Project Report:
Achieving Value for Money

Kicking Horse Canyon – Phase 2 Project

BRITISH COLUMBIA
Ministry of Transportation

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partnerships
British Columbia

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Purpose of this Document

Before entering into a public private partnership, Partnerships BC works with its ministry clients to undertake an analysis of the value for money expected over the life of the partnership. Value for money is a broad term that captures both quantitative factors, such as costs, and qualitative factors, such as service quality and public interest.

Value for money is one of six key principles guiding public sector capital asset management in British Columbia. The others are:

- Sound fiscal and risk management;
- Strong accountability in a flexible and streamlined process;
- Emphasis on service delivery;
- Serving the public interest; and
- Competition and transparency.

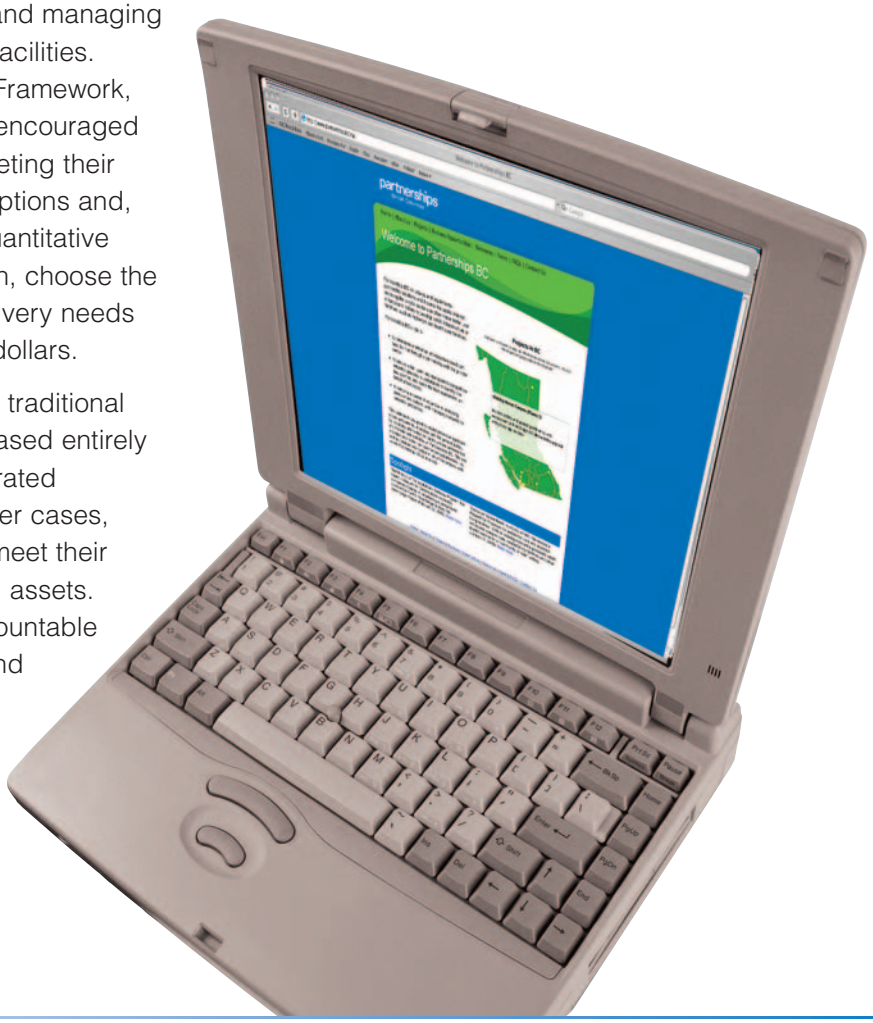
Since 2002, these principles have guided the B.C. public sector's approach to acquiring and managing assets such as roads and health care facilities. Under the Capital Asset Management Framework, ministries and other public bodies are encouraged to consider all available options for meeting their service objectives. They analyze the options and, after considering the qualitative and quantitative advantages and disadvantages of each, choose the one that overall best meets service delivery needs and makes the best use of taxpayers' dollars.

In some cases, the best option may be traditional procurement – where assets are purchased entirely with taxpayer supported debt and operated exclusively by the public sector. In other cases, agencies may find innovative ways to meet their service needs without acquiring capital assets. In all cases, agencies are publicly accountable through regular budgeting, auditing and reporting processes.

In all of its procurement processes, including public private partnership agreements, the Province is committed to a high standard of public disclosure to ensure accountability. This report describes the rationale, objectives and processes that led to the use of a public private partnership for the Kicking Horse Canyon – Phase 2 Project, giving the public a clear sense of how and why the decision was reached to proceed with that option. It explains how value for money was measured and how it is expected to be achieved in the context of current market conditions.

For more on the Province's Capital Asset Management Framework, please go to **http://www.fin.gov.bc.ca/tbs/camf.htm**

For more on public private partnerships in B.C., please go to **www.partnershipsbc.ca**



1. Executive Summary/Highlights

Project Background

The Kicking Horse Canyon Highway Improvement Project is improving safety, reliability and adding capacity to a critical east-west trade corridor between B.C. and Alberta, and more broadly linking B.C.'s ports to all destinations east. Commercial carriers make up a large portion of the traffic, but it is also a frequented route by tourists and residents of the region.

The Kicking Horse Canyon section of the Trans-Canada Highway – between Golden and Yoho National Park – was originally constructed in the mid-1950s, with the bridges completed in 1956. Today, this section of the highway has one of the highest accident rates in the province, making it a top provincial transportation priority.

Overall, the Kicking Horse Canyon Project involves upgrading approximately 26 kilometres of the highway to a modern, four-lane standard, including bridge replacements. The project is divided into three phases, and it is Phase 2 that is the subject of this report.

With an estimated capital cost of $130 million, Phase 2 involves the design, construction and financing of a 5.8 kilometre segment of the highway, including the replacement of the Park Bridge, as well as the maintenance, operation and rehabilitation of the entire 26 kilometre stretch of the highway for a term of 25 years. The Government of Canada has committed to contributing 50 per cent of the capital cost for Phase 2 up to a maximum of $62.5 million.

