P3 Value for Money Assessment and Project Report

Northeast Anthony Henday Drive (NEAHD) Ring Road Project

Edmonton, Alberta

November 2012

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Value for Money Assessment and Project Report on Public Private Partnership (P3) for NEAHD

October 2012

1. Summary: Using a P3 for Northeast Anthony Henday Drive - did it work?

By using a Public Private Partnership (P3) to design, build, finance and operate Northeast Anthony Henday Drive (NEAHD), the Alberta government will save an estimated $371 million (in 2012 dollars) over 34.5 years when compared to a traditional design-bid-build procurement approach ($1.809 billion instead of $2.180 billion, a 17% savings). It will also deliver NEAHD three years earlier than it could have achieved with traditional procurement methods. The following assessment shows that using a P3 delivered value for money and that it was the right way to procure NEAHD.

The government signed the P3 contract, with a 34.5-year term in May 2012, with Capital City Link General Partnership (the contractor) for the design, construction, partial financing, operation and maintenance of NEAHD. The contract requires the road to be ready for public use by October 1, 2016. The cost savings and earlier completion can be attributed to:

- life-cycle optimization,
- economies of scale,
- construction efficiencies,
- construction innovations,
- risks shifted from government to the contractor, and
- fixed-price contract.

The Government of Alberta uses P3s, when deemed appropriate, to deliver needed infrastructure to Albertans. The P3 procurement approach is used to provide benefits that can include an extended warranty, fixed pricing and earlier delivery of infrastructure compared to procuring the asset using a traditional approach. The government also requires P3 projects to deliver value for money. This report provides information to show that the Northeast Anthony Henday Drive (NEAHD) indeed delivered value for money through P3 procurement.[1]

The Northeast Anthony Henday Drive is the final segment of the ring road in Edmonton. It will provide an alternate route for bypass traffic along the north and east edges of the city, thereby alleviating congestion along Yellowhead Trail through Edmonton.

This report explains what a P3 is and why it may be used, provides a value for money assessment of the P3 and provides a project summary.

[1] This report was developed by Alberta Transportation following the value for money methodology in the Government of Alberta's *Public-Private Partnership Framework and Guideline* which can be viewed at. http://www.finance.alberta.ca/business/alternative-capital-financing/documents-resources.html

2. Background

What is a P3?

A P3 is a different, non-traditional way for government to create capital assets such as roads, schools, and other types of government facilities. In the case of NEAHD, the government entered into one agreement with a contractor responsible for designing, building, partially financing, operating and maintaining the road over a 34.5-year period (four and a half years design and construction; 30 years operations and maintenance). [2]

A P3 can save time and money and reduce risk to the government by having one contractor design, build, finance, operate and maintain a road. For Alberta P3 projects, the public sector owns the facility and provides public services to Albertans, the same as it does with a traditional design-bid-build approach.

What is a traditional approach?

In a traditional approach, the public sector hires an engineering firm to design a road, bridge, or other related facilities, and then hires a construction contractor through a public tender process to build them. Once the infrastructure is built, the public sector operates and maintains it typically by awarding numerous individual contracts for routine repairs and rehabilitation. The government pays for the construction of the infrastructure by making progress payments (for its own infrastructure) or by making capital grants to entities such as school boards, health authorities, and post-secondary institutions. Government funding is also used to operate and maintain the facility.

What does a Value for Money (VFM) assessment do?

A VFM assessment measures whether a P3 is the best option for a particular project. In the case of NEAHD, the estimated costs of the traditional and P3 options were compared. The VFM for a project is the difference between these two costs. The goal of a P3 is to provide value; to do so, the P3 must cost less – measured by net present value – than the traditional method over the life of the contract.

What is net present value?

Net present value is the current value of a future sum of money. It is a standard method to compare the value of money over time (a dollar today is worth more than a dollar tomorrow because of interest and inflation) to assess long-term projects. It is produced by applying an interest rate and an inflation rate (collectively called the “discount rate”) to a future sum. The amount and timing of cash flows differ in the two options for producing the road (traditional and P3) and the calculation of net present value accounts for those differences. The net present value of the cost to produce and maintain a facility using the traditional approach is called the Public Sector Comparator, or PSC.

