Project Report

South Fraser Perimeter Road

JUNE 2011

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Purpose of this Report

The purpose of this report is to provide key information about the South Fraser Perimeter Road project. This report describes the need for the South Fraser Perimeter Road project and how it will be delivered. The report explains how different procurement delivery methods were analyzed and how project benefits and innovations are expected to be achieved. A summary of the key aspects of the Concession Agreement is also provided.

British Columbia agencies and ministries are publicly accountable for projects through regular budgeting, auditing and reporting processes. In all of its procurement processes, the Province is committed to a high standard of disclosure as part of its accountability for the delivery of public projects.

Partnerships BC and the Ministry of Transportation and Infrastructure are accountable for the contents of this project report, including the reasonableness of facts, assumptions and professional opinions that have been presented.

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1. Executive Summary and Highlights

The South Fraser Perimeter Road project (SFPR, or the Project) involves the construction of a new four-lane route, approximately 40 kilometres in length, located on the south side of the Fraser River. The road will extend from the existing Highway 17/Deltaport Way interchange, through Delta and Surrey, and along the south bank of the Fraser River, with connections to Highways 1, 15, 17, 91, 99 and the Golden Ears Bridge.

The SFPR is a key element of the Gateway Program, which was established by the Province of British Columbia (B.C.) in 2003 in response to the impact of growing regional congestion, and to improve the movement of people, goods and transit throughout Metro Vancouver by providing efficient transportation choices and better connections.

80%

REDUCTION IN TRUCK TRAFFIC ON RIVER ROAD IN NORTH DELTA RESIDENTIAL COMMUNITY

The SFPR will take a significant step towards improving Metro Vancouver's major road network. It will benefit commuters, the trucking industry and visitors by connecting primary gateway facilities—such as ports, airports and rail intermodal terminals—as well as facilitating access to borders, the Tsawwassen ferry terminal and the B.C. Interior. In addition, it will restore local municipal roads as community connectors, thereby improving the quality of life for residents and local businesses.

The Project includes the largest environmental and agricultural mitigation and enhancement plan for a highway construction project of this size in B.C. The Project underwent a rigorous environmental review and an extensive public consultation process. Environmental enhancements are being constructed to improve fisheries and wildlife habitat, Burns Bog water management and to remediate contaminated sites. As well, the Project offers many economic benefits and is expected to generate new commercial and industrial development opportunities along the Surrey/Delta corridor, with the potential to create 7,000 long-term jobs.

7,000

LONG-TERM JOBS CREATED IN DELTA AND SURREY

The total project capital budget is $1.264 billion, which includes a funding contribution of $365 million from the Government of Canada through its Asia-Pacific Gateway and Corridor Initiative. The Project is being completed in two phases. In phase one, the Province is conducting site preparation to support the Project schedule and to help address certain project risks. This work includes the placement of preload materials to help advance ground settlement, and to provide timely geotechnical data for the design and construction of the Project. Various utility installations and relocation work as well as environmental enhancement work and the construction of a number of overpasses are also included.

In phase two, the work is being delivered using a design, build, finance and operate (DBFO) delivery model. In July 2010, the Province entered into a performance-based, fixed price Concession Agreement with Fraser Transportation Group Partnership (FTG, or the Concessionaire) to design, build, finance and operate the road for a term that spans the construction period, plus a 20-year operating period. The capital costs associated with the DBFO portion of the project is $666 million.

After the Project is constructed, FTG will receive monthly asset availability payments over the 20-year operating period for operations, maintenance and rehabilitation of the highway. Once the highway is operational, unavailability events or non-compliance with performance measures set out in the Concession Agreement can result in a deduction to the availability payment.

The procurement decision to use a DBFO partnership delivery model was based on a thorough analysis of procurement options, including both traditional and partnership delivery approaches. The analysis undertaken indicated project objectives could best be met by delivering the Project using the DBFO partnership model.

By delivering phase two of the Project using this partnership model, significant value for money for taxpayers over the lifetime of the Concession Agreement will be realized. In financial terms, the Partnership model is estimated to achieve value for money for taxpayers of $34 million (net present cost).