Following a competitive procurement process and negotiations phase, the contract between Trans-Park Highway Group and the Province was finalized in October 2005, and meets the Province's objectives to:

- Improve the safety record of the highway;
- Provide better customer service and access;
- Deliver economic benefits;
- Achieve value for money;
- Optimally manage project risks;
- Ensure that the existing road serves traffic demand during construction of new improvements; and
- Optimize asset condition over the long term.

Phase 2 of the Park Bridge and Approaches

Achieving Value for Money

The contract between Trans-Park Highway Group and the Province delivers value for money by offering:

- Expected cost savings of $18.1 million in today's dollars;
- Expected completion 19 months earlier than traditional delivery – 25 months rather than 44 months – resulting in additional benefits to the highway users estimated at $2.8 million;
- Additional safety and quality benefits of innovation; and
- Taxpayer protection from cost overruns.

The expected net present cost of the contract – which includes design, construction, maintenance and rehabilitation over 25 years is $166.3 million. By comparison, the Ministry of Transportation estimates the net present cost of the public sector reference project to be $184.4 million. The difference over the 25 year contract is $18.1 million, or 10 per cent of the value of the contract.

Further, by expecting to complete the project and having the highway ready for use by drivers 19 months earlier than anticipated, the Province can achieve an additional $2.8 million in benefits to the highway users. This faster schedule was a significant feature of the proposal by Trans-Park Highway Group. It demonstrated the contractor's innovation such as experience in working in winter conditions and constructing pre-fabricated structural components off-site while at the same time continuing construction on-site – which significantly shortened the planned project schedule.

Trans-Park Highway Group's proposal further offered safety and quality benefits such as enhanced safety in the design of the Park Bridge, an additional two kilometres of highway embankment, an extra rest stop, more shoulder and centre-line rumble strips and measures to minimize traffic disruption. These safety enhancements were above and beyond the required safety standards prescribed in the request for proposals.

In addition, the public private partnership contract transfers the risk of cost overruns and most schedule delays to Trans-Park Highway Group. That means that if there is a cost overrun in design and construction, the contractor pays, not taxpayers. Further projects' risks are minimized for taxpayers and transferred to the contractor such as: some risks relating to site conditions, material cost escalation, landslides and snowslides, and much of the maintenance and rehabilitation of the highway over the contract term.

Finally, further macro-economic benefits accrue to the region, the Province, commercial carriers, tourists and to residents as a result of a safer, more reliable and more efficient travel corridor. These benefits have not been quantified.

The Province retained PricewaterhouseCoopers to conduct a peer review of the public sector comparator calculations for the project and stated that, "overall, we consider that the quantitative assessment as undertaken by Partnerships BC to be reasonable and demonstrates that value for money has been achieved."

Final Contract

The Province will pay Trans-Park Highway Group an annual service payment based upon its performance for the 25 year contract term. Under the contract, the Province continues to own the infrastructure and set and monitor performance standards for this project.

2. Project Background, Rationale and Objectives

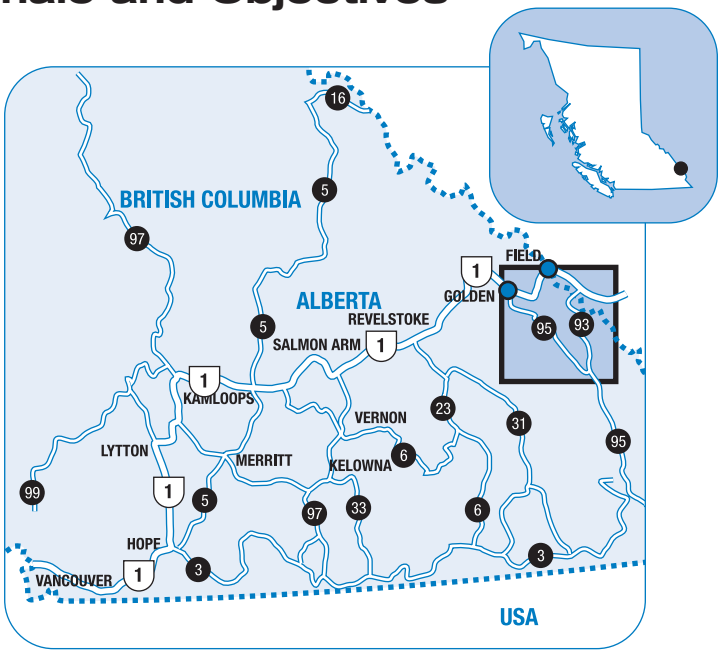
Kicking Horse Canyon Highway Improvement Project: Background

The Kicking Horse Pass extends 80 kilometres through the Rocky Mountains between Golden, British Columbia and Lake Louise, Alberta, and is among the most breathtakingly scenic stretches on the Trans-Canada Highway (Highway 1).

Both the Trans-Canada Highway and the Canadian Pacific Railway run through the Canyon, supporting the movement of national road and rail based goods and tourism. This stretch of highway is part of British Columbia's primary highway system, and while this mountain route is the major east-west connection between B.C. and Alberta, it has seen little improvement over the past few decades.

The Kicking Horse Canyon section of the Trans-Canada Highway – between Golden and Yoho National Park – was originally constructed in the mid-1950s with the Yoho (5-mile) and Park (10-Mile) bridges completed in 1956. Commercial carriers make up a large proportion of traffic along this section of the Trans-Canada Highway, and it is also a favoured route for tourists.

Average daily traffic ranges from 5,000 vehicles in the off peak season to 10,000 vehicles in the peak season, of which approximately 15 to 20 per cent are heavy trucks. A significant transportation corridor historically, this part of Highway 1 is also a critical link to ports and southern routes. The economy of the region and the Province is directly affected by the operational effectiveness of this Highway. Revitalizing this portion of the national highway system is critical to strengthening the province as Canada's gateway to the world.



The Kicking Horse Canyon section of the Highway also has one of the highest accident rates in B.C. From 1994 to 2005, there were 454 accidents, with 9 of these accidents involving fatalities and 183 resulting in injuries. Its high accident severity and frequency, diminishing pavement conditions, unsatisfactory bridge conditions and poor reliability have made the Kicking Horse Canyon Highway Improvement Project one of the top provincial priorities for transportation improvement.