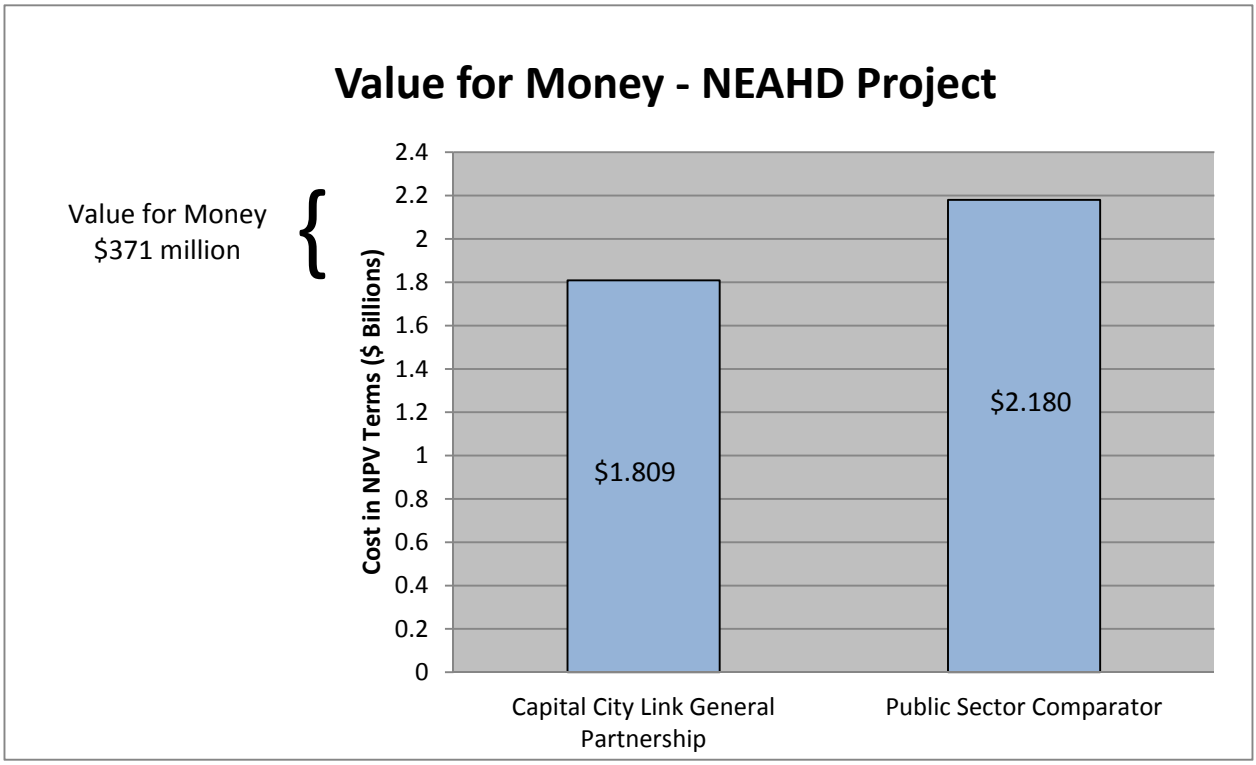
[2] For detailed discussion on P3s, see the Annual Report of the Auditor General of Alberta 2003–2004, on pages 49 to 72 (www.oag.ab.ca/files/oag/ar2003-2004.pdf).

3. VFM Assessment of the P3 used for NEAHD

Money and time saved by using P3: Quantitative measures of value

This VFM assessment uses net present value as of March 14, 2012, when bids were received. It includes the costs to design, build, partially finance, operate and maintain the road over the 34.5-year agreement term. It also includes the impact of risk transfer (as discussed later in this section) but excludes costs common to both methods, such as land. [3]

The low bid received for this project was $1.809 billion and the PSC was estimated at $2.180 billion (both in 2012 dollars). The VFM is therefore $371 million or 17% of the PSC. A value for money analysis prepared by the financial advisor, Deloitte & Touche LLP, retained for this project is attached in Appendix A.



[3] Capital and rehabilitation costs for both methods were developed by ISL Engineering Ltd. Inflation and discount rates were provided by the Ministry of Finance and Enterprise. Deloitte & Touch LLP developed the financial model.

Private financing by the contractor costs more than public financing by government, but in the case of NEAHD, that cost was more than offset by the following factors:

1. **Life-Cycle Optimization** – Having one contract that includes design, construction and a 30-year maintenance period encourages the contractor to consider different construction and maintenance solutions that would optimize the life-cycle of the infrastructure and reduce costs over the life of the project.

2. **Earlier Completion** – Completing the project three years earlier than could be achieved using traditional delivery can equate to savings on cost escalation. Market forces continually drive up costs related to labour, equipment, fuel, construction materials, etc. Earlier completion reduces the exposure to this phenomenon. Earlier completion also provides savings to the road users in travel time and fuel costs over the three years of earlier completion.

3. **Economies of Scale** – Given the 355 lane kilometers of road construction and 47 bridge structures, the contractor is able to secure large volume long term contracts for material such as asphalt, concrete, and steel which are significantly discounted relative to the smaller quantities secured in traditional contracts.

4. **Construction Efficiencies** – As with many large projects, the contractor is able to apply standardized design approaches and construction methodologies to numerous elements within the project scope. The project can be completed using fewer person-hours by capitalizing on the streamlining of processes.

5. **Construction Innovation** - A P3 contract requires the contractor to perform both the design and construction processes. The contractor can use its knowledge and experience to develop innovative solutions in either design or construction that accelerate the completion of the project and reduce costs.

6. **Risk Allocation** – Allocating risks to the party best able to manage them means the contractor bears many of the costs that the government would have borne in the traditional approach and can manage them at a lower cost than government. For example, the contractor will pay for any changes needed during the construction period due to design changes and errors. The contractor will also bear any cost increases for labour and material during the construction period. In addition, for the 30-year operation and maintenance term, the contractor will pay to rehabilitate or replace any defective component of the infrastructure. A list of some of the major risks that the P3 contract allocated to the contractor is on pages 6 and 7 of this report.

