of the most important aspects is the ability to build in life-cycle costs through the life of a project—really dealing with one of the greatest challenges that I think we face in infrastructure, and that is long-term maintenance costs.

With that, I will conclude and welcome any questions after the other panelists.

Chairman SCOTT. Thank you, Ms. Garvey.

Ms. Campbell.

STATEMENT OF COLLEEN CAMPBELL, BOARD MEMBER, INFRASTRUCTURE ONTARIO

Ms. CAMPBELL. Thanks as well for having me here today. As mentioned, I am a board member of IO, and I also chair their Investment Committee.

IO, just by way of background, is the Government of Ontario's Crown agency responsible for delivering major infrastructure projects using our made-in-Ontario P3 model. We call it "Alternative Financing and Procurement." I will refer to it as AFP. We are very proud of the work that IO does and believe it brings together the best in public sector investment and private sector expertise.

As Ms. Garvey mentioned, legislation is important. The agency was created in legislation and is accountable through our independent board of directors to the Ministry of Economic Development, Employment, and Infrastructure. The majority of the board

members of IO are from the private sector with a variety of experience in finance, law, construction, and general management. You referred to my own experience in financial markets. Specifically, I started BMO's infrastructure practice in 1997.

So IO itself was created 10 years ago when the province faced similar challenges to what you described for you today. The government has a very ambitious plan to rebuild its aging capital stock, and yet we had great concerns about procuring and managing these projects using a traditional method because, quite frankly, we had failed on many of those projects.

The government realized that complex infrastructure projects have big risks and that transferring those risks to the private sector was in the public interest. So rather than taking a status quo approach, we developed our own model to modernize how these could be done.

Over the last 10 years, IO's major projects division has completed 46 projects. The construction value of these projects is well over $10 billion.

A review of our track record conducted March of 2014 confirmed that 97 percent of the completed projects were delivered on or below budget, and 73 percent of those projects were also delivered within a month of their scheduled completion date, so a much better record than the more traditional method.

This model is obviously being deployed elsewhere. Both Australia and the United Kingdom have done so for quite some time. And we are also taking note of the progress being made in the United States. We are pleased to be partnered with the National Governors Association to assist in building P3 capability in the United States.

So there is a growing body of evidence that P3s are a responsible way for government to invest in infrastructure, and we just wanted to give a bit of a foundation for our discussion today to describe some of the core elements that make this approach successful.

First, we do not break large projects up into smaller projects and tender them separately. Breaking them up leaves enormous integration risks with the public sector.

Second, we do not pay until projects are complete, or at least we try to limit the amount we pay until completion. In some cases, we have to make interim payments.

And, third, we require builders to design the projects to meet our specifications and build to meet our objectives, and change orders to deal with deficiencies in the design are the private sector's responsibility.

And, finally, where appropriate, we hold builders accountable for the long-term quality of the asset by paying them a portion of the construction cost over time on what we call "Design Build Finance Maintain," or DBFM, contracts.

Private finance is a tool in the toolbox for government to ensure that the private sector has skin in the game and delivers results for government. In a sense, it is a cost of the risk transfer as arguably private sector financing costs are typically higher than the public sector. The point is the benefits outweigh the costs. That is value for money.

It is important to be clear: all of our AFP projects result in publicly owned assets; AFP is not privatization; and AFP is not a fundraising tool for government.

While IO's first 10 years delivering AFPs have been focused on social infrastructure, the next 10 years are anticipated to be dominated by civil infrastructure. We are now working on major roads, subway, and light-rail transit systems.

Ontario is a leader in AFP, and Canada is a leader in P3s globally. There is a strong industry within Canada that includes financial institutions, general contractors, architects, and engineers, all of whom are part of the success. There is a deep, efficient bank and bond market available to finance these structures, and this financing is available on a long-term basis to match the long life of the assets, thus eliminating refinancing risk.

It is important to note that last week the Governments of Canada and Ontario both delivered their respective annual budgets. Ontario committed $130 billion for investment in infrastructure over 10 years, with a focus on transport and transit. And the Federal Government created a $1 billion annual public transit fund that will be leveraged to deliver projects using AFP.

Equally important to the success of this model is the culture of transparency and fairness and the centralization of expertise that an organization like IO brings to the equation. A large part of our mandate is risk management. And like any risk management function, the oversight and independence that our organization brings to our ministry clients strongly supports the objective of on-time, on-budget delivery of high-quality infrastructure assets.

Our organization is the intermediary between the public and the private sectors. Our ministry clients trust us to execute on their behalf, and our private sector partners trust us to run a transparent and fair process.

I would be happy to discuss any aspects of our model so that we can help you advance the use of modern project delivery models in the United States. Thank you.

Chairman SCOTT. Thank you, ma'am.

Mr. Hollis.

STATEMENT OF CALVIN E. HOLLIS, MANAGING EXECUTIVE OFFICER, COUNTYWIDE PLANNING AND DEVELOPMENT, LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

Mr. HOLLIS. Mr. Chairman, Ranking Member Menendez, and Members of the Committee, thank you for the opportunity to be here today. I am responsible for Metro's real estate and joint development program in Los Angeles. The department houses the real estate acquisition group, our real estate asset management team, and the joint development program. The joint development program results in ground leases with private sector developers for the residential and commercial development of Metro property. The projects are often on or immediately adjacent to Metro's below- or at-grade rail stations, on park-and-ride lots, and similar underutilized properties. The Metro joint development program dates back to the early 1990s with Metro's first light-rail project.

To date we have completed 17 joint development transactions, which has resulted in over 2,000 residential units, approximately 30 percent of which are subsidized affordable housing units, the 300-room W Hotel in Hollywood, 800,000 square feet of retail space, and 600,000 square feet of office space. We have 3 additional residential projects that are under construction, 9 under negotiations, and another 14 to 20 sites that are under consideration for future development. Private sector demand is very strong for our well-located sites. With the implementation of five additional transit projects this year, additional joint development sites will be identified.

With regard to our board's policies and priorities, the board has established the following goals for its joint development program: first, to increase ridership; to encourage comprehensive planning and development around stationsites and along transit corridors; to reduce auto use and congestion through the encouragement of transit-linked development; to generate value to Metro through maximizing ground rent on Metro-owned properties; and to enhance land use, urban design, and economic development goals of the communities that we serve.

Typically, our joint development agreements are structured as long-term, nonsubordinated ground leases such that we maintain long-term control and ownership of the property. Lease payments have been structured as either prepaid lump sum leases or with annual payments with escalations. In certain cases, the projects have also made capital contributions for station modifications and additional transit enhancements. In the current fiscal year, our asset management group will generate over $12 million in revenue from property and the joint development group an additional $10 to $14 million in lease income. We believe a joint development program can provide significant benefits to transit agencies and the general public by: recouping a portion of the public investment in transit infrastructure, capitalizing on the land value enhancement created by that public investment; providing a dependable revenue stream to support operations; creating a platform for additional private investment, particularly in communities which to date have been struggling to attract such investment; and demonstrating how TOD principles as espoused by the Urban Land Institute, and others, can add both real estate value to public lands and reduce the dependency on the private automobile.

There are impediments to developing joint development programs. The first of those is the availability of land and capital for joint development. Typically, our experience at Metro is that major transit corridor projects seek to minimize land acquisition to preserve limited capital dollars for transit improvements. Metro has not applied for Federal FTA grants for joint development purposes in favor of reserving such grant opportunities for transportation improvements. Should a source of funding be available that was reserved or targeted specifically for joint development activities, Metro would be interested in these programs to expand our joint development program. With regard to financing tools that can be applicable to joint development, S. 797 and S. 880 are steps in the right direction.

Second, alignment of transit capital projects with real estate cycles is very difficult. It is most cost-effective to move forward with integrated joint development and transportation projects at the same time. This has been difficult for a variety of reasons, but not impossible to achieve. Where it is not possible, we attempt to mitigate the costs inherent in serial development by looking at station design from a future joint development perspective in addition to a transportation perspective such that future development is anticipated and not precluded or made more costly than necessary.

In conclusion, we believe Metro has developed a model for maximizing the return on transit infrastructure investment through joint development and proper stewardship of our other property assets in partnership with an active private sector.

Thank you for the opportunity. We would be happy to respond to questions of the Committee.

Chairman SCOTT. Thank you, Mr. Hollis.

I will start with the first of Ms. Campbell. I believe that we should do more to leverage public resources to address some of our infrastructure needs. Federal highway projects have been very successful in the P3 space. The same is not necessarily true for public transportation. I remember back in my days on county council where we were able to use a design-build public-private partnership to create a number of road projects that were very successful. It gave local government and the Federal Government predictability and certainty as we moved forward in some of the projects.

The one example that I am aware of, the P3 on the transit, is the Denver Eagle P3 project. However, this project did not receive expedited consideration, nor has the Federal Government waived any of the construction or financial management oversight requirements for the project. And as a result, what was supposed to be a project delivered through a streamlined and expedited process is still mired in Federal bureaucracy.

Ms. Campbell, the process for entering into an Infrastructure Ontario P3 seems quite different than what I just described, as does the timeline for review. Could you discuss the process that IO has in place for advancing projects? What kind of consideration do you give to the due diligence of private investment groups? And how much oversight of the actual construction process and the financials does IO exercise once a P3 is signed?

Ms. CAMPBELL. I will do my best. So just to be clear, the IO's role, we would deal with the ministry responsible for the given project. In this case it would be—you know, they would own the decision on whether to go ahead with the project. And so once that decision was made, IO is brought into procure and run the P3 process, and we have a very defined process for doing that in terms of what our role is and how we face the private sector.

And so once the project is designed, signed off, we work to come up with a budget for that through the traditional, and then we put it out to tender through what we call a Request for Qualifications as the first step where we—consortiums are formed, and in this case they probably would be financing as well, so they have financial partners as well as the construction partners. We shortlist that to a group of three groups once we are through the RFQ, and then

those three go away and over a 6-month period typically will come up with a competitive bid to both finance and build that.

It is a very defined process that they all respond to. It has got to meet all the requirements for—all the technical requirements and all the financing requirements. And at this stage, after 10 years, the process is quite well understood by the groups that bid on it, and so I would say it is quite formulaic now when you get into transportation projects versus hospitals. There are obviously very different risks. So it is a little more complex, but it is very well defined.

So without getting into the details on whether we look at the structures, we are very precise in terms of what the requirements are on the design. They are allowed to innovate within that if they can find a better way of building. But they have to provide to a standard kind of construction and design complement. And in that way, three prices are arrived at, and then we take a few months to decide which of those three we will pick to proceed with. But these are fully financed as well by them.

Chairman SCOTT. Thank you, ma'am.

Ms. Garvey, how does the private marketplace work the broader Federal process into their overall deliberations when deciding whether to invest in a P3 project? And is there a point at which the Federal process is considered to take too long and, as such, a firm like Meridiam would decide against investing? For example, would a P3 through IO be more attractive than one going through the Capital Investment Grant Program?

Ms. GARVEY. I think from our perspective, the first thing that we look at is where does it fit in in a transparency plan. And if it looks to be a critical part of the plan, that is incredibly important to us.

We have found, in terms of the Federal Government, sometimes we run into difficulties in trying to apply the TIFIA program. We have worked very closely with that. I think the key is in the whole discussion of how you are defining risk, and that is done very early on in the project.

If you are sitting down with the private sector and really understanding who is taking—or the public sector—who is taking which risk, I think that is critical. That is really important to understand.

The public sector understands the environmental process very well, so we tend to look at those projects that have already been through the environmental process, that have the environmental document if not fully in place, a draft in place, because that is a real document. Understanding that is sort of a threshold question for us. If the public is through the environmental process or have a draft in place, then there is a good indication that that project will continue. So that is generally how we judge the projects that we are going to engage in, that and whether it is a really critical piece of an overall transportation plan.

Chairman SCOTT. Thank you.

Ranking Member.

Senator MENENDEZ. Thank you Mr. Chairman. Thank you all for your testimony.

There has been some discussion in this Committee about whether the private sector can fill in the gaps where Government has fallen short, in particular the question of whether we can pass an-

other flat-funded transportation bill and ask the private sector to fill in the gaps.

So my first question, Ms. Garvey, your testimony notes that if the only reason a public sector agency is considering a P3 is for financial reasons, it is probably not the right model. Can you give us a little context to that? Discuss why that is the case.

Ms. GARVEY. I think the real advantage of a P3 is threefold:

One, you can move a project much quicker, and the private sector can finance it upfront. You still have to have a robust revenue stream, and I will get to that. But you can finance it upfront, often moving a project ahead many years before it might have happened or occurred ordinarily.

The second is the real sharing of risk that we talked about. The public sector takes on the risk that they are most comfortable with—that is, the environmental, the permitting, and those aspects—leaving the construction risks and the design risks to the private sector.

The third reason that I think it is really important is this whole notion of life-cycle costs. When I look at the infrastructure in this country, in my own State of Massachusetts, one of our great challenges is maintenance and long-term life-cycle costs. We have not always done as well on that.

When you look at a public-private partnership, although the public sector owns it, the private sector is only paid when they perform according to the performance standards, but the life-cycle costs are taken on by the private sector, and I think that is a real advantage. Those to me are the reasons why you would move to a P3.

Having said that, I fully agree with your assessment that a robust Federal program, a robust State program is absolutely needed. It is a partnership, and to think of this as taking the place of the public investment I think is probably not appropriate or not the best way to look at it. This is one more tool—as was said by one of the previous speakers, it is one more tool in the toolbox, but it should not be viewed as a panacea or the silver bullet.

Senator MENENDEZ. Thank you for those insights.

Mr. Hollis, let me ask you, your testimony focuses on an important point, not just better leveraging of existing resources but ways to actually create new revenue streams for transit agencies by leasing real estate to the private sector for residential or commercial development. So I think it is a creative approach.

Joint development produces a revenue stream for your agency, albeit a modest one compared to, I guess, your overall operation. How is your agency using that revenue? That is one question.

And, last, your testimony notes that although you have the option of using Federal transit dollars for joint development, LA Metro has declined to pursue that option, focusing instead on using those funds solely for transportation purposes. Should Congress consider dedicated funding for public-private sector joint developments? If you could put your microphone on.

Mr. HOLLIS. With regard to how we use revenues, all of our joint development revenues go into our general fund which supports operations, which helps keep our fares some of the lowest in the country. So it is a small piece, but it is critical because it is very flexible revenue, and we use it for operating costs of the system.

With regard to the availability of Federal funds for joint development, it is a permitted use under the regulations. We currently have a $5 billion construction program with five transit projects underway. Our board would like to see that be much larger. Every dollar is critical, and so where I would love to have extra dollars that I could round out a development site so we could do a better development, a more impactful development, our transit planners will be trying to minimize the footprint of that real estate that we acquire. So rather than having to go to funding a program that competes with capital dollars for our transit system, if there was a separate program that was dedicated to joint development, it would allow us to compete for those dollars, creates better projects, more valuable projects, therefore generating more operating revenues for our system.

Senator MENENDEZ. All right. I have other questions, but in deference to our colleagues, Mr. Chairman, depending how long we go, I might ask you to come back.

Chairman SCOTT. Absolutely.

Senator Warren.

Senator WARREN. Thank you very much, Mr. Chairman. Thank you for inviting me here today. And I want to thank our witnesses, all three of you, for your very thoughtful analysis.

You know, elsewhere we hear a lot of talk about public-private partnerships around infrastructure and claims that they will solve our infrastructure crisis. And so I just wanted to ask a question around focusing on the financing aspect.

These partnerships can provide capital to start a project, as you have talked about. But there is no magic here. The money must always be repaid, and the price must always include a healthy profit for the private company. Whether it is increased taxes to pay back a private loan, higher tolls on a bridge, or higher parking fees at the airport, the bill comes due; taxpayers must pay.

As the Federal Highway Administration noted in its report in 2010 regarding public-private partnerships, these programs "do not generate revenue, they require it."

Public-private partnerships have another problem. The profits are privatized, but when something goes wrong, sometimes taxpayers end up having to deal with the consequences. Bankruptcies, design changes, falling demand, huge cost overruns can eat up the supposed benefits of these deals.

So the question I would like to ask is: Since these projects are ultimate funded by the taxpayers for the benefit of private companies, do you agree that there should be strong Federal oversight to evaluate the costs, the risks, and the benefits of these programs? Ms. Garvey, how about if I start with you?

Ms. GARVEY. Yes, I think there certainly is an appropriate role for the Federal Government for oversight. Absolutely. But I will tell you there are two key pieces.

One is that in determining the sharing of the risks, the construction risks, for example, the design risks, those are all assumed by the private sector. So the kind of due diligence that the private sector has to do in order to make that happen is important.

Senator WARREN. Let me just stop you right there, though, and just ask the question: That is, if that is what the public requires.

There is nothing inherent in that that requires it, because we have seen the projects that have been the public-private partnerships that have exploded, that have gone very, very badly. And the risks all got shoved over to the taxpayers.

Ms. GARVEY. Well, actually, the one that I am the most familiar with would be the one in California, and in that case, the Federal Government did—I do not want to say "very well," but they were able to—the TIFIA program was able to recapture that. I think you are making a good point, that you have to be very clear in the contracts that you draw up. It absolutely has to be ironclad. And I would say that that is in the private sector's interest as well. You have got to have a clear contract.

I think we have learned a lot from the early days of P3s and certainly learned a lot from the Canadian experience as well. A clear, ironclad contract is absolutely essential. But you are right; you need a robust revenue stream. They have to be paid back.

Senator WARREN. Good. Thanks, Ms. Garvey.

Ms. Campbell?

Ms. CAMPBELL. I will try not to be competitive, but I disagree. And I think it is fine to talk about these things in the model and isn't it great, but if it is not done right, you will get extra costs and the downside of the risks. So it really is critically important.

And, you know, to go back to, I think, why it has worked—and we have had 10 years of learning, and starting from small things, working on hospitals for 10 years. If you do not structure the contracts right and you do not do your—and I do think you need a central authority. You cannot have everyone creating their own way, however that works, whether it is the State level or the Federal level. You have to have a Center of Excellence, and I think the Center of Excellence has to be independent from the owner of the asset. It is like I say, when you build a house—and in my case, my husband is the problem, not me. But you decide what you are going to build, and then all of a sudden he wants the fancy sound system or the bigger garage or whatever it is, and you have to say, "No, I am independent. I was told that you wanted to build this. We have procured this. We have priced this. We have a timeline for this. If you want to change it, we have to go back to the top of government. No meddling in the back room."

