

City of Edmonton

Outline Business Case

Southeast and West LRT Project

December 2010



PRICEWATERHOUSECOOPERS 

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Our work did not constitute an audit conducted in accordance with generally accepted auditing standards, an examination of internal controls or other attestation or review services in accordance with the standards established by the Canadian Institute of Chartered Accountants (CICA). Accordingly, we do not express an opinion or any other form of assurance on the financial or other information, or operating and internal controls, of the Project.

Our work was based primarily on information supplied by the City as well as the City's external technical advisors. It was carried out on the basis that such information is accurate and complete. Information was not subject to checking or verification procedures, except to the extent expressly stated to form part of the scope of our work.

Actual results may vary from those presented, and the variations may be material. The outputs of our analysis are provided only for planning purposes. No assurances are provided that the results indicated in the analysis discussed in this report will be borne in practice. These forecasts may change based on additional analysis and data.

We make no representation regarding the sufficiency of our work either for the purposes for which this report has been requested or for any other purpose. Had we been requested to perform additional work, additional matters might have come to our attention that would have been reported to the City.

1 Outline Business Case

1.1 Introduction and Background

In July 2010, the City of Edmonton (City) appointed PricewaterhouseCoopers LLP (PwC) as Financial Advisors for the Southeast and West LRT Project (Project). PwC's role included preparing a Secondary Screening Report (SSR), which was completed in August 2010, and a Business Case, which was completed in December 2010.

The conclusions of the SSR indicated that a Public Private Partnership (P3) delivery method is likely to be a viable delivery method for the Project and could achieve a better Value for Money (VFM) outcome when compared against non-P3 delivery methods.

In accordance with the City of Edmonton P3 policy, the City therefore directed PwC to develop a detailed Business Case. The purpose of the Business Case was to build upon the work undertaken as part of the SSR. Specifically the objective of the Business Case was to further develop the P3 structure and determine whether the P3 delivery method is likely to deliver the City overall cost savings when compared against the most efficient non-P3 delivery method, namely Design Build (DB).

This Outline Business Case has been prepared as a high-level summary of the Business Case, excluding commercially sensitive information which could harm the City's negotiating position at future stages of the Project.

1.2 Project Description

In December 2009, Edmonton City Council approved the proposed West and Southeast corridors for the LRT expansion. The approval followed extensive public involvement, recognizing that new LRT development will play an important role in shaping the future of the City and is expected to result in significant benefits and impacts to businesses, communities and institutions.

The Project includes the following components:

- West extension from the Lewis Estates Transit Centre to downtown;
- Southeast extension from Mill Woods Town Centre to downtown; and
- The downtown connection of the West and Southeast lines.

The West and Southeast corridors, 13 km and 12 km respectively, will be connected through a 2 km downtown segment, forming one continuous line from Lewis Estates to Mill Woods with a total of 29 stations. An urban-style approach will be applied to this system, which will run primarily at grade and operate in a dedicated guideway adjacent to traffic. In an effort to limit property acquisition, certain sections of the corridors will have traffic lanes removed in order to accommodate the LRT. The principles of LRT operations are based on line of sight operations with LRT having traffic signal priority through intersections. System frequency is assumed at weekday peak headways of five minutes, with 10 minute intervals in off peak hours and 15 minutes in evenings and 10 to 15 minutes frequency on weekends. The speed of the LRT will be limited to roadway traffic speeds to allow the system to fit and operate safely in narrow right-of-ways and pedestrian oriented areas.

1.3 Strategic Context

The City's Strategic Vision, *The Way Ahead*, identifies a number of Strategic Goals that support the concept of expanding Public Transit and most notably LRT. These include: Improving Edmonton's Liveability, Transforming Edmonton's Urban Form, Shift Edmonton's Transportation Modes and Preserve and Sustain Edmonton's Environment.