The overall Kicking Horse Canyon Highway Improvement Project involves upgrading approximately 26 kilometres of the Trans-Canada Highway to a modern four lane standard, including bridge replacements. The portion of the highway to be upgraded runs from the junction of Highway 95 in Golden to the western boundary of Yoho National Park.

With steep rock faces, deep canyons and winding roads, this is one of the most technically challenging transportation projects in the province.

The project is being undertaken in three phases.

Phase 1

With funding participation of $22.5 million from the federal government, Phase 1 is currently underway as a design-bid-build and involves the replacement of Yoho (5 Mile) Bridge. This phase is expected to be complete in 2006 and has an estimated total capital cost of $64 million.

Phase 2

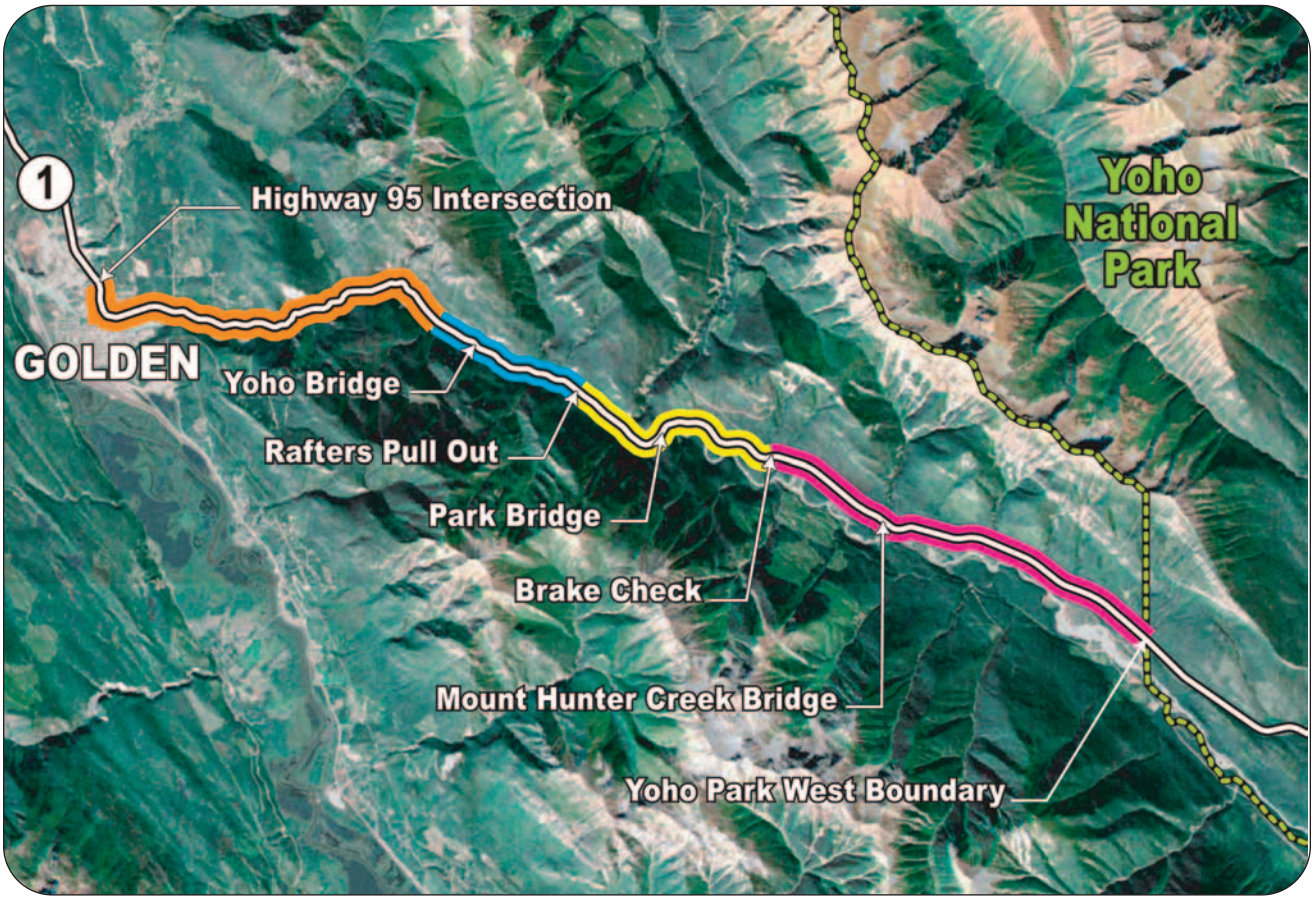
With an estimated capital cost of $130 million, the Phase 2 improvements involve the design, construction and financing of a 5.8 kilometre segment of the Kicking Horse Canyon including the replacement of the existing Park Bridge. The competitive selection process for Phase 2 further involves the maintenance, operation and rehabilitation of the entire 26 kilometre section of the highway for a term of 25 years.

The Phase 2 improvements were announced jointly by the Premier of British Columbia and the Prime Minister of Canada in March 2003. Under this announcement, the Federal Government committed to a contribution of 50 per cent of the capital costs for Phase 2 up to a maximum of $62.5 million. The Government of Canada's contribution for Phase 2 is made through its Canada Strategic Infrastructure Fund (CSIF).

It is the Kicking Horse Canyon – Phase 2 Project that was undertaken as a public private partnership and is therefore the focus of this report.

Phase 3

Phase 3 is in the early planning stages and will address improvements to the balance of the corridor. This is a longer-term project that involves upgrading approximately 17.3 kilometres of Trans-Canada Highway to four lanes including significant realignment to improve traffic operations and safety, and to reduce rock fall hazards.



This project is one of the provincial government's top transportation priorities. The Ministry's overall goals for the project are to improve safety, enhance the trade corridor and generate economic benefits to the region as a result of more efficient traffic flow.

The Ministry of Transportation identified the following objectives for this project:

- Improve safety record;
- Provide better customer service and access;
- Deliver economic benefits;
- Achieve value for money;
- Optimally manage project risks;
- Ensure that the existing road serves traffic demand during construction of new improvements; and
- Optimize asset condition over the long term.

