



WRONG TURN:

Is a P3 the best way to expand
Edmonton's LRT?



A REPORT FOR THE PARKLAND INSTITUTE BY JOHN LOXLEY • OCTOBER 2013



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John Loxley

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Parkland Institute
University of Alberta
11045 Saskatchewan Drive
Edmonton, Alberta T6G 2E1
Phone: (780)492-8558
Fax: (780) 492-8738
<http://parklandinstitute.ca>
Email: parkland@ualberta.ca

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About the author

John Loxley is Professor of Economics at the University of Manitoba and a Fellow of the Royal Society of Canada. He has studied and published extensively on public-private partnerships since the mid-1990s, and is the author, with his son Salim, of *Public Service Private Profits: The Political Economy of Public-Private Sector Partnerships* (Winnipeg: Fernwood Publishing, 2010).



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Abbreviations

DB: design-build

DBB: design-bid-build

DBF: design-build-finance

DBFOMO: design-build-finance-operate-maintain-own

DBFOM: design-build-finance-operate-maintain

DBVFOM: design-build-vehicle-finance-operate-maintain

LRT: Light Rail Transit

NAIT: Northern Alberta Institute of Technology

PSC: public sector comparator

P3 or PPP: public-private partnership

PwC: PricewaterhouseCoopers

SPV: special purpose vehicle

VfM: value for money

Executive summary

Edmonton's transportation master plan lays out some ambitious goals for the city. It signals the need to encourage downtown development, better integrate the city's suburbs, reduce car use and congestion, and raise the economic efficiency of the City's transportation. A key way the City of Edmonton plans to meet these goals is by expanding its Light Rail Transit (LRT) system from one line to six in order to encompass more of the city. Four of the proposed lines are considered extensions of the existing system, which has been taken to mean that the City itself should manage financing, operations, and maintenance. The expansion also consists of two new lines, and some have argued that these are suitable for a public-private partnership (P3) approach.

The City of Edmonton retained the consulting firm PricewaterhouseCoopers (PwC) to investigate the suitability of the P3 approach to the LRT extension. This report examines, insofar as possible, the data and analysis underlying three key reports prepared by PwC. Some of these reports focus specifically on the Southeast leg of the proposed Valley Line extension (often referred to as the Southeast Line), which is slated to soon move ahead. Notably, none of the reports have been made public in their entirety. The most important document, the business case, was accessed in severely redacted form through Alberta's Freedom of Information and Protection of Privacy legislation. Indeed, the business case was so severely censored as to make it impossible to judge definitively whether the case for the P3 approach is valid. The secrecy surrounding the P3 proposal is troubling, unwarranted, and a breach of the City's own policy.

Unfortunately, significant concerns are raised even by what little data is publicly available. Problems include the following:

- Contrary to how some P3 advocates have sought to portray the matter, use of new technologies neither necessitates nor justifies a P3. Indeed, a P3 approach has the potential to introduce problems of system coordination, and does not allow the City to build up the management capacity that will be needed in-house for further LRT expansions.
- PwC demonstrates the superiority of the P3 approach in part through comparisons to the value for money achieved in other Canadian P3s. Because of differences in how value for money is calculated, these comparisons cannot be accepted at face value.

- Proponents of a P3 approach have identified some BC projects as examples of what might be achieved here in Edmonton. However, a closer look at these projects make clear that they are not arrangements to emulate, given that they involve sacrifices in the quality of the infrastructure, and that their purported advantages may be nothing more than imaginary.
- What value for money the Southeast Line P3 is expected to achieve is largely found in operations, likely through the intended use of labour practices that threaten the well-being of workers.
- The methodology used by PwC to justify risk spreading to the private sector is open to criticism. Particularly, the assumption of large amounts of risk transfer should be examined with scepticism.
- A P3 arrangement would involve private financing, which is significantly more expensive than public borrowing. The use of private financing may cost the City of Edmonton \$421 to \$510 million (or \$227 to \$275 million in today's money) more than if it borrowed the money directly.
- The present proposal is for the private sector to retain all profits from any future refinancing or equity flipping related to the LRT P3 project, positioning the private sector to achieve big gains while the City of Edmonton receives no benefit.
- The 30-year contract inherent to the proposed P3 arrangement raises important issues related to loss of flexibility for the City with respect to finance and operations.

Notably, the public does not favour taking a P3 approach to expanding the LRT, largely due to concerns over lack of transparency, cost escalation, system integration, and loss of public accountability and service quality.

After a thorough assessment of the available information, it is clear that there is ample reason to question whether proceeding to undertake the Southeast Line under a P3 arrangement will serve the public interest. The City of Edmonton should reconsider this approach.

RECOMMENDATIONS

- 1.** Based on available information, the City should not proceed with the P3 option, but should instead build the Southeast Line on the traditional Design-Bid-Build or a Design-Build basis.
- 2.** If the City insists on considering the P3 option, it should open up all documents and calculations employed so far in the evaluation of this option, so that they can be publicly scrutinized.
- 3.** The City and PwC should clearly justify and explain the assumptions that have gone into the assessments that have found in favour of a P3 approach, and be prepared to discuss these assumptions in public meetings.
- 4.** Greater caution should be exercised in making comparisons between the value for money purportedly achieved through other P3 projects and that expected from the Southeast Line. Comparisons should be made only when the public sector comparators employed in the various projects are truly comparable.
- 5.** Edmonton City Council should take seriously the expressed concerns of the public about proceeding with the Southeast Line through a P3 approach.

Introduction

Edmonton's transportation master plan provided for the expansion of the City's Light Rail Transit (LRT) network from one line to six.¹ Figure 1 shows the existing line that operates from Clareview station in the northeast, passing through downtown to the University and then continuing to the Century Park station. It also shows proposed new lines that would cover all sectors of the city, adding lines to the Northwest (Northern Alberta Institute of Technology to St Albert), Northeast (Clareview to Industrial Heartland), East (Downtown to Sherwood Park), Southeast (Downtown to Mill Woods), South (Century Park to Heritage Valley), West (Downtown to Lewis Estates), and the Central Area Circulation System. The intent of the plan is to encourage downtown development, better integrate the city's suburbs, reduce car use and congestion, and raise the economic efficiency of the City's transportation. The total cost of these LRT network expansions was estimated to be in excess of \$3.6 billion.²

1 City of Edmonton, *The Way We Move: Transportation Master Plan* (Edmonton: September, 2009).

2 City of Edmonton, *Fast Tracking LRT Construction* (NAIT, Southeast and West) (Transportation Department: April 15, 2010), 2.

Figure 1. Edmonton's LRT system and proposed extensions



Figure 1: City of Edmonton, The Way We Move: Transportation Master Plan (Edmonton: September 2009), p. 45.

In a preliminary screening of the expansion projects in October 2009, the City Administration determined that projects involving the extension of existing LRT lines should be proceeded with in the conventional manner, i.e. by public financing and public operations and maintenance, to avoid problems of integration with existing systems. Thus the Northern projects, the South project, and the Central Area Circulation System were deemed to be suitable only for conventional procurement and organization. This means that the projects will be built using a design-bid-build approach in which the design, financing, ownership, operations, and maintenance of the project remain with the public sector, while the private sector bids to build the project. However, the Southeast to West Line, called the Valley Line, is completely new and was thus deemed appropriate for 'alternate delivery methods', usually a euphemism for public-private partnerships.

In December 2009, the City Council approved the corridors for the Southeast to West Line, along with a downtown link, a total of 27 kilometers of rail. In February 2010, City Council determined that the Southeast to West Line be given construction priority, with the NAIT concurrent to or following.³ In May 2010, the city laid the groundwork for departures from conventional procurement and management of City projects with the development of a policy on P3s. In July 2010, PricewaterhouseCoopers (PwC) was appointed by the City as Financial Advisors to the Southeast to West Line project. Since that time, they have completed a number of assessments of how best to proceed with the project, all of which concluded in favour of the City pursuing a P3 format.

While there have been challenges to the planned expansion of the LRT system, both conceptually and in reference to specific routes chosen, assessing the validity of these challenges falls outside the scope of this document. This review is intended to determine if, based on the available data, the decision to proceed with the LRT expansion as a P3 is sound.

It is now four years since the idea of undertaking an LRT system expansion through a P3 arrangement was first mooted publicly in October 2009. As of yet, no concrete progress has been made in implementing the idea. In the meantime, costs have escalated, making financing more challenging. In 2009, the Southeast leg of the project was estimated to cost between \$0.9 and 1.2 billion.⁴ Subsequently, it was said to cost \$1.1 billion.⁵ A little later, costs escalated to \$1.3 billion.⁶ The cost is now estimated to be \$1.8 billion and is likely to escalate by between 60 and 80 million dollars a year if the project is delayed further. The Southeast Line is currently short \$515 million in funding. Uncertainties regarding financing threaten to delay the project further.⁷

3 Ibid.

4 City of Edmonton, *Alternative Delivery Methods for Future LRT Extensions* (Capital Construction Department: October 27, 2009), Attachment, 5, 15.