7. **Fixed-Price Contract** – By entering into a fixed-price contract for the project, the contractor bears the risk for increases to project costs during construction. The government is protected from any anomalies in construction pricing and can effectively budget for the price of the project. As well, the operations and maintenance costs for the 30-year maintenance period are fixed with an index factor applied to adjust for inflation. The contractor's payments over the 30 years cannot be modified if the price of various maintenance materials or equipment increases.

Qualitative measures of value

1. **Long Term Warranty** – The P3 effectively gives the government a 30-year warranty by transferring responsibility for operation and maintenance of the road to the contractor for the term of the contract. The 30-year operation and maintenance period gives the government assurance that the road will be maintained in good condition with no deferred maintenance at the end of 30 years.

2. **Life Cycle View** – By linking the design, construction, operation and maintenance obligations into a single contract ensures that there is a high degree of discipline in achieving a quality product. For example, any compromise in quality would result in a more substantive maintenance obligation for the P3 contractor. Therefore the combination of design, construction, and operation and maintenance of the infrastructure is highly optimized to suit the infrastructure's entire life cycle.

Major risks allocated in P3 contract

An important factor in the delivery of P3 projects is an acceptable allocation of risks to the party or parties best able to manage them. In some cases, the contractor is the appropriate party to manage a risk; in others, the government can better manage the risk; in yet a third case, the risk may be best shared between the two parties.

Table 1 (Appendix B) shows a sample of the risk allocation between the government and the contractor in the P3 contract and schedules. This list is not comprehensive. The P3 contract referenced in Appendix B shows all the allocated risks.

Schedule certainty – The contractor agrees to have the road available for traffic by October 1, 2016 or receive reduced payments. The contractor has to manage the construction schedule to meet this date.

Weather – The contractor bears any costs of project delays caused by bad weather.

Scope changes – The government pays for any scope changes that it requests during construction. The government will pay for this work in accordance with the change order process set out in the P3 contract. During the operation and maintenance period the government may consider changes to the road. For example, continued residential growth in the area may require the government to add another interchange or more freeway lanes. The government will pay for this work as long as the contractor provides competitive pricing based on a tendering process as specified in the P3 contract.

Interest rates and financing – During the maximum two month period between notifying a preferred proponent (which becomes the contractor when it signs the P3 contract) and signing the contract, the government shares the risk of any changes in base borrowing rates with the preferred proponent. The contractor has to arrange for partial financing for the whole term of the contract and is solely responsible for the impact of the financing arrangements. No matter how much rates increase during the contract, the contractor must pay any increased refinancing costs. Conversely, the contractor can benefit from any rate drops.

4. Project report

Project goals

The NEAHD project assists in meeting a number of Government of Alberta (GoA) goals and strategic priorities[4] and Alberta Transportation Priority Initiatives (referenced in Alberta Transportation's Business Plan 2012-15[5]), as follows:

1. **Government of Alberta Strategic Plan Goal 5: "Preserve the Province's Finances"** – the delivery of NEAHD will be done in a fiscally responsible manner, will support growth in the Gross Domestic Product, provide job opportunities, and enhance movement of goods and people.

2. **Alberta Transportation Goal 1: "Alberta's provincial highway network connects communities and supports economic and social growth"** – NEAHD is a major addition to the City of Edmonton road network and a major connector of the north-south movement of goods. Connectivity with the regional highway network will be improved with new highway-to-highway interchanges at Highway 16 and Highway 15 (Manning Drive). With the completion of NEAHD, a high standard north-south bypass of Edmonton will be provided and will facilitate the movement of goods and people to northern Alberta, including Fort McMurray.

Appendix C provides a drawing showing the project route and lists the associated interchanges and crossings.

Project outcomes

The following outcomes will be achieved by delivering NEAHD as a P3:

- **Cost certainty for the life of the road** – Shifting the risk of increasing construction costs and other financial risks to the contractor ensured cost certainty for the design, construction, operation and maintenance of the new road.

- **An innovative, repeatable, transparent, and accountable process to produce and maintain roads** – The same process can be used for other projects in Alberta.

- **Less time and lower cost to build**– To plan, design, and build this amount of infrastructure using the traditional approach would take at least seven and a half years before being available to the travelling public. In contrast, the P3's coordinated and comprehensive approach will produce NEAHD in only four and a half years and at a lower cost.

- **A 30-year warranty** – The contractor is responsible for ongoing operation, maintenance and rehabilitation for the 30-year operation and maintenance phase.

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[4] GOA Government Strategic Plan 2012:
http://www.finance.alberta.ca/publications/budget/budget2012/goa-business-plan.pdf

[5] Transportation Business Plan 2012-15:
http://www.finance.alberta.ca/publications/budget/budget2012/transportation.pdf

Approaches considered

The government considered two alternative approaches to deliver NEAHD:

1. **Traditional Design-Bid-Build approach**, with the usual pay-as-you-go financing by the government and delivery by Alberta Transportation. Private-sector engineering consultants hired by Alberta Transportation design the roads and bridges. Construction contracts are awarded through a traditional open-bidding process tendered by Alberta Transportation to private sector contractors, typically in work packages of unique tasks (such as grading, paving, bridge construction, lighting, etc.) and/or of geographically distinct sections. A project of this size under a traditional procurement would involve up to 30 separate construction contracts. Upon construction completion, operations, maintenance and infrastructure rehabilitation responsibility is tendered through an ongoing traditional open-bidding process to private sector contractors specializing in this type of work.