Procurement Options Analysis

Three procurement models were evaluated for this project against the Ministry's key objectives

Consistent with the Capital Asset Management Framework, the project team evaluated three procurement models to determine which model had the potential to deliver best value for money, i.e. meeting or exceeding project objectives for the best cost.

The three options reviewed were:

- Conventional delivery – this option involves separate procurements for the design, construction, and operations in a linear process, often called Design-Bid-Build.
- Design-Build – This option involved developing a procurement process just for the design and build portion of the project.
- Design-Build-Finance-Operate (DBFO) – This option involves a public private partnership procurement process for the design, building, operation and financing of the project.

These options were evaluated against the Ministry's project objectives using a multiple criteria evaluation method that compares the different options against a range of qualitative and quantitative criteria.

The analysis showed that overall the DBFO option offered the best potential for value for money over the other options, indicating a higher overall level of benefits from the perspective of both cost and qualitative benefits.

Expected Benefits of the DBFO

Overall, this project had many characteristics that made it a strong candidate for delivery through a public private partnership. These characteristics are summarized below.

- The technically challenging nature of the highway – such as deep canyons, steep rock faces, etc. – means that construction includes a fair degree of risk, with a relatively high probability of delays, variations and cost overruns, most of which would be assumed by the contractor.
- By combining design and construction into one contract, it was expected that some schedule savings could be gained to reduce delivery time over the estimated design-bid-build 44 month schedule.
- The technical challenges further offered the opportunity for innovative construction and design to enhance safety and reliability of the highway.
- There was an ability to establish clear objectives and payment mechanisms for the project.
- As there is no alternative route, a critical element of the project is to keep the highway open to users, and maintaining this service under construction conditions can be a challenging task where performance payments can provide the right incentive to a contractor.

Based on the options analysis, the project team identified a number of specific expected benefits of a DBFO approach.

- By structuring the arrangement as a DBFO, the provision of private sector funds adds a level of discipline that encourages innovation and efficiency in areas such as meeting the project schedule, minimizing traffic disruption, and developing a design that would result in better maintenance over the long term. Further, because the contractor invests its own equity, and relies on performance-based payments, the contractor has more incentive to deliver the long term outcomes the Province requires. The contractor's return on investment is based on its performance.
- A DBFO would also allow for optimal risk allocation with the contractor assuming some of the project risks for areas where it had the most control, such as schedule and cost. By transferring this risk, taxpayers are protected from potential cost overruns. Further, by completing the project earlier, the contractor begins to receive payments earlier, offering an added incentive for early completion.
- The Province would own the right-of-way and retain all responsibility to set performance standards for the improvements to meet the needs of those who use the highway. The contractor would be responsible for meeting performance standards set by the Province to manage the highway.
- In exchange for assuming these risks, the contractor's rewards would be achieved through its expertise in realizing incremental value through efficiencies in designing, building, financing and operating the project as well as through improved life-cycle planning and operations.

The successful contractor would also be required to demonstrate significant experience and expertise in transportation infrastructure assets of this nature so that the Province is fully confident in its ability to deliver the project.

PUBLIC PRIVATE PARTNERSHIPS IN TRANSPORTATION

Public private partnerships are used in transportation infrastructure around the world. International experience suggests that this type of arrangement can result in better project definition, reduced delays, and more financial control, including fewer cost overruns.

In B.C., the Ministry of Transportation evaluates public private partnerships as an option where they can deliver value for money, i.e. the best overall project at a cost that is affordable. The Ministry of Transportation has utilized the private sector in designing, building and maintaining highways for decades. In public private partnerships, the private contractor typically designs, builds, maintains, operates and rehabilitates, and finances roads, bridges and highways to meet detailed performance standards set by the Province and embodied in a long term, binding contract. Typically, the Province owns the asset and pays based on performance.

The partnership model is designed to capture the strengths of both the public and private sectors through allocating risks and responsibilities to the party that can manage them the best. For example, by allocating the responsibility of construction costs and schedule to the contractor, taxpayers are protected from cost overruns, and the contractor has an incentive to manage the project cost-effectively. At the same time, by instituting performance standards, the government can monitor performance and will pay incentives or penalties based on the usability of the transportation asset.

Public private partnerships are part of the Province's plan to provide affordable infrastructure that meets public needs in a timely manner. As transportation demands increase, this procurement model has the potential to maximize the value of taxpayers' investments in new and improved infrastructure.

3. Competitive Selection Process

Managing a Competitive Procurement Process

A project board was established to guide the overall Kicking Horse Canyon – Phase 2 Project development and competitive procurement strategy. The project board was responsible for the key decisions throughout the procurement process, with the Province making the ultimate decision to approve contract terms.

Reporting to the project board was a project management committee. This committee was responsible for implementing the procurement process and was made up of representatives from the Ministry of Transportation, Partnerships BC and external advisors.

To ensure that the project was accessible to the community and reflected its regional importance, the Ministry of Transportation opened a project office in Golden in October 2003. The Ministry's project director, located into Golden, continues to be responsible for the overall Kicking Horse Highway Improvement Project. Reporting to the Project Director, Partnerships BC acted as Business, Transaction and Procurement Manager on the project and additionally managed peer review, the evaluation process and due diligence arrangements.

ESTABLISHING FISCAL CONSTRAINTS

The Province established a maximum net present cost as part of the competitive selection process to ensure that proposals received were within the Province's fiscal constraints.

For proposals to be compliant, they were required to be below a maximum net present cost as calculated according to the Request for Proposals evaluation criteria. By establishing a maximum net present cost limit, while still assigning the majority of evaluation points on the basis of the net present cost, proponents were encouraged to compete on price, innovation, quality, and safety within the Province's fiscal constraints.

The addition of the maximum net present cost constraint had the following positive impacts:

- *The Province achieved certainty that proposals would be affordable;*
- *Competitive pressure continued on price, with both proponents submitting proposals below the maximum net present cost; and*
- *Both proponents offered proposals with additional quality, technical and commercial terms, and safety enhancements above the required specifications outlined in the Request for Proposals.*

Procurement Timetable

The procurement process remained on schedule and the contract was signed one year after the RFP was issued.