The significant factors in achieving this value for money include efficiencies from the integration of the design, build, finance and operate teams through effective risk transfer[1]. Other factors include a number of benefits from the private partner such as:

- Significant initial investment in the design and construction of the road and associated structures, resulting in lower long-term operating and maintenance costs, and an efficient rehabilitation strategy over the 20-year operating period;
- Standardizing design elements and construction methods for structures;
- Optimized use of materials to reduce risk and provide significantly greater schedule certainty; and
- Design innovation through the competitive process whereby proponents are encouraged to develop the best possible design, reflecting the best-in-class from around the world.

IRRIGATION IMPROVEMENTS BENEFITING

15,000

ACRES OF FARMLAND

AMOUNT FOR LOCAL ROAD IMPROVEMENTS FOR FARM VEHICLES

$10 MILLION

[1] Value for money methodology is described in Section 4.

2. Project Benefits

The South Fraser Perimeter Road project has been part of regional plans for more than 20 years and will take a significant step toward completing the network of major roads in Metro Vancouver. When the Project is completed, the new highway will offer goods movers an efficient transportation corridor, while restoring municipal roads as community connectors by reducing truck and other traffic in residential neighbourhoods thereby improving safety and local air quality. Highlights of these expected benefits include:

- 80 per cent reduction in truck traffic on River Road in North Delta residential community;
- 50 per cent reduction in traffic on River Road in Sunbury and Tilbury;
- 400,000 fewer vehicles per year using local roads to access the Vancouver landfill; and
- Reduced ferry and Deltaport traffic on Highway 17 and Ladner Trunk Road through Ladner.

The new highway will significantly improve travel times between Tsawwassen/Deltaport, industrial and port areas along the Fraser River, Highway 1 and the Golden Ears Bridge, as well as improve connections to transit and local cycling routes.

Community Benefits

Construction of the SFPR supports transportation objectives in the City of Surrey and the Corporation of Delta's Official Community Plans, which acknowledge the growing need to shift regional traffic, particularly trucks, away from local routes.

The SFPR will relieve pressure on arterial and community streets, improving community cohesion and quality of life for residents. In particular, truck and regional traffic will be removed from community streets and put back on highways.

Environmental Benefits

The Project includes a significant environmental management program. The Project went through a rigorous environmental review and an extensive public consultation process. The environmental enhancements are being constructed to improve fisheries and wildlife habitat, improve Burns Bog water management and remediate contaminated sites. Once complete, long-term monitoring will be put in place. Environmental enhancement projects include:

- Working with the Burns Bog Management Committee to improve water level and quality management for Burns Bog through innovative water-balance modeling, water-control structures and protective berms, all complementing the Burns Bog Ecological Conservancy Management Plan;
- The remediation of contaminated sites and historical landfills;
- The construction of numerous fisheries and wildlife enhancement sites including:
  - Alex Fraser tidal wetlands to provide a nursery and rearing home for salmon and other fish;
  - Crescent Slough riparian restoration to improve drainage and connectivity to the northern and southern portions of the slough and Fraser River;
  - Construction of a marsh at the Manson Canal tidal wetland to provide habitat for salmon and other fish; and
  - Wildlife crossings.

Agricultural Benefits

The Project incorporates extensive agricultural enhancements that will provide significant benefits for local farmers and agriculture in Delta—improving the range and quality of crops that can be grown on more than 6,000 hectares (15,000 acres) of farmland. The project budget includes the following enhancements:

- Topsoil conservation to improve productivity on existing farms;
- Local road enhancements to improve safety and access for farm vehicles—this includes farm overpasses and local road extensions; and
- Irrigation/drainage system improvements and enhancements to storm-water management, reducing flood risks.

Labour Benefits

The project will generate new commercial/industrial development opportunities with the potential to create 7,000 long-term jobs in Delta and Surrey.

3. Project Background, Objectives, Scope and Budget

Project Background

The SFPR is an important component of the Ministry of Transportation and Infrastructure's (MOTI) Gateway Program. Gateway improvements will complement other regional road and transit improvements already planned or underway. These improvements will help create a comprehensive and effective transportation network that supports the movement of people and goods, facilitates economic growth, increases transportation choice and provides better connections to designated population growth areas.