2. **Design-Build-Finance-Operate-Maintain approach (the basis of the P3)**, with the winning private-sector proponent (the contractor) forming a consortium or group to handle the project from start to end of the contract. The contractor is responsible for the ongoing operation and maintenance of the road for a set time (in this project, 30 years), and for having a rehabilitation plan to ensure performance requirements are met. The government makes monthly payments to the contractor during the 30-year maintenance phase of the contract. Payments start after the road is ready to use and cover capital, operations, maintenance and rehabilitation costs. The government can reduce payments based on criteria such as whether the roadway remains available for use and whether the performance of the infrastructure meets certain standards.

Selection process

The government's selection process was open, competitive, timely, fair and transparent. The Fairness Auditor, GGC Consultants Inc., as represented by Mr. Gary Campbell, QC, prepared a report on the fairness of the process (Appendix D).

A Request for Qualifications was publicly issued on March 2, 2011. Five teams responded and were evaluated on experience, personnel qualifications, past performance and financial capability. The three teams asked to submit proposals were Alberta Roads Consortium, Capital City Link Group, and Edmonton Connect Partners, as shown in Appendix E.[6]

The Request for Proposal (RFP) process ran from May 13, 2011 to March 14, 2012. The made-in-Alberta approach to P3s ensures the process is competitive throughout. During the RFP process, the teams made financial and technical submissions to ensure that they met the project's minimum specifications. The government issued a draft form of the contract during the RFP process and the teams provided comments on it. Before receiving financial bids, the government issued the final form of the contract that the successful proponent would sign.

Once the three teams provided RFP submissions, they all submitted financial bids based on the final form of the contract. There were no negotiations on this contract after financial bids

[6] The companies that make up the teams are listed in Table 2 (Appendix E).

were received. These bids are summarized in Table 3 (Appendix F). Capital City Link Group submitted the lowest price, on a net present value basis, and won the contract. Capital City Link Group then created a special purpose company, known as Capital City Link General Partnership, to carry out the work of the contract.

Key terms of P3 contract

What the government must pay: The sum of the payments for the 34.5-year contract is approximately $1.809 billion in 2012 dollars.

During the construction phase the Alberta government will pay $924.9 million for construction costs while P3 Canada will provide up to $36.8 million through the PPP Canada Fund. This funding covers only part of the overall construction (capital) cost. Once the road opens to traffic, the Alberta government will make monthly payments over the remaining 30 years of the contract. Of these monthly payments, the portion representing the remaining capital amount is fixed, while operation, maintenance and rehabilitation payments are indexed.[7] This is the same index that is used for Alberta Transportation's traditionally delivered provincial highway maintenance contracts.

If the contractor fails to achieve traffic availability by the October 1, 2016 target date, the contractor will incur severe penalties, achieved by reduction in the overall capital payments payable by the government. The penalty is loss of the full amount of the monthly capital payments or a portion thereof that the government would otherwise have paid the contractor, except that during December 2016 through May 2017 the penalty is one-third of the capital payment.

What the contractor must do: The 34.5-year contract between the government and the contractor has a four and a half year construction period and a 30-year operation, maintenance, and rehabilitation period. It requires the contractor to:

- complete the design and construction of the NEAHD as described in Appendix C by October 1, 2016;
- partially finance the construction over the contract term;
- operate, maintain, and rehabilitate the road to the performance standards specified in the contract;
- operate and maintain (but not rehabilitate) a portion of existing bridge infrastructure already constructed by Alberta Transportation. The existing infrastructure includes two bridges at Whitemud Drive, two bridges carrying Sherwood Park Freeway over the Canadian National Railway and one bridge carrying 34 Street over Sherwood Park Freeway; and
- hand back the roadway to Alberta Transportation in September 2046 in a condition as prescribed in the contract.

Payments reduced for non-performance:

The government can reduce all monthly payments (capital, operation and maintenance, and rehabilitation) if the contractor does not meet performance standards in the contract. For

[7] Four indices are used to calculate operation and maintenance payments: Manpower, Consumer Goods, Construction, and Diesel Fuel. Additional detail can be found in Schedule 10 of the P3 Agreement.

example, if pavement does not meet performance criteria and the contractor does not repair it within the allowed time, the government can reduce monthly payments to the contractor.

A detailed description of all the payment adjustments is in Schedule 15 of the P3 contract, and a sample appears in Table 4 (Appendix G). The final form of the P3 contract is at http://www.transportation.alberta.ca/3787.htm.

The Government owns the road

The contractor has a licence from the government for the term of the P3 agreement, subject to the paramount obligation to keep the road open for the free use by the public (except for specifically permitted lane closures due to accidents, emergencies, repair work, etc.). Tolls are expressly prohibited, as are commercial signage and any other commercial use of the road.

Monitoring during and after construction

During construction, the government is using ISL Engineering Ltd. as its consultant to review the designs and ensure that construction standards have been met. The contractor has to provide monthly reports on design and construction issues. In the operation, maintenance, and rehabilitation period, the contractor will self-monitor and report on its compliance with the technical requirements. The government will also do its own inspections and testing to ensure the standards continue to be met. In addition, the contractor's lender has a consultant review the contractor's performance.