Procurement Milestone	Date	Purpose and Outcome
Registration of Interest (ROI)	May 2004	Purpose: to provide advance notice to the private sector – construction, design, finance and operating companies – that this project would soon be beginning procurement, and to determine market interest in the project. Outcome: 54 companies expressed an interest in the project.
Proponent Information Meeting	July 2004	Purpose: to provide information about the project, demonstrate government commitment and to encourage companies to form proponent teams. Outcome: 84 individuals attended meeting.
Request for Qualifications Issued	July 2004	Purpose: to develop a qualified shortlist to receive the RFP. Outcome: three qualified teams submitted responses and, based on an evaluation, all three were pre-qualified to receive the RFP. The proposals were submitted by: • KHC Highway Group • Trans-Park Highway Group • SNC-Lavalin
Request for Proposals Issued	October 2004	Purpose: to outline the project specifications and criteria upon which the proponents will be evaluated. Outcome: • Two proposals were received both meeting mandatory criteria, ensuring a competitive process. • SNC-Lavalin chose to withdraw from the competition early in the RFP process.
Preferred Proponent Identified	August 2005	• Trans-Park Highway Group was identified as the Preferred Proponent and negotiations commenced.
Financial Close	October 28, 2005	Contract was awarded to Trans-Park Highway Group on October 28, 2005.

Evaluation

The two proposals underwent a thorough evaluation process, which was made up of the following organizational elements:

- Evaluation Committee
- Evaluation Manager
- Completeness Committee
- Technical Evaluation Sub-Committee
- Commercial Evaluation Sub-Committee
- Due Diligence Team

The evaluation teams above included government and external advisors:

- Ministry of Transportation representatives
- Partnerships BC representatives
- Ministry of Attorney General representatives
- Owner's Engineer (Focus Corporation)
- Operations and Maintenance Advisor (Geoplan / Opus)
- Legal advisor (Fraser Milner Casgrain)
- Ministry of Finance representatives

A Fairness Auditor and Conflict of Interest Adjudicator were engaged to ensure that the evaluation process was fair, objective and appropriate.

Further due diligence was applied by a Conflict of Interest Adjudicator and a Fairness Auditor. The role of Conflict of Interest Adjudicator Les Peterson C.M., O.B.C., QC, was to make conflicts of interest rulings in accordance with industry best practices, and to clear the evaluation team members prior to commencing the evaluation process. Fairness Auditor, Jane Shackell, QC, had full access to all documents and was available to the evaluation committee to provide advice. The Fairness Auditor provided an independent opinion as to the fairness of the procedures that were followed and as to whether the requirements of the process as defined in the RFP were met. In her report, the Fairness Auditor reported the following:

"In my view, the evaluation team had appropriate resources to fulfill its tasks, and gave thorough consideration to all aspects of the Proposals. I was impressed with the due diligence, energy and professionalism of the team members. Based on my direct observations, I conclude that the Proposals were evaluated and scored by a process that was grounded in good faith, open, fair, objective, appropriate and in accordance with the RFP."

Contract Finalization

Following the selection of Trans-Park Highway Group as the preferred proponent in August 2005, the project team undertook intensive negotiations to finalize contract details, and concluded a contract in October 2005. During this time, Trans-Park commenced its design work on the project under an early works agreement in order to meet its schedule commitments.

Competitive Selection Costs

The total procurement costs incurred by the Province from the date of issuance of the Request for Proposals until financial close is $4.5 million. This represents 2.7 per cent of the overall project value, in net present cost terms, and is in keeping with procurement costs incurred for similar projects of this magnitude. Approximately 65 per cent of these procurement costs relate to the capital works with the remainder related to operations, maintenance and rehabilitation. The procurement costs include the value of partial compensation paid to the unsuccessful proponent of $600,000. Other costs that are included are: owner's engineer, geotechnical investigation, procurement advisor, financial advisor, legal advisor, Ministry of Transportation and Attorney General internal costs, traffic consultant, and the cost of an asset condition inventory study. Procurement costs incurred by the proponents are additional to these costs.

4. Final Contract

Trans-Park Highway Group assumes the majority of the risks relating to construction cost overruns in this project, protecting B.C. taxpayers from these potential costs. As a performance based contract, incentives are in place for the operator to meet or exceed long term safety, reliability and capacity objectives set by the Province. Further incentives are included to minimize road delays and closures, improve predictability of closures and complete the improvements on time.

The Trans-Park Highway Group, led by Bilfinger Berger BOT Inc., developed an integrated team to deliver the improvements to Phase 2 of the Kicking Horse project.

Profile: Trans-Park Highway Group

The team proposed by Trans-Park Highway Group offered international, national and local expertise to the project. Members of the team have done work in B.C. and similar projects around the world.

Bilfinger Berger BOT Inc.

As the project manager for the Trans-Park Highway Group, Bilfinger Berger BOT Inc. brings to the project international experience in construction and infrastructure development from the design process, financing, and construction through to operational services. Bilfinger Berger BOT Inc. provides equity for the project, and additional financing through CIT Group Securities (Canada) Inc.

Flatiron Constructors Canada

Flatiron Constructors is responsible for construction management, and brings to the project experience in successfully delivering complex bridge, highway and transportation projects that require specialized construction similar to this project.

Parsons Overseas Company of Canada

Responsible for the design management, bridge design and Quality Program for this project, Parsons is the Canadian operation of the transportation unit of Parsons Corporation, an international planning, engineering, program and construction management, and operations and maintenance firm.

HMC Services Inc.

A British Columbia-based firm that already does work on the Kicking Horse Canyon Highway, HMC Services Inc. is responsible for the operations and maintenance services for the entire 26 kilometre section of the highway.

Trans-Park Highway Group has also identified a number of sub-consultants and subcontractors for this project which include:

- Delcan Corporation – Bridge Design Check
- Golder Associates Ltd. – Geotechnical and Environmental
- KWH Constructors Corp. – Bridge Steel Launching
- Lombard North Group – Landscape Design
- Stantec Consulting Ltd. – Roadway Design
- Wyllie & Norrish Rock Engineers Ltd. – Rock Mechanics

Key Terms of the Contract

The contract between the Ministry of Transportation and the Trans-Park Highway Group is a 25-year performance-based contract that is expected to deliver a replacement for the Park Bridge and safety and capacity highway improvements in 25 months rather than the estimated 44 month schedule under traditional delivery.