5 Ibid., Attachment, 3.

6 City of Edmonton, "Fast Track LRT" (PowerPoint presentation, Transportation and Public Works Committee: May 4, 2010), 4.

7 Gordon Kent, "Edmonton Council Votes to Keep Seeking Southeast LRT Grants," *Edmonton Journal*, June 19, 2013.

Data availability was a major impediment to this study. None of the reports prepared by PwC have been made public in their entirety. The most important document, the business case, was accessed in severely redacted form through Alberta's Freedom of Information and Protection of Privacy legislation. Indeed, the business case was so severely censored as to make it impossible to judge definitively whether the case for the P3 approach is valid. Detailed analyses of the City of Edmonton's policy on P3s and of the documents prepared by PwC about the Southeast Line are available in the appendices to this report.

Public-private partnerships (P3s)

P3s are multi-year, often multi-decade, contracts in which a corporation or consortium of corporations assumes responsibility for activities previously undertaken by the public sector. In the conventional approach to building infrastructure, the public sector commissions an architect to design the structure, and one or more private contractors to build it, while retaining the functions of finance, operations, maintenance, and ownership. This is called a design-bid-build approach, or DBB. In a P3, the private sector may design and build the project, while also taking on such responsibilities as direct financing of infrastructure, as well as management, operation, maintenance and, though not common in Canada, even ownership of facilities. At one extreme, the P3 may take the form of the private sector simply operating or servicing a facility, such as a water or waste water facility (e.g. as in the case of the Hamilton-Wentworth waste water facility, which also covered maintenance).⁸ At the other extreme, the P3 may take the form of a design-build-finance-operate-maintain-and-own (DBFOMO) for a period of years, as in the case of the Charleswood Bridge in Winnipeg.⁹

Increasingly, P3s in Canada are taking the form of design-build-finance-operate-and-maintain (DBFOM), while formal ownership rests with the public sector. In such projects, the public sector agrees to annual 'lease' payments to cover the private sector's cost of capital. These are a substitute for the public sector repaying its own direct borrowing and are, in effect, a new form of debt. As Larry Blain, former CEO of Partnerships BC, has put it so succinctly, "Clearly all the money is coming from the government. It's debt of the province, whether you borrow it as bonds, or contract over a 35-year period."¹⁰ The public sector also covers the private partner's operating costs, which may sometimes be folded into the lease payments, and maintenance costs.

8 John Loxley with Salim Loxley, *Public Service Private Profits: The Political Economy of Public-Private Sector Partnerships* (Winnipeg: Fernwood Publishing, 2010), 161-170.

9 *Ibid.*, 112-119.

10 Rich Saskal, "Trends In The Region: It's Quality, Not Quantity: Eying the Big Picture of California's Big Debt," *Bond Buyer*, October 5, 2007, 1.

The attraction of P3s for the private sector is straightforward. They provide relatively new opportunities for long-run and guaranteed profit. Since private financing is generally more expensive than public financing, and since the legal and other ‘transactions costs’ of P3s are much higher than under the traditional approach, the P3 approach must offer other forms of savings to the public sector. The claim is that in a P3, various potentially costly risks that the public sector would otherwise face are shifted over to the private sector. Depending on the nature of the project, these risks are often greatest in the construction phase, where cost overruns and project delays may be encountered. Other potential risks that may be transferred include those related to demand or customer use, which can be important in transportation projects. There may also be risks encountered in operations and maintenance. Proponents of P3s also argue that by involving the private sector in the direct financing of the project, it has ‘skin in the game’ and an incentive to ensure the least cost delivery of projects over their life-cycle, after taking risk into account.

For these reasons, proponents maintain that P3 delivery may be superior in terms of life-cycle net costs and benefits. Efforts to establish whether P3 delivery is appropriate typically take the form of a value-for-money (VfM) analysis in which the proposed P3 (represented by a so-called shadow bid, which reflects bids that are likely to be submitted when the project is put to tender) is compared with traditional delivery through the use of a Public Sector Comparator (PSC). The PSC shows the costs and benefits of proceeding with the project in a conventional manner. Estimates are made of the life-time costs and benefits of the PSC and the P3. These costs and benefits are then translated into today’s money (present value) by discounting them for each approach by an interest rate, based on the argument that future sums are worth less than sums today because time is money. The higher the rate and the longer into the future is the cost or benefit received, the lower will be the cost or benefit in present value terms. The same interest or discount rate is applied to both approaches. The approach with the lower value of net costs at the given discount rate is said to offer VfM relative to the other approach. When a P3 approach is deemed to be superior, VfM is usually expressed in dollar terms or as a percent of the discounted net costs of the PSC. The higher the dollar value of the VfM, and the higher it is as a percent of the net present value of costs of the PSC, the more VfM the P3 approach is said to offer.

The goal of VfM analysis is to indicate, at the planning stage of a project, the approach most likely to deliver the required infrastructure at the lowest cost. As the project moves from planning to implementation, the anticipated VfM may or may not be realized, depending upon the reasonableness and accuracy of the assumptions on which the analysis rests.

While assessing VfM may appear straightforward, in reality it is not so.¹¹ The details of calculations, and the reasonableness and consistency of assumptions, produce wide margins of error, leaving significant room for debate. Some experts even question whether or not the major benefits of P3 could be obtained by the public sector offering a single design-build (DB) contract at a fixed price while retaining all other functions in-house.¹² DB puts contractors in control of projects, giving them the latitude to design projects as they build, in order to find ways of working within budget constraints. While popular with contractors and governments, architects and engineers feel that DB debases their skills, subordinates them to profit driven contractors, and potentially sacrifices the quality of the finished product. Some authors, like Loxley and Loxley (2010), treat DB arrangements as a form of P3.¹³ Others do not. As we shall see, some recent P3 VfM appraisals seem to have implicitly accepted DB arrangements as alternatives to P3s by assuming DB, rather than DBB, in the PSC.

There have been a number of academic studies on P3 performance. Some, such as Iacobacci (2010), have underwritten the arguments in favour of their use, while others have been more critical.¹⁴ The major criticisms of P3s are that often VfM analyses, if performed at all, are inadequate. The problems with these analyses are numerous, and include situations where:

- the PSC (representing a conventional approach) and the shadow bid (representing a P3 approach) that are compared are often not driven by the same specifications;
- the choice of discount rate is often arbitrary and sometimes quite high (as in BC), which favours P3s, since the lease costs are long-term;
- the assumptions about risk transfer are often excessive (as high as 49% for simpler DBF models and, astonishingly, in excess of 70% for DBFOM projects¹⁵) and lack justification;
- the VfM analysis is performed only after the P3 has been initiated, which would suggest such analyses are intended to justify decisions already made, rather than to guide decision-making.

As a result of such flaws, the VfM process is often heavily weighted in favour of P3s.

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- 11 Columbia Institute, *Public-Private Partnerships: Understanding the Challenges: A Resource Guide* (Vancouver, BC, 2007).
- 12 John Loxley, "Public-Private Partnerships after the Global Financial Crisis: Ideology Trumping Economic Reality," *Studies in Political Economy* 89 (2012).
- 13 Loxley with Loxley, *Public Service Private Profits*.
- 14 Authors in favour of P3s include: Mario Iacobacci, *Dispelling the Myths: A Pan-Canadian Assessment of Public-Private Partnerships for Infrastructural Investments* (Conference Board of Canada, 2010), <http://www.conferenceboard.ca/documents.aspx?did=3431>. Authors who are more sceptical include: Aidan R. Vining and Anthony E. Boardman, "Public-Private Partnerships in Canada: Theory and Evidence," *Canadian Public Administration* 51, 1 (2008): 9-44; John Loxley with Salim Loxley, *Public Service Private Profits: The Political Economy of Public-Private Sector Partnerships* (Winnipeg: Fernwood Publishing, 2010).
- 15 Matti Siemiatycki and Naeem Farooqi, "Value for Money and Risk in Public Private Partnerships," *Journal of the American Planning Association*, 78, 3 (2012): 286-299.

Other criticisms of the P3 approach include concerns that:

- the number of bids received is often quite low, making it unlikely that competition will ensure low costs;
- the large scale of P3s discriminate against local contractors;
- any purported efficiencies often come at the expense of labour in lower wages, fewer benefits, and less security;
- contract periods are too large for efficient monitoring and control of private partners, especially by school boards and municipalities;
- P3s build long-term financial inflexibility into public services, and are generally more costly over the project life-time than traditionally delivered projects.

It should also be noted that difficulties in accessing key data related to the P3 arrangement are far from unique to the Edmonton LRT case. Indeed, P3s are associated with reduced accountability and transparency in the public sector, because they are often shrouded in the secrecy purportedly necessary to ensure commercial confidentiality.¹⁶

There is a very strong P3 lobby in Canada supported by the Canadian Council on P3s. It is supported by all major construction, finance, and consulting firms (including PwC), as well as a number of provincial and municipal governments. This lobby serves as a strident and persistent advocate for P3s. The federal government also has a strong bias in favour of P3s. In 2009, it established a \$1.3 billion fund devoted entirely to funding P3s, and refinanced it in 2013. More importantly, the federal government requires all large infrastructure projects to be evaluated to determine if they are suitable for P3 approaches before they are eligible for financing through regular infrastructure funding outlets such as the Building Canada Fund.¹⁷ Increasingly, therefore, if municipalities and others wish to take advantage of federal infrastructure money, they are pressured to take the P3 approach.