Accounting treatment

The accounting treatment for P3 projects follows generally accepted accounting principles set out by the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants. The obligation is "on-book", so the province records the amount owing for the private financing over the construction period and also records the cost of building the asset on its balance sheet as a capital asset.

Project schedule

The P3 contract was signed on May 8, 2012 and construction started in earnest in June 2012. The contractor must deliver NEAHD by October 1, 2016 or face a payment reduction. An independent certifier will certify when NEAHD is available for use.

The operation, maintenance, and rehabilitation period starts after the road is made available to traffic and continues until September 2046, when the license granted to the contractor to access the road for operation, maintenance, and rehabilitation activities will expire. The contractor then must hand back the road in the condition specified in the contract. The government and the contractor will assess NEAHD to ensure it is in the condition specified in the contract when the contract expires. After the contract expires, the Alberta government will be responsible for operating, maintaining, and rehabilitating the road.

Appendix A: Commentary by Deloitte & Touche LLP

Deloitte.

Northeast Anthony Henday Drive P3

Comparison of Financial Offers and Calculation of Final Value for Money

Confidential

March 14, 2012

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Introduction

Scope of Report

This report presents the comparison of the Financial Offers received from NEAHD Proponents in their SR3 submissions to determine the Preferred Proponent. It also calculates the Value for Money ("VfM") realized by the Preferred Proponent's Financial Offer. The purpose of this report is to provide a concise summary of the bid evaluation process to identify the Preferred Proponent and to facilitate the notification of the Preferred Proponent.

Timing

The PSC was finalized prior to receipt of the Proponents' proposals, and was deposited with the Deputy Minister of Justice on February 14, 2012. The finalized PSC comprises assumptions and cost estimates last updated by Alberta Transportation ("AT") on September 8, 2011. The discount rate, inflation rate and P3 debt financing rate were further updated on February 9, 2012 using information from Alberta Finance and Enterprise.

The PSC was recalculated on March 14, 2012, using the discount rate and inflation rate that were determined by Alberta Finance and Enterprise as the basis for calculating the net present value of the Proponents' Financial Offers. None of the other input assumptions (costs, etc.) were altered. The PSC referred to herein is this recalculated value.

The Financial Offers from Proponents were received on March 14, 2012.

Limitations

This report was prepared for the exclusive use of AT, and is not to be reproduced or used without written permission of Deloitte with the exception of its use with regard to the procurement process for the Northeast Anthony Henday Drive P3 project. No third party is entitled to rely, in any manner or for any purpose, on this Report. Deloitte's services may include advice or recommendations, but all decisions in connection with the implementation of such advice and recommendations shall be the responsibility of, and be made by, AT.

Deloitte's scope of work related to the PSC was limited to the review and updating of a PSC spreadsheet model provided by AT. The PSC's financial assumptions and cost estimates are those of AT. Deloitte's scope of work related to the VfM was limited to development of a spreadsheet to calculate and compare the net present value of the financial offers using AT's methodology.

This report relies on certain information provided by AT and the Project's Proponents, and Deloitte has not performed an independent review of this information. It does not constitute an audit conducted in accordance with generally accepted auditing standards, an examination or compilation of, or the performance of agreed upon procedures with respect to prospective financial information, an examination of or any other form of assurance with respect to internal controls, or other attestation or review services in accordance with standards or rules established by the CICA or other regulatory body.

Comparison of Financial Offers

Method

The Financial Offers consist of the following payments:

- Monthly payment stream over the operating period (October 2016 to September 2046 inclusive), consisting of:
  - Capital Payments (identical monthly payments stated in nominal dollars)
  - O&M Payments (monthly payments for O&M, stated in 2012 dollars)
  - Major Rehabilitation Payments (monthly payments with timing as needed for Major Rehabilitation, stated in 2012 dollars)
- Total Provincial Funding, calculated by multiplying the amount of one full month's Capital Payment by 266.

The total cost of the Financial Offers on a net present value basis was determined by calculating the sum of the net present values (as at the SR3 submission date of March 14, 2012) of:

- the Capital Payments;
- the O&M Payments, after first adjusting each payment for inflation using a fixed estimated inflation rate of 2.15% per annum determined by Alberta Finance and Enterprise;
- the Major Rehabilitation Payments, after first adjusting each payment for inflation using the fixed estimated inflation rate of 2.15% per annum determined by Alberta Finance and Enterprise; and
- the Provincial Funding, after first distributing the amount into a number of separate progress payments using a pre-determined schedule of payment dates and payment amounts (with each amount defined as a percentage of Provincial Funding). The schedule of payment dates and amounts is taken from the Shadow Bid, which has monthly payments averaging 2.8% of Provincial Funding commencing in January 2014[1].

The discount rate used to calculate net present values is 3.75% per annum, determined by Alberta Finance and Enterprise based on the Province's borrowing costs.

Proponents were advised of the discount rate and inflation rate to be used on March 12, 2012.