A distinguishing feature of the proposal submitted by Trans-Park Highway Group was its aggressive schedule offering to complete the construction well ahead of the planned schedule by an expected 19 months. The Trans-Park Highway Group believes this early completion can be achieved due to some of the reasons outlined below:

- By working on design and construction in an integrated, parallel process – rather than a linear process – sections of the highway which have been designed can begin construction early while other sections or components continue in the final design phase.
- Team members have considerable experience in working in winter conditions which means that work is continuing in the winter season, rather than taking time off due to weather conditions.
- In some areas, work is being done almost around the clock in shifts.
- Structural components are being pre-fabricated off-site to gain efficiencies.

The contract between the Ministry of Transportation and Trans-Park Highway Group is 25 years commencing October 28, 2005 with construction of the new bridge and roadworks expected to be completed by November 2007, and final completion – including removal of the old bridge – by spring 2008.

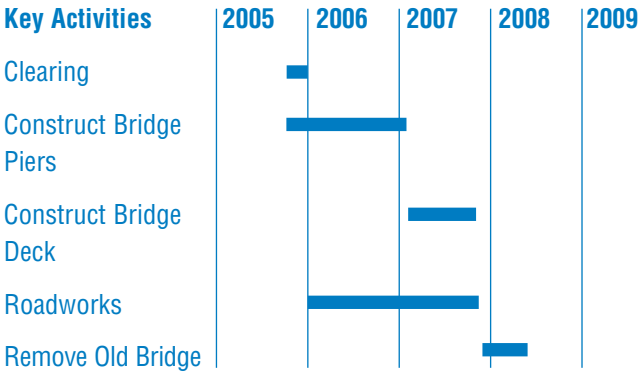
Under the contract, Trans-Park Highway Group will:

- Design and construct the 5.8 kilometre segment of the Kicking Horse Canyon including the replacement of the existing Park Bridge;
- Remove the existing bridge;
- Operate, maintain and rehabilitate the entire 26 kilometre section of the TransCanada Highway between Golden and Yoho National Park to established standards over the term of the contract;
- Ensure that, at the end of the contract, the highway meets the handback conditions specified by the Province; and
- Provide financing for the project.

In the contract, the Province has:

- Set standards;
- Maintained the flexibility to request further improvements at the government's option and cost;
- Retained responsibility for property acquisition; and
- Mechanisms to monitor the contract.

Phase 2 Expected Construction Schedule
Required Completion - November 2009



Performance Payments

The Ministry of Transportation will make payments to Trans-Park Highway Group based on performance. The performance payment structure is largely based on the quality of service provided to users of the highway and is designed to encourage the contractor to:

- Keep all lanes of the highway open at all times;
- Maintain the highway in good condition; and
- Ensure reliable and quality services for highway users (encouraging good quality construction).

Specifically, the total payments to the contractor will be made up of three main components:

- Pre-completion performance payments during construction;
- Availability and safety payments that are subject to deductions should the contractor's performance result in the standard of the road falling below pre-determined standards; and
- Traffic volume payments that are subject to the level and type of traffic on the road following construction completion.

The traffic volume portion of the payment is an important component because it links customer satisfaction to the performance of the contractor in maintaining a safe, reliable and efficient highway. If an increasing number of drivers use the highway, it means the highway is becoming a preferred route by more and more people due to its reliability and capacity. This is an important incentive to ensure maintenance and rehabilitation is carried out to a high standard.

Financing

The financing for the project is provided by both the Government of Canada and Trans-Park Highway Group.

The Government of Canada is providing up to $62.5 million in funding to the Province towards eligible capital costs. This is contributed by way of pre-completion performance payments during construction at six month intervals based on eligible costs incurred by the contractor. An independent certifier will verify that the relevant capital costs have been incurred and the works have been completed satisfactorily prior to payment being made to the contractor.

Trans-Park Highway General Partnership has arranged the remaining financing for the project. The equity is provided by Bilfinger Berger. Senior debt in the form of a bond financing was arranged and underwritten by CIT Group.

Risk Allocation Summary

Project risks were negotiated and allocated to the party best able to cost-effectively manage those risks.

Under the contract, Trans-Park Highway Group is primarily responsible for the risks associated with the following:

- Effectiveness and ability to implement the proposed design of the works;
- Construction costs, labour availability and some geotechnical conditions;
- Construction schedule;
- Price and availability of operations and maintenance resources;
- Rehabilitation of the whole section; and
- Availability and changes to the cost of financing from financial close.

Risks relating to:	Risk Allocation		
	Public (Ministry of Transportation)	Private (Trans-Park)	Shared
Design of highway and structures.		✓	
Construction of highway and structures including cost and schedule overruns and safety obligations.		✓	
Majority of the risks associated with environmental factors including changes to restrictions and permitting.		✓	
A significant number of the operations and maintenance risks including the risk of latent defects in the new improvements undertaken by Trans-Park Highway Group.		✓	
Traffic management during both construction and operations.		✓	
Requirements for moving utilities to construct the highway and structures.		✓	
Acquisition of property required for highway construction including risks related to cost and timeliness to acquire such property.	✓		
Responsibility for repairing any latent defects in work on the Phase 1 and Phase 3 sections of highway.	✓		
Changes in certain types of laws (generally relates to those laws that are targeted at Trans-Park Highway Group or the project structure and can be characterized as discriminatory).	✓		
Requirement to undertake soils or other remeditation as a result of discovery of undisclosed contaminated soils	✓		
Increases in operations and maintenance costs as a result of changes in the composition of traffic (for example if heavier use of highway by heavy trucks was to cause more damage to the highway).			✓
Geotechnical site conditions (for example, soil below the highway surface).			✓
Bringing the highway back into agreed upon condition after the occurrence of significant natural events (such as landslides) – Phases 1, 2 and 3.			✓
Impact of delay in proceeding with construction schedule caused by the discovery of archaeological findings during construction.			✓
Increases in the future of general insurance premium cost charged by the insurance industry for the insurance required by the contract.			✓
Changes in certain types of laws that are not characterized as discriminatory or targeted at Trans-Park Highway Group or the contractor's industry.		✓	
Protest or trespass actions related to Trans-Park Highway Group construction activity (up to a pre-determined limit).			✓
Inflation for construction, operations, maintenance and rehabilitation – the Province retains 20 per cent of this risk, and Trans-Park holds 80 per cent of this risk.			✓

Expected Budget Reporting and Accounting Treatment

The Kicking Horse Canyon – Phase 2 Project will be treated as an asset by the British Columbia Transportation Financing Authority (BCTFA) and consolidated into the summary financial statements of the Province. The performance payments will be considered an obligation, with the component of the performance payments related to capital costs treated as debt by the BCTFA and consolidated into the financial statements of the Province.