P3s have become quite common since the 1990s. Accurate data are very hard to come by, but between 1985 and 2011, 200 P3s were planned or implemented in Canada, including 137 that were finalized, at a cost of US\$71.6 billion. After a setback related to the 2008-09 financial crisis, the pace at which P3s are coming on-stream seems once again to be increasing.¹⁸

16 John Loxley, *Asking the Right Questions: A Guide for Municipalities Considering P3s*, Report Prepared for Canadian Union of Public Employees, June 2012, cupe.ca/p3guide.

17 Loxley, "Public-Private Partnerships after the Global Financial Crisis."

18 Loxley, *Asking the Right Questions*.

Assessment of the proposed P3 approach to the Southeast Line

Given the secrecy surrounding the decision to undertake the Southeast leg of the Valley Line LRT extension as a P3, it is hard to offer a thorough evaluation. What follows draws on what little information has been made available, as well as the wider academic and expert literature on P3s. At the very least, this analysis raises questions that must be fully addressed if the public is to have confidence in Edmonton City Council's proposal to go forward with the P3.

1. TRANSPARENCY, ACCOUNTABILITY, AND ACCESS TO INFORMATION

The City's approach to transparency, accountability, and access to information was made quite evident in a December 2010 information session for City Council on the delivery method for the combined Southeast to West LRT Line.¹⁹ Delivered by then Manager of Project Management & Maintenance Services Joe Kabarchuk, the guidelines for the session contained some remarkable restrictions on Council members' autonomy and democratic rights:

- No record or minutes of the information session will be kept
- The flow of information must be entirely one way from Administration to Councillors
- Councillors can only ask clarification questions
- Councillors must not ask questions regarding justification for information provided or actions taken by the administration
- Councillors must not provide comments, direction or instructions to Administration
- Councillors must not discuss or debate the information provided by Administration among each other
- Councillors must not attempt to reach any decision on the basis of information provided by Administration

Though the intent was that the meeting not be construed as a Council meeting, most of these restrictions constitute a serious breach of the democratic freedom and responsibility of Council members. The alternative of not agreeing to them, of course, was denial of all access to the information available. This management edict stood in complete contradiction to the City's P3 policy, which requires that the "Public interest

¹⁹ City of Edmonton, SE and W LRT Delivery Method: Business Case Results, December 9, 2010.

must be thoroughly examined and discussed,” that policy reviews and oversight should be carried out “to ensure transparency, due diligence and the protection of the public interest,” and that “P3 processes and outcomes will be transparent.”²⁰

Since that time, it is apparent that information on the project has been severely restricted, well beyond even the information restrictions that characterize P3s elsewhere in Canada. Clearly, the City has chosen to put its policy of protecting commercial confidentiality above any concern for openness and transparency. Crucial decisions, such as that to proceed with the P3 and, subsequently on August 29, 2012, to reverse Council’s decision to keep operations and maintenance in-house, were taken at short notice and in-camera.²¹

The almost complete redaction of numbers in the Business Case and related papers also contradicts yet another component of the City’s P3 policy, which states that “The community will be well informed about the obligations of the City and the private sector.”²² It should be noted that outline business cases and the argument for proceeding with the corresponding projects as P3s have been made available for projects undertaken in cities such as Winnipeg and Victoria well before the call for proposals. These have given numerical estimates of the net costs of the PSC as well as of the shadow bid of the P3. They have also put numbers on different types of risk, and the estimated allocation between the City and the private partner. See the example of the 2008 report by Deloitte to Winnipeg City Council, which lays out the P3 options for the Disraeli Bridge with an estimate of possible VfM relative to the PSC.²³ The 2008 document authored by Deloitte suffers from severe shortcomings. Most worryingly, the data in the risk valuation and allocation appear to be crucial to the final value for money figures and the recommendation to proceed with the P3, but their source is not given and their levels are not justified.²⁴ Nonetheless, these reports are fuller than anything Edmonton has released on its LRT P3 proposals. Their availability would indicate that release of such documents does not prejudice commercial confidentiality. Indeed, in the case of the proposed wastewater treatment plant for Victoria and region, the whole business case was released, together with sensitivity analysis around use of alternative discount rates.²⁵

As Siemiatycki and Farooqi have argued,

*...it is critical that the key project information that underpins the complete VfM report is publicly released during the project planning process prior to approval, enabling meaningful assessment and debate of the merits of a PPP compared to other procurement alternatives. This includes data on private rates of project financing, expected returns on private investment, and the data used to develop the risk premiums that are applied to both the PSC and the PPP concessions in the VfM assessment.*²⁶

20 City of Edmonton, Public Private Partnership (P3) Policy, Policy C555 (Finance and Treasury Department: May 26, 2010).

21 “Council Challenged on Secret Decision to Run SE LRT Privately,” OurLRT News, October 16, 2012, <http://ourlrt.ca/council-challenged-on-secret-decision-to-run-se-lrt-privately/>.

22 City of Edmonton, Public Private Partnership (P3) Policy, Policy C555.

23 Deloitte, City of Winnipeg: Analysis of Private Sector Involvement for the Disraeli Bridge, Executive Summary, February 18, 2008, <http://winnipeg.ca/publicworks/MajorProjects/DisraeliBridges/DisraeliFreewayProjectReportCouncil-May1408.pdf>; Winnipeg Council Minutes, May 14, 2008, <http://winnipeg.ca/publicworks/MajorProjects/DisraeliBridges/DisraeliFreewayProjectReportCouncil-May1408.pdf>.

24 John Loxley, “Public-Private Partnerships after the Global Financial Crisis,” 23.

25 Ernst and Young, Capital Regional District Core Area Wastewater Treatment Program: Business Case in Support of Funding from the Province of British Columbia, Addendum, September 2, 2010, 23, downloaded August 22, 2013 from <http://www.wastewatertreatment.ca/documents/2010-sept-business-case-addendum.pdf>.

26 Siemiatycki and Farooqi, “Value for Money,” 297.

Unfortunately, Edmonton City Council has not heeded this call for public release of key information. As a result, Edmontonians have been left wondering about the wisdom of proceeding with the construction of the Southeast leg of the Valley Line LRT extension as a P3.

2. NEW TECHNOLOGIES AND SYSTEM COORDINATION DO NOT REQUIRE P3s

Proponents have argued that the Southeast to West LRT Line is suitable for P3 processes because it is a new line employing new technologies. However, the use of new technologies does not necessarily demand a P3 approach. Indeed, any expansion of the LRT network will inevitably incorporate new technologies relative to the existing line. If the City can handle new technologies in the expansion of old lines, then surely it can handle it in the creation of new lines.

Furthermore, a P3 approach is certainly not a guarantee of a well-coordinated system. The decision to proceed with the construction of the Southeast leg while the West leg remains on hold threatens to introduce potential complications. The winning bidder on the Southeast project is required to provide operating and maintenance costs for the West leg, a line they may not get the opportunity to build.²⁷ As even Councillors admit, this allows the possibility of two different companies building different parts of the LRT system, with a single company dealing with operations and maintenance, opening up the possibility of all kinds of disputes and litigation, with the City caught in the middle.²⁸ Rather than ensuring a well-coordinated system then, a P3 arrangement in fact sets the stage for problems with system coordination. Indeed, the beginnings of some of these problems may already be apparent in Edmonton.

The projected LRT expansions that will be handled in the traditional manner and operated in house will require the City to build up its project planning and management capacity. Using the private sector to build and operate the Southeast to West Line simply delays the building of that capacity. The existing LRT system seems to work efficiently, and there are no obvious reasons why it could not be expanded without use of P3s and their expensive financing.

27 Ryan Tumilty, "Edmonton Still Missing Funds for LRT Project," *Metro*, March 14, 2013, <http://metronews.ca/news/edmonton/596281/edmonton-still-missing-funds-for-lrt-project/>.

28 Ibid.

3. THE PUBLIC SECTOR COMPARATOR AND VALUE FOR MONEY COMPARISONS WITH OTHER P3s

Proponents of undertaking the Southeast Line through a P3 arrangement have sought to demonstrate the superiority of the P3 approach by citing the VfM outcomes achieved with other P3s in Canada. For example, the VfM of the Alberta Schools Project Phase I is given as \$118 or 15.7%.²⁹ Alberta's own assessment of that project puts the VfM at \$97 million or 13.3%.³⁰ The Alberta Schools Project Phase II is said to yield 29.3% over the PSC.³¹ The VfM quoted for the South East Stoney Trail Ring Road, Calgary, is said to be a remarkably high 57.3%.³²

The comparisons between the VfM purportedly achieved in other P3s and the VfM that may ensue from the Southeast Line cannot be accepted at face value. The problem is this: most public sector comparators employ the traditional DBD or only partial DB. The business case prepared by PwC in relation to the Southeast LRT project, however, employs DB. Using DB typically results in a lower VfM, as much of the construction risk would be transferred to the private sector in exactly the same way as it would under the P3. Certainly, applying DB to the PSC of these other projects could be expected to reduce the VfM of the P3 significantly.