And what is equally important is that the oversight during the process and the selection of the partners and the structuring—and that is why the transfer of the financial risk to the private sector is critically important. And I know in our Governor General's report, we got the note on, you know, you paid these additional financing costs that you referred to, and there is no question the financing costs are higher for that entity than it would be if the government was raising the money directly. But without the transfer of the financial risk, you do not get the accountability for delivering. And so when they go offside, they own the risks of going offside.

Senator WARREN. Thank you.

And, Mr. Hollis, if I could ask you just to respond briefly, because I am over time, if that is all right, Mr. Chairman.

Mr. HOLLIS. Well, I cannot speak directly to the P3 program. I will say I agree with the speakers, and it is evident in the real es-

tate program. You need to have the right people with the right expertise to deal with complicated projects. P3 is a financing tool primarily, and if you do not have people that understand financing, the first X-number of deals are going to go bad. And you have to have the right people in the right place. That is why it is difficult for small agencies, I think, because they do not have the in-house expertise, and there needs to be some kind of regional entity that can gather that expertise together.

Senator WARREN. I want to thank you all, and I just appreciate your emphasizing here the importance of the Federal role and the importance of having excellent oversight. There is no free lunch here. Giving into the temptation of a short-term fix with private money and then paying for it with long-term taxpayer money not only does not create any new resources for infrastructure; in fact, it makes the problem worse over time.

We need more up-front taxpayer investments in infrastructure, period. Public-private partnerships will not solve that problem, and if governments are going to turn to public-private partnerships, the need to exercise the kind of careful oversight our witnesses have talked about is critical to ensure that taxpayers are not left holding the bag.

Chairman SCOTT. Thank you very much.

Senator WARREN. Thank you, Mr. Chairman.

Chairman SCOTT. Yes, ma'am.

Mr. Hollis, during the hearings last week, the Committee focused on the growing state of good repair backlog. It strikes me that one way to address some of the backlog is to look more seriously at the potential to generate nontraditional sources of revenue from transit investments, also known as "value capture."

Today transit systems often only look at traditional revenue streams—Federal, formula funds, State and local taxes, and fare box recovery—when there are a myriad of other opportunities to generate revenues. Around the world, more and more work is being done to capture the commercial value of the transit investment rather than simply value-engineer the investment to obtain the lowest-cost alternative.

LA Metro has done some work in this area, but I understand that LA still struggles with some of the value engineering issues associated with the overall cost of projects.

First, what types of value capture projects has LA Metro undertaken in an effort to generate revenues? How much annual revenue has been generated to date from these investments? And do you expect greater revenue potential in the future from additional investments?

Senator MENENDEZ. Mr. Chairman, if I may, just for a moment, I have an amendment that is pending in the Finance Committee which I have to go attend to. So if you are finished before I can come back, then I will just submit my questions for the record.

Chairman SCOTT. Sounds good. Thank you, sir.

Senator MENENDEZ. Thank you.

Mr. HOLLIS. Mr. Chairman, we currently generate from our real estate operation—our real estate operation deals with all of our real estate assets other than the joint development piece. That group generates about $12 million a year, and that is from short-

term leases, from advertising opportunities on that property, from temporary uses by a whole range of people. Our joint development program this year will generate about $14 million.

There are other real-estate related sources. As an example, we are negotiating with the State of California to acquire a number of park-and-ride lots that are located along the Green Line of one of our transit lines. The State of California's statutes do not allow it to generate revenue from those parking lots. We are working diligently with the State of California and with the Federal Highway Administration who helped pay for those lots to try to convey those lots to Metro so that we can put them into more productive use. And I think more cooperation between the State, the Federal, and the local agencies to get some of those stagnant assets back into productive use would be very, very helpful.

Our board has been very clear that we are to look for every revenue stream that we can find in addition to fare revenues. And that includes advertising revenues; it includes cell tower revenues; it includes leasing revenues; and it includes expanded joint development opportunities. They are an important revenue because, as I mentioned, they do not have many of the single-purpose strings attached to them that other sources of funds have within a transit agency.

Chairman SCOTT. Thank you.

Ms. Campbell, since 2004, Infrastructure Ontario has been assigned 83 projects representing a total construction cost of around $5.5 billion. This is a significant investment, but much like the United States, there is also the long-term costs to maintain these significant infrastructure investments.

Can you speak to the life-cycle cost requirements that are built into the P3 arrangements? And how long are concessionaires expected to maintain these assets, if at all? What are the advantages to a P3 that included operating and maintaining the assets? It certainly seems to have caused a number of questions about the long-term investment and the long-term risk exposure to taxpayers. I would love to hear your comments.

Ms. CAMPBELL. We look at each one of these assets—and I talked about the DBFM, the Design-Build-Finance-Maintain model, and it does not apply to every project we do. But when there is, as Ms. Garvey referred to, when it is an asset where the life-cycle costs are significant, you want an alignment between the fact that they are going to build this thing upfront, you are not going to be clear on how well it is built or what the maintenance looks like until, you know, 30 years in. If you need to line those up, they then have a 30-year operating arrangement on that. At the end of 30 years, they will hand it back to the government.

And so if you do the whole package, they will finance it upfront; we will pay them some payments—well, actually, on a full DBFM, they will not get paid anything upfront. They will get paid over the 30 years. And if there are maintenance costs over that 30-year time that exceed what our payment stream is to them, they bear that risk. And their financing lines up over that 30-year period in an amortizing instrument as well.

And so they are at risk. If indeed they go over cost on the build or if they go over cost on the maintenance, that is fully their responsibility.

Not all assets make sense. If it is viewed that there is little life-cycle risk in the asset, it might not make sense to do it that way. But where there is life-cycle risk, we bundle it all together with the financing component and transfer that risk to the private sector.

Chairman SCOTT. Thank you.

Ms. Garvey, are there any guiding principles Meridiam believes must be a part of a P3 investment that it considers, contracting guidelines or long-term revenue requirements, operating and maintenance goals?

Ms. GARVEY. Well, I think we have discussed a number of those today.

Chairman SCOTT. Yes.

Ms. GARVEY. But I think, again, when we look at the guidelines, what we are looking for is clear legislation. We are looking for a clearer understanding of what the public policy goals and expectations are for the public sector. We are looking at what the revenue stream is and how robust is that revenue stream. We are looking at the institutional capability, that was talked about before. Those are fundamental principles for us as we look at a project.

The whole notion of operating and maintenance that you just referred to, Mr. Chairman, I think is really critical and important, and one of the more interesting aspects that we are finding in P3s is that there is often an incentive built into the contract for the private sector to move to more energy-efficient projects or energy-efficient techniques, because that is really a way to capture some of the efficiencies. So some of those incentives are important as well as we look at the contracts.

Chairman SCOTT. Thank you.

Ms. Campbell, IO's literature talks about leveraging the expertise in project management discipline of the private sector through the use of P3s to deliver infrastructure projects. However, Ontario's Auditor General released an audit on IO's P3 model and asserted that Ontario taxpayers spent $8 billion more than it would have if the projects were completed successfully using traditional government procurement. Eight billion dollars is not an insignificant amount. Could you address this finding and explain to the Committee why, in spite of this 2014 finding, IO continues to advance the P3 model? Are there other benefits or efficiencies that were not considered in the audit?

Ms. CAMPBELL. The short answer is yes, and there has been a lot of press over that. There are two numbers missing from the $8 billion. There is a $14 billion number, which is the savings—we do something called value-for-money analysis on every project we look at. And we look at the risk transfer and the dollars in that risk transfer, which in the total of the projects that she referred to was $14 billion. So we calculated—and this is third-party verified, well-known technology in the calculations—that there were $14 billion in savings in transferring those risks, and those would have been life cycle, capital, and the rest of it—$14 billion in savings against the $8 billion of additional financing costs, which is both the up-front fees plus the financing costs over the life of the asset, that

it costs incrementally to finance through the private sector, leaving us a net gain of $6 billion. So that is the full assessment.

Chairman SCOTT. That is the whole story.

Ms. CAMPBELL. That is the whole story.

Chairman SCOTT. Excellent. Thank you.

Last question, and thank you all for your participation in this panel discussion, an important discussion about how we can hopefully move more projects forward and do it in less time and more cost-effective.

Mr. Hollis, one way to employ the value capture concept is through contracts with concessionaires who in turn generate revenues that can be reinvested in the system. I understand that one of LA Metro's efforts centers on bringing concessionaires into Union Station as part of a broader revitalization effort. Mr. Hollis, could you speak to the broader efforts to revitalize Union Station and the decision to bring in private concessionaires? How much revenue has been generated as a result of these contracts? And is the revenue sufficient to cover the annual operating budget of Union Station?

Mr. HOLLIS. Mr. Chairman, in 2011, our Metro Board of Directors acted to purchase Union Station from a private party. Since that time, we have done a complete master plan for the property, and we have begun attracting concessionaires into the property. These include restaurants and other retail uses. We currently generate approximately $1 million, $1.2 million in revenue, which does cover the operating costs of the station as a property. In addition to that, we have tenants, including Amtrak and commuter rail, that pay additional costs for the burdens they put on the station.

We believe Union Station is the kind of property that can certainly generate substantial revenues that will more than cover its costs. We also as part of the master planning for Union Station planned for 3.2 million square feet of commercial development at the station, and those ground lease revenues will generate tens of millions of dollars for the transit agency.

So that was an asset that we had to acquire, and we are achieving the benefits of that acquisition decision today and will continue into the future.

Chairman SCOTT. I was pretending that was my last question. Actually I have one more that came to mind.

Drawbacks from being a landlord, having the transit system as a landlord, you know, just quickly?

Mr. HOLLIS. The principle drawback is that the agency needs to think of itself as an owner of real estate, and increasingly—and there has been a change in the way we address this issue to the positive. We have to recognize we have to work with our local communities. We are imposing development within their communities. We need to work with those communities to be sure that development is consistent with the needs of those communities, and we are doing a much better job of that.

Second, we need to act like a private landlord if we are going to get the benefits of being a property owner. We need to insist upon fair value for our property, which our board has been very good at insisting upon. We need to be sure that the development is built

properly for the long term, because these are our assets forever, as far as we are concerned.

So as long as you are diligent, as long as you are willing to act like a private landlord in terms of protecting the value of those assets, and you properly transfer appropriate risks to those lessees, we do not believe that there are significant downsides for a transit agency to be the owner of a commercial property.

Chairman SCOTT. Thank you very much. Thank you to all the witnesses for being here this morning. I know that Senator Menendez as well as other Members may have questions. We will submit those questions for the record.

Chairman SCOTT. Thank you so much, and this Subcommittee is adjourned.

[Whereupon, at 10:27 a.m., the hearing was adjourned.]

[Prepared statements and responses to written questions supplied for the record follow:]

PREPARED STATEMENT OF JANE F. GARVEY

CHAIRMAN, MERIDIAM INFRASTRUCTURE FUND, NORTH AMERICA

APRIL 29, 2015

Good Morning, Chairman Scott, Ranking Member Menendez and Members of the Subcommittee.

My name is Jane Garvey, and I am Chairman of the Meridiam Infrastructure Fund, North America. It is my pleasure to be here today to discuss the opportunities and the challenges for private investment in the United States transit system.

Meridiam is a long-term investor in public-private partnerships, or P3s. Our investors are primarily public pension funds or institutional investors who embrace the long-term nature of the fund and are committed to the notion of building public infrastructure. While there is a broad range of definitions for P3s, fundamentally, it is a legally binding contract between the public sector and a private company where the partners agree to share the risks and rewards that are inherent in an infrastructure project. In the case of some P3s, the private sector assumes all of the revenue risk and collects tolls or fees generated from the project

Meridiam's business model contemplates an agreement where we, the private sector, designs, builds, finances, operates and maintains the facility for a pre-determined period of time. In exchange, the public sector provides a reoccurring payment based on the condition of an asset—In other words, we are paid only if we meet certain performance standards set by the public sector.

Currently, we have 33 billion under management and 39 projects in operation worldwide. Our investments have been across a number of asset classes including transportation, power and social infrastructure but what links them is their social importance to the communities they serve.

Let me be clear—Public-private partnerships are not for every project. However, large, complex projects that lend themselves to innovation are often good candidates. There are certain characteristics that we in the private sector look for—and criteria that are equally important to public sector as well.

1. Strong, authorizing legislation that gives clarity and direction to the public/private relationship. Currently about 33 States have the ability to enter into P3 agreements. Legislation that provides clear guidance and direction is an essential threshold for the private sector.
2. Politically smart projects: Projects should be of critical importance to the community. In the case of transportation, the project should be part of a larger plan that is integral to an overarching view of the future of the community. This implies an open public policy debate and discussion early in the process. What public policy goals are important to the community, how are they reflected in a P3 relationship? These projects are long term in nature and extend far beyond the term of one administration. Projects that reflect clear policy goals that are laid out early in critical to success and give the public sector an understanding of what is important to the community as well.
3. Active engagement of the stakeholders: These are complex projects, often it is a "first time" approach. Active engagement of the stakeholders throughout the process, not just the early stages, is critical for success.
4. Determining the revenue stream: As has been said many times, P3s are not "free money". Lack of a robust revenue stream has been an impediment to many transit projects and P3s are no exception. Fares do not generate enough to cover the long-term costs. Some communities, such as Los Angeles and Denver, have opted to pass a sales tax dedicated to creating a long-term revenue stream. Others are considering impact fees, development rights along the transit corridor or a combination of multiple streams.
5. Risk sharing: Risk sharing may be among the more complicated aspects of P3s and can take many forms. The public sector often takes on the environmental and permitting risk while the private sector assumes the risk for design, all the construction risk, financing risk and the operating and maintenance of the facility. But as is often the case, the devil is in the details. For example, during the design phase of a project, is the private sector free to design to a performance measure or are the same design reviews that are used in traditional delivery models still employed here, creating a duplicative layer of review? Similarly, during construction, is the contractor free to employ techniques that meet the performance standards or are they expected to follow more prescribed techniques? And is the revenue risk transferred entirely to the private sector or is it an availability structure where the private sector is paid if it meets per-

formance standards or metrics? These are important questions and for a project to succeed, those issues should be understood upfront.

6. Institutional capability: It is critical to have an empowered dedicated P3 public sector team. Centrally located and a team with the technique expertise to oversee what is a complicated process. Often the responsibilities for moving through the process are shared across many agencies or departments in government. This can create delays as well as confusion for proposers who may have questions or concerns. A focal point, or a "one stop shopping" could help eliminated the inefficiencies that can arise during the process.
7. Political Leadership. The Federal Government has a key role in fostering P3 projects. However, there is no substitute for a strong, local leadership to advocate for the project and in this case for an alternative delivery model. It is generally true for any large, complex infrastructure project and I would say particularly true for P3s. These projects only succeed with strong local leadership.

When I look at the lessons learned from established P3s, particularly here in the United States, the extent to which they are successful depends, in part, on recognizing and embracing these elements I have outlined:

- Clear legislation,
- Understanding of revenue risk,
- Level of expertise,
- Transparency,
- An identified revenue stream, and
- Political leadership.

There are certain to be some growing pains with our experiences particularly in the United States. For example, how does the contract deal with what could be unanticipated events far into the future perhaps in year 20 or 25? Is there some sort of "elasticity provision" that could give both parties an opportunity to revisit a narrow provision in the contract without opening up the entire contract? Are the roles of each entity public and private clearly understood particularly in the area of "risk sharing"?

In the case of the private sector, it is essential for us to fully understand the political considerations and challenges that the public sector faces. I believe we can better explain some of the advantages of the P3 model, but also fully recognize it is not for every project and the public policy considerations may lead the public sector to another conclusion. And while we urge transparency on the public side, it is equally important for us to be transparent in our goals, approach and revenue returns as well.

As I stated, P3s are not for every project. If a public sector entity is considering this approach solely for financial reasons, it is probably not the right model. But it is one more "tool", one more approach for the public sector to consider as they are looking at solutions for their infrastructure investments. A P3 approach allows for appropriate sharing of risk, encourages the private sector to be innovative and efficient and gives the public sector a fixed price for all the elements (design, construction, operation and maintenance). This allows a real opportunity for the public sector to anticipate and plan well into the future. For me the real benefit of a P3 is the ability to deal with a challenge that has long plagued the aging infrastructure in this country and that is the ability to build in life cycle costs. It is a recognition that construction of a project is step one and that maintaining that infrastructure throughout its useful life is equally necessary to the long-term success of a project.

I applaud this Committee's interest in this issue. Working together, I am confident we can create constructive partnerships between the public and private sectors, partnerships that benefit our communities and help to improve our national infrastructure.

Again, thank you for the opportunity to appear before your Committee. I am happy to answer questions.

Meridiam Infrastructure Fund, North America

Examples of U.S. Projects

Port of Miami: This project comprises the construction and management of a 1.6 km tunnel linking the Port of Miami to the MacArthur Causeway. The concession company receives FDOT payments over the term of the concession based on the availability of the tunnel.

- Overall investment: $903 M

- Concessionaire: MAT Concessionaire, LLC
- Partners: Meridiam (93.4%), Bouygues Construction (6.6%)
- Public partner: Florida Department of Transportation (FDOT), Miami-Dade County, city of Miami
- Date of entry into service: August 2014
- Concession period: 35 years

Presidio Parkway: This project is a design, build, finance, operate, and maintain concession in San Francisco, California. The Project will replace the current 1.6 miles (2.6 km) Southern approach to the Golden Gate Bridge with a parkway facility, two pairs of cut-and-cover tunnels, a high viaduct, a low-causeway and landscaped medians.

- Overall investment: $365 M
- Concessionaire: Golden Link Concessionaire (GLC)
- Partners: Meridiam Infrastructure (50%), Hochtief (50%)
- Public partner: California Department of Transportation (Caltrans), San Francisco Transportation Authority (SFCTA)
- Current status: Construction with date of entry into service as Fall 2015 (provisional)
- Concession period: 33.3 years

IH–635 (LBJ) Managed Lanes: This project consists of reconstructing the motorway alignment to provide general purpose lanes and 13 miles of new Managed Lanes as well as the construction of new frontage roads on the IH–635 road that currently serves as the main circumferential roadway in the Dallas region in the Dallas-Fort Worth metropolitan area (the "Metroplex"), the fourth largest metropolitan area in the United States.