In support of *The Way Ahead*, there are five key Corporate Strategic Plans that have been, or will soon be, adopted by City Council. All of the following plans contain further policy statements in support of expanding the LRT network:

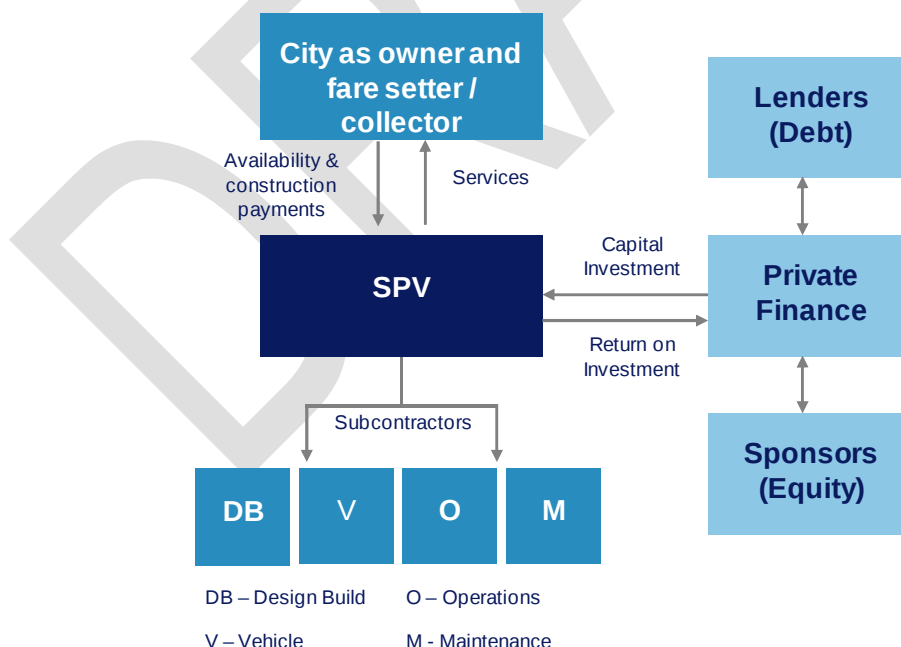
- The Way We Move (Transportation Master Plan);
- The Way We Grow (Municipal Development Plan);
- The Way We Finance (City's Financial Plan);
- The Way We Live (Edmonton's People Plan); and
- The Way We Green (Edmonton's Environmental Plan).

1.4 P3 Commercial Structure

The commercial structure section considered the optimal arrangement amongst the design, build, vehicle supply, finance, operate and maintain elements of the Project. The following three commercial structures (all of which meet the City's definition of a P3) were assessed:

- Design, Build, Vehicle, Finance, Operate and Maintain (DBVFOM);
- Design, Build, Vehicle, Finance, Operate (DBVFO); and
- Design, Build, Vehicle, Finance and Maintain (DBVFM).

The analysis indicated that the DBVFOM structure offers the best opportunity for the City to achieve the optimal VFM outcome under a P3 arrangement. Under this arrangement the City would contract with a single private entity created solely for the Project. The private entity is commonly referred to as a 'Special Purpose Vehicle' (SPV), 'ProjectCo' or the 'Concessionaire'. The SPV would be responsible for designing and building the infrastructure, supplying the vehicles and operating and maintaining the infrastructure over the anticipated term of the P3 arrangement of approximately 34 years (the construction period plus an operational period of 30 years). The SPV would also provide a component of the finance necessary to fund the Project. The DBVFOM commercial structure is illustrated in the following diagram.



Taking into consideration the characteristics of the Project (a stand-alone line, operating independently of the existing system), the benefits of a DBVFOM structure appear compelling. It is widely regarded as the most

efficient P3 arrangement due to its integrated structure and the characteristics of the Project do not prevent it from being pursued.

The integration of the design, build, vehicle supply, operate and maintenance components forces the SPV to adopt a whole-of-life costing approach and minimizes unnecessary interfaces. This outcome would be difficult to achieve under other structures. The SPV would have clear incentives to reduce the whole-of-life cost through a combination of efficient risk management, innovation and economies of scale. The proposed approach allows the City to structure a payment mechanism under which both system availability and system performance is clearly the responsibility of the SPV - there are no opportunities for "finger pointing". Ultimately, if the system does not perform to achieve the required performance standards, the SPV's payment will be reduced.

1.5 Commercial Principles

The proposed commercial principles that will underpin the P3 arrangements draw upon Canadian and international precedents (and in particular the Alberta P3 approach), as well as best practices on other rail transit P3 projects, such as the Canada Line, Gold Coast Rapid Transit project (in Australia) and the Nottingham Express Transit project (in the UK).