As a result, it is incorrect to make any sort of direct connection between the VfM calculated in relation to other P3s and that expected from the Southeast LRT extension. Such connections have the potential to mislead the public about the VfM of proceeding with the Southeast Line as a P3.

4. THE VALUE FOR MONEY COMPARISONS WITH OTHER LRT PROJECTS

Proponents of proceeding to build the Southeast Line as a P3 make much of the superior performance of BC's Canada Line, which seems to have been used as a template for the Southeast LRT. However, there are a number of reasons that Edmontonians might do well to be cautious about emulating the BC example.

Firstly, there are concerns about the process through which the decision was made to undertake the Canada Line as a P3. Stuart Murray has argued that the decision to make the project a P3 was taken well before the VfM estimate was made.³³ The VfM assessment, by PwC, was made public only in 2006, well after construction had begun.³⁴ And the assessment contained a number of basic flaws, such as differences in the assumptions underlying the P3 model and the PSC, ranging from train frequencies, through

29 PricewaterhouseCoopers, Business Case: Southeast and West LRT Project, February 2011, 81.

30 Government of Alberta, P3 Value for Money Assessment and Project Report: Alberta Schools Alternative Procurement (ASAP) Project Phase 1, June 2010, 21, <http://education.alberta.ca/media/1320820asapip3valueformoneyassessmentandprojectreport.pdf>.

31 PricewaterhouseCoopers, Business Case, 81.

32 Government of Alberta, P3 Value for Money Assessment and Project Report: Southeast Stoney Trail (SEST) Ring Road Project, Calgary, Alberta, September 2010, 4, <http://www.transportation.alberta.ca/Content/docType490/Production/SESTVFM.PDF>.

33 Stuart Murray, Value for Money? Cautionary Lessons about P3s from British Columbia (Canadian Centre for Policy Alternatives, June 2006), 39.

34 Ibid., 40.

construction techniques, to ridership forecasts. Ultimately, the VfM failed to compare apples with apples, “which makes the analysis meaningless.”³⁵

Efforts to clarify assumptions in the VfM report by Ronald Parks (2009), an investigative and forensic accountant at Blair MacKay Mynett Valuations Inc., Vancouver, concluded that Partnerships BC used an approach to VfM that systematically discriminated in favour of P3s by using unsubstantiated but likely exaggerated estimates of the risk transferred, and higher than warranted discount rates. Parks examined four BC projects. On the Canada Line, risk transfer was estimated at \$242 million for the PSC and \$30 million for the P3, but no details or quantitative justification were given for this.³⁶ Since generally, where information was available, the nominal, undiscounted value of costs were higher for P3s than for the PSCs, the assumption about the discount rate to bring these costs into present value was crucial. For the Canada Line, the VfM analysis used a 6% discount rate to arrive at the final VfM of \$92 million. This rate exceeded the transit authority's cost of borrowing, and favoured the P3 by heavily discounting long-term public sector lease payments to the private sector. Had a rate of even 5% been used, the VfM would have fallen to only 1.48% of the PSC's net present value of costs. A rate of 4.5% would have brought the VfM of the P3 to zero, and anything less, such as the Province's long-term cost of borrowing of 4.38% in 2008-09, or the 3.5% used in P3s in the UK, would have led to the PSC delivering net savings relative to the P3.³⁷

Secondly, perhaps even more disconcerting for Edmontonians may be the cuts in project scope that ensued in BC as the costs of the Canada Line project escalated. These involved reductions in the number of stations and “changes in the physical nature of the line and the way it was built.”³⁸ Some changes, such as shorter station lengths, may present problems of system expansion in the future.³⁹ There were also several million dollars' worth of ‘scope transfers’, moving costs from the P3 to the public sector.⁴⁰ In sum, the Canada Line project hardly seems like an example to emulate, whether with respect to government accountability or the reduced quality of the infrastructure that was built.

Proponents of undertaking the Southeast LRT extension as a P3 also reference another BC project, the 11km Evergreen LRT. This P3 takes the form of a design-build-finance (DBF) arrangement, given that it is a connection to an existing line, with responsibility for operations and maintenance to remain with public provider Translink. The 2013 project report on the Evergreen LRT compared the DBF arrangement with a PSC incorporating DB, and concluded that the P3 would offer a VfM of \$134 million or 10.1%.⁴¹ This relatively large VfM was the result of the successful bidder building a single line tunnel rather than a double one, thereby speeding up construction and reducing site risk. However, there is no evidence that a DB approach would not also have incorporated these

35 Ibid., 41.

36 Ronald Parks, *Evaluation of Public-Private Partnerships: Costing and Evaluation Methodology* (Vancouver: Blair Mackay Mynett Valuations, 2009), 26. Report prepared for Canadian Union of Public Employees.

37 Ibid., 26.

38 Ibid., 39.

39 Taras Grescoe, *Straphanger: Saving Our Cities and Ourselves from the Automobile* (Harper Collins Canada, 2012) as quoted in Mack D. Male, “P3 or not P3? That's the Question as We Try to Fund Edmonton's Future LRT,” *MasterMq*, March 14, 2013, <http://blog.mastermaq.ca/2013/03/14/p3-or-not-p3-thats-the-question-as-we-try-to-fund-edmontons-future-lrt/>.

40 Murray, *Value for Money?*, 39.

41 Partnerships BC, *Project Report: The Evergreen Line Rapid Transit Project* (Vancouver, March 2013). The discount rate used was the private partner's internal rate of return on this very short-lived project of 3.94%.

adjustments. As a result, the supposed VfM may be nothing more than imaginary. This example highlights a logical inconsistency in using DB in the PSC: the DB approach invites creativity and flexibility, with the result that its precise nature cannot be known until proposals are received. As a result, VfM calculations that incorporate DB, like those underlying Edmonton's Southeast LRT P3 project, offer little by way of concrete information to guide responsible decision-making.

5. PRIVATE OPERATION OF THE SOUTHEAST LINE PROVIDES MUCH OF THE SUPPOSED VALUE FOR MONEY. HOW?

The documents available on the Southeast Line make clear that taking operation out of the P3 approach reduces private sector returns significantly, and reduces the relative attractiveness of the P3 approach relative to the PSC. Thus, the VfM calculation falls from between 3% and 10% to between -2% and 6%, with a likely 2%. This brings the VfM calculation perilously close to zero, meaning that the P3 Shadow Bid is not clearly superior to that of the PSC with public operation of the line. Retaining operations within the P3 is what raises the VfM, bringing it supposedly close to that of other P3s in Canada. This raises the question of what the private sector would be doing to reduce operating costs in the P3. Could it be that the line would use fewer workers, reduce wages and benefits, or use uncertified labour? What is it about private operation that lowers costs relative to the PSC? In the absence of further information, there is reason to be concerned that supposed VfM might come at the expense of those employed to work on the project.

6. ASPECTS OF THE RISK TRANSFER IN THE VALUE FOR MONEY CALCULATION ARE DIFFICULT TO BELIEVE

Risk transfer is what is typically used by P3 proponents to justify VfM. However, there is reason to think that any risk transfer within the Southeast LRT P3 arrangement is minimal at best.

The PSC used to evaluate VfM in relation to the Southeast LRT project is based on a design-build arrangement, which commits the contractor to a fixed sum and a firm delivery date. Using DB (as opposed to DBB) as a PSC should reduce any risk assumed to be transferred to the private sector during the important construction phase. Indeed, of the 31 risks identified in PwC's

Southeast LRT Business Case, some 20 seem to relate to the construction phase. It is hard to see why most of them would not apply equally to the PSC and P3, e.g. tunnelling costs, utilities relocation, design risk, etc.⁴² The payment of progress, or milestone payments, also reduces various risks, especially financial, of the private sector in construction phase. Again, this should be common to both the PSC and the P3.

Even when DBB is used in the PSC, the assumptions of large amounts of risk transfer must be treated with a high degree of skepticism. Risk transfer assumptions are rarely spelled out fully, and if experience elsewhere is to be taken seriously, are often greatly exaggerated.⁴³ In a situation such as the Southeast LRT, where the PSC employs a DB rather than a DBB, there is substantial reason to doubt that risk transfer is significant.

Furthermore, since under the proposed arrangement for the Southeast LRT P3 there is no demand or revenue risk devolved to the private sector, revenue assumptions should be fairly similar for both the PSC and the P3 Shadow Bid. This leaves only the maintenance risk as a potential area in which the P3 is projected to offer significant advantages over the PSC. Maintenance risk would seem to refer to a situation in which budget constraints would delay or make impossible necessary maintenance work. While maintenance provisions under a P3 would be guaranteed, it is hard to believe that City budget constraints would be so severe that public sector maintenance would be impaired on infrastructure such as an LRT where safety must be paramount.