- Overall investment: $2.6 B
- Concessionaire: LBJ Infrastructure Group (LBJIG)
- Partners: Meridiam Infrastructure and co-investors (42.4%), Cintra (51%), Texas Police and Fire Pension System (6.6%)
- Current status: Construction with date of entry into service: Fall 2015 (provisional)
- Concession period: 52 years

North Tarrant Express project: The NTE project includes the financing, design and total rebuilding and expansion of 21.4 km length sections of the existing roadway, including frontage roads and the addition of tolled managed lanes. The roadway borders a number of communities to the north and east of Ft Worth, Texas. The project is financed by a mix of private and public sources.

- Overall investment: $2.1 B
- Concessionaire: NTE Mobility Partners
- Partners: Cintra (57%), Meridiam and co-investors (33%), Dallas Police and Fire Pension System (10%)
- Public partner: Texas Department of Transportation (TxDOT)
- Date of entry into service: October 2014 (nine months ahead of schedule)
- Concession period: 52 years

Long Beach Courthouse: This social infrastructure project includes the design, construction, financing, operation and maintenance of the new court building which replaces the current Long Beach Courthouse completed in 1959. The new Courthouse comprises 31 courtrooms, with accompanying holding cells and administrative office space. The project also includes renovation and operation of a car parking facility and the provision and management of commercial office space and retail space within the Courthouse.

- Overall investment: $495 M
- Concessionaire: Long Beach Judicial Partners
- Partners: Meridiam and co-investor (100%)
- Date of entry into service: Fall 2013
- Concession period: 38 years

Remarks to the US Senate Committee on Banking, Housing and Urban Affairs – Sub-Committee on Housing, Transportation and Community Development

Colleen Campbell, Infrastructure Ontario Board of Directors Member
April 29th, 2015

Check Against Delivery

Thank you for the invitation to discuss Ontario's approach to investing in public infrastructure by partnering with the private sector.

I am a Board Member of Infrastructure Ontario (" IO"). IO is the Government of Ontario's Crown agency responsible for delivering major infrastructure projects using our made-in-Ontario P3 model, called Alternative Financing and Procurement (AFP). We are very proud of the work that IO does and believe it brings together the best in public sector investment and private sector expertise.

The Agency was created in legislation and is accountable through our independent board to the Ministry of Economic Development, Employment and Infrastructure. The majority of Board Members are from the private sector with expertise in finance, law, construction, and general management. My own professional background includes over 30 years of experience in investment banking and debt capital markets, most recently as global head of Debt Capital Markets for BMO Capital Markets. Specifically I started BMO's infrastructure capital markets practice in 1997.

IO was created 10 years ago when the province faced a significant dilemma. The government had an ambitious plan to rebuild its aging capital stock. And yet there were significant concerns that procuring and managing projects using traditional methods would lead to cost over-runs and missed timelines.

The government realized that complex infrastructure projects have big risks, and that transferring those risks to the private sector was in the public interest. Rather than taking a status quo approach, the province created our P3 model called Alternative Financing and Procurement, to modernize how large public sector projects are done successfully.

Since then, IO's major projects division has completed 46 projects. The construction value of these projects is well over $10B.

A review of our track record conducted as of March 2014 confirmed that 97 % of completed projects were delivered on or below budget. 73% of those projects were also delivered within a month of their scheduled completion date. This is a very strong track record.

We are not alone in deploying modern project delivery techniques in order to better align public and private interests and protect the public sector from the risks associated with large projects.

Both Australia and the United Kingdom have done so for quite some time.

We are also taking note of the progress that is being made in the US. IO is pleased to be partnered with the National Governors Association to assist in capacity building about P3 potential in the US.

There is a growing body of evidence that P3s are a responsible way for governments to invest in public infrastructure.

To give a foundation for our discussion today, allow me to describe our approach to P3s -- Alternative Financing and Procurement.

At its core AFP is a modern project delivery method used to manage risks that have too often caused cost overruns in the past. There are a few ingredients for success.

- First, we do not break large projects up into smaller projects and tender them separately. Breaking projects up leaves enormous integration risk with the public sector.
- Second, we do not pay until projects are complete – or at least we try and limit the amount we pay until completion.
- Third, we require builders to design the projects to meet our specifications and build to meet our objectives, and change orders to deal with deficiencies in the designs are the private sector's responsibility.

Colleen Campbell, Infrastructure Ontario Board of Directors Member
April 29th, 2015

- Finally, we hold builders accountable for the long-term quality of the asset by paying them a portion of the construction cost over time on Design Build Operate Maintain (DBFM) contracts.

Private finance is a tool in the toolbox for government to ensure that the private sector has skin in the game and delivers results for government. In a sense it is a cost of the risk transfer as arguably private sector financing costs are typically higher than the public sector financing costs. The point is the benefits outweigh the costs. That's value for money.

It's important to be clear:

- all of our AFP projects result in publicly owned assets;
- AFP is not privatization; and
- AFP is not a fund raising tool for government.

And while IO's first ten years delivering AFPs has been focused on social infrastructure, the next ten years are anticipated to be dominated by civil infrastructure. We are now working on major roads, subway and light rail transit systems.

Ontario is a leader in AFP and Canada is a leader in P3s globally. There is a strong industry within Canada that includes financial institutions, general contractors, architects, engineers and more, all of whom are part of the success of AFP. There is a deep, efficient bank and bond market available to finance these structures. This financing is available on a long term basis to match the long life of the assets without refinancing risk .

It is important to note that last week the Governments of Canada and Ontario both delivered their respective annual budgets. Ontario committed $130 billion for investment in infrastructure over 10 years, with a focus on transit and transportation. The federal government created a new $1 billion annual public transit fund that will be leveraged to deliver projects using AFP or P3. These are signs that Canada is one of the biggest and best markets in the world for the private sector to work with government to deliver public infrastructure.

Colleen Campbell, Infrastructure Ontario Board of Directors Member
April 29th, 2015

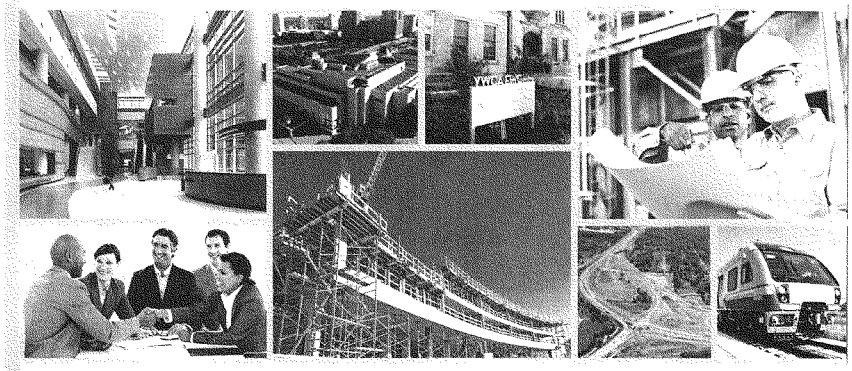
Our experience confirms that modern project delivery techniques like AFP and P3 protect the public sector from cost overruns.

Equally important to the success of this model is the transparency and centralization of expertise that an organization like IO brings to the equation. A large part of our mandate is risk management. And like any risk management function the oversight and independence that our organization brings to our ministry clients strongly supports the objective of on time on budget delivery of high quality infrastructure assets.

I would be happy to discuss any aspects of our model so that we can help you advance the use of modern project delivery models in the US.

Thank you very much for the opportunity to appear before you today.

Ontario
Infrastructure Ontario



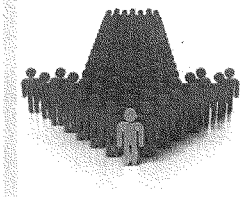
The Opportunities and Benefits of Alternative Financing and Procurement (AFP)

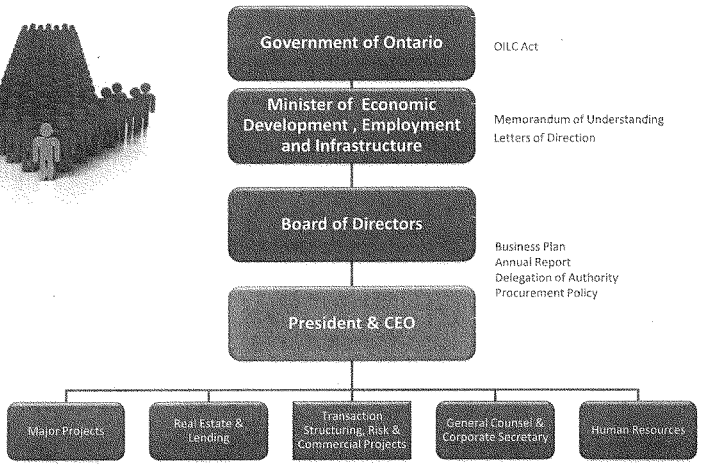
Spring 2015

Infrastructure Ontario's Mandate – AFP and More

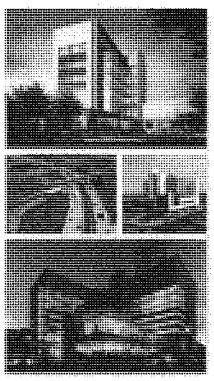
- **Infrastructure procurement and project manager** – IO is the leading infrastructure delivery agency in North America using Alternative Financing and Procurement (AFP) and has completed projects with a capital value of over $10 billion
- **Real estate manager** – IO manages the second largest (and of one of the oldest) real estate portfolios in Canada including 4000 small capital projects delivered annually, 5,100 buildings and 45 million sq ft of office space, and 150,000 acres of land
- **Infrastructure lender** – IO provides low-interest loans for municipalities and other public sector clients to invest in infrastructure with close to $7 billion advanced to more than 350 clients
- **Commercial advisor** – IO is an advisor to the government on commercial transactions at the intersection of the public and private sectors

IO's Operating Framework





AFP Facts and Figures



AFP Project Delivery Status as of Dec 31, 2014

Projects	Number	Capital Cost
Completed	44	$11.29 Billion
Under Construction	22	$12.94 Billion
Under Procurement	23	$13.12 Billion
Total	**89**	**$37.35 Billion**

Third-party assessment of IO's on-time and on-budget performance for the 37 AFP projects that have reached substantial completion (as of March 31, 2014)

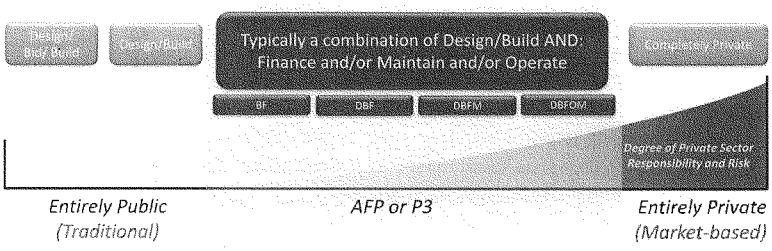
- 36 of the 37 projects, or 97%, have been delivered on budget.
- 27 of the 37 projects were delivered early, on time or within one month of their scheduled date.

What is Alternative Financing & Procurement (AFP)

- The AFP model is an **alternative to the Traditional project delivery** model (Design-Bid-Build)
- Utilizes **private expertise and financing** to rebuild infrastructure
- Ensures **appropriate public control and ownership**
- Integrates key project components using **output specifications**, encouraging design creativity and **innovation** and minimizing scope changes
- Provides **appropriate risk sharing** through the project agreement
- Encourages **on time and on budget** project delivery, and payment after construction is complete
- The AFP model ensures **value for money**
- Allows **deductions for poor performance** against key performance indicators in monthly payment mechanism (under a DBFM)
- Includes provision in the project agreement that allows for sharing of future innovations and costs

Range of Infrastructure Delivery Models

- The spectrum of infrastructure delivery models ranges from traditional delivery to full privatization
- AFP/P3 delivery models in Canada fall in the middle of the spectrum



The role of and risk to the private sector increases in the delivery of an infrastructure project

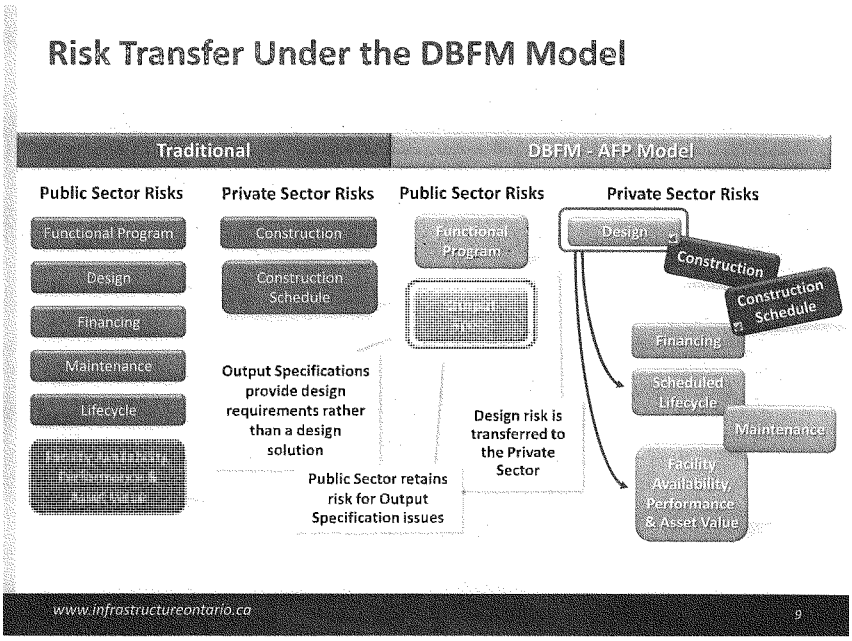
AFP is a risk transfer tool not a financing technique

- Private finance is used to drive risk transfer and on-time and on-budget results during construction. There is relatively little long-term private finance after construction completion.
- Of 41 projects IO has built, 23 have no element of private finance once substantial completion is reached.
- Of the 18 projects where not all costs are paid out at substantial completion:
  - 50-60% is paid out for buildings; and
  - 75-85% is paid out for roads and public transit.
- If there were no element of private finance in large capital projects, the Government would need to include much bigger contingencies for the risk it is taking back. These would, in many cases, dwarf the higher cost of finance of private capital.

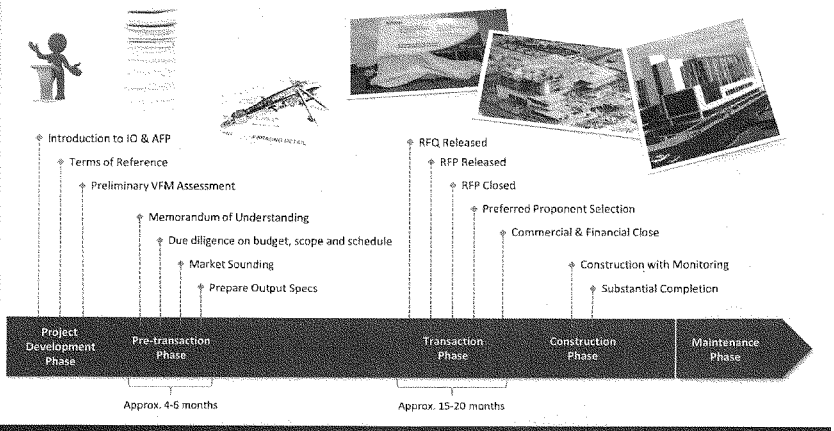
Large and complex projects have big risks

AFP is a procurement and project management approach to manage risks and maximize benefits like:

- Integration of complex elements of large projects by the private sector team members responsible for all design and construction disciplines
- Innovation that drives both high quality design as well a lowest cost
- Design requirements that meet public sector with specifications and designs that are built to standards
- Long-term lifecycle management requirements to ensure that public assets are built and maintained for public service delivery
- On-time delivery, with most costs for delays transferred to the private sector or shared by the private and public sectors


Risk Transfer Under the DBFM Model
Traditional
DBFM - AFP Model
Public Sector Risks
Private Sector Risks
Public Sector Risks
Private Sector Risks
Functional Program
Design
Financing
Maintenance
Lifecycle
Construction
Construction Schedule
Functional Program
Design
Construction
Construction Schedule
Financing
Scheduled Lifecycle
Maintenance
Facility Availability, Performance & Asset Value
Output Specifications provide design requirements rather than a design solution
Design risk is transferred to the Private Sector
Public Sector retains risk for Output Specification issues
www.infrastructureontario.ca
9

Estimated AFP Project Timeline



Benefits of the AFP Delivery Model

Project Planning

- [illegible]
- [illegible]
- [illegible]

Risk Transfer

- [illegible]
- [illegible]
- [illegible]

Procurement Process

- [illegible]
- [illegible]
- [illegible]

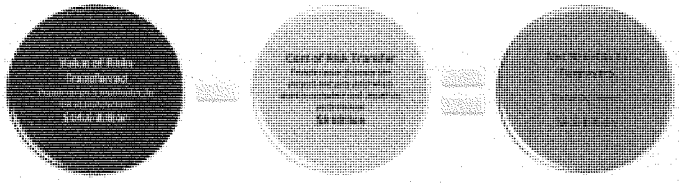
Standardization

- [illegible]

Project delivered <u>on-time</u> and <u>on-budget</u>

(Payment occurs only after delivery completed)

The Value of AFP



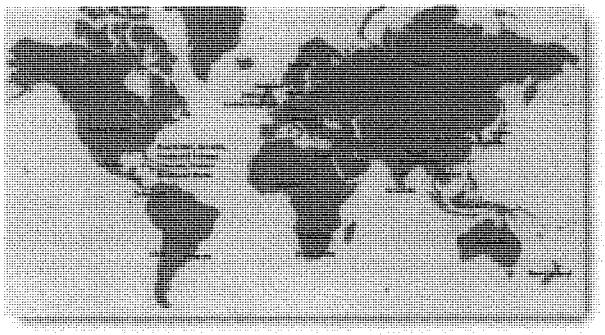
"(T)his $8-billion difference was more than offset by Infrastructure Ontario's estimate of the cost of the risks associated with the public sector directly contracting out and managing the construction and, in some cases, the maintenance (...). (Auditor General's 2015 Report)

"Leveraging the expertise and project management discipline of the private sector through the use of P3s where appropriate, should continue to be a tool in the infrastructure procurement toolbox." (TD Economics 2015 Report)

"There is a growing body of empirical evidence that, when used appropriately, P3s can be a very effective means of protecting the public sector from the risks associated with large project delivery." (Deloitte 2015 Report)

International Interest in AFP

- More than 40 foreign governments and international agencies have consulted with Infrastructure Ontario to draw on the agency's expertise and best practices in the delivery of their own infrastructure plans