Process and results

To determine the Proponent that provided the Financial Offer with the lowest total cost on a net present value basis, the Proponent's Form G1 cashflows (Columns B, D, and E) were value-copied into the bid comparison spreadsheet that was developed in advance.

The payment cashflows as copied into the bid comparison spreadsheet were compared to and spot-checked against each Proponent's Form G1 (paper version) to confirm agreement between the Proponent's electronic and paper financial offers and the accuracy of the value-copy process. The sum of each cashflow in the bid comparison spreadsheet was also compared to the sum of the cashflow in the Proponent's Form G1 spreadsheet to again ensure the accuracy of the value-copy process. These comparisons confirm that the NPVs of each bid have been calculated according to the payments indicated on the paper version of each Proponent's Form G1.

[1] Since actual progress payments will be made according to the Contractor's verified progress in the field, which cannot be known in advance, an assumed schedule is required to evaluate the bids. The same schedule is used for all three because Proponents do not bid an enforceable construction schedule. The Preferred Proponent's schedule of Progress Payments as evidenced in its financial model may be used for calculating the book value and for budgeting purposes.

The bid comparison spreadsheet calculates the NPV of the cashflows to the Proponents as of March 14, 2012, which is the basis for determination of the Preferred Proponent. The results are as follows:

	Public Sector Comparator	Cashflows to Proponents		
		ARC	ECP	CCLG
Total Cost on a Net Present Value Basis (NPVs to 14-Mar 2012, in millions)	$2,179.97	$2,033.93	$2,218.51	$1,808.87

ARC=Alberta Roads Consortium, CCLG=Capital City Link Group, ECP=Edmonton Connect Partners

The result as indicated in the above table is that Capital City Link Group has the lowest NPV, and absent any SR3 submission compliance concerns, Capital City Link Group would be the Preferred Proponent.

Calculation of final value for money

Overview

VfM is determined by comparing the Preferred Proponent's Financial Offer to the PSC and is defined by Alberta's Public-Private Partnership Framework and Guideline as:

> *…a net present value comparison of the comparable costs and risks of the proposed P3 project with the Public Sector Comparator (PSC).*

The cost of traditional project delivery for the Project is established as the PSC. The cost of P3 project delivery is estimated at several points in the project development process with a Shadow Bid, allowing VfM to be estimated and refined as project information improves. The final VfM analysis replaces the Shadow Bid's estimated cost with the cost of the Preferred Proponent's Financial Offer (i.e. the actual bid rather than the Shadow Bid).

Calculation

The VfM compares the cost of the Preferred Proponent's Financial Offer to the cost of the PSC. The VfM is therefore as follows:

	NPV (in millions)
Public Sector Comparator	$ 2,179.97
Preferred Proponent's Financial Offer	$ 1,808.87
Difference	$ 371.1

The VfM is therefore $ 371.1 million, or 17% of the PSC.

Appendix B: Sample of Risk Allocations

Table 1: Sample of Risk Allocations between Government of Alberta and Contractor [8]

	Traditional		P3	
	GoA	Contractor	GoA	Contractor
DEVELOPMENT, DESIGN AND CONSTRUCTION RISKS				
Concept approvals – environmental – Alberta Environmental Referral	●		●	
Concept approvals – environmental – Federal CEAA (assumes CSIF funding)	●		●	
Bridge crossing and/or watercourse alteration				
Environmental permits	●			●
Environmental				
Environmental Contamination (known)	●			●
Environmental Contamination (unknown)	●		●	
Archaeological				
Archaeological finds (known)	●			●
Archaeological finds (unknown)	●		●	
Land acquisition	●		●	●
Delays by outside agencies (utilities and permitting)	●		●	●
Delays by the Province	●		●	
Minimum insurance and bonding requirements	●		●	
Adequacy of insurance and bonding requirements	●			●
Confirmation of insurance and bonding		●		●
Sub-contractor insolvency		●		●
Design error	●			●
Changes in standards	●		●	
Alberta Transportation supplied data – accuracy		●		●
Alberta Transportation supplied data – sufficiency	●			●
Alberta Transportation supplied data – interpretation		●		●
Traffic volume and vehicle mix	●			●
Patent infringement	●	●		●
Weather	●			●
Labour disputes	●			●
Fire		●		●
Vandalism		●		●
Damage to works		●		●
Traffic accidents		●		●
Damage/injury to third parties		●		●
Damage/loss to utilities		●		●

[8] The project agreement should be consulted for a comprehensive allocation of risks between the parties. The final form of the project agreement is available at http://www.transportation.alberta.ca/3787.htm.