Until the risk calculations estimated by PwC are made public, skepticism about the likely degree of risk transfer in the case of the Southeast Line is warranted.

7. THE ADDITIONAL FINANCING COSTS OF THE P3 ARE HUGE

Cost escalation and the absence of clear financing arrangements make it very difficult to assess the additional costs of using private as opposed to public financing. Using plausible assumptions, however, we can estimate these additional costs.

Given the financing profile suggested by PwC, it would appear that private funding would now be expected to reach one third of \$1.8 billion, or \$594 million, of which \$59 million might be equity, and \$535 debt or bond financed. The PwC 2011 report suggests that, based on their market soundings with private businesses, any payments on private debt will be around 2% more costly than direct borrowing. We do not have 30 year borrowing costs for Edmonton, but for Winnipeg these are 4.58%.

42 PricewaterhouseCoopers, Business Case, C3.

43 For the UK example, see: Dexter Whitfield, *The Global Auction of Public Assets: Public Sector Alternatives to the Infrastructure Market and Public Private Partnerships* (Spokesman: Nottingham, UK, 2010). For Canadian perspectives, see: Hugh Mackenzie, *Doing the Math: Why P3s For Alberta Schools Don't Add Up*, prepared for CUPE Alberta, 2007; Matti Siemiatycki and Naeem Farooqi, "Value for Money and Risk in Public Private Partnerships," *Journal of the American Planning Association*, 78, 3 (2012): 286-299.

Since Edmonton appears to be able to borrow at slightly lower rates than Winnipeg, we estimate Edmonton's likely borrowing costs at 4.55% p.a. This would mean the P3 borrowing rate might be 6.55% p.a. The additional costs of borrowing at this rate over 30 years, relative to the estimated cost of Edmonton borrowing directly, is likely to be \$241 million over 30 years, or \$131 million in present value terms (discounted at Edmonton's estimated cost of borrowing of 4.55%). Equity returns are estimated by PwC to be between 10 and 15%. This suggests payments to equity of between \$177 million and \$265 million over 30 years in nominal, undiscounted terms, or between \$95.5 million and \$143.3 million in present value terms.

In short, private borrowing and equity will cost Edmonton between \$400 million and \$500 million more in nominal terms over the lifetime of the project, or between \$227 million and \$275 million more in present value from the date of operations of the line, than if the City had financed the project itself.⁴⁴

8. PROVISIONS TO ENABLE THE PUBLIC TO SHARE IN GAINS RELATED TO REFINANCING OR EQUITY FLIPPING ARE LACKING

Once the construction phase is complete and the risk associated with it no longer relevant, it is common for P3 projects to be refinanced. It is increasingly common for the public sector to share in the gains from refinancing. If the Southeast Line is to proceed as a P3, provision should be made for the City to share in any refinancing gains.

Apart from refinancing, increasingly the equity of P3s in Canada is being flipped and the public sector does not share in any gains.⁴⁵ In the UK, returns of over 50% were earned on over 1,200 P3 equity flips.⁴⁶ In the absence of any provision for sharing profits related to such flips, Edmontonians stand to lose out as the private sector wins big.

44 It should be noted that the profile of the debt (whether bonds or loans, number of years the debt will be outstanding, borrowing costs, etc.) is not known at this time. If, for instance, the debt were to be repaid earlier, the additional borrowing costs would be lower than estimated.

45 Keith Reynolds, "How Flipping Equity in P3s Boosts Profits and Ends Up With the Projects Being Run From Channel Islands Tax Havens," Policy Note (CUPE-BC: March 9, 2011), <http://www.policynote.ca/how-flipping-equity-in-p3s-boosts-profits-and-ends-up-with-the-projects-being-run-from-channel-islands-tax-havens/>

46 Dexter Whitfield, The £10 billion Sale of Shares in PPP Companies: New Sources of Profit for Builders and Banks (European Services Strategy Unit: County Kerry, Republic of Ireland, Tralee, January 2011), <http://www.european-services-strategy.org.uk/news/the-ps10bn-sale-of-shares-in-ppp-companies-new/>.

9. THE WISDOM OF 30 YEAR CONTRACTS

Locking the City of Edmonton into a 30 year financing deal brings with it a host of potential problems. First of all, it binds the City into payments that are the equivalent of debt. Debt by another name is still debt. If the intent of the proposed P3 is to reduce Edmonton's financing problems, the answer is not to be found in P3s.

The long time frame also locks Edmonton into rigid operations, maintenance, and life-cycle financial commitments that might prevent the City benefitting from potential new ways of doing things over the project lifetime. It also builds rigidities into the LRT system as a whole over that long time period.

10. PUBLIC OPINION AND THE LRT P3

Usually in Canada, P3s proceed without any formal checking on whether or not the public supports this method of service delivery. In Regina, however, a formal referendum in September 2013 tested public support for a waste water treatment plant proposed as a P3.⁴⁷ While no such plans exist in relation to the P3 proposed for the Southeast Line, Public Interest Alberta did commission the Environics Research group to conduct a random sample survey of households, to ascertain the level of public support for the P3, and for handing over the operations to a private company. The findings reveal dissatisfaction both with the federal government for forcing the P3 arrangement onto Council as a condition for funding (61% either disagreed or strongly disagreed), and with the Council for taking the decision to privatize operations behind closed doors without a public debate (71% opposed). A clear majority of people surveyed opposed privatizing the operations (64%) and expressed concerns about the integration of the P3 into the LRT system as a whole (68%), about loss of accountability if things were to go wrong (57%), about costs rising to guarantee profits for the private partner (69%), and about reduced quality of service (59%).⁴⁸ These results are significant statistically and should give the Edmonton City Council cause for reflection on its decisions.

47 Paul Dechene, "Hey, Regina, Looks Like You'll Get That Waste Water Referendum After All," *Prairie Dog*, July 22, 2013, <http://www.prairiedogmag.com/congratulations-regina-looks-like-youll-get-that-waste-water-referendum-after-all/>.

48 Environics Research Group, *Public Interest Alberta; Edmonton LRT Expansion Banner Tables*, 2013.

Conclusions and recommendations

This review has examined the case put forward for delivering the Southeast leg of the Valley Line LRT extension as a P3 or, more precisely, as a DBFOM P3. While there have been challenges to the planned expansion of the LRT system, both conceptually and in reference to specific routes chosen, assessing these falls outside the scope of this document. The main finding of this review is that the arguments for building the Southeast Line using a P3 approach are far from convincing.

To judge by what has been made available of the assessments undertaken to date, there is reason to doubt that any potential risk transfer is sufficient to establish the superiority of a P3 over a traditional DBB or narrow DB approach, when the estimated additional financing costs of a P3 are considered.

Worryingly, there remain many unanswered questions about the City of Edmonton's plans, in large measure because of the layers of secrecy that surround the P3 proposal. The obsession with so-called commercial confidentiality at the very earliest stages of evaluation, before the private sector has even submitted a bid, is unwarranted and unnecessary, and contradicts important tenets of the City's own P3 policy.

What is perhaps even more troubling is that Edmonton City Council is signalling its intention to proceed with the project as a P3, despite clear public misgivings about the adoption of a P3 approach, about the City being forced into a P3 to obtain federal funding, about fears of problems with system coordination, and about the wisdom of the private sector running the operations and maintenance.

From what little is known about the project, the case for the P3 approach seems weak. As the risk transfer claims seem questionable, the general argument for the P3 providing VfM is dubious. Serious questions can be raised about the favourable VfM numbers in other P3 projects, both in LRT and in other sectors, used by the consultants to justify and promote the P3 model. If the P3 does go ahead as proposed, the City will be paying well above its own borrowing cost to pay private sector debt and profits. The 30 year contract period for operations poses potential system and financial inflexibility issues for the City. Much of the planned expansion to Edmonton's LRT system will be built using the traditional approach, meaning that the City will be obliged to develop its technical capacity to manage new lines and ensure system coordination. In using a P3 arrangement on the Southeast leg of the Valley Line, the City would miss an opportunity to begin to build this capacity.

The Southeast leg of the LRT extension project has already encountered problems with cost escalation and financing sufficiently severe to call into question project timelines. While resulting delays create hardship for the people of Edmonton who are awaiting much-needed improvements to transportation infrastructure, there may be a significant silver lining if a delay provides an opportunity to revisit the question of how to manage the LRT expansion so as to best serve the public interest.

RECOMMENDATIONS

- 1.** Based on available information, the City should not proceed with the P3 option, but build the Southeast Line on the traditional Design-Bid-Build or a Design-Build basis.
- 2.** If the City insists on considering the P3 option, it should open up all documents and calculations employed so far in the evaluation of this option, so that they can be publicly scrutinized.
- 3.** The City and PwC should clearly justify and explain the assumptions that have gone into the assessments that have found in favour of a P3 approach, and be prepared to discuss these assumptions in public meetings.
- 4.** Greater caution should be exercised in making comparisons between the value for money purportedly achieved through other P3 projects and that expected from the Southeast Line. Comparisons should be made only when the public sector comparators employed in the various projects are truly comparable.
- 5.** Edmonton City Council should take seriously the expressed concerns of the public about proceeding with the Southeast Line through a P3 approach.