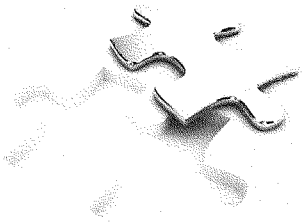


Third-party perspectives on AFP

- "If the government went back to traditional procurement as the [Auditor General] has suggested, because of better financing terms...it would just be a disaster. I think the model has proven to be very effective and I don't think anyone is saying it should be used for every project out there." (Andy Manahan, Executive Director, Residential and Civil Construction Alliance of Ontario quoted in *The Daily Commercial News*, December 22, 2014)
- "In an era of fiscal constraint, how does the Ontario government get the biggest bang for its buck out of this fund? The answer is right under its nose: trust in the made-in-Ontario Alternative Financing and Procurement (AFP) model." (Allan O'Dette, President and CEO, Ontario Chamber of Commerce, special to the *Huffington Post*, December 4, 2014)
- "The [National Governors Association State Resource Centre on Innovative Infrastructure Strategies] looked to Infrastructure Ontario because the Alternative Finance and Procurement (AFP) model is considered a modern approach to deliver infrastructure. Infrastructure Ontario has been a valuable partner to the NGA Centre." (David Moore, Director, National Governors Association Centre for Best Practices, November 2014)
- "Ontario is one of the world's leading jurisdictions for alternative financing. Infrastructure Ontario and its partners have a strong track record of delivering infrastructure projects, within budget and in a timely manner." (Hon. Brian Tobin, Vice Chair, BMO Capital Markets, BMO Financial Group news release, November 17, 2014)
- "Though public-private partnerships are not a panacea, when used appropriately, Ontario's track record demonstrates that they are consistently more effective at delivering the infrastructure Ontarians need today on-time, on-budget, at less cost and at less risk than traditionally procured projects." (Canadian Council for Public-Private Partnerships news release, December 10, 2014)

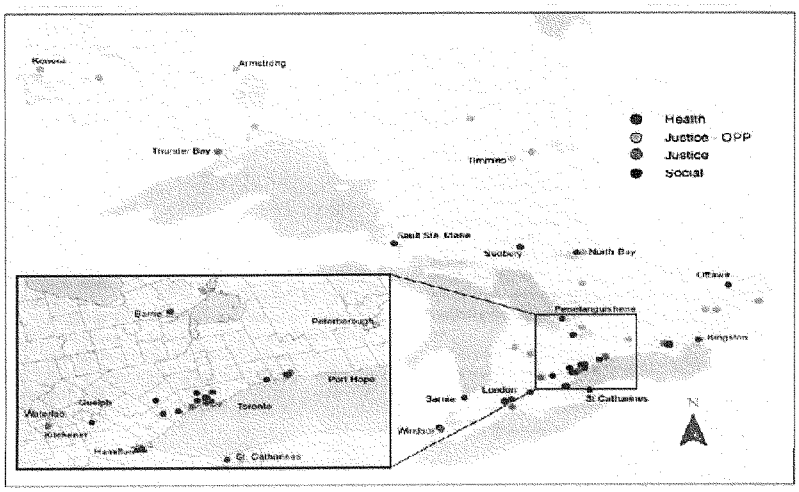
Third-party perspectives on AFP

- "IO is recognized as an international leader in leveraging private-sector expertise to deliver projects on time and on budget, while maintaining proper public ownership and control of core public infrastructure assets...Collectively, IO's professionals have significant construction and project management expertise across various sectors, including, hospitals, courthouses, detention centres, roads, transit, highway service centres, data centre, sports facilities, education facilities and police station." (HM Treasury, *A New Approach to Public Private Partnerships*, 2012)
- "Ontario's past and planned public infrastructure spending over 2006 to 2014 provides a significant and permanent boost to the province's overall potential output." (The Conference Board of Canada, *The Economic Impact of Ontario's Infrastructure Investment Program*, 2013)
- "Capital costs from infrastructure P3 projects in Ontario from 2003-2012 support *direct employment* of 99,800 FTE jobs, earning an estimated $6.3 billion in *direct income/wages and benefits*. Additionally, these projects contribute $8.0 billion in *direct GDP to the provincial economy*." (InterVISTAS, *10-Year Economic Impact Assessment of Public-Private Partnerships in Canada (2003-2012)*, 2013)
- "We teach business students that it is good management practice to focus on your core business and look for outside experts to deliver the non-core services you need. Infrastructure Ontario is recognized internationally for on-time, on-budget delivery of public infrastructure projects through public-private partnerships. Focusing on its core business is a good strategy for government." (Paul Boothe, Ivy Business School, *Maclean's Magazine*, January 2015)
- "Infrastructure investment must be done properly. We must 'slay the myths', but also deflect considerations of ideology and self-interest. We must learn from our own experience and that of others – both from successes and from hard-learned lessons. We must identify and adopt 'best practices'." (Residential and Commercial Construction Alliance of Ontario, *Unlocking Ontario's Advantages: Building new infrastructure on the foundation of existing public assets*).



APPENDIX

AFP Projects in All Regions of the Province



AFP projects that have reached Substantial Completion in the last 10 years

Health Care

- Bluewater Health
- Bridgepoint Health
- Centre for Addiction and Mental Health (CAMH)
- Credit Valley Hospital Phase II Redevelopment Project
- Hamilton Health Sciences - Hamilton General Hospital
- Hamilton Health Sciences - Juravinski Hospital and Cancer Centre
- Kingston General Hospital
- Lakeridge Health Corporation
- LHSC/SJHC London - M2P2
- Markham Stouffville Hospital
- Montfort Hospital
- Niagara Health System
- North Bay Regional Health Centre
- Ottawa Cancer Centre
- Quinte Health Care – Belleville General
- Rouge Valley Health System, Ajax-Pickering
- Royal Victoria Regional Health Centre
- Runnymede Healthcare Centre
- Sault Area Hospital
- St. Joseph's Health Care – West 5th Campus
- St. Joseph's Health Care London - M2P1
- Sudbury Regional Hospital
- Sunnybrook – M-Wing/P&G Fit-out
- Toronto Rehabilitation Institute
- Trillium Health Centre
- Waypoint Centre for Mental Health Care
- Windsor Regional Hospital
- Woodstock General Hospital

Justice

- Durham Region Courthouse
- Forensics Services and Coroner's Complex
- OPP Modernization
- Quinte Consolidated Courthouse
- Roy McMurtry Youth Centre
- St. Thomas Consolidated Courthouse
- South West Detention Centre
- Thunder Bay Consolidated Courthouse
- Toronto South Detention Centre
- Waterloo Region Consolidated Courthouse

Pan/Parapan American Games

- Pan Am Aquatics Centre, Field House and Canadian Sport Institute of Ontario

Transit

- Union Pearson Express Line

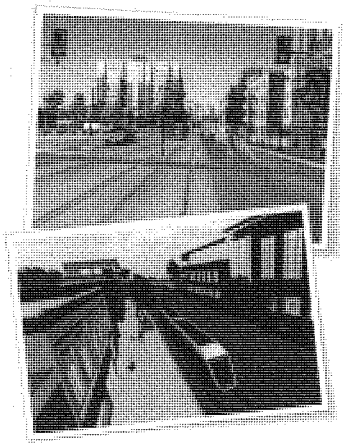
Other

- Ministry of Government Services Data Centre

Waterloo Light Rail Transit System

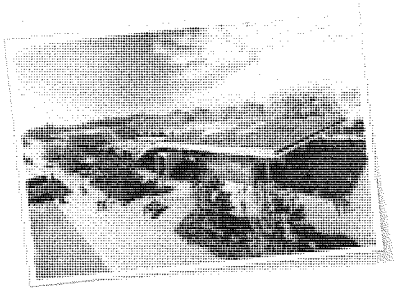
The Region of Waterloo engaged IO as the Commercial Procurement Lead (Advisor) for Stage 1 of its Light Rail Transit (LRT) project. Stage 1 includes a 19 km LRT route from Northern Waterloo to Southwest Kitchener with 16 station stops. The project also includes a 17 km route of adapted bus rapid transit from Kitchener to Cambridge.

Structure:	Design Build Finance Operate Maintain (DBFOM)
Project Value:	Approximately $818 million
Features:	– 19 km line between Waterloo and Kitchener – 17 km of adapted bus rapid transit between Kitchener and Cambridge – 22 stations along the 36km transit corridor – Reduction in greenhouse gases for the Region resulting in better air quality



Ottawa Light Rail Transit System

Infrastructure Ontario worked for the City of Ottawa to select a consortium to deliver the Ottawa Light Rail Transit (OLRT) project - the first of several phases to implement light rail transit in the City of Ottawa. It will feature a 12.5-kilometre line along the existing bus route system and include 13 stations, 3 of which will be underground.



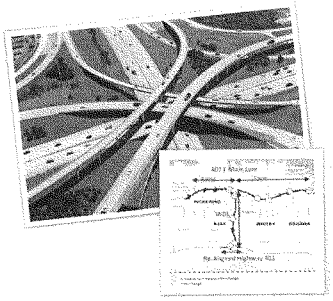
Structure: Design Build Finance Maintain (DBFM)

Project Value: $2.13 billion

Features:
- 12.5-kilometre line from Tunney's Pasture to Blair Road
- Tunnel through the downtown core
- 13 stations, including three underground stations
- 70% reduction of carbon dioxide emissions along the route
- Reduction of City's fuel consumption by 10 million litres annually
- Reduction in cross city commuting time by up to 30 minutes per day

Highway 407 East – Phase One

Highway 407 East is one of the largest highway construction projects ever to take place in Ontario, and will be completed in two phases. Phase one extends the highway by about 22 kilometres from Pickering to Oshawa, and connects Highways 407 and 401 with a 10-kilometre link. The new link is called West Durham Link. The Highway 407 East Extension will be a toll road that is owned by the Ontario government.



Structure: Design Build Finance Maintain (DBFM)

Project Value: $1 Billion

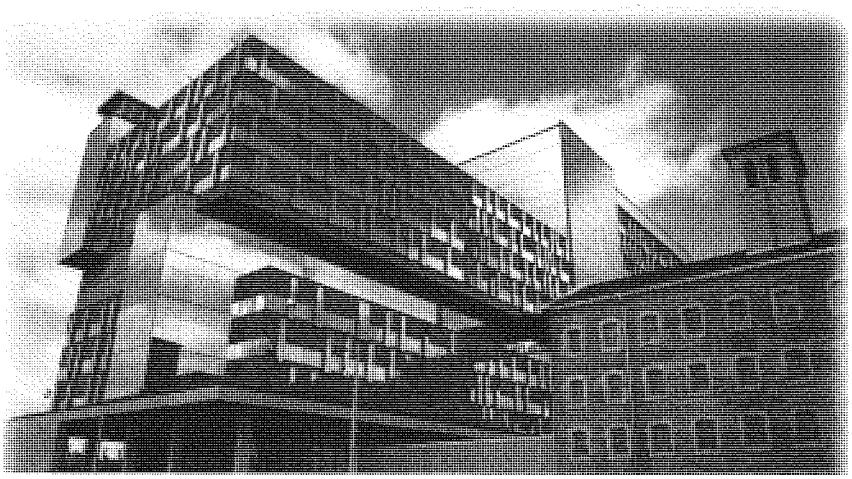
Features:
- 22 kilometre long, six-lane highway construction project in Durham Region
- Approximately 148 kilometres of new lanes, including ten interchanges
- The extension will improve the transportation network in Durham Region, creating more capacity and connections to major routes
- Project is expected to create 900 construction jobs

Street Smart. World Wise.

AltusGroup

Infrastructure Ontario AFP Track Record Report

October 16, 2014



Executive Summary 2

Summary of Observations and Recommendations 4

A. Background & Objectives 6

A1 Mandate 6

A2 Altus Group Limited Background 6

A3 Infrastructure Ontario Overview 6

A4 Projects Assessed 6

B. Scope & Approach 8

B1 Scope of Review 8

B2 On Time and On Budget 9

B3 Data Verification & Validation 9

C. Budget Development 9

C1 Overview and Milestones 9

C2 AFP Project Cost Estimates 10

C3 Lessons Learned & Recommendations 10

D. A to B: Approved Pre-RFP Budget to Awarded AFP Contract Budget 11

D1 Budget Comparison 11

D2 Project Bid Analysis 12

D3 Lessons Learned 13

E. B to C: Awarded Contract to Substantial Completion 13

E1 Awarded Contract to Substantial Completion 13

E2 IO Managed AFP Contract Costs 13

E3 Total Project Costs 15

E4 Lessons Learned & Recommendations 15

F. Schedule Analysis 16

F1 On Time Performance 16

F2 Late Project Assessment 17

F3 Lessons Learned & Recommendations 18

G. Review of 2013 Project Track Record Review Recommendations 18

Appendices 20

Appendix A – Glossary of Terms 21

Appendix B – Project List 23

Appendix C – Data Verification & Validation 24

Appendix D – Data Sources 27

Executive Summary

Background

Infrastructure Ontario (IO) is a Crown corporation of the Government of Ontario that was established in 2005 and in 2011 was merged with the Ontario Realty Corporation. IO delivers large, complex public infrastructure projects using a made-in-Ontario procurement and project management model called Alternative Financing and Procurement (AFP). Since its inception, IO has brought to market a total of 76 AFP projects with a capital value of approximately $39 billion. As of March 31, 2014, 37 of these projects have reached Substantial Completion, with an approximate capital value of $10 billion.

IO continues to develop and refine its AFP project management and control processes by drawing upon industry best practices and learning from its contractual experience. In 2013, IO commissioned an external review of the 30 projects that had reached Substantial Completion at that time. The purpose of the report was to assess the track record for **On Time** and **On Budget** performance and to identify lessons learned and opportunities for continuous improvement.

As a leading authority on infrastructure projects, Altus was retained by IO to conduct the second annual review, which included an additional seven projects that had reached Substantial Completion. We were provided access to key data sets and were able to independently assess the results and implications as described in Appendix C. This year's report goes a step further than last year's report to review Total Project Costs in addition to AFP Managed Contract Costs, and we recommend that this analysis continue in future years. The following report summarizes the findings from our analysis.

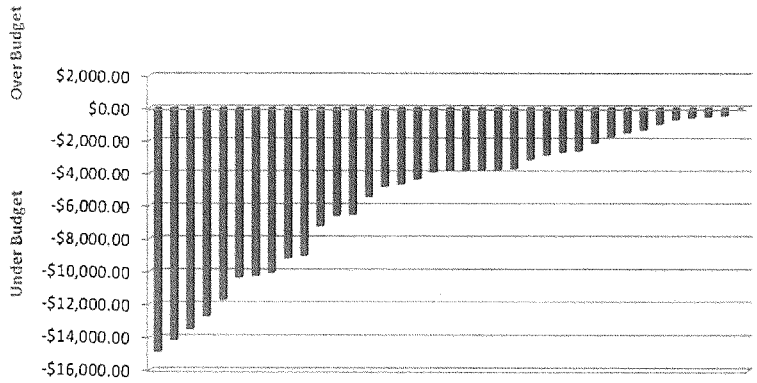
Overall Findings

Our findings of the **On Time** and **On Budget** performance of the 37 projects that have reached Substantial Completion exceed generally accepted industry benchmarks with **97%** of projects delivered **On Budget** and **65%** of projects delivered early or **On Time**. Our review of IO's budgeting practices found that they are aligned with industry best practices and the guidelines established in "Guide to Cost Predictability in Construction" prepared by the Joint Federal Government / Industry Cost Predictability Taskforce in November 2012.

On Budget Performance

To assess the **On Budget** performance of AFP projects, we looked at the difference between the Awarded Contract Value and the Actual IO Managed AFP Contract Costs at Substantial Completion. This comparison best reflects **On Budget** performance because it measures IO's ability to ensure that the project achieves the originally specified outcome while managing required scope revisions. IO has been able to deliver 36 of the 37 projects, or **97%**, **On Budget** with only one project going 0.01% over the budgeted IO Managed AFP Contract Costs. This performance demonstrates almost absolute cost certainty within the identified project costs under IO's management, highlighting the effectiveness of the AFP delivery model and IO's project management expertise. Through our review we have identified areas for improvement, which we outline in the Summary of Observations and Recommendations.

IO Managed AFP Contract Variance for projects that have reached Substantial Completion as of March 31, 2014



On Time Performance

To assess the on-time performance of AFP projects, we looked at the variance between the planned Substantial Completion date at the time of Financial Close and the actual Substantial Completion date achieved. Our review found that 24 of the 37 projects in the sample, or **65%** were delivered early or **On Time**. A further three were completed within one month of their scheduled date, and would still be considered "**On Time**" by many within the construction industry.

IO Managed AFP Schedule Performance for projects that have reached Substantial Completion as of March 31, 2014

A review of each delay reveals that the private sector partner (Project Co) often bore the costs associated with such delays, either in full or in part based on the allocation of risk defined in the Project Agreement. In contrast, had these projects been delivered through a traditional contracting model, it is anticipated that the costs of delays for most of these projects would have been the full responsibility of the public sector owner/authority.

The combined **On Time** and **On Budget** performance demonstrates the high level of effectiveness and efficiency of the AFP model and of IO's project management processes across a large portfolio of projects and a wide range of asset classes. While a balanced comparison of the performance of the AFP model against the traditional model of public sector construction projects remains challenging, the publically available data and studies indicate this high level of performance would not be considered typical.

Summary of Observations and Recommendations

As part of this track record review, we identified a number of key observations with recommendations to improve the **On Time** and **On Budget** performance on future projects. These include the following:

On Budget

The **On Budget** performance can largely be attributed to the additional rigour and due diligence associated with the private sector financing, along with the overall project management discipline and controls that IO applies at the individual project level. However, it was noted that IO could improve the consolidation and accuracy of reporting actual cost data at the portfolio level.

We recommend that IO make improvements to the reporting and quality control measures specifically related to budget and actual cost data at the portfolio level through better leveraging its project management software platform. Improved reporting and data quality will allow for the identification of issues and facilitate overall project management activities.

Total Project Costs

IO's ability to effectively manage project costs is diminished when the data set was expanded to include Discretionary Variations. Discretionary Variations are typically not required to deliver the current functional program, design or scope, and are typically managed by the public sector owner/authority, and not by IO directly. This would include changes to the approved Functional Program, changes that have an operating or service delivery impact, or other changes that impact the agreed scope of the Project that are initiated by the public sector owner/authority. Examples of a Discretionary Variation would include; additional breaker panels or rough in for future cabling (IT), a change in quality of flooring or finishes, or additional door operators not required by code. Though less common, some Discretionary Variations can involve significant scope alterations. An example of this would be the addition of policy-directed surface areas or entire floors when additional funding or program requirements occur after the initial planning stage.