During the construction period it is anticipated that the City would pay the SPV progress / milestone payments for a portion of the capital costs, with the remaining portion of the Project costs being financed by the private sector.

During the operating period it is anticipated that the City would make monthly payments to the SPV that would be linked to a number of factors including system availability, quality, major maintenance costs, service levels and special events. To receive the full amount of the payment, the SPV would need to achieve the level of performance specified in key performance indicators defined in the contractual agreement. Under the proposed P3 structure, it is anticipated that the City would own the LRT system and no portion of the SPV's payments would be linked to ridership revenue or demand risk.

The City would generally follow the Alberta P3 approach, drawing upon other relevant approaches where this would enhance VFM to the City.

1.6 Market Sounding

Market soundings for the Project were held with eight organizations, representing potential vehicle suppliers, design and build contractors and P3 concessionaires. The organizations surveyed included companies from North America, Europe and Australasia.

The results of the market sounding indicate that there is strong interest in the Project and in proceeding with the Project as a P3.

1.7 Financial Analysis

In accordance with best practice, the City compared the estimated cost of delivering the Project under DB delivery, as represented by the Public Sector Comparator (PSC), against the estimated cost of delivering the Project under P3 delivery, as represented by a shadow bid model (Shadow Bid).

The PSC reflects the estimated costs of delivering the Project using the most efficient form of non-P3 procurement, which in this instance is assumed to be DB procurement. Under the DB approach it is assumed that the City would:

- enter into a single DB agreement with a private sector contractor to design and construct the Project;
- finance the design and construction of the Project;
- enter into a separate contract with a vehicle provider to supply the vehicles; and

- operate and maintain the system itself.

The Shadow Bid model incorporates similar assumptions that the private sector would assume to estimate the cost of the Project under P3 procurement. As such, it includes estimates of the private sector's design and construction costs, operating and maintenance costs, debt servicing and equity returns. Similar to the PSC representing the estimated cost under DB delivery, the Shadow Bid represents the estimated cost under P3 procurement.

After all of the costs and revenues have been accounted for over the lifetime of the Project, the costs associated with delivering the Project under the different delivery methods (DB and P3) are discounted back to a single Net Present Cost (NPC) value. Discounting the costs of both the PSC and Shadow Bid models to a single NPC value allows for a comparison of delivery methods on a consistent basis.

The financial analysis indicates that delivering the Project as a P3 is likely to represent savings to the City over the life of the Project, in the range of 5% to 10% when compared to the cost under DB delivery. The projected VFM is within the range of VFM outcomes that have been achieved across a variety of recent P3 projects throughout Canada.