Appendix 1:

CITY OF EDMONTON POLICY ON PUBLIC-PRIVATE PARTNERSHIPS

Edmonton's policy on P3s is broadly consistent with that of the provincial government.⁴⁹ City policy provides for the P3 approach to be considered for complex projects costing over \$30 million that promise to:

- a. deliver improved services and better value for money through appropriate allocation of resources, risks, rewards, and responsibilities between the City and private sector partners;
- b. enhance public benefits through clearly articulated and managed outcomes;
- c. leverage private sector expertise and innovation opportunities through a competitive and transparent process;
- d. create certainty around costs, schedule, quality, and service delivery; and
- e. optimize use of the asset and included services over the life of the P3.⁵⁰

Value for money (VfM) is defined in quantitative terms as the difference between the risk-adjusted net costs to the City of delivering the project using traditional methods, and those incurred in delivering it as a P3. Net costs are to be calculated in present value terms, meaning that all future costs, minus revenues, are discounted by an interest rate back to present day values. A public sector comparator (PSC) is to be drawn up for net costs likely to be incurred if the project proceeds along traditional lines, and this is to be compared with a shadow bid for the P3 approach. The term shadow bid is used because the P3 costing is an estimate only, since it precedes actual private sector bids. If the present value of net costs of the shadow bid is estimated to be lower than that of the conventional approach as represented by the PSC, then the P3 approach is to be considered superior and will be pursued.

While the policy does not state which discount rate is to be used, the practice across Alberta is to use the public sector borrowing rate. While this practise results in less of a bias in favour of P3s than the high discount rates used in BC that are based at least partially on private sector returns to capital, they are still higher than experts suggest they should be.⁵¹

The policy also allows for qualitative value for money calculations to be used alongside the quantitative ones, but how these are to be undertaken is not elaborated upon.⁵²

49 Government of Alberta, P3Public Private Partnerships: Alberta Infrastructure and Transportation's Management Framework: Assessment (Edmonton, September 2006), <http://www.infrastructure.alberta.ca/Content/doctype309/production/ait-p3-assessmentframework.pdf>; Government of Alberta, Alberta's Public-Private Partnership Framework and Guideline (Treasury Board: Edmonton, March 2011).

50 City of Edmonton, "Fast Track LRT".

51 John Loxley, "Public-Private Partnerships after the Global Financial Crisis."

52 Ibid., 2.

The sharing of risk between the City and private partners is considered important. All risks should be clearly identified, assessed quantitatively, and allocated to the party best able to handle them.

The policy lays out an organizational structure for implementing P3s, providing for an Independent Fairness Advisor to oversee the procurement process, and for a Steering Committee, a Multi-Disciplinary Project Team, and an independent Corporate P3 Function with the City Administration. Council is a central component of this structure, being responsible for appraising and approving P3 assessments, and monitoring P3 progress.

The intent of following the P3 approach is to provide incentives to the private partner to meet cost and timing targets, and maintain efficiency and creativity throughout the project's lifetime.

As of August 2013, the Southeast Line would appear to be at the Project Development Stage, with Requests for Qualifications expected to be called in October 2013.⁵³

Figure 2 outlines the process through which P3s must pass.

53 Kent, "Edmonton Council Votes to Keep Seeking Southeast LRT Grants."

Figure 2. P3 project process lifecycle and approval

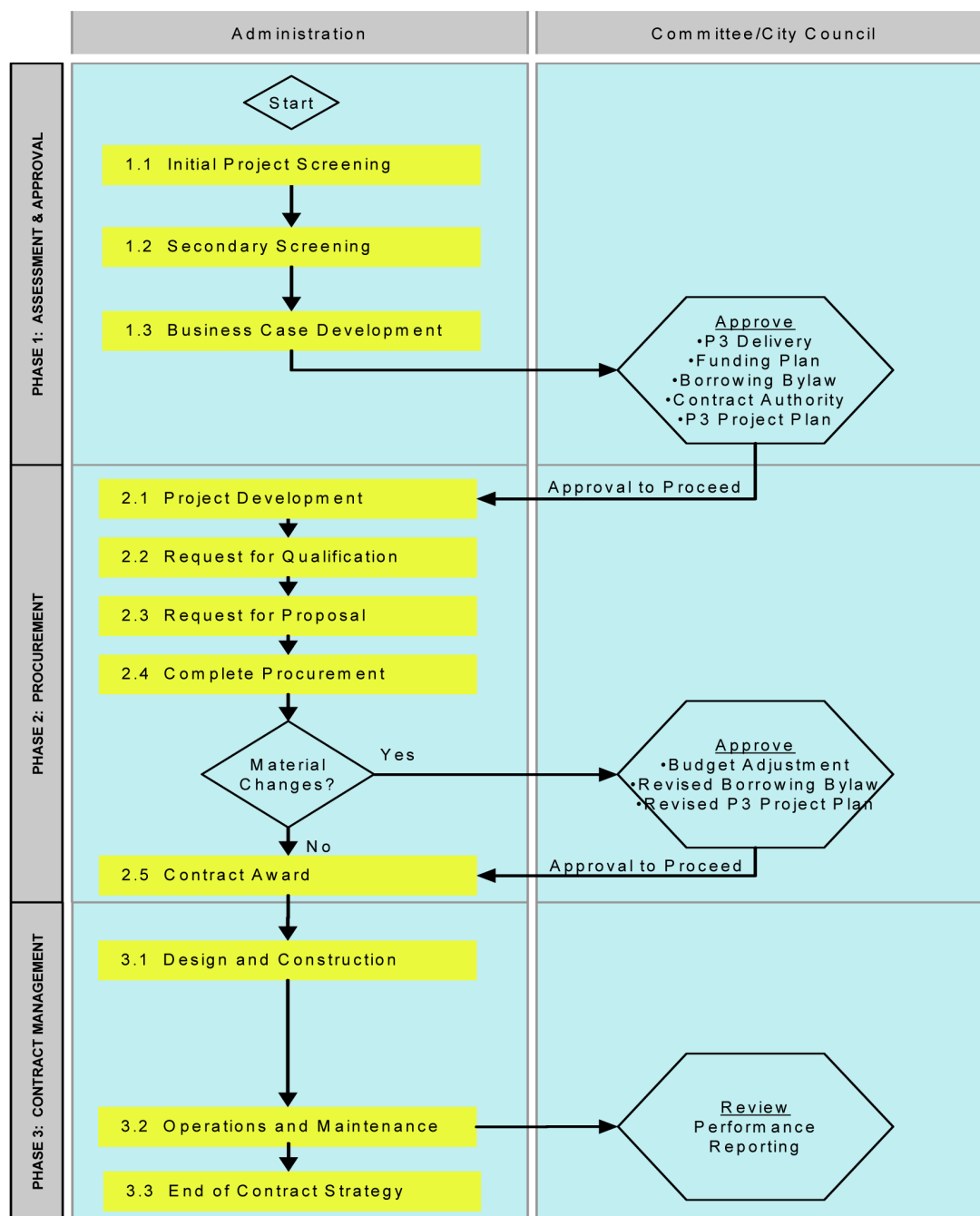


Figure 2: City of Edmonton, Public Private Partnership (P3) Policy, Policy C555 (Finance and Treasury Department: May 26, 2010).

Appendix 2:

REVIEWING THE DOCUMENTS: secondary screening, business case, outline business cases, and addendums

Very little published information is available on the proposed LRT expansion using a P3 arrangement. What follows reviews all the documentation that has been made available, both officially and unofficially, to show how the project has evolved. We are not aware of any other documents that deal with the business case for the P3 approach relative to building the project along conventional lines.

Initially, PricewaterhouseCoopers (PwC) was requested to undertake what is called a secondary screening of the projects, which means a high level assessment of the wisdom of different alternate delivery methods. This was completed in August 2010, and presented to an information session for Edmonton City Councillors in December 2010.⁵⁴ Subsequently, PwC was requested to prepare a Business Case, or a detailed financial assessment of alternative approaches, and this was completed in February 2011 at an estimated cost of \$900,000.⁵⁵ In January 2012, Council decided to proceed initially only with the Southeast extension. Again, PwC was commissioned to undertake a high-level Outline Business Case addendum, which was prepared in April 2012.

In May 2012, Council requested PwC to review the April exercise for the Southeast extension, but this time with the operating of the system remaining within City hands. This was completed in June 2012. Each of the PwC business case assessments concluded in favour of the City pursuing a P3 format for the project.

PwC's secondary screening of the Southeast and West Lines projects, 2010

The first document relating to the business case for applying a P3 model to the LRT extension in Edmonton is a summary of PwC's secondary screening of the Southeast and West Lines projects. This report has not been made available, but it has been possible to access a summary of a PowerPoint presentation given to interested Councillors at an information session held on December 9, 2010.⁵⁶ The summary indicates that the presentation consisted of an overview of P3 policy, commercial criteria to be followed, proposed performance measures, the meaning of and factors considered in value for money, an outline of the quantification of risk, and

54 City of Edmonton, SE and W LRT Delivery Method.

55 City of Edmonton, Fast Tracking LRT Construction.

56 City of Edmonton, SE and W LRT Delivery Method.

a high-level summary of the Business Case results. The conclusion was that the P3 approach is valid, proposing a 30 year term Design-Build-Vehicle-Finance-Operate-Maintain model (DBVFOM).