We recommend that Discretionary Variations and Other Project Costs be reported directly to IO, as part of its overall project management to ensure that appropriate oversight and accounting of the Total Project Costs are maintained to a standard consistent with the IO managed Non-Discretionary Variations. This should allow for a more complete and accurate understanding of all costs associated with the project, and their performance in relation to the approved budgets.

Variations

There appears to be some subjectivity in the classification of Discretionary and Non-Discretionary Variations. During the day-to-day project management through construction, multiple issues and specific elements may be negotiated or combined to facilitate resolution. Occasionally, some portion of the costs designated as a Discretionary Variation may be partially related to an issue which was Non-Discretionary in nature or vice versa.

IO should consider measuring **On Budget** performance based on the Total Project Cost to avoid differentiating between the types of variations and to capture the full cost of the project to the Province. IO should follow the established protocol for the approval of Non-Discretionary Variations, with sufficient and readily accessible funding in accordance with the allocated Post Contract Contingency.

Schedule

Although the Province did not incur any additional costs as a result of the delay in most cases, the more pertinent measure of **On Time** performance is if the facility was able to be used according to the original schedule.

IO should consider a cost benefit analysis of incentives that could drive better on time performance and ensure planned occupancy dates, schedule buffers and contingency plans are sufficient to deal with schedules that are not as reliable.

A. Background & Objectives

A1 Mandate

Altus Group Limited was retained by IO to perform the following:

- Review the performance of the 37 AFP projects that have reached Substantial Completion as of March 31, 2014;
- Assess these projects to understand the extent to which these projects were delivered **On Time** and **On Budget**;
- Investigate the use of the Post Contract Contingency (PCC) budgets through the construction phase;
- Assess the project budget development process relative to industry best practices; and
- Identify trends and lessons learned to help improve future AFP delivery.

A2 Altus Group Limited Background

Altus Group Limited (Altus) is a multi-discipline advisory firm and the leading authority on infrastructure project finance, procurement, construction, operations, technical risk assessment, cost and schedule planning, control and management in the private and public sectors in Canada. Altus has extensive experience in advising lenders, owners and investors in AFP/PPP and traditional project delivery.

Our ability to deliver independent professional services is enhanced by our ongoing relationships with leading lenders, owners, developers, contractors and other professionals throughout Canada, the U.S. and internationally. Altus has a proven track record, demonstrating our ability to provide reliable and impartial expert advice.

Our experience with traditional infrastructure delivery projects encompasses various aspects including: risk analysis, costing, and project monitoring services through the planning, construction, and operations phases. Through our past experience in AFP / PPP and traditional procurement, Altus has participated in and tracked data, including risks and their associated budget and schedule impacts, on a wide range of projects.

A3 Infrastructure Ontario Overview

Infrastructure Ontario (IO) is a Crown corporation of the Government of Ontario that was established in 2005 and in 2011 was merged with the Ontario Realty Corporation. IO plays a key role in the Province of Ontario's long-term infrastructure plan to repair, rebuild, and renew the Province's roads and highways, bridges, public transit, post-secondary institutions, hospitals, and justice facilities, including detention centres and courthouses, in communities across Ontario.

IO partners with public sector agencies, including provincial ministries, Crown corporations, municipalities and not-for-profit organizations to renew infrastructure across Ontario.

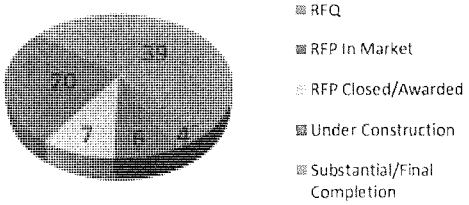
On behalf of the Province of Ontario, IO procures and delivers large projects using an alternative financing and procurement (AFP) delivery model.

Projects delivered by IO are guided by five key principles:

- Transparency;
- Accountability;
- Demonstrating value for money;
- Maintaining public ownership and control; and
- Ensuring the protection of public interest.

A4 Projects Assessed

Since its inception, IO has brought to market a total of 76 projects valued at approximately $39 billion in capital. As of the publication date of this report, these projects have progressed through various stages of the delivery process as shown below.



As of March 31, 2014, 37 AFP projects had reached Substantial Completion, which will be the focus of this review.

Of the projects assessed, the majority were infrastructure relating to healthcare (hospitals), in addition to justice related projects (courthouses & detention centres), and other social infrastructure projects (forensics services & data centre).

These projects by asset type are summarized below:

These completed projects were delivered through the following AFP delivery models:

Design-Build-Finance-Maintain (DBFM)

- Private sector is generally responsible for design, construction, maintenance, capital rehabilitation (lifecycle) and financing (both short-term and long-term).
- The Capital Cost of the project is paid for by the public sector owner/authority, in part, by lump sum payment at completion of construction and through blended capital and service payment instalments over the fixed maintenance period, usually 25 to 30 years.

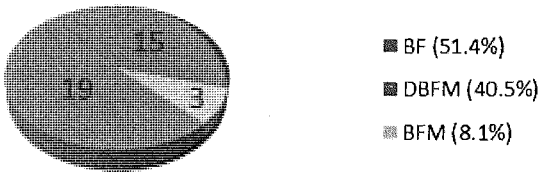
Build-Finance-Maintain (BFM)

- Private sector is generally responsible for construction, maintenance, capital rehabilitation (lifecycle costs) and financing (both short-term and long-term).
- The Capital Cost of the project is paid for by the public sector, in part, by partial lump sum payment at completion of construction and through blended capital and service payment instalments over the fixed maintenance period, usually 25 to 30 years.
- The public sector owner/authority is responsible for developing the detailed design of the facility.
- This model was used to transition early projects and is no longer used by IO.

Build-Finance (BF)

- Private sector is generally responsible for construction and short-term financing during the construction period.
- The Capital Cost of the project is typically paid for by the public sector in a lump sum at the completion of construction.
- Public sector retains design and ongoing maintenance after completion of construction responsibilities.

Of the 37 completed projects, the delivery model employed was as follows:



A detailed listing of the projects assessed as part of this assignment is included as **Appendix B** to this report.

B. Scope & Approach

B1 Scope of Review

The scope of this review included an assessment of project performance on both an individual project basis and at an aggregate level by asset class and delivery model. The review focused on the following project attributes:

Budget Development Process

- Review of budget process and relevant milestones.
- Comparison of described process with industry practice.
- Recommendations and Lessons Learned from process review.

Project Bid Analysis

- Quantification and review of the submitted RFP bid amounts for each project.
- Comparison of Winning Bid to Average and Highest Bid Submissions.
- Comparison of Winning Bid to Pre-RFP Approved Budget and actual Awarded Contract Amounts.

Project Budget Accuracy

- Review and comparison of established Project Budgets at significant project milestones including:
  A – Pre-RFP Budget Amount as approved by Government.
  B – Awarded Contract Amount at Financial Close.
  C – Final Project Costs at Substantial Completion.
- Determination of whether the achievement of the **On Budget** criteria was met.
- Where this criteria has not been met, evaluation of the reasons for the budget variance.

Post Contract Contingency Usage and Budget Performance

- Analysis of allocated Post Contract Contingency at Financial Close, compared to actual usage during construction.
- Assessment of Discretionary and Non-Discretionary variations and their contribution to the Final Project Costs at Substantial Completion.
- Identification of Other Project Costs incurred during the construction phase and the impact on the Final Project Costs at Substantial Completion.

Project Scheduling

- Determination of whether the achievement of the **On Time** criteria was met.
- Where this criteria has not been met, evaluation of the reasons for the schedule variance.
- The nature and impact on scheduling related to retained and transferred risks.

B2 On Time and On Budget

The key measures assessed in this review of AFP projects are the **On Time** and **On Budget** performance. These measures are consistent with the previous track record review undertaken in 2013 for continuity and comparison purposes and are defined as follows:

On Time

- When the actual Substantial Completion Date occurs prior to, or within five business days of the Scheduled Substantial Completion Date (as defined in the Project Agreement at the time of Financial Close).

On Budget

- When the project's actual IO Managed AFP Contract Costs at Substantial Completion are less than the amount budgeted at Financial Close.

The actual IO Managed AFP Contract costs include all payment obligations within the executed Project Agreement and any Non-Discretionary Variations that have occurred through the construction period. The transaction and the IO fees are also managed by IO and were excluded from this analysis because they are fixed costs.

The budgeted IO Managed AFP Contract costs include the Awarded Contract value and the budgeted Post Contract Contingency allocated at Financial Close.

B3 Data Verification & Validation

In order to measure and assess the appropriate performance indicators and benchmarks, a comprehensive review of the available data supplied by IO was undertaken. This data was verified against multiple sources, including publicly-disclosed information where available and applicable. The outcome of the Data Verification and Validation exercise is summarized in **Appendix C.**

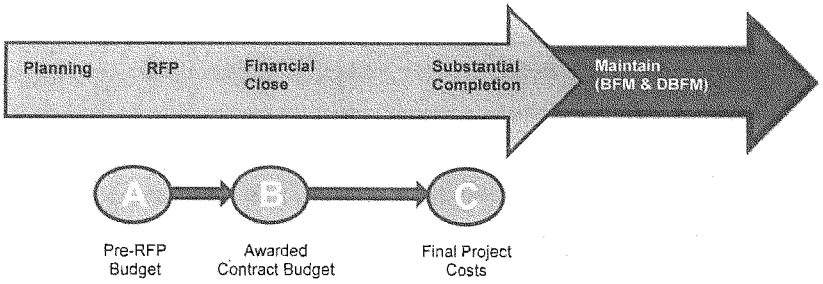
Specific sources used to verify and validate the data considered in this assessment are described in **Appendix D**.

C. Budget Development

C1 Overview and Milestones

A project is assigned to IO by Government for delivery through an AFP model, allocating a total approved budget typically based on an initial functional program and associated cost estimate.

Once the project has been assigned to IO it generally follows the process and key budget milestones outlined below:



Through the planning phase, as the project is developed and refined, the budget is further revised and updated to reflect the improved level of information. These updates would typically be reported back for approval to Government.

C2 AFP Project Cost Estimates

The budgeting process adopted by IO is consistent with general best industry practice. On each project, IO works closely with professional cost consultant advisors with the appropriate expertise and familiarity with traditional construction of large-scale infrastructure projects and alternative project delivery models, such as AFP. This process is aligned with the guidelines established in "Guide to Cost Predictability in Construction" prepared by the Joint Federal Government / Industry Cost Predictability Taskforce in November, 2012. These guidelines refer to the following classes of estimates:

- **Class D**: Based on the initial functional program and broad concept approach, expected variance of 20 to 30%.
- **Class C**: Based on a schematic design (construction documents) development estimate, where the program is set, and the design is generally completed up to 33%, expected variance of 15 to 20%.
- **Class B**: Based on working drawings and more detailed dimensioning. Depending on the project, this estimate can be developed when construction documents are at 50%, 66% or 95% complete, expected variance of 10 to 15%.
- **Class A**: Based on construction documents that are 100% complete, expected variance of 5 to 10%.

Given the early stage of the project when the initial estimate is developed, particularly within an AFP framework where the design is not fully established, these estimates are often developed based on the initial functional program or exemplar design. Depending on the project complexity, a variance of between 20-30% could be anticipated when compared to the median bid received.

For DBFM and DBF projects, where the design is not developed to any significant extent the project budget is not likely to be based on any better than a Class D Estimate, within 20-30% of the median bid, but should improve as the project scope is better defined through the planning stages prior to RFP release.

For BF/BFM projects, a revised budget based on the fully developed design at the time of RFP release could be expected to be within 5-10% of the median bid received.

C3 Lessons Learned & Recommendations

One challenge identified in the budgeting process is the lag between the formal approvals and the real-time progression of a project as it is advanced and refined, particularly as specifications and contract documentation is developed in preparation for the RFP release to market.

In many cases the Final Pre-tender Estimate varies from the Pre-RFP Approved Budget due to further scope refinement, updated cost estimates, and revised financing assumptions. Where the Final Pre-tender Estimate remains below the Pre-RFP Approved Budget, the variance is not of concern and does not create any approval impediment to the release of the RFP. However, if the Final Pre-tender Estimate exceeds the Pre-RFP Approved Budget, the expectation is that a new formal approval would be obtained prior to the release of the RFP. Given this requirement, and the associated timing and scheduling impacts for the procurement process, there is a risk that potential changes which would otherwise have an effect on the Final Pre-tender Estimate may be diminished or subject to an optimism bias in order to avoid exceeding the Pre-RFP Approved Budget.

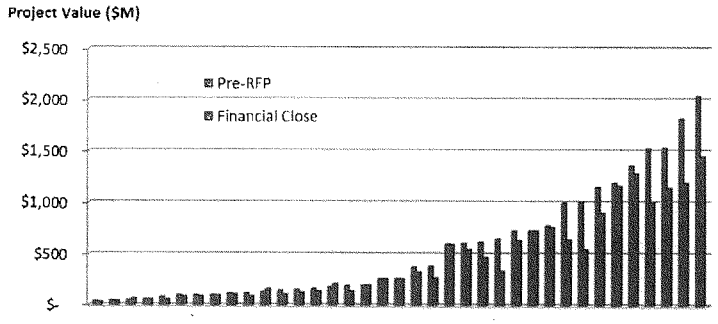
A consistent formal approval process for the Final Pre-tender Estimate immediately prior to the RFP release would ensure that the current best estimate is established, approved and able to provide a consistent benchmark for project budget assessment.

D. A to B: Approved Pre-RFP Budget to Awarded AFP Contract Budget

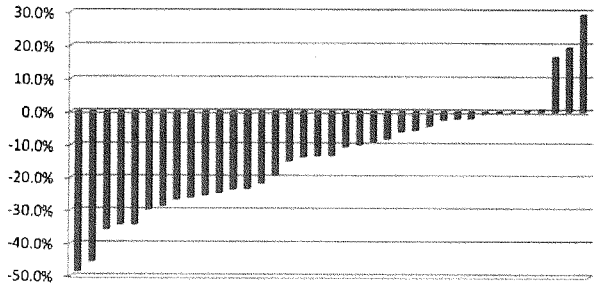
D1 Budget Comparison

A comparison of the AFP Contract Value from the Pre-RFP Approved Budget to the Awarded AFP Contract Budget provides an indication of the accuracy of the estimation process and the validity of the assumptions used. The Pre-RFP Approved Budget for the 37 AFP Contract Values totalled $20.7 billion, which after the RFP process resulted in $16.4 billion at Financial Close, a reduction of $4.3 billion.

A to B: AFP Contract Value Comparison



A to B: Budget Variance (%)



In 32 of the 37 projects analysed, the AFP Contract Value at Financial Close was within the corresponding AFP Contract estimate contained in the Pre-RFP Approved Budget. Of these 32 projects, the following five projects, each delivered through a DBFM model, came in under the AFP Contract cost component of the Pre-RFP Approved Budget by more than 30%.

In two instances, the AFP Contract value at Financial Close only moderately exceeded the AFP Contract cost component of the Pre-RFP Approved Budget by less than 1%.

In three instances, the AFP Contract value at Financial Close significantly exceeded the AFP Contract cost component of the Pre-RFP Approved Budget by up to 29%.

Given that these three instances are all BF projects, these variances are higher than expected when compared to general industry benchmarks. However, in aggregate the BF projects perform most closely to their Pre-RFP Budgets, so there does not appear to be a systemic issue driving these variances.

Overall, the variance between the approved Pre-RFP budgets and the actual Awarded AFP Contract value performs quite well and is consistent with general industry best practice.

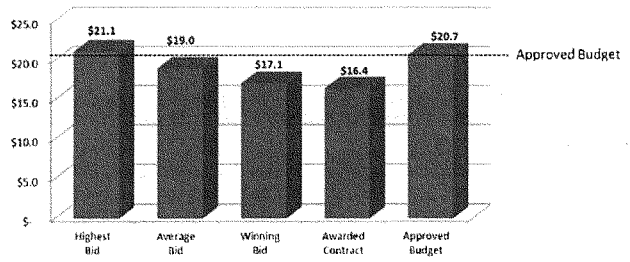
D2 Project Bid Analysis

Through the AFP procurement phase, usually three (DBF and DBFM) or five (for BF) pre-qualified and experienced project consortia review the project scope and requirements and competitively price their proposed solution.

A review of bid submissions, aggregated across the AFP portfolio, reveals the general range of solutions and respective costs among the winning, average, and highest cost bidders, based on the requirements specified in the RFP and applicable AFP Contract.

This bid data is also compared to the AFP Contract Value included in the Pre-RFP Approved budget and at Financial Close, which incorporates the revised financing costs resulting from the credit spread reset protocol and any negotiated elements with the identified preferred proponent after the RFP bid submission.

Aggregate AFP Contract Bid Values



On a portfolio wide basis, the Pre-RFP Approved budgeted AFP Contract Values compares to the bid submission values as follows:

- 2% lower than the highest bid
- 9% above the average bid
- 21% above the winning bid

The AFP Contract value at Financial Close in comparison to the bid data as follows:

- 4.0% lower than the winning bid
- 13.7% lower than the average bid
- 22.3% lower than the highest bid

The variance between the winning bid and AFP Contract value reflects changes that occur between the RFP submission and Financial Close dates. This variance is primarily attributed to the revised financing costs reflective of the updated credit spreads and changes to the underlying base rates over this time period as well as any negotiations relating to innovations or value engineering items between the public sector owner/authority and Project Co.

The winning bid is cumulatively 10% lower than the average bid and 19% lower than the highest bids. This variation between the winning and other bids is often a result of the inherent level of innovation and efficiency encouraged under significant competitive tension through the established RFP process, as well as combining design and long term maintenance.

These bid submission ranges help to validate the cost estimates informing the Pre-RFP Approved Budget, generally within the IO target of two bids below and one bid above the government approved budget.

A comparison of budget performance by delivery model indicates that the DBFM model has typically experienced the largest variances between the approved budget and awarded contract, with an average variance of 25% compared to less than 10% for the BF and BFM models. These variances are in line with expectations given the achievable class of estimate for each model.

This differential can be partially attributed to the challenges associated with forecasting the long-term maintenance, lifecycle and financing costs associated with the DBFM model, through the 30 year concession term, along with the limited design detail available prior to RFP release, in comparison to the BF and BFM models where the design is specified. The inclusion of design allows for greater flexibility and opportunity to incorporate innovative approaches to both design development and construction, at a lower overall cost.