1.8 Conclusion

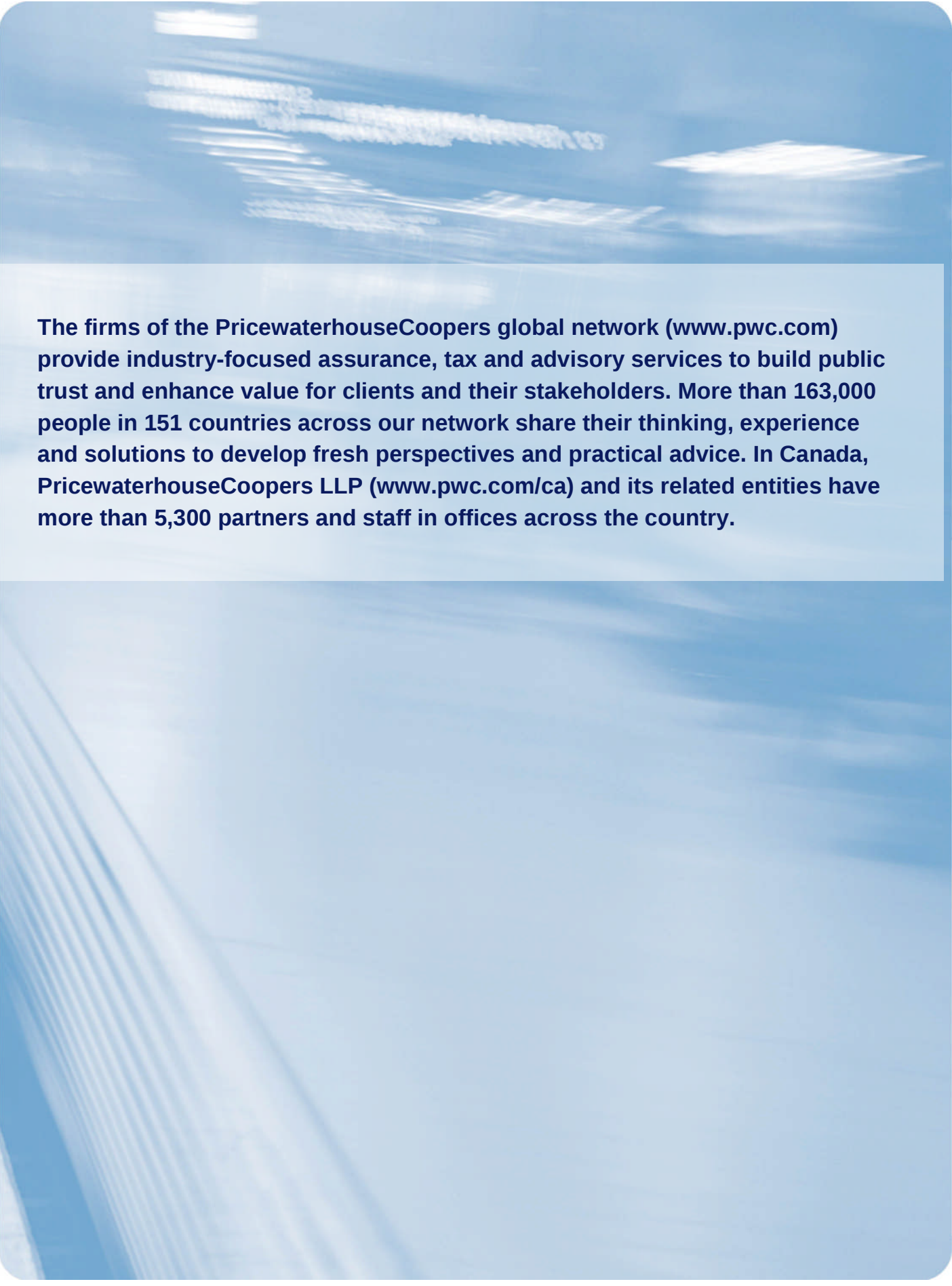
Demonstrating VFM is paramount to P3 procurement – achieving VFM should be the key consideration at all stages of the P3 process. In accordance with its P3 policy and consistent with best practice, the City adopted a rigorous evaluation process to assess whether a P3 would be a viable delivery method for the Project.

The financial analysis found that delivering the Project as a P3 is likely to represent savings when compared against the most efficient non-P3 delivery method of DB. In arriving at this conclusion, the financial analysis has taken full consideration of the cost of private finance within the P3 transaction. Indeed it is the very inclusion of private finance that results in the City obtaining a VFM outcome.

Structuring the P3 transaction in a manner which requires the private sector to put its 'capital at risk' fundamentally changes its commercial incentives to deliver the Project on time and on budget – failure to do so means that the private sector's financial return will be reduced. Ultimately, this is why the private sector requires a higher return than the public sector does – the public sector is not directly exposed to the same financial penalties for cost and schedule overruns. However, as the cost of private finance is higher than the public sector's borrowing costs, the higher cost of private finance must be offset by efficiencies generated through other Project elements. The characteristics of this Project (a stand-alone line, operating independently of the existing system) should allow the City to structure an efficient P3 that generates such efficiencies and results in an optimal risk allocation.

1.9 Next Steps

The VFM benefits that are achieved via a P3 approach are not obtained automatically – they only result from well-planned and rigorously appraised projects. The City must recognize that P3 procurement requires a more complex contractual arrangement than other delivery mechanisms. It 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. Should the City invest the necessary time and resources, the P3 approach is likely to deliver taxpayers a better VFM outcome than under alternative delivery methods. In particular, the City should obtain a higher degree of cost and schedule certainty under P3 delivery relative to other delivery methods.



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