The presentation summary indicates a P3 would have a positive value for money of between 5% and 10% relative to the PSC. In this case, the PSC was not based on conventional methods of delivery, but rather on a design-build alternative that is said to offer more reliability in terms of construction timing and costs. The presentation summary stresses that this value for money would only be valid if the two lines were built at the same time, the plan being to complete them by 2016. What the presentation summary did not do, however, is show how these conclusions were arrived at in quantitative terms. No data are given on the value of the PSC or the Shadow Bid, nor is there any information given on how risks were quantified or allocated between the two potential partners. The presentation summary is also silent on the discount rate used.

The presentation summary states that financing would be 67% from the public and 33% private, but there is no breakdown of where the public money would be found, and no distinction between private equity and private borrowing. Once the lines become operational, the private sector would receive monthly payments to cover its financing costs, together with what is called a 'performance/availability' payment to cover profits. These payments would be adjusted as ridership changed over time.

The business case: Southeast and West LRT project, 2011

The PwC 2011 Business Case document was not made public and, when requested, neither the City nor PwC volunteered to release it. As a result, the Parkland Institute sought access under the Freedom of Information and Protection of Privacy Act in May 2013, and was given a severely redacted version two months later. The redactions are so severe that barely a number is left in the document. As a result, it is impossible to challenge PwC's calculations by changing assumptions or by using alternative financial parameters. Nonetheless, the report does throw light on the process that PwC went through to justify the P3 approach, and it also suggests a commercial structure, financial structure, and the broad terms under which a P3 is likely to be pursued.

In assessing value for money, the PwC document first lists all likely base costs and revenues before risk is taken into account. Costs include all capital costs and all operating costs, as well as project development costs that the City is expected to incur, including those for property acquisition, social

and environmental assessment, legal services, administration, and publicity. Regular maintenance and life-cycle or major asset replacement costs are also listed. No data is available for any of these amounts, though the maintenance section does confirm that the project is a thirty-year one. Base revenues are mainly fares. The average fare per rider is redacted, as are non-fare sources of revenue. Ridership numbers are given for both the opening date of January 2017 and for 2041; the City estimates a daily ridership of 33,800 for the Southeast Line rising to 45,800, while the equivalent numbers for the West Line are 40,000 rising to 63,500. The growth rate is interpolated at 1.27% p.a. for the Southeast Line and 1.34% p.a. for the West.

This base data is then used in developing the Public Sector Comparator (PSC), under which it is assumed that the City hires a contractor to design and build the project, enters into a separate contract for vehicle supply, and operates and maintains the project itself. The report replicates the approach taken in the secondary screening by comparing a shadow P3 bid with a Design-Build (DB) approach. Major assumptions on which both the PSC and P3 are developed include completion of construction by 31 December 2016, operations commencing on 1 January 2017, a thirty year operations and maintenance period, and project ending 31 December 2046. 1 January 2011 being the date for discounting costs to present value, and the discount rate based on the City's expected cost of borrowing (precise number is redacted). The use of the City's borrowing costs for discounting is less favourable to the P3 approach than the use of higher rates as in BC, but more favourable to it than using social discounting rates.⁵⁷

The base costs and revenues of the PSC are first stripped of any provision for contingencies and then adjusted for risk. The process of quantifying risk is laid out in some detail in appendices. It involved first developing a matrix of risks that might affect design and construction, operations and maintenance, and financial and commercial aspects of the project. So, in the construction phase, for instance, there might be risks associated with environmental or other approval delays, property acquisition, construction delays, strikes, etc, while on the financial and commercial side, there might be changes to interest rates (borrowing costs), debt availability, financial positions of sponsors, costs of insurance, etc. These potential risks were detailed and presented to a two-day workshop attended by representatives of the City, PwC, CH2M Hill, Spencer Environmental, and Thurber Engineering. This apparently gave rise to a quantification of risk in the matrix, and an assessment of its probability and its likely distribution between the PSC and the P3 Shadow Bid. In other words, the City's exposure to risk will be different depending on which approach is taken.

This data was then run through a software program which conducted Monte Carlo simulation, or random sampling analysis, in order to derive probability

57 Loxley, "Public-Private Partnerships after the Global Financial Crisis."

of risk distribution in terms of low (5%), most likely, and high impact (95%) outcomes.⁵⁸ These risk estimates were then applied to costs and benefits of both the PSC and the P3 Shadow Bid in the value for money calculation. Every aspect of the risk data was, however, redacted in this report, so there is no way of knowing how reasonable the assumptions are.

The VfM exercise concludes that the P3 shadow bid offers a cheaper alternative, but by how much is redacted. This conclusion is said to hold even after a sensitivity analysis is applied to the data by varying assumptions about discount rates, private borrowing costs, P3 efficiency, different degrees of public financing, and a reduction in the contract term from 30 to 15 years. This analysis gives a range of VfM results, some higher and some lower than the base VfM. Again, though, this data is not made available for scrutiny.⁵⁹ The results are said to compare favourably with VfM assessments of 22 other Canadian P3s, including that of the Canada Line in BC, upon which the Edmonton P3 approach draws heavily. That project is said to yield a VfM of 4.6%.⁶⁰

The organizational structure proposed by PwC is the creation of a Special Purpose Vehicle (SPV) to be owned by the private sector which would have responsibility for creating and running a DBVFOM P3, meaning it would be responsible for designing, building the infrastructure, purchasing the rail cars, financing, operating, and maintaining the system for a period of 25-30 years after construction is complete.⁶¹ The SPV, or concessionaire, would be the sole point of contact with the City. It would arrange sub-contractors if necessary to undertake the various tasks assigned to it. It would also arrange for equity sponsorship and for private debt finance. It would then provide LRT services to the City, and commit to maintain a certain standard of service. PwC did consider two other options, one involving the City retaining operations and the other involving the City retaining maintenance (but, strangely, not both!). PwC concluded that whole-life costs of the system would be lower if these functions were transferred to the P3.

58 For a discussion of risk assessment techniques, see: John Loxley with Salim Loxley, *Public Service Private Profits: The Political Economy of Public-Private Sector Partnerships* (Winnipeg: Fernwood Publishing, 2010).

59 PricewaterhouseCoopers, *Business Case: Southeast and West LRT Project*, 80.

60 *Ibid.*, 81.

61 *Ibid.*, 21-22.

Figure 3. Proposed organization of the Edmonton LRT P3

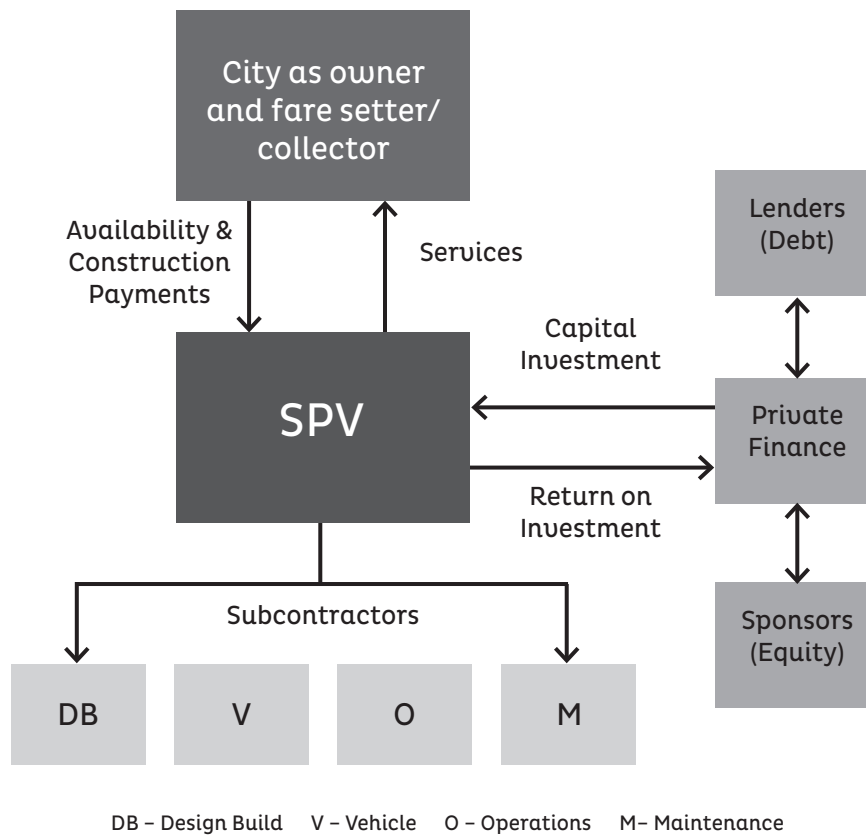


Figure 3: PricewaterhouseCoopers, Business Case: Southeast and West LRT Project, February 2011.