D3 Lessons Learned

Considering the extensive pre-qualification process, bid participation is generally limited to teams with significant experience and relevant qualifications. It is expected that the variation between the winning and other bids is often a result of the level of innovation and efficiency, under significant competitive tension, particularly where design and long-term maintenance and lifecycle responsibilities are included, within the AFP contract.

E. B to C: Awarded Contract to Substantial Completion

E1 Awarded Contract to Substantial Completion

In assessing the budget performance during construction, it is important to differentiate between the IO Managed AFP Contract costs and the Total Project Costs that extend beyond those elements directly included as part of the AFP Contract.

The actual IO Managed AFP Contract costs include all payment obligations within the executed Project Agreement and any Non-Discretionary Variations that have occurred through the construction period. These Non-Discretionary Variations are tied to unforeseen risks retained by the public sector and are intended to be paid through the allocated Post Contract Contingency established at Financial Close.

The balance of the Total Project Costs are either related to the transaction process (fixed costs for IO fees and advisors) or costs directly controlled by the public owner outside of the AFP Contract framework including any Discretionary Variations, such as owner directed scope changes, and the actual expenditures relating to the owner's ancillary and other costs. IO does not manage or control these costs.

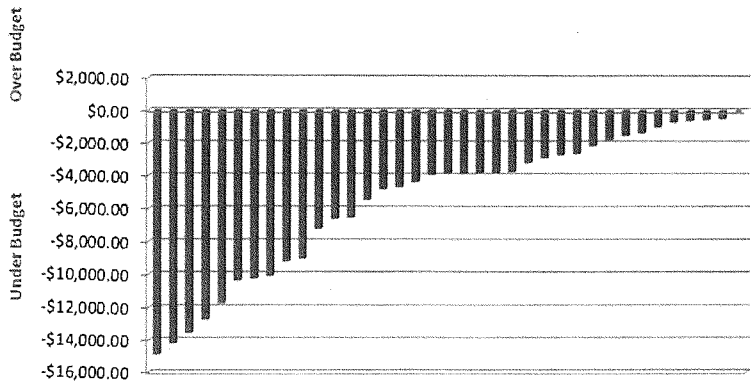
E2 IO Managed AFP Contract Costs

The IO Managed AFP Contract Costs are used to determine the **On Budget** performance of a project.

Thirty-six projects or **97%** of the projects assessed can be strictly considered to be delivered **On Budget** with respect to the IO Managed AFP Contract Costs, as of Substantial Completion. The one remaining project was completed using 100.01% of the IO Managed AFP Contract Costs.

This performance demonstrates almost absolute cost certainty within the identified project costs under IO's management, highlighting the effectiveness of the AFP delivery model and IO's project management processes.

B to C: IO Managed AFP Contract Variance

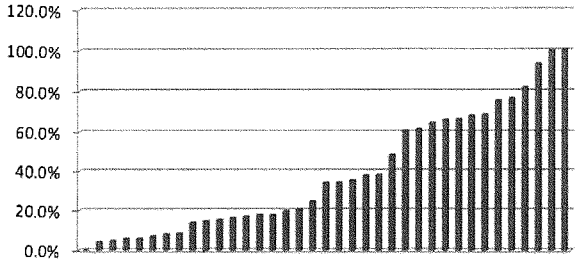


All delivery models and asset classes have consistent performance with respect to the total IO Managed AFP Contract Costs with the aggregate Actual Costs achieving **98.9%** of the allocated budget at Financial Close.

One project exceeded its allocated PCC amount as a result of Non-Discretionary Variations during the construction period by 0.02%.

The overall variation between the IO Managed AFP Contract costs at Substantial Completion compared to the allocated budget at Financial Close is reflected in the total amount of the Post Contract Contingency (PCC) used through the construction period.

Post Contract Contingency Usage by Project



On an aggregate basis for all projects, 36% of the available Post Contract Contingency is used to address Non-Discretionary Variations through the construction period. While this could indicate some opportunity to reduce the amount of PCC allocated, the trend appears fairly linear on a project by project basis from minimal usage to utilizing the entire amount.

In cases where significant Discretionary Variations were approved, leading to additional new project scope during construction, the available Post Contract Contingency was adjusted to reflect the increase in scope.

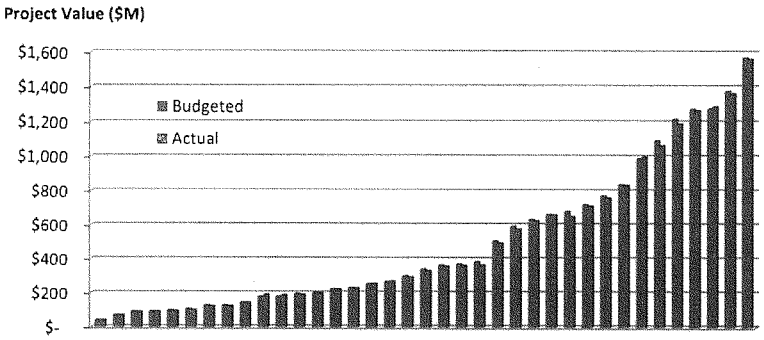
Some challenges were noted with respect to the practical application and management of the allocated PCC during the implementation phase, resulting in inconsistent treatment (how they were identified) and

accounting of the Non-Discretionary Variations. Another challenge was the ability to access PCC funding in accordance with the allocated PCC; access to this would be beneficial in managing these costs during construction.

E3 Total Project Costs

Total Project Costs are assessed at Substantial Completion and include both the IO Managed AFP Contract Costs, Transaction Fees, direct IO fees for delivering the project, Discretionary Variations and any other costs relating to the project managed by the public sector owner/authority.

B to C: Total Project Cost



On an aggregate basis, all delivery models and asset types perform fairly well when comparing the budgeted Total Project Costs at Financial Close to the actual costs at Substantial Completion.

Thirty-five of the 37 projects at Substantial Completion are below, or within two percent of the budgeted Total Project Cost at Financial Close. On a Total Project Cost basis, this indicates a high level of overall project cost control and performance.

The two projects that exceeded the budget at Financial Close by more than two percent were both the subject of significant scope changes introduced by the respective public sector owner/authority (i.e. Discretionary Variations) during construction which contributed to this outcome.

While introducing additional scope during the construction phase is generally not desirable, in instances where additional new funding becomes available, improving or expanding the facility can be accommodated. The decision to seek additional funds and approve these scope changes are maintained by the public sector owner/authority and applied based on their direction. The appropriateness of any resulting schedule impacts should be assessed in relation to the added benefit introduced.

E4 Lessons Learned & Recommendations

Generally, project performance during construction compares quite favourably to the Awarded Contract budget.

A limited level of information is currently available to fully represent the Total Project Costs. A more detailed review of the two projects that appear to have exceeded their budgets should be considered to ensure that all related costs have been recognized.

There appears to be some subjectivity in the classification of Discretionary and Non-Discretionary Variations. During the day-to-day project management through construction, multiple issues and specific elements may be negotiated or combined to facilitate resolution. Occasionally, some portion of the costs designated as a Discretionary Variation may be partially related to an issue which was Non-Discretionary in nature, or vice versa.

Part of this challenge is likely related to the difficulties accessing the PCC funding in a timely and responsive manner during construction. It would be beneficial to have sufficient and readily accessible funding to access the allocated PCC funding when following the protocol for the approval of Non-Discretionary Variations.

Further consideration should be given to assessing **On Budget** performance based on the Total Project Cost to avoid differentiating between the types of variations and to capture the full cost of the project to the public sector owner/authority.

F. Schedule Analysis

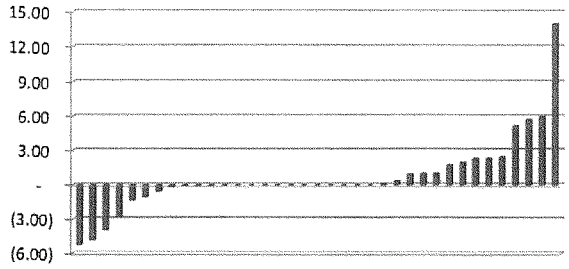
F1 On Time Performance

A key objective in the assessment of a project is whether it can be considered to have been delivered **On Time.**

A project would be considered to have been completed **On Time** when the Substantial Completion Date of the project, as certified by an independent third party, occurs earlier than or within five business days of the Scheduled Substantial Completion Date (as defined in the Project Agreement at the time of Financial Close).

The following illustrates the variance between the scheduled and actual Substantial Completion Dates for each project.

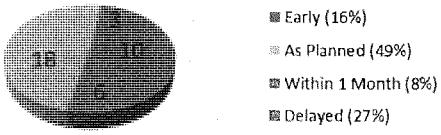
Project Schedule Variance: Scheduled to Actual (Months)



The majority of projects had minimal or no variance from the Scheduled Substantial Completion Date. The earliest project was delivered over five months early and the latest project over 14 months after the Scheduled Substantial Completion Date.

A detailed assessment of the projects by delivery model and asset class examined overall schedule performance and identified where projects were delivered:

- **Early** – More than one month ahead of the Scheduled Substantial Completion Date.
- **As Planned** – Within the month prior to, or no later than five days after the Scheduled Substantial Completion Date.
- **Delayed** – More than five days after the Scheduled Substantial Completion Date.



Overall, 24[1] of the 37, or about **65%,** of the assessed projects successfully achieved **On Time** performance, within five days of the Scheduled Substantial Completion Date.

F2 Late Project Assessment

There does not appear to be any significant trend by either delivery model or asset class, based on the limited sample sizes of some project types.

For the thirteen projects that have experienced delays, the primary cause has been assessed along with the party who bore the associated risks relating to the delay.

Project Asset Class	Year Complete	Delivery Model	Delay (days)	Primary Cause	Prov. Risk	Shared Risk	Proj Co. Risk
Healthcare	2010	BF	11	Schedule Management		✓	
Justice	2013	DBFM	30	Provincial Trade Strike: Elevators / Project Co. Management		✓	
Healthcare	2012	DBFM	31	Unknown Site Conditions	✓		
Healthcare	2009	BF	32	Strike		✓	
Social	2009	BF	52	Schedule Management/Winter Conditions			✓
Justice	2013	DBFM	60	Provincial Trade Strike: Elevators / Project Co. Management		✓	
Justice	2014	DBFM	70	Provincial Trade Strike: Elevators		✓	
Healthcare	2009	BF	70	Design Errors by Province	✓		
Social	2013	DBFM	74	Site Conditions		✓	
Justice	2014	DBFM	158	Provincial Trade Strikes: Elevators/Terrazzo/Roofers		✓	
Healthcare	2013	BF	174	Schedule Management /Errors & Omissions		✓	
Healthcare	2011	BF	183	Resourcing/ Technical Deficiencies			✓
Healthcare	2012	BF	427	Schedule Management / Scope Change		✓	

Review of Delay Causes and Impacts

The AFP Contract framework endeavours to transfer project risk to the public or private party best positioned to manage it. Achieving this balance is critical to ensure that efficient pricing and optimal value is achieved. As a result, while the majority of construction related risks are transferred to the private contractor, some risks remain with the public owner. Should these risks materialize, the potential of a delay remains and achieving 100% **On Time** delivery is not likely.

Of the 13 delayed projects, Project Co. either fully retained or partially shared primary responsibility for the delay on all but two projects. In contrast, it is anticipated that many of these delays would have been the full responsibility of the Province had the project been delivered traditionally.

The design error related delay retained by the Province under the BF model would have been a risk transferred to Project Co. under the DBFM model.

Strike Related Delays – Five projects

[1] One project was comprised of two distinct sites. One of the sites was completed 148 days early, while the other site was 101 days late. For the purpose of this report, the net result was to consider the project to have been delivered On Time.

A number of the recently completed projects were delayed primarily as the result of province wide trade strikes. Under the AFP contract, such an event is a shared risk between both the private and public sectors where the Project Co. has an obligation to make commercially reasonable efforts to mitigate the strike impact. This obligation likely reduced the overall extent of the delays and limited the cost impacts to the Province.

Schedule Management Related Delays – Four projects

Under the AFP model, the risk of schedule management related delays are entirely the responsibility of the Project Co. As a result, the Province bears no additional financial responsibility for costs associated with this type of delay.

Unknown Site Conditions – Two projects

The risks associated with the discovery of unknown site conditions that were not readily inferable from the available reliable data are retained by the Province. For the most part this risk is easily managed through comprehensive site investigations prior to transaction initiation. In some cases the ability to undertake these investigations may be limited due to timing or access constraints. These two projects should be reviewed to understand the reason for these conditions to remain undiscovered and the relevant site investigation protocols should be adjusted, as appropriate.

Design Errors & Scope Changes – Two projects

Scope changes introduced by the owner during construction that cause delay are at the owner's risk. The potential for a related delay should be understood and considered as part of the decision to initiate any change in scope during construction, as the Province would be fully responsible for the costs associated with the scope change and any related delay. For one project, with the greatest overall delay (~14 months) it is understood that about two months of the delay could be directly attributed to the introduction of new scope. The balance (~12 months) was related to Project Co. schedule management.

F3 Lessons Learned

Schedule performance might be better benchmarked using public commitments, requirements to efficiently transition operations from existing facilities, or through anticipated coordination with other related works.

In establishing these commitments and deadlines, full consideration should be given to the project risk profile and allow for suitable schedule contingency to accommodate these risks. In addition to providing an appropriate schedule contingency, alternative transition and occupancy plans should be developed and reflected in the schedule to minimize negative impacts of the delay to the Province.

A sampling of publically available information on recent non-IO public infrastructure projects delivered in Ontario, through a traditional delivery model, indicates a general trend of significant schedule delays:

- **Spadina Subway Extension** – The TTC has confirmed that the $2.6B Spadina subway extension to Vaughan will open about a year later than originally scheduled.
- **Pape Station Renovation** – Completed more than 18 months behind schedule.
- **Clarkson GO Station Parking Lot** – Estimated delay of about one year
- **Burlington GO Station** – Estimated delay of about one year

G. Review of 2013 Project Track Record Review Recommendations

The initial AFP Track Record Review, undertaken in 2013 articulated four key recommendations for review. Over the past year, IO has considered these recommendations and, where appropriate, taken measures to address these findings. The following key recommendations were provided:

Budget Development

Recommendation

- The current processes for setting PCC budgets should be reviewed to see if the % benchmark is appropriate and whether there is an opportunity to reduce the magnitude of unspent PCC funds across the portfolio, particularly in cases where there is substantial risk transfer.

IO Action

- IO's due diligence practices during the transaction period allow IO to carry a PCC generally lower than the typical best practice approach in a stipulated price contract. Preliminary discussions have been initiated and opportunity to reduce the magnitude of underutilized PCC funds is to be investigated further upon the build up of their dedicated Capital Budget team.

A to B Budget Review

Recommendation

- For two outlier projects where Awarded Contract Amounts were more than $500M lower than pre-RFP budgets, additional investigations should be undertaken to better understand the reasons for the magnitude of this variance.

IO Action

- A project specific review was conducted on three projects, which yielded a number of key recommendations that IO is now incorporating.

Schedule Performance

Recommendation

- For two outlier projects that were substantially delayed, additional investigations should be undertaken to determine if there are any lessons learned that can be used to inform future AFP scheduling and project delivery.

IO Action

- A project specific review was conducted on another project. Lessons learned were focused on one of the projects that was considered more relevant to future projects. A number of recommendations came out of the review and have been incorporated into current processes and practices.

Continuous Improvement

Recommendation

- Identified an opportunity to establish a project review protocol, based on % or $ thresholds or benchmarks, that would trigger a review of specific AFP projects upon completion to help avoid/mitigate risk on future projects and to ensure that projects are completed on time and on budget, without reducing scope.

IO Action

- IO now conducts a project specific review for any project that is late or over budget and has established a Vendor of Record to conduct third party project reviews. IO has developed a formal tracking tool, the Lessons Learned Register, which captures all current lessons learned recommendations from audit reports and project review reports.
- A corporate-wide Lessons Learned Program is currently being developed. The program is targeted to be rolled-out to all business units later this year.

Appendices

Appendix A – Glossary of Terms

- **Alternative Financing & Procurement (AFP):** AFP is an innovative way of financing and procuring large, complex infrastructure projects. Under AFP, the public sector owner/authority establishes the scope and purpose of the project while the work is financed and carried out by the private sector. In some cases, the private sector will also be responsible for the maintenance of a physical building or operation and rehabilitation of a roadway.
- **Ancillary Costs:** Are costs for all the technical advisors (designers, architects, and engineers) and are billed to the public sector owner/authority on a pass-through basis.
- **Awarded AFP Contract Budget:** Represents the budget for the project taking into account the value of the actual AFP Contract with the successful bidder (Project Co) at Financial Close, including an updated Post Contract Contingency amount based on Project Co's construction costs, and any remaining other project related costs.
- **Build Finance (BF):** Type of AFP project delivery model in which the private sector is generally responsible for construction and short-term financing during the construction period. The Capital Cost of the project is paid for by the public sector in a lump sum at the completion of construction. The public sector sponsor is responsible for developing the detailed design of the facility and ongoing maintenance after completion of construction.
- **Build Finance Maintain (BFM):** Type of AFP project delivery model in which the private sector is generally responsible for construction, maintenance, capital rehabilitation (lifecycle costs) and financing (both short-term and long-term). The Capital Cost of the project is paid for by the public sector, in part, by partial lump sum payment at completion of construction and through blended capital and service payment instalments over the fixed maintenance period, usually 25 to 30 years. The public sector owner/authority is responsible for developing the detailed design of the facility. This model was used to transition early projects and is no longer used by IO.
- **Capital Costs:** Include the construction, financing and other project costs associated with the implementation of the project. Capital Costs do not include costs associated with operations, or lifecycle activities.
- **Discretionary Variations:** Variations and/or change orders to the Project Agreement that are initiated by the public sector owner/authority. Discretionary Variations amend the scope of the project.
- **Design Build Finance Maintain (DBFM):** Type of AFP project delivery model in which the private sector is generally responsible for design, construction, maintenance, capital rehabilitation (lifecycle) and financing (both short-term and long-term). The Capital Cost of the project is paid for by the public sector owner/authority, in part, by lump sum payment at completion of construction and through blended capital and service payment instalments over the fixed maintenance period, usually 25 to 30 years.
- **Final Pre-tender Estimate:** The estimate of total project costs developed by an external cost consultant reflecting the project scope immediately before release of the RFP.
- **Financial Close:** The time at which the Project Agreement is executed with the successful Project Co.
- **IO Managed AFP Contract Costs:** Include all payment obligations within the executed Project Agreement and any Non-Discretionary Variations that have occurred through the construction period. It does not include Transaction Fees or direct IO fees for delivering the project.
- **Non-Discretionary Variations:** Variations and/or change orders to the Project Agreement that arise when risks borne by the public sector owner/authority under the Project Agreement materialize. These variations and/or change orders do not relate to functional scope changes of a project.
- **On Budget Performance:** When the project's actual IO Managed AFP Contract costs are less than the budgeted IO Managed AFP Contract costs at Financial Close.
- **On Time Performance:** When the actual Substantial Completion Date occurs prior to, or within five business days of the Scheduled Substantial Completion Date, as defined in the Project Agreement at the time of Financial Close.
- **Post Contract Contingency (PCC):** The budget allocation established at Financial Close to fund Non-Discretionary Variations through the construction period, based on the anticipated risk profile, level of design development, and the Project Co established construction costs.