The need for the SFPR is closely related to the growth in population, development and economic activity that has occurred over the past 20 to 30 years in Metro Vancouver. This growth is expected to continue in the coming years with Metro Vancouver's population forecast to grow by about 900,000 residents over the next 25 years, with more than 50 per cent of this growth anticipated to take place in Surrey, Delta and the northeast.

The Project will restore municipal roads as community connectors by reducing truck and other traffic in residential neighbourhoods in Delta and Surrey, while offering goods movers an efficient transportation corridor, thereby improving the quality of life for local residents and businesses. Traffic through these areas is presently served by portions of provincial highways, local arterials and collector roads, which provide a partial, discontinuous, and inefficient route for goods movement. The SFPR will be a continuous, high standard, limited access corridor that will provide travel time savings and safety benefits for all users.

In addition, the Project includes grade separation with respect to railways thereby allowing more efficient rail operations and improved access for commercial trucks destined for rail intermodal facilities. Improving traffic conditions and the flow of goods is expected to make a significant contribution to economic development, particularly with respect to opportunities from growing Asia-Pacific and Canada-U.S. trade.

Project Objectives

The SFPR has been part of local and regional plans for more than 20 years and will take significant steps toward completing the network of major roads in Metro Vancouver. The Project objectives are:

- Improve the movement of people and goods through the region by providing improved connections to the Provincial highway network;
- Reduce east-west travel times, particularly for heavy trucks, by providing a continuous highway along the south side of the Fraser River;
- Improve access to major trade gateways and industrial areas as well as facilitate development in designated industrial areas along the south side of the Fraser River;
- Improve safety and reliability; and
- Restore municipal roads as community connectors by reducing truck traffic on municipal road networks.

Project Scope

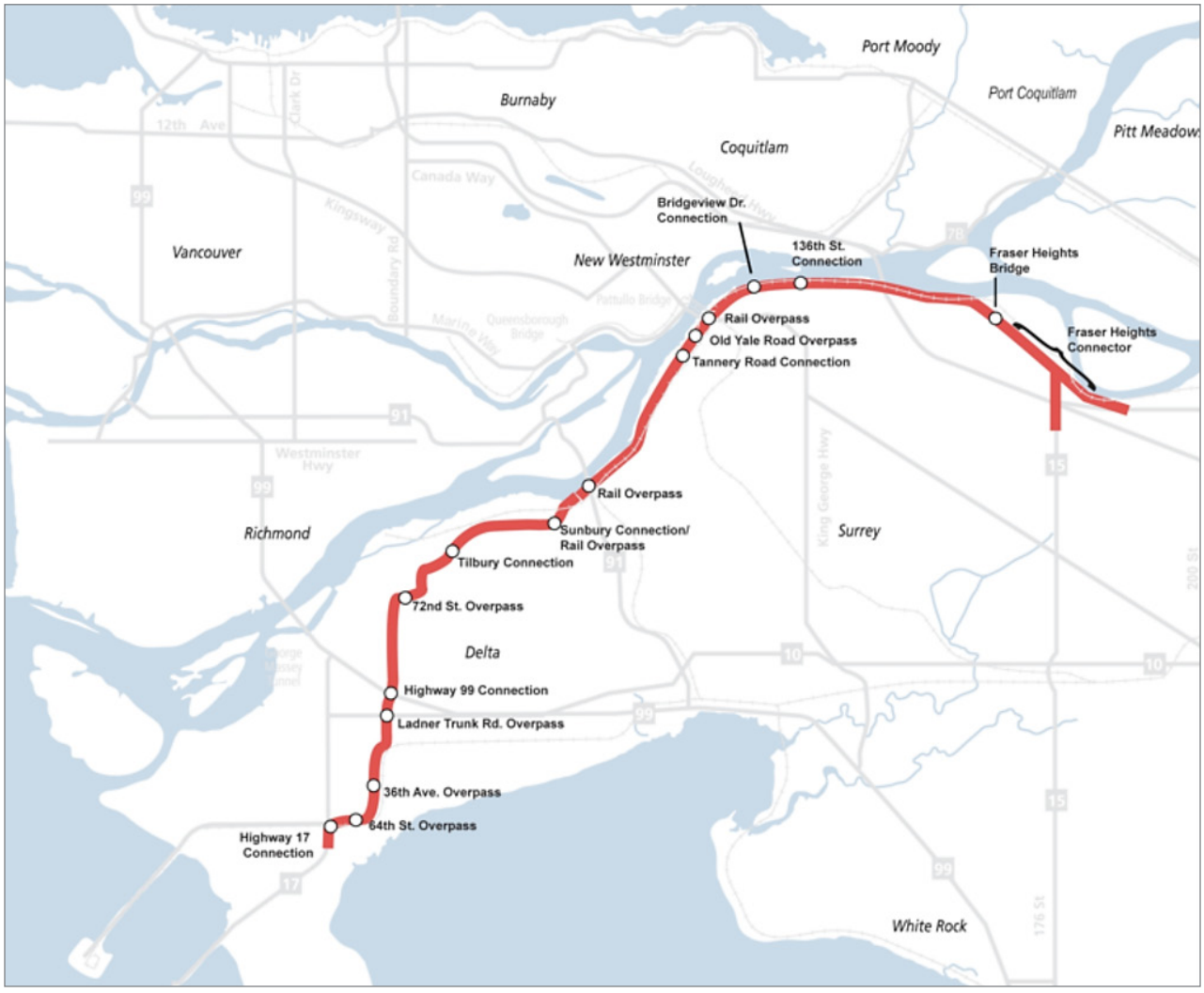
As illustrated below, the Project involves the construction of a new, four-lane route, approximately 40 kilometres in length, located on the south side of the Fraser River. The road will extend from the existing Highway 17/Deltaport Way intersection, through Delta and Surrey, along the south bank of the Fraser River, with connections to Highways 1, 15, 17, 91 and 99 and the Golden Ears Bridge. As a new route that is largely independent of the existing highways in the area south of the Fraser River, the SFPR will accommodate heavy volumes of regional truck traffic and provide an efficient highway for commuters. The Project is designed to improve the connectivity of the provincial highway network and reduce east-west travel times by enhancing access to, and continuity between, major trade gateways and industrial areas.