For its part, the City would retain “most if not all” ownership of the infrastructure.⁶² It would also be responsible for acquiring real property, setting transport policy, marketing services, procuring the project, developing bus interfaces and scheduling, governing the project, including coordinating with other levels of government, and obtaining necessary environmental approvals.⁶³

Details of the proposed financial structure are redacted, but the general argument being advanced is in line with the 67-33% public-private financing proposed in the second screening document of 2010. The suggested portions, it is claimed, maximize risk transfer to the private sector, provide incentives for the private sector to exercise due diligence and are consistent with available private capital.⁶⁴ Again, no sources are outlined for the public money, and no breakdown of equity versus loans is given for the private money.

62 Ibid., 26.

63 Ibid., 26.

64 Ibid., 33.

A series of commercial considerations are laid out, but again the detailed conclusions are redacted. It seems that PwC favours progress, or milestone payments, as progress is made and verified in construction, as opposed to substantial completion payments when construction is ended. Progress payments reduce the need for private sector financing to less than total construction costs, and also save on capitalized interest and fee payments. This approach is favoured in Alberta.⁶⁵

The mechanism for paying the private sector to cover its costs and risks in the operating phase will be designed supposedly on the ‘no service, no fee’ principle, with payment being made only if an agreed upon level and quality of service is actually delivered.⁶⁶ There will be a series of components to the fee paid: an availability payment will cover private sector financing costs, operations, and maintenance; a payment linked to quality of service, e.g. cleanliness; and a service level adjustment. This last will adjust payments as costs increase due to increased ridership. Notably, this payment “is not intended to transfer any degree of revenue risk to the SPV.”⁶⁷ In fact, PwC argue that the SPV should carry no revenue or demand risk, on the grounds that the City would retain control of transport policy, including fares, route alignment, and specification of service quality required. Furthermore, in a market sounding session with eight prominent companies engaged in the P3 business as concessionaires or equity providers (Acconia, Balfour Beatty/Parsons Brinckerhoff, Bombardier, John Laing, Macquarie, Plenary, Siemens, and SNC Lavalin), PwC were told that the recent financial crisis has reduced the private sector’s appetite “to accept a high degree of demand risk.”⁶⁸ Besides, “excluding revenue risk from the arrangement will therefore be simpler, which in turn makes the arrangement easier to administer for the City.”⁶⁹ In short, it is assumed that the City would carry this risk.

PwC lists potential key indicators upon which payments to the SPV could be based, including system reliability and punctuality, a satisfaction survey, managing customer comments, making information available in ‘real time’ for travellers, maintaining trains and stations in good condition, system accessibility, safety, and ride comfort. Failure to meet these indicators persistently could have financial implications for the SPV, in the extreme the termination of the contract. Provision would be made, however, for a rectification period.

Other commercial principles were proposed by PwC. The first is that changes in interest rates between the time of bid submission to financial closure should be covered in adjusted payments by the City, but not those taking place after financial closure. Secondly, they seem to recommend against the City sharing in any future refinancing gains, as this seems to be the practice in Alberta, but redactions leave some ambiguity here. Elsewhere, it is common for the public sector to share at least 50-50%

65 Ibid., 32.

66 Ibid., 33.

67 Ibid., 35.

68 Ibid., 36.

69 Ibid., 37.

in any refinancing gains.⁷⁰ The third is that PwC again recommends following Alberta practice in requiring a substantial (\$20 million or more) letter of credit to guarantee that the SPV puts financing in place, and successfully designs and builds the structure. The fourth is that three situations are outlined in which termination may occur: default related to non-performance of critical obligations, force majeure, or public sector termination. Again, these are drawn from the Alberta model. Finally, PwC suggests the appointment of an independent certifier, to be financed jointly by the City and the SPV, to act as an objective third party on progress assessment, bill payment, disputes etc.

The market sounding exercise referred to earlier suggests that major private sector players in P3s support the idea of an Edmonton LRT P3, and support the proposed organizational structure, as well as the proposed payment mechanisms. There was reluctance to accept any ridership risk or non-ridership revenue risk. While generally supporting the Alberta model, they indicated no objection to sharing any refinancing gains. They supported public funding in the 60 to 70% range. They anticipated that private sector gearing ratios would be 90% debt to 10% equity, that returns to equity (internal rates of return) would be in the range of 10 to 15%, and that debt margins (the extent to which private borrowing exceeds the cost of City borrowing in this case) would decline from 250 basis points (2.5%) to 200 basis points (2%) for the start of the project.

Outline business case addendum: Southeast LRT project, April 2012

During 2011, the City Administration was instructed to examine phasing in the project, starting with the Southeast expansion, and in January 2012 proceeded to contract an addendum to the 2011 Business Case. This had two major departures from the Business Case: it was to consider the viability of P3 for delivering the Southeast expansion only; and secondly, the 2016 deadline to meet Expo 2017 was no longer relevant. The easing of the deadline was the result of Edmonton withdrawing its bid for Expo when the federal government refused to contribute financially towards it. The analysis otherwise makes all the same assumptions as the 2011 Business Case, but adds consideration of possible problems that might arise in future if the LRT system is expanded in the face of proceeding with the P3. It concluded that “the DBVFOM was still the most appropriate option for the P3 delivery considering that if expansion occurs, contractual mechanisms exist and can be incorporated in the Southeast Line contract to protect the City’s interests.”⁷³

73 PricewaterhouseCoopers, Outline Business Case Addendum: Southeast LRT Project, April 2012, 4.

The Addendum concludes that the project would still have a lifetime of 34 years, the first 4 being construction, and that the P3 route was still optimal, returning a VfM of between 3% and 10% compared with the next-best non-P3 alternative, the Design Build. It is to be noted that this VfM implies some slippage at the lower end relative to that in the combined Southeast-West project as described in the 2010 second screening.

All relevant data, except the bottom line of the VfM calculation, is excluded, purportedly for reasons of commercial sensitivity and the possible harming of the City's negotiating position.

Outline business case addendum: Southeast LRT project, June 2012

In May 2012, PwC were again asked to provide a Business Case Addendum for the Southeast expansion, but this time on the assumption that operations would be retained by the City. Once operations are taken out of the P3, its attractiveness falls relative to building the project in the conventional, or in this case, the DB manner. The VfM was still positive for the P3 Shadow Bid relative to the PSC, but now reduced to 2% of net PSC costs, with sensitivity analysis showing a range of between -2% and +6% of those costs. The report noted the expected VfM was now less than that of the Canada Line, but that project did include operations. It also stressed that actual VfM in other Alberta P3s had outperformed the initial VfM estimates.⁷⁴

PwC called another Market Sounding, this time with nine unnamed organizations of vehicle suppliers, design and build contractors, and P3 concessionaires. Though participating organizations expressed a preference for operations being included, they would be happy to proceed with or without them being in the P3. They also generally felt that any expansions should be negotiated or re-tendered rather than pre-priced, given the uncertainty of the timing.

All relevant data, except the bottom line of the VfM calculation, is excluded, purportedly for reasons of commercial sensitivity and the possible harming of the City's negotiating position.

As in the case of all the PwC reports examined, there is a strong statement that the City "needs to put in place a team of competent advisors, and an appropriate governance structure, to ensure the Project is well defined and appropriately structured."⁷⁵

74 PricewaterhouseCoopers, Outline Business Case Addendum: Southeast LRT Project, June 2012, 5.

75 Ibid., 5.

Application to the P3 Canada Fund

Edmonton applied for financial assistance for the project to the P3 Canada Fund. In August 2012, the City Council met in-camera and reversed its decision to perform operations in-house. The assumption is that pressure was put on City Council by the P3 Fund, and this has been backed up by published comments by Councillors.⁷⁶ Similar pressure was put on the Winnipeg Convention Centre when it applied for P3 funding, the application being rejected, in part at least, because the centre was not planning to hire private management of the facility.⁷⁷ The City was, however, encouraged to re-apply, suggesting that P3 Canada seeks to pressure the public sector into redesigning proposals to further private gain from public assets. With operations once more in private hands, Edmonton's application to the P3 Fund was successful, and a grant of \$250 million was announced March 4, 2013, although this is \$150 million less than the City is seeking from the federal government.⁷⁸

76 "Federal Threat Forced Approval of P3 for LRT, Group Claims," *Edmonton Journal*, October 16, 2012, <http://www.cbc.ca/news/canada/edmonton/story/2012/10/16/edmonton-southeast-lrt-p3.html>.

77 Bartley Kives, "No Help from Ottawa to Expand Convention Centre," *Winnipeg Free Press*, January 5, 2011, <http://www.winnipegfreepress.com/local/no-help-from-ottawa-to-expand-convention-centre-112924489.html>.

78 PPP Canada, *Edmonton Light Rail Transit System* (Edmonton, Alberta: 2013), <http://www.p3canada.ca/project.php?id=17>.



11045 Saskatchewan Drive,
Edmonton, Alberta
T6G 2E1
Phone: 780.492.8558
Email: parkland@ualberta.ca
Website: www.parklandinstitute.ca

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