- **Pre-RFP Approved Budget:** The approved total budget allocated in the annual Letter of Direction prior to the actual RFP release.
- **Project Agreement:** Contract between the public sector owner/authority and private sector consortium (Project Co) setting out the requirements and obligations of each party to complete the project.
- **Project Co:** The private sector consortium comprised of differing parties and expertise (depending on the AFP delivery model) which, together with its Lenders, executes the Project Agreement and is responsible for completing the project.
- **Request for Proposals (RFP):** The second step of the two-stage AFP procurement process in which the public sector owner/authority solicits competitive bids for the completion of the defined project scope from prequalified bidders passing the RFQ stage.
- **Request for Qualifications (RFQ):** The first step of the two-stage AFP procurement process in which the public sector owner/authority solicits qualifications from private sector consortia for a potential project, resulting in the prequalification or "short-listing" of a selected number of consortia.
- **Scheduled Substantial Completion Date:** The date, first bid by the successful Project Co and as specified in the Project Agreement, when construction of the Project is scheduled to be completed. For the purposes of this report, the Scheduled Substantial Completion Date is that date defined in the Project Agreement at the time of Financial Close within five business days.
- **Substantial Completion:** The time when the construction of the project is completed in accordance with the Project Agreement, as certified by the Independent Certifier (BFM/DBF/DBFM) or the Consultant (BF), and the time when maintenance of the facility, either by Project Co (BFM/DBFM) or the public sector owner/authority (BF/DBF) begins.
- **Total Project Costs**: Includes both the IO Managed AFP Contract Costs, other IO Managed costs relating to the transaction process, direct IO fees for delivering the project, Discretionary Variations and any other costs relating to the project managed by the public owner.
- **Transaction Fees:** Transaction fees are a fixed fee to cover the costs of advisors (financial, fairness, legal and process advisors) required in the development of the agreements for the RFQ and RFP, and in negotiations leading to Financial Close.

Appendix B – Project List

Project	Type	Delivery Model
Kingston General Hospital	Healthcare	BF
OPP Modernization Project	Justice	DBFM
Sunnybrook Health Sciences Centre	Healthcare	BF
Hamilton Health Sciences - Henderson Site	Healthcare	BF
Lakeridge Health, Oshawa	Healthcare	BF
Bluewater Health, Sarnia	Healthcare	BF
Saint Anne Hospital	Healthcare	BFM
Trillium Health Centre	Healthcare	BF
The Ottawa Hospital	Healthcare	BF
Rouge Valley Health System	Healthcare	BF
LHSC/SJHC - M1P2	Healthcare	BF
Runnymede Healthcare Centre	Healthcare	BF
Hamilton Health Sciences - General Site Redevelopment	Healthcare	BF
North Bay Regional Health Centre	Healthcare	BFM
Roy McMurty Youth Centre	Social	BF
Durham Consolidated Courthouse	Justice	DBFM
Guelph Data Centre	Social	DBFM
St. Joseph's Health Care, London - Grosvenor Rosewood (MOPT)	Healthcare	BF
Quinte HealthCare	Healthcare	BF
Forensic Services & Coroner's Complex	Social	DBFM
Waterloo Regional Consolidated Courthouse	Justice	DBFM
Niagara Health System	Healthcare	DBFM
Toronto Rehab Institute	Healthcare	BF
Toronto South Detention Centre	Justice	DBFM
Centre for Addiction & Mental Health	Healthcare	DBFM
Windsor Regional Hospital	Healthcare	BF
Woodstock General Hospital	Healthcare	BFM
Trillium Health Partners (Former Credit Valley)	Healthcare	BF
L'Hopital Regional de Sudbury	Healthcare	BF
Bridgepoint Hospital	Healthcare	DBFM
Royal Victoria Regional Health Centre	Healthcare	BF
Thunder Bay Consolidated Courthouse	Justice	DBFM
St. Joseph's Health Care - West 5th Campus	Healthcare	DBFM
Quinte Consolidated Courthouse	Justice	DBFM
Waypoint Centre for Mental Health Care	Healthcare	DBFM
South West Detention Centre	Justice	DBFM
St. Thomas Consolidated Courthouse	Justice	DBFM

[2] Montfort Hospital was excluded from the analysis as it was initiated prior to the establishment of IO, and did not include private sector financing, a key consideration in AFP project delivery.

Appendix C – Data Verification & Validation

The specific sources used to verify and validate the data considered in this assessment are described in **Appendix D**.

Budget Data

A – Pre-RFP Approved Budget

In most instances, the project-specific allocations in the annual Letter of Direction issued to IO (issued to IO before the RFP is released) were used to establish the Pre-RFP Approved Budget.

In a few instances, the allocations in the Letters of Direction issued to IO immediately following release of an RFP were used to establish the Pre-RFP Approved Budget, provided that such post-RFP issuance Letters of Direction were only used when:

- the relative short timeframe of the Post-RFP Letter of Direction issuance reasonably indicated that the Pre-RFP Approved Budget had actually been approved by government before the RFP release date;
- the Pre-RFP Approved Budget set out in the Post-RFP issued Letter of Direction was consistent with the figures supplied to IO senior management and executives for the purposes of obtaining internal approval to release; and,
- the content of the Post-RFP issued Letter of Direction was consistent with a known change in the project delivery model or payment structure which was not reflected in the previously issued annual Letter of Direction.

These budget approvals prior to RFP release were typically made for the anticipated Total Project Costs associated with a project and do not provide details corresponding to the AFP Contract, Post Contract Contingency, or Other Project Cost estimates.

In some cases, this information could be confirmed through corresponding AFP budget documents or the Pre-RFP Release Presentations to executive groups.

For a number of the early projects, the cost components necessary to assess budget performance between milestones A and B could not be reconciled or were unavailable and therefore could not be verified or validated. Generally, data availability and consistency has improved for the more recently delivered projects.

In order to present a comprehensive assessment of project performance between milestones A and B, along with the respective comparisons to the respective bid data results, the AFP Contract Costs identified in the previous 2013 AFP Track Record were used as indicative data, but cannot be considered to be validated as part of this assignment.

B – Awarded AFP Contract Budget (Financial Close)

The Awarded AFP Contract Budget reflects the actual AFP Contract value negotiated at Financial Close with the successful Project Co, an updated Post Contract Contingency based on the revised construction costs, and the remaining approved Other Project Costs.

The budget items encompassing the Awarded Contract Budget, used to establish **On Budget** performance, are readily available and verifiable through IO's annual Results-based Planning (RbP) submissions to government and IO's Construction Status Reports that are used to track budget utilization through the construction period.

C –Project Costs at Substantial Completion

The actual IO Managed AFP Costs and Total Project Costs are compiled by IO upon achievement of Substantial Completion. These costs reflect the net changes in project costs from the Awarded Contract Budget including the following:

- Non-Discretionary Variations;

- Discretionary Variations;
- Unused Post Contract Contingency Amount; and,
- Unused/Additional Other Costs.

These amounts were compiled directly from the responsible staff teams at IO.

Bid Data

IO provided a summary of the Winning, Average, and Highest AFP Contract bid submissions on either a project, or aggregate basis to support the relevant analysis described in this report.

Given the proprietary nature of this data, the direct source material contained within the actual bid submissions was not made available and therefore could not be verified.

Schedule Data

All schedule related data required for each project's **On Time** assessment was confirmed through the relevant formal contract documents, as described in **Appendix D**.

General project timeline data, including the RFP release date, was verified through publicly available information.

Where a project is made up of multiple sites, the Scheduled and Actual Substantial Completion Dates for the latest sites were used for the **On Time** analysis.

Lessons Learned & Recommendations

As noted above, the format and level of detail available for the budget related data created challenges in fulfilling the data verification and validation exercise part of this assignment, particularly for many of the earlier delivered projects.

A number of factors have been identified that contributed to these inconsistencies:

- The timing lag between the annual Letter of Direction, and budget development/revisions;
- Inconsistent level of detail/summary of budget information;
- Poor data management/record keeping; and
- Limited access to source data.

These inconsistencies appear to have improved over time, with the data available for the more recent projects being more comprehensive and in a format that allows consistent interpretation and comparison.

Similarly, the reporting and documentation of actual costs incurred during construction appears to have not been consistently tracked and controlled. Specific deficiencies identified are:

- Expected Post Contract Contingency usage (for Non-Discretionary Variations) could not be verified due to intentional reallocation of funds from other line items in the project budget. Such reallocation was done in order to make timely payment to Project Co pursuant to the Project Agreement since the approval requirements for the actual use of funds allocated as Post Contract Contingency are onerous and would otherwise lead to untimely payment;
- Inconsistent classification and treatment of expenses during construction; and
- Official records of expenses and payments for completed projects were not available.

Schedule data was readily available and easily verified through multiple sources and official documentation.

It is recommended that IO:

- Undertake a comprehensive review of its budgeting documentation requirements to ensure consistency and accuracy throughout the project delivery and implementation phases, with clear linkages between approved budgets and subsequent revisions;
- Assign responsibility to a single entity to manage and account for all costs associated with the Project from initiation to Substantial Completion;

- Make improvements to the available Construction Status Reports, with appropriate staff training, to ensure consistent treatment and reporting of project costs during the construction phase; and
- Issue a formal report following project completion that accounts for all costs incurred during construction, reconciling with the associated budget items.

Appendix D – Data Sources

Budget Data

A – Pre-RFP Budget Amount as approved by Cabinet

Budget Item	Data Source(s)
Approved Total Project Cost	▶ Letter of Direction dated prior/adjacent to RFP release ▶ Pre-RFP Release Presentation to IO Executive Group
AFP Contract Estimate	▶ Pre-RFP Release Presentation to IO Executive Group ▶ Detailed AFP Budget
Post Contract Contingency	▶ Pre-RFP Release Presentation to IO Executive Group ▶ Detailed AFP Budget
Other Project Costs	▶ Pre-RFP Release Presentation to IO Executive Group ▶ Detailed AFP Budget

B – Awarded Contract Budget at Financial Close

Budget Item	Data Source(s)
Awarded Total Project Cost	▶ Results-based Planning Submissions ▶ Confirmed with IO Construction Status Reports
Awarded AFP Contract	▶ Results-based Planning Submissions ▶ Confirmed with IO Construction Status Reports
Allocated Post Contract Contingency	▶ Results-based Planning Submissions ▶ Confirmed with IO Construction Status Reports
Other Project Costs	▶ Results-based Planning Submissions ▶ Confirmed with IO Construction Status Reports

C – Final Project Costs at Substantial Completion

Budget Item	Data Source(s)
Non-Discretionary Variations	▶ Compiled and provided directly from IO
Discretionary Variations	▶ Compiled and provided directly from IO
Final Ancillary/Other Costs	▶ Compiled and provided directly from IO
Other Final Project Costs	▶ Compiled and provided directly from IO Status Reports

Schedule Data

Schedule Milestone	Data Source(s)
RFP Release Date	▶ IO Website ▶ Press Releases
Financial Close Date	▶ IO Website

Schedule Milestone	Data Source(s)
	▶ Press Releases
Scheduled Substantial Completion Date	▶ As defined in Executed Project Agreement, available on IO Website
Actual Substantial Completion Date	▶ Official Project Substantial Completion Certificate(s)

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Calvin E. Hollis
Managing Executive Officer, Countywide Planning and Development
Los Angeles County Metropolitan Transportation Authority (LA Metro)

Statement to the Banking Subcommittee: Exploring Opportunities for Private Investment in Public Infrastructure

Focus: Metro's Joint Development Program as a Tool for Augmenting Transportation Funding

April 29, 2015

Mr. Chairman, Ranking Member, and Members of the Committee

Thank you for the opportunity to speak to the Committee today. My name is Cal Hollis; I am a Managing Executive Officer at the Los Angeles County Metropolitan Transportation Authority, responsible for Metro's real estate and joint development program. The department houses the real estate acquisition group, our real estate asset management team and the joint development program. The joint development program results in ground leases with private sector developers for the residential and commercial development of Metro property. The projects are often on or immediately adjacent to Metro's below or at grade rail stations, on park and ride lots and similar underutilized properties. The Metro joint development program dates back to the early 1990's with Metro's first light rail project.

To date we have completed 17 joint development transactions resulting in over 2,000 residential units of which approximately 30% are subsidized affordable units, the 300-room W Hotel in Hollywood, 800,000 square feet of retail space, and 600,000 square feet of office space. We have 3 additional residential/mixed use projects under construction, 9 under negotiations and 14 to 20 sites under consideration. Private sector demand is very strong for our well-located sites. With the implementation of 5 additional transit projects this year, additional joint development sites will be identified.

PRIORITIES

Pursuant to Metro's Joint Development Policies and Procedures, Metro has the following goals and priorities.

1. Increase transit ridership.
2. Encourage comprehensive planning and development around station sites and along transit corridors.
3. Reduce auto use and congestion through encouragement of transit-linked development.

4. Generate value to Metro through maximizing ground rent on Metro property.
5. Enhance the land use, urban design, and economic development goals of the communities we serve.

Metro is in the process of revisiting its Joint Development Policies and Procedures. A key change will be inclusion of a goal that 35% of the total housing units constructed within the Metro portfolio of sites will be reserved for covenanted affordable units.

ORGANIZATION

The Real Estate Unit, including joint development and parking operations, is housed in the planning department. This provides greater coordination in station design, parking management and other related functions. The joint development team is staffed primarily with individuals with real estate or community development experience. The department utilizes our general counsel as well as outside real estate attorneys to assist in negotiating the transactions.

STRUCTURE, REVENUES, BENEFITS

Typically, our joint development agreements are structured as long term, non-subordinated ground leases such that we maintain long-term control and ownership. Lease payments have been structured either as prepaid lump sum or annual payments with escalations. In certain cases, the projects have also made capital contributions for station modifications and enhancements. In the current fiscal year our asset management group will generate over $12 million in revenues from property and the joint development group an additional $10 to $14 million in lease income, including lump sum payments. We believe a joint development program can provide significant benefits to the transit agency and the general public by:

- Recouping a portion of the public investment in transit infrastructure, capitalizing on land value enhancement created by that investment;
- Providing a dependable revenue stream to support operations, or to leverage for capital projects;
- Creating a platform for additional private investment in communities which may have struggled to attract such investment;
- Demonstrating how TOD principles as espoused by the Urban Land Institute, and others, can both add real estate value and reduce the dependency on the private automobile.

IMPEDIMENTS TO MAXIMIXING JD AS A FUNDING SOURCE FOR TRANSIT NFRASTRUCTURE

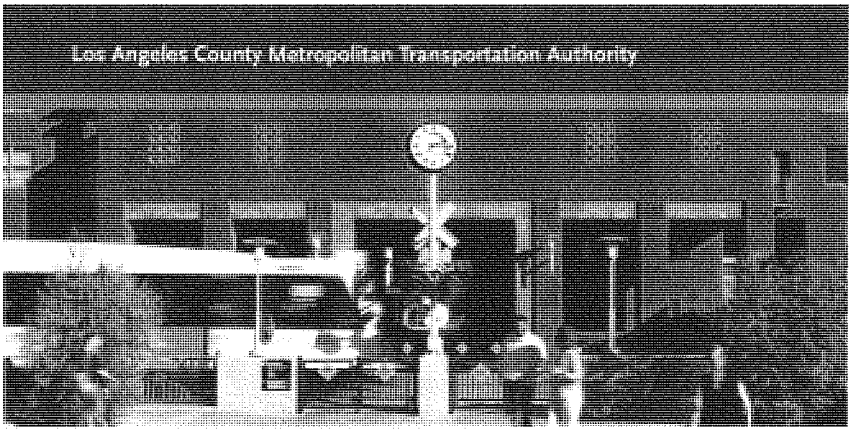
- ***Availability of Land and Capital for Joint Development.*** Typically, our experience at Metro is that major transit corridor projects seek to minimize land acquisition to preserve limited capital dollars for transit improvements. Metro has not applied for Federal FTA grants for joint development purposes in favor of reserving such opportunities for transportation improvements. Should a source of funding be available that was reserved or targeted specifically for joint development activities such as additional land acquisition, Metro would be interested in those programs to expand our joint development program. With regards to financing tools available for joint development, S.797 and S.880 are steps in the right direction.

- ***Alignment of transit capital projects with real estate cycles.*** It is most cost effective to move forward with integrated joint development and transportation projects at the same time. This has been difficult for a variety of reasons, but not impossible to achieve. Where it is not possible we attempt to mitigate the costs inherent in serial development by looking at station design from a future joint development perspective such that future development is anticipated and not precluded or made any more costly than necessary.

- *Costs.* The cost of JD projects are often higher due to the nature of sites (urban infill), avoiding or making changes to transit infrastructure and additional public improvements, thus reducing fair market value of the projects and net revenues for such sites.

In conclusion, we believe Metro has developed a model for maximizing the return on transit infrastructure investment through joint development and proper stewardship of our other property assets in partnership with the private sector.

Again, thank you for this opportunity.