5. Achieving Value for Money

Value for money represents the relationship between costs and benefits of a project, and includes quantitative and qualitative factors. The Kicking Horse Canyon – Phase 2 Project offers significant value for money for the Province.

In summary, the value for money proposition for this project can be encapsulated in four areas:

- **Cost savings:** by procuring the project as a public private partnership the Province is expected to save $18.1 million in net present cost terms as compared to traditional procurement over the term of the contract.
- **Expected early completion:** by completing the project and having the highway ready for use by drivers an expected19 months earlier than anticipated, the Province can achieve an additional $2.8 million in benefits to the highway users as compared to traditional procurement.
- **Additional safety and quality benefits of innovation:** there are significant other non-quantifiable benefits relating to safety and quality that the Province has achieved as a result of innovation brought by Trans-Park Highway Group, as compared with the public sector reference project, or Public Sector Comparator (PSC).
- **Protecting taxpayers from cost overruns:** by optimally allocating projects risks, Trans-Park has assumed risk of cost overruns or most schedule delays, thereby protecting taxpayers from these potential costs.

Cost Savings

The expected cost of the project to the Province is $166.3 million net present cost over the 25 year contract. This amount includes the expected costs of the annual payments to Trans-Park Highway Group for providing the improvements and for operating, maintaining and rehabilitating the entire 26 kilometre section of highway.

By comparison, the Ministry of Transportation estimates that the net present cost of the public sector reference project would be $184.4 million, accounting for project risks. The following table describes the net present cost comparison in more detail.

Comparison of the NPC of the PSC and DBFO ($2005 Millions)	$M	$M
	PSC	**DBFO**
Risk Adjusted NPC @ 6.95 per cent Discount Rate	175.6	158.4
Taxation Adjustment	2.2	–
Procurement Costs	0.2	4.5
Design and Construction Management Costs	6.5	1.8
Contract Management Costs	–	1.6
Total	184.4	166.3
Cost Differential		**18.1**
Percentage saving from PSC		**10%**

SELECTION OF THE DISCOUNT RATE FOR THIS PROJECT

To compare the public sector comparator and the final contract, the cash flows for the term of the contract must be discounted to a common point in time so that a comparison that expresses the present value of money that will be spent (or received) in the future can be made.

By applying a discount rate (interest rate) to future cash flows to bring them back to the present, the net present cost expresses future amounts in the dollars of a reference year (2005). The same discount rate must be applied to both the PSC and the final contract.

The cost of using capital is defined as the rate of return investors, who have alternative market investment opportunities, will require before they will invest in the project. The discount rate used represents the project's internal rate of return (project IRR) for Trans-Park Highway Group. The project IRR best reflects the level of risk transfer for this particular project. Project IRR measures the cost of capital and is a blended cost of each type of capital (i.e. the interest on debt and the return on equity) by taking into account the proportion of that type of capital in the project's capital structure.

The public sector's borrowing rate reflects government's low cost of debt, relative to the rate of interest on corporate bonds. Government's cost of borrowing is lower because of two reasons: (1) it does not factor in any project risks, essentially assuming a project is risk-free, and (2) government can, through its powers of taxation, increase its revenues to pay loans or overruns. Consequently, there is a very low risk that the public sector debts will not be paid back and thus it can borrow funds at a lower rate than the private sector.

Using the public sector discount rate to compare the PSC and the final contract is not appropriate because the cost of public sector borrowing reflects the taxpayer-supported credit of the Province whereas the project IRR reflects the level of risk associated with the individual project. Therefore, the appropriate cost of capital for government borrowing would be to adjust the public cost of debt by the project risk premium. Thus, the project IRR can be tied to the government cost of borrowing with the following relationship:

Discount rate = Private sector project IRR = Public cost of debt + Project risk premium

Expected Early Completion

Trans-Park Highway Group is using innovative construction techniques to reduce the projected construction schedule by an expected 19 months – from 44 months to 25 months as compared with the public sector reference project of design-bid-build. The Province's owner's engineer team had planned and estimated that the improvements would be open for the public in July 2009, with final completion in November 2009. Trans-Park Highway Group's proposal offered to achieve substantial completion of the improvements 19 months earlier with the new highway and bridge ready for public use by November 2007, and final completion is scheduled in spring 2008. This schedule is now part of the contract.

Trans-Park Highway Group is expected to be able to achieve these savings by using its experience in working in winter conditions to minimize delay due to weather. Trans-Park Highway Group is planning to work almost 24 hours per day for most of the construction period throughout the winter and the rest of the year. They are also pre-fabricating structural components off-site and designing and constructing in an integrated, parallel process which further reduces the schedule.

The economic benefits of this highway improvement project in terms of employment and contribution to Provincial GDP were estimated to be $181.2 million based on the expected construction costs. An additional direct benefit to the highway users of $19.4 million is achieved as a result of such factors as:

- Travel time savings
- Reduced highway closure costs
- Reduced accident costs
- Reduced vehicle operating costs

Based on having the project completed 19 months earlier, drivers will enjoy the benefits of travel time savings, reduced highway closure costs, reduced accident costs and reduced vehicle operating costs earlier than anticipated. Based on this calculation, the value of having the highway ready 19 months earlier is estimated to be an incremental $2.8 million in net present cost terms over and above the direct cost savings and the economic benefits above.

In addition, further macro-economic benefits accrue to the region, the Province, commercial carriers, tourists and to residents as a result of a safer, more reliable and more efficient travel corridor. These benefits have not been quantified.