	Traditional		P3	
	GoA	**Contractor**	**GoA**	**Contractor**
Defective materials		●		●
Water/air/soil pollution – unknown pre-existing	●		●	
Water/air/soil pollution – known pre-existing or arising from work	●	●		●
Quality assurance/quality control	●	●		●
Quality audits	N /A	N/A	●	
Public interface	●	●		●
Workplace Health and Safety		●		●
Utilities	●	●	●	●
FACILITY EXPANSION RISK				
Traffic congestion due to signalization	●			●
Traffic growth	●			●
Future interchanges or additional lanes	●		●	
OPERATION AND MAINTENANCE RISKS				
Changes in standards and legislation	●		●	
Weather	●			●
Labour disputes	●			●
Traffic – volume and vehicle mix	●			●
Traffic – deterioration	●			●
Actual maintenance costs higher than anticipated	●			●
Damage/injury to third parties		●		●
Damage to works	●		●	
Water/air/soil pollution		●		●
Vandalism	●		●	
Condition after 30 years	●	N/A		●
Performance	●			●
FINANCING RISKS				
Interest rates – before Agreement closure	●		●	
Interest rates – after closure	●			●
Inflation on Construction Agreement		●		●
Inflation on operation, maintenance, rehab.	●		●	●

Appendix C: Project Scope

NEAHD Location and Features

Project Feature:

- 27 kilometres of six- and eight-lane divided roadway (9 kilometres of new highway construction and 18 kilometres of highway reconstruction)
- nine interchanges
- two road flyovers
- eight railway crossings (flyovers)
- two bridges across the North Saskatchewan River
- 47 total bridge structures

Interchanges locations:

- Manning Drive (partly completed with the Northwest Anthony Henday Drive project)
- 153 Avenue
- 130 Avenue
- Highway 16 (Yellowhead Trail)
- Broadmoor Boulevard at Highway 16
- Sherwood Drive at Highway 16
- Baseline Road
- Sherwood Park Freeway/Wye Road
- 17 Street at Sherwood Park Freeway

Flyover locations:

- Various CNR/CPR Rail Crossings
- Victoria Trail Flyover
- Petroleum Way Flyover

Appendix D: Commentary by Fairness Auditor

GGC CONSULTANTS INC.
2700, 10155 – 102 Street
Edmonton, AB
T5J 4G8

March 14, 2012

Tom Loo, P.Eng.
Executive Director
Major Capital Projects Branch
Alberta Transportation
2nd Floor, Twin Atria Building
4999 – 98 Avenue
Edmonton, AB, T6B 2X3

Dear Sir:

Re: Fairness Auditor's Report on Completion of the RFP Evaluation and Recommendation of the Preferred Proponent for North East Anthony Henday Drive ("NEAHD")

This Report is being provided to the Executive Director, Major Capital Projects Branch and Project Steering Committee of the above-noted, as stipulated in the Alberta Infrastructure and Transportation Terms of Reference for the Fairness Auditor.

Further to our Letter of Opinion dated May 10, 2011, the Fairness Auditor has familiarized himself with the appropriate documentation in this matter, including the **Request for Qualification, Instructions to Proponents, Transaction Process Framework,** terms of the **Request for Proposal, Agreement to Design, Build, Finance and Operate North East Anthony Henday Drive ("NEAHD"),** and the appropriate minutes and memoranda pertaining to this process.

In order to ensure that the transaction was conducted fairly and consistently, the following fairness principles were used as guidelines throughout the transaction process:

1. The Proponents in this matter were given the same opportunity for the availability to access information.

2. The information made available to the Proponents was sufficient to ensure that they had the opportunity to fully understand the opportunity.

3. All the Proponents had reasonable access to the opportunity.

4. The criteria established in the invitation documents truly reflect the needs and objectives of the project.

5. The evaluation criteria and the evaluation process were established prior to the evaluation of submissions.

6. The evaluation criteria, and evaluation processes were internally consistent.

7. The pre-established criteria and evaluation process were followed.

8. The evaluation criteria and process were consistently applied to all submissions.

The Fairness Auditor attended several Evaluation Committee Meetings, and in addition reviewed the evaluation criteria used by that group.

The Fairness Auditor attended the Selection Committee Meetings and Working Committee Meetings, and was present for interviews between the Selection Committee/Working Committee and the RFP Proponents. It was observed that the interface with each group was open, unbiased, transparent, consistent in approach, and ultimately a fair process in my opinion. In addition, at every meeting with any of the RFP Proponents, the Fairness Auditor asked the Proponent whether there were any fairness issues and the response in every case was that there were no fairness issues.

As the Fairness Auditor in this procurement, I hereby certify that, in my opinion, the selection process in this matter conducted by Alberta Transportation, to the completion of its recommendation of the Preferred Proponent, was open, consistent in approach and fair.

Yours very truly,

GGC CONSULTANTS INC.

Per:
GARY G. CAMPBELL, Q.C.

GGC/wd

Appendix E: Proponent Teams

Table 2: Composition of proponent teams invited to participate in RFP process

Team Component	Capital City Link Group[9] (CCLG)	Alberta Roads Consortium (ARC)	Edmonton Connect Partners (ECP)
Project Lead	HOCHTIEF PPP Solutions North America Inc. (Contact) **(LEAD)**	Macquarie Capital Group Limited (Contact) **(LEAD)**	SNC-Lavalin Capital, a division of SNC-Lavalin Inc. (Contact) **(LEAD)**
	ACS Infrastructure Canada Inc. **(LEAD)**		John Laing Investments Limited
	MNII Canada I, LLC **(LEAD)**		
	Davis LLP		
	McMillan LLP		
Design-Build	Flatiron Constructors Canada Limited **(LEAD)**	Kiewit Management Co. **(LEAD)**	SNC-Lavalin Constructors (Pacific) Inc. **(LEAD)**
	Dragados Canada, Inc.	Parsons Canada Ltd.	Graham Building Service, a JV of Graham Building Services LP and Jardeg Construction Services Ltd. **(LEAD)**
	Aecon Construction Management Inc.	McElhanney Engineering Services Ltd.	SNC-Lavalin Inc.
	Lafarge Canada Inc.	Delcan Corporation	CH2M HILL Canada Limited
	Sureway Construction Management Ltd.	Brybil Projects Ltd.	**exp** Services Inc. (formerly Trow Associates Inc.)