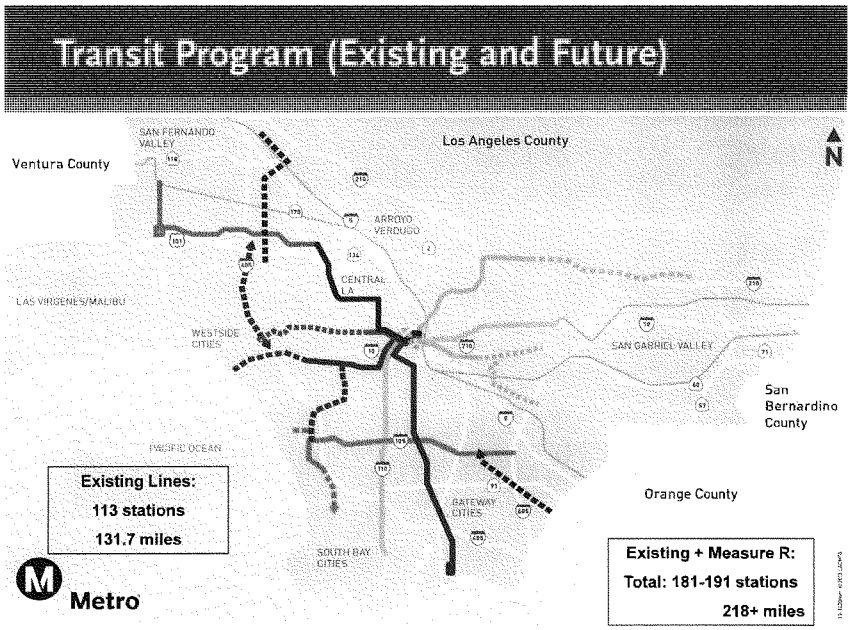
Metro's Joint Development Program

Metro

Presentation Overview

- Current and Future Rail Projects
- Overview of Joint Development Program
- Design Review Process
- Completed Projects
- Projects in Negotiation
- Upcoming RFIQ/RFPs

Metro


Transit Program (Existing and Future)
Ventura County
SAN FERNANDO VALLEY
Los Angeles County
N
ARROYO VERDUGO
CENTRAL LA
LAS VIRGENES/MALIBU
WESTSIDE CITIES
SAN GABRIEL VALLEY
San Bernardino County
PACIFIC OCEAN
Orange County
GATEWAY CITIES
SOUTH BAY CITIES
Existing Lines:
113 stations
131.7 miles
Existing + Measure R:
Total: 181-191 stations
218+ miles
Metro

Measure R Projects

In Operation

- Exposition Blvd. Light Rail Transit Phase I
- Orange Line Canoga Extension

In Construction

- Exposition Blvd. Light Rail Transit Phase II
- Gold Line Foothill Extension (Sierra Madre Villa to Azusa)
- Crenshaw/LAX Transit Corridor
- Regional Connector
- Metro Purple Line Extension

Metro

We are moving...

In Draft Environmental

- East San Fernando Valley Transit Corridor
- Airport Metro Connector
- South Bay Metro Green Line Extension
- Eastside Transit Corridor Phase 2

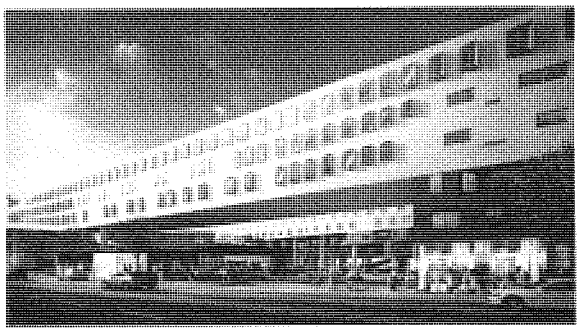
Initial Planning

- West Santa Ana Branch Corridor
- Sepulveda Pass Transit Corridor

Metro

Joint Development - Overview

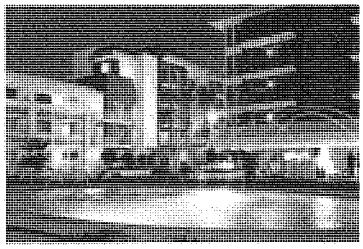
Metro's Joint Development (JD) Program is a real estate management program that collaborates with qualified developers to build transit-oriented developments (TODs) on Metro-owned properties. These properties are often parcels of land that contain Metro Rail station portals or platforms or that were acquired for parking or construction staging for transit projects.



Metro

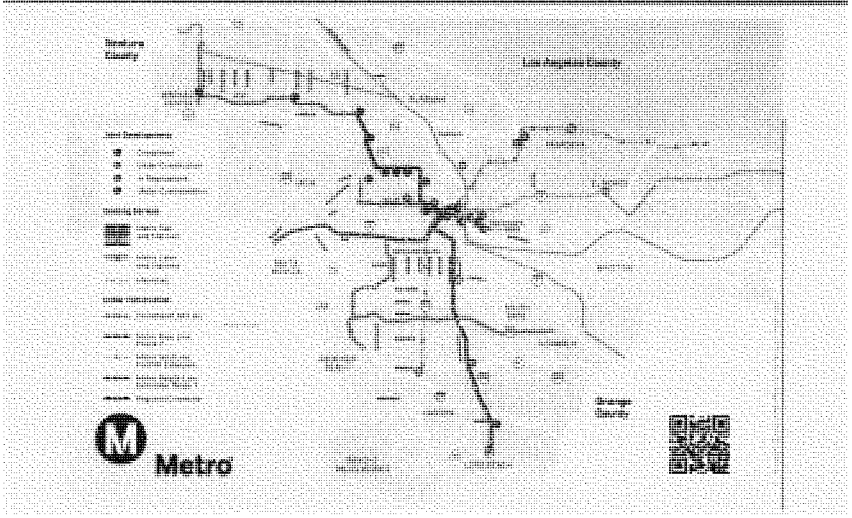
What Metro seeks from Joint Development

- Reduced auto use/Increased transit use
- Density, but consistent with surrounding neighborhood
- Mix of uses linked to transit
- High quality design
- Upgrades to/Completion of Metro facilities
- Strong neighborhood and inter-modal link
- Pedestrian orientation
- Enhanced transit patron experience
- Long-term ground lease (typically)
- Fair market return
- Sustainable development

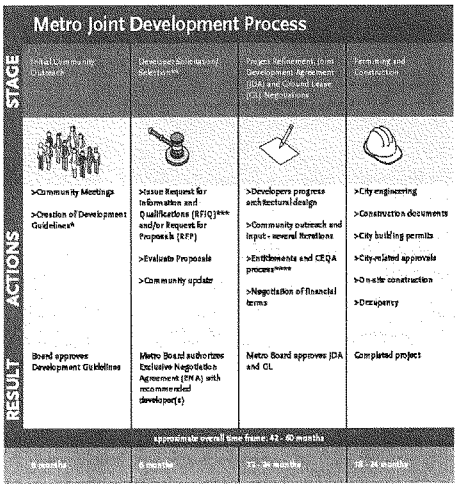


Metro

Joint Development Program - Overview Map



Joint Development Process



Metro

Design Review Process

New process to incorporate design aesthetics, first/last mile connections and other land use and planning goals into Metro's technical review and community outreach process.

Procurement of outside design firm(s) to:

- Assist with development of community-driven "development guidelines" for each project
- Assist with proposal evaluation
- Facilitate community input on design
- Facilitate Metro's technical comments on design

Metro

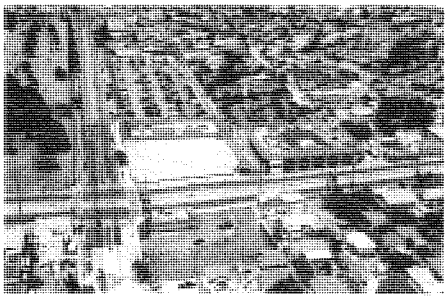
List of Completed Projects

- Hollywood/Highland
- Hollywood/Vine Apts
- Hollywood/Vine Hotel & Condos
- Hollywood/Western
- Wilshire/Vermont Apts
- Wilshire/Vermont School
- Wilshire/Western
- Westlake/MacArthur Park (Phase A)
- Grand Central Market
- Union Station (Metro HQ)
- Fillmore
- Del Mar
- Sierra Madre Villa (Phase I)
- Willow
- One Santa Fe
- Taylor Yard Lot 1, 3, 6, 7, 8

Metro

Projects in Negotiation, Under Construction or in Consideration

- Taylor Yard (Lot 2, 4, 5)
- West Hollywood (Division 7)
- Vermont/Santa Monica
- In Boyle Heights:
  - 1st/Boyle
  - 1st/Lorena
  - Chavez/Fickett
  - 1st and Soto
  - Chavez and Soto



1st/Lorena Apartments

Metro

Upcoming RFIQ/RFPs

In 2015:

- North Hollywood Red Line Station – 15.6 acres (RFIQ released March 2)
- Sepulveda Park and Ride (Orange Line) – 12.45 acres

In 2016:

- One or more sites on Crenshaw Line
- Mariachi Plaza Station

Within the next 3 years:

- Additional sites along the Crenshaw Line

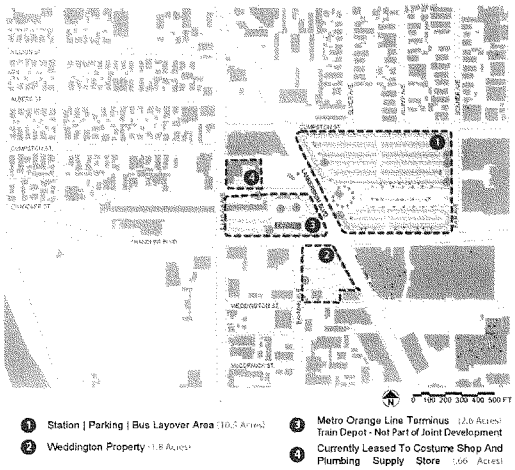
Future sites along the following extensions:

- Purple Line
- Gold Line (Foothill)
- Expo Line (Phase 2)

Metro

North Hollywood

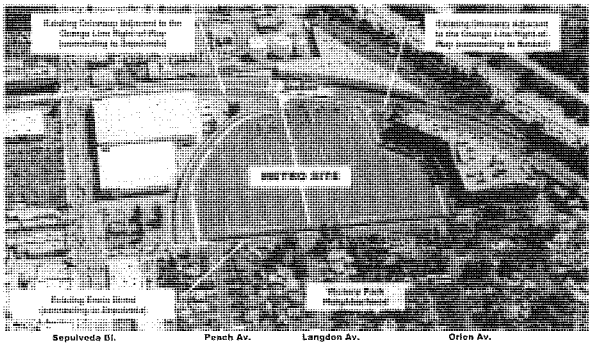
- Two-stage process
- RFIQ released March 2
- 15.6 acres at terminus of Red and Orange Lines
- Development Guidelines to begin Spring 2015
- Requires replacing 2,000 parking spaces for transit patrons



Metro

Sepulveda Parking Facilities

- 12.45 acre site
- Development Guidelines to begin Summer 2015
- RFP in Fall 2015

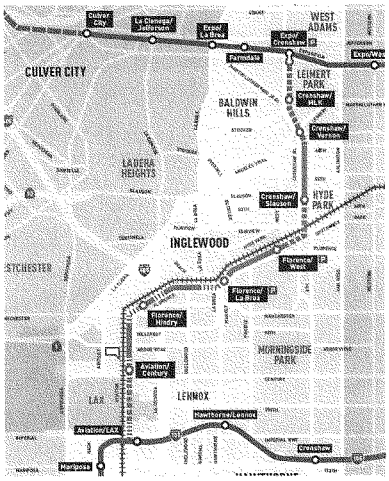


Metro

Crenshaw Line

Joint Development & TOD Opportunities being studied at several stations. Those most likely for TOD :

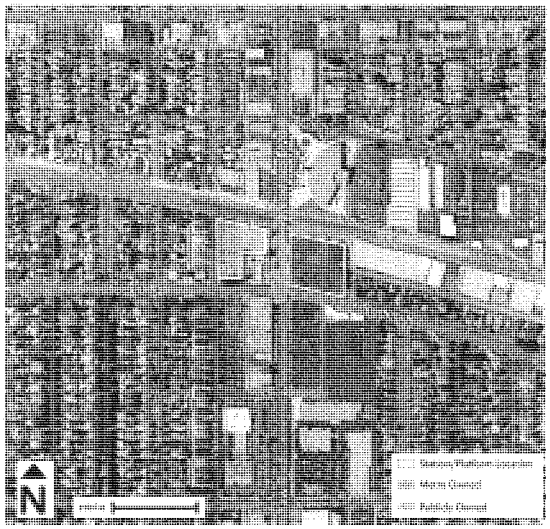
- Crenshaw & Expo (Metro/County JD)
- Leimert Park (City of LA property)
- Florence/West (Metro/County JD)
- Florence/La Brea (City of Inglewood property)
- Aviation/Century (Metro)
- Aviation/LAX (Metro/Caltrans lot)



Metro

Crenshaw Line – Crenshaw and Expo

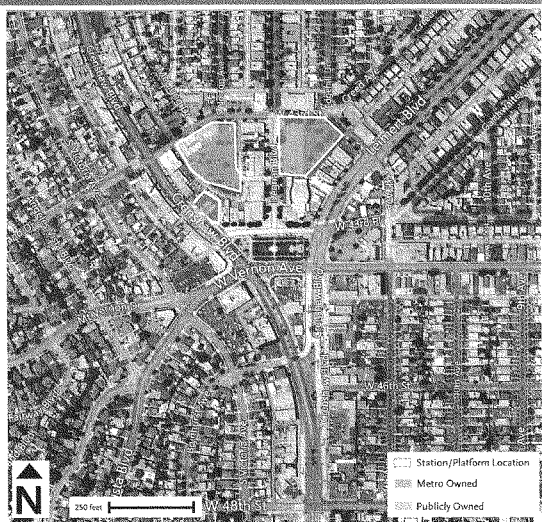
First RFP likely to cover Metro Property + County – owned site at Crenshaw and Expo



Metro

Crenshaw Line – Leimert Park

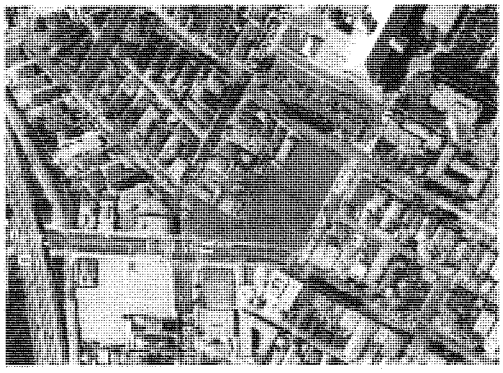
Metro will collaborate with City of LA for the Leimert Park Station



Metro

Eastside Gold Line – Mariachi Plaza Station

- 1.44 acres, including station area and adjacent vacant parcel
- Development Guidelines to begin Fall 2015



Metro Property

Metro

Questions?

Calvin Hollis
Managing Executive Officer,
Countywide Planning &Development
HollisC@metro.net
213-922-7319

Metro

RESPONSE TO WRITTEN QUESTION OF SENATOR VITTER FROM COLLEEN CAMPBELL

Q.1. As you know, building or upgrading highway infrastructure is among the most common uses for Public-Private Partnerships. In Louisiana, for example, a Public-Private Partnership has been considered as a way to complete the long-delayed Interstate 49 corridor from Lafayette to New Orleans.

From your experience, can you describe the criteria or formula that should be used to determine what ratio of investment should be public versus private, and how to fairly determine a price for tolls for projects such as a highway?

A.1. The decision to utilize private funding as a means of financing civil infrastructure should be used judiciously as it comes with a cost. The ratio with respect to private versus public investment in a project should be limited to the optimal amount required to align the interests of the public and private sectors; with the ultimate goal of giving the public sector appropriate negotiating leverage and protection in the event of a default by the builder or operator of the asset. In Canada, the majority of new roads have not involved the transfer of toll risk. Therefore, the totality of the risks being passed on to the private sector specifically relate to those associated with construction, lifecycle, and maintenance of the asset. Traditionally, this means that the majority of capital used during construction is private and the majority of the capital during the operating phase is public via annual/monthly service payments to the operator. In some cases, as much as 85 percent of the capital during the operating phase is publicly funded. This type of funding structure is typically utilized on our largest capital transactions where the sheer size of the contract warrants a larger substantial completion payment (SCP) in order to make it financeable and affordable.

IO's current policy for Highways is to pay up to 85 percent of Capital Costs at Substantial Completion to achieve the optimal balance between risk transfer and maximizing value for the Province.

That said when devising IO's internal strategy with respect to determining the optimal SCP size, IO conducted sensitivity analysis on two risk coverage/exposure metrics in addition to reviewing the nature (complexity/labour intensity & spatial coverage) of the specific asset class to assist in informing our policy:

- **Public Sector Coverage Ratio (PSCR):** This ratio essentially captures the value of the private sector money at risk (debt and equity) over the 30 year concession period as compared to performance obligations that Project Co. must meet per the Project Agreement (*i.e.,* facilities maintenance and lifecycle/rehabilitation) over the same period. Overall, it is an indication of the Sponsor's leverage over Project Co. during the concession period.

- **Expiry Transition Period Over-run Cushion (ETPOC)—** This ratio focuses on the sponsor's (public sector) coverage during the high risk years (*i.e.,* 5 years prior to expiry of the Project Agreement). The ratio captures how much facilities maintenance and lifecycle/rehabilitation costs can increase before it eats into the remaining private sector debt and equity. It is a measure of how high actual costs can deviate upwards from projections before a potential default by Project Co.

It is important, however, to keep in mind that other factors can influence this policy. Therefore it is critical to balance the following constraints with the above ratios to achieve the optimum SCP on a Project-by-Project basis.

- **Affordability—**as the amount of public sector investment decreases (or SCP), financing costs will increase. Higher SCP makes the project affordable for the Province.
- **Market Lending Capacity—**for civil transit projects in particular, the dollar scale of the project may be too large for the market to accommodate from a bond capacity perspective. This may warrant an increase to the overall amount of public investment.
- **Minimum Lender Capacity—**to ensure competitive pricing a transaction should ideally attract large dealers and institutional investors. For this at a minimum, bond solutions must meet the DEX Bond Index size requirements (>$100m & 10 buyers).
- **Project Rating—**a decrease in the amount of the SCP will improve the coverage and break-even ratios but depending on the size, scale and risk profile of the project, it may not achieve the desired project rating no matter any change (*i.e.,* a movement from a BBB+ to a low A rating may not be worth the increase in overall financing costs).

As an example of SCP sizing in recent IO highway projects:

- Windsor Essex Parkway (2009)—85 percent substantial completion payment
- Highway 407 Phase 1 (2012)—85 percent substantial completion payment
- Highway 407 Phase 2 (2015)—85 percent substantial completion payment
- Highway 427 (2016 estimated)—75 percent substantial completion payment