Additional Safety and Quality Benefits of Innovation

The Trans-Park Highway Group proposal offered further innovations in achieving enhanced safety and quality. These benefits include:

- Enhanced safety in the design of the Park Bridge;
- Use of excess fill to construct an additional two kilometres of highway embankment that can be used for future highway widening;
- A temporary overhead bridge to haul excess material, minimizing traffic disruption and improving safety during construction;
- Additional shoulder and centre-line rumble strips where most effective throughout the corridor; and
- An additional eastbound rest area and truck stop.

Protecting taxpayers from cost overruns

The contract with Trans-Park Highway Group achieves an allocation of project risks that is expected to protect taxpayers from cost overruns or schedule delays. For example, if labour costs or material costs increase, it will be the contractor who pays, not the taxpayer. Further, the contractor does not receive full payments until the project is complete, providing a financial incentive to complete the project on time.

Peer Review

The Province retained PricewaterhouseCoopers to undertake a peer review of the procurement process and the evaluation methodology from a commercial point of view. PricewaterhouseCoopers determined that the commercial evaluation was undertaken in a reasonable and diligent manner.

PricewaterhouseCoopers was further retained to conduct a peer review of the public sector comparator calculations for the project and stated that, *"overall, we consider that the quantitative assessment as undertaken by Partnerships BC to be reasonable and demonstrates that value for money has been achieved."*

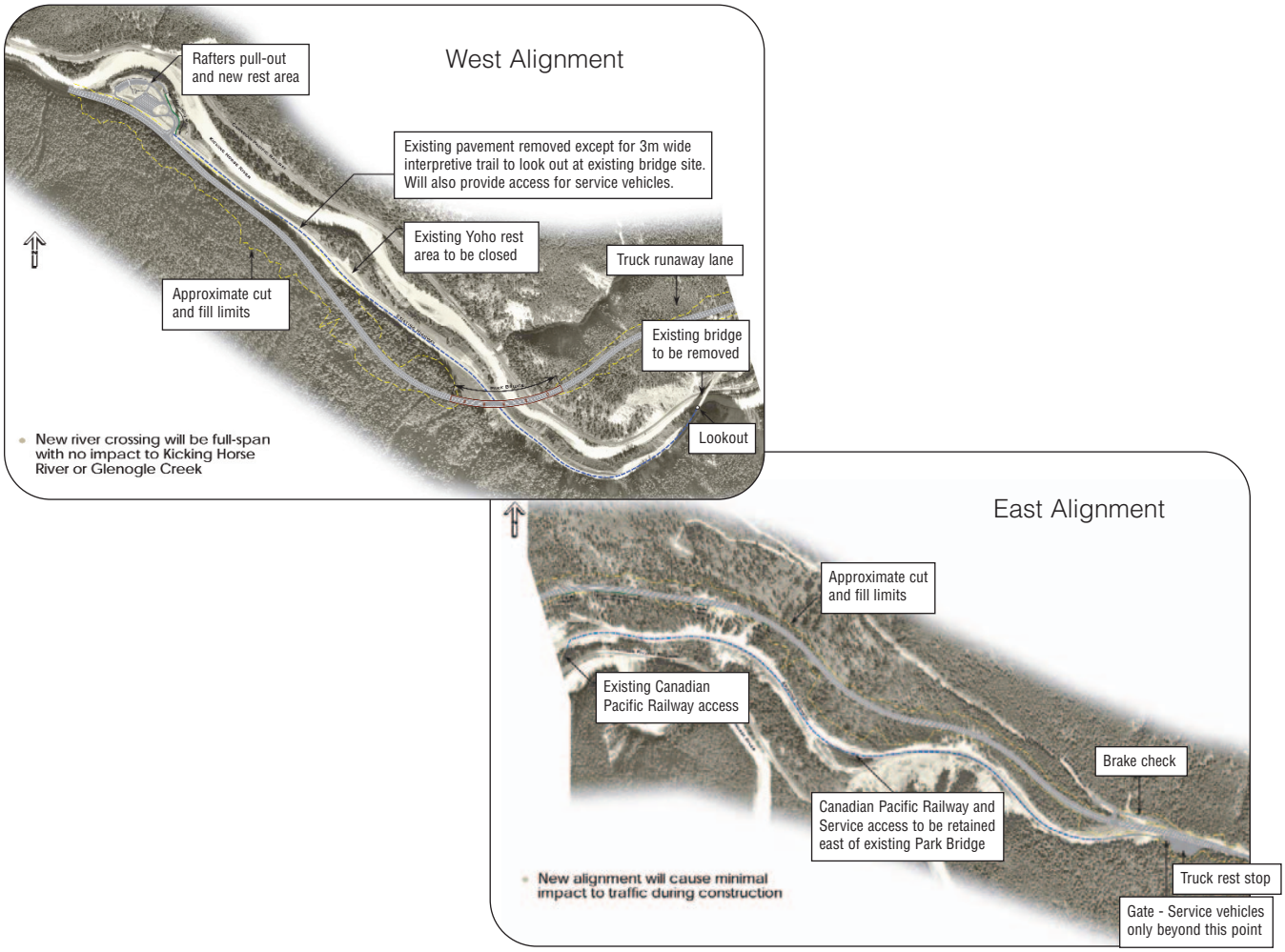
6. Contract Monitoring and Performance

The Ministry of Transportation will monitor the performance standards for the project throughout the term of the contract.

If Trans-Park Highway Group fails to meet the specified performance standards, the Ministry will be entitled to make deductions from the performance payment in accordance with the contract.

"Highway 1 is our province's gateway to Canada and must be safe for all travelers. Replacement of the Yoho and Park Bridges, and the extensive alignment and widening work are key elements in fulfilling our commitment to improving the Trans-Canada highway." - Kevin Falcon, Transportation minister

"The quality and reliability of transportation linkages have a direct relationship with the economic condition of a community, a region, and a nation. The Kicking Horse Canyon Project is eliminating the tangible economic, social, and psychological barriers posed by a mere 16km stretch of horrifically sub standard highway. Once completed, we're going to witness an amazing and positive transformation as the perceptions and realities of access into British Columbia are radically changed."
- Jon Wilsgard, Manager of Community Economic Development for Golden Area Initiatives

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