[9] Capital City Link Group was the proponent group that developed and submitted the successful proposal. Once the RFP process was completed, the project leads for Capital City Link Group formed a special purpose organization, Capital City Link General Partnership to carry out the work of the contract.

Team Component	Capital City Link Group[9] (CCLG)	Alberta Roads Consortium (ARC)	Edmonton Connect Partners (ECP)
	AECOM Canada Ltd.	Terracon Consultants Inc.	International Bridge Technologies, Inc.
	Stantec Consulting Ltd.	DMD & Associates Ltd.	Hatch Mott MacDonald Ltd.
	MMM Group Limited	Opus International Consultants (Canada) Ltd.	
	Buckland & Taylor Ltd.	George L. Crawford & Associates Inc.	
	AMEC Earth and Environmental, a division of AMEC Americas Limited	Northwest Hydraulic Consultants Ltd.	
	EBA Engineering Consultants Ltd.		
	Spencer Environmental Management Services Ltd.		
Operation and Maintenance	Volker Stevin Contracting Ltd. **(LEAD)**	Alberta Highway Services Ltd. **(LEAD)**	SNC-Lavalin Operations and Maintenance Inc. **(LEAD)**
			Carmacks Maintenance Services Ltd.
Financing	ACS Infrastructure Canada Inc. **(LEAD)**	Macquarie Capital Group Limited **(LEAD)**	SNC-Lavalin Capital, a division of SNC-Lavalin Inc. **(LEAD)**
	HOCHTIEF PPP Solutions North America Inc.		John Laing Investments Limited
	MNII Canada I, LLC		Scotia Capital Inc.
	National Bank Financial Inc.		
Other Advisors		Blake, Cassels & Graydon LLP	
		Davies Ward Phillips & Vineberg LLP	
		Cook Advisory Services Inc.	

Appendix F: Summary of bids received

Table 3: Financial bids received from proponents on March 14, 2012

Item	PSC	P3 Procurement		
		Capital City Link Group	Alberta Roads Consortium	Edmonton Connect Partners
Total net present value of design, construction, finance and operations and maintenance	$2,180 million	$1,809 million	$2,034 million	$2,219 million
Value for money of P3 procurement		$371 million 17%	$146 million 7%	-$39 million -2%

Appendix G: Payment adjustments

Table 4: Sample of key payment adjustments included in P3 contract [10]

Issue	Payment Adjustment
If an external audit has not been completed within the specified time:	$2,400/week or any partial week, for the first four weeks and $6,000/week or any partial week, thereafter
If any deficiencies identified by the Environmental Management System external auditor have not been corrected within the specified time:	$6,000/week or any partial week, for the first four weeks and $12,000/week or any partial week, thereafter
If the contractor fails to undertake roadway inspections:	• $2,500 for the first occurrence; • $5,000 for the second occurrence; • $10,000 for the third occurrence; and • $20,000 for the fourth occurrence and each occurrence thereafter.
If during the Operating Period, the roadway superelevation and cross-slope rates are measured and are found not to be maintained within ±1.0% of the design rates:	• $3,600/week or any partial week, for the first four weeks the deficiency is not remedied; then • $11,000/week or any partial week, thereafter.
If localized pavement repairs (e.g. for spalling, roughness, cracking, or potholes), permanent or otherwise, are not completed within the stipulated time period:	$600/localized repair for each seven day period or any partial week, until the deficiency is corrected.

[10] The project agreement should be consulted for details on all payment adjustments. The final form of the project agreement is available at http://www.transportation.alberta.ca/3787.htm.

Issue	Payment Adjustment
If lamps or components of the roadway lighting system are not adjusted, maintained, repaired/replaced within the stipulated time:	• Lamp repair/replacement, $120/lamp/day or any partial day, that the lamp remains in need of repair/replacement; and • Repair or adjustment of any pole, base or other lighting system component, $120/component/day or any partial day, that the component needs adjustment.
If grass is in excess of the specified maximum height:	$120/hectare or any partial hectare/month or any partial month,
If the contractor fails to commence work within 60 days of identification of a structural or operational deficiency on bridges:	$1,200/day or any partial day, per deficiency shall be assessed until the contractor commences and diligently pursues completion of the work.
If the contractor is non-compliant with respect to snow clearing and ice control:	• $12,000 for each occurrence of non-compliance during a Storm Event (to a maximum of $72,000 total for the Infrastructure); • $24,000 for each occurrence of non-compliance during a subsequent Storm Event in any consecutive 12 month period (to a maximum of $145,000 total for the Infrastructure); and • The third occurrence of any non-compliance within a consecutive 12 month period but in a separate third Storm Event shall be a potential Termination Event for the purposes of and having the consequences set out in section 16.8(k) of the DBFO Agreement.