Project Capital Budget

The total project capital budget is $1.264 billion, which includes a funding contribution of $365 million from the Government of Canada through its Asia-Pacific Gateway and Corridor Initiative (APGCI).

Government of Canada

The Government of Canada's contribution entails $363 million towards construction and an additional $2 million towards environmental enhancements. The APGCI is an integrated set of federal investment and policy measures focused on trade with the Asia-Pacific Region. Its mission is to establish Canada's Asia-Pacific Gateway and Corridor as the best transportation network facilitating global supply chains between North America and Asia.



Alignment map of South Fraser Perimeter Road

4. Project Delivery Options

The Ministry of Finance has mandated through its Capital Asset Management Framework (CAMF) that the following principles guide all public sector capital procurement:

- Fairness, openness and transparency;
- Allocation and management of risk;
- Value for money and protecting the public interest; and
- Competition.

In accordance with CAMF, the Ministry of Transportation and Infrastructure and Partnerships BC undertook a procurement options analysis to determine an optimal procurement method for the project.

Methodology

The evaluation of procurement options is mainly concerned with identifying the method of delivering the project that will result in the greatest value for money on both a financial (quantitative) and qualitative basis. In financial terms, value for money is established by calculating the estimated cost of a project, based on a particular public private partnership (PPP) procurement method, and comparing it to the estimated cost if the project were procured entirely by the public sector using a traditional method.

The evaluation of procurement options involves two main steps. The first step identifies key procurement objectives, and provides a qualitative assessment of a wide range of available procurement options including both traditional and partnership methods. The assessment of these procurement options is intended to identify the two most appropriate traditional and partnership methods, which then form the basis of comparison.

The second step in the assessment involves a more detailed, quantitative analysis that compares the partnership method to a traditional procurement method. To do this, a comprehensive risk analysis is conducted and financial models representing the two procurement methods are developed and compared. A financial model is developed for a project based on a traditional procurement method, also known as a public sector comparator (PSC), and is compared to a financial model created based on PPP procurement. The PPP procurement method is an estimate based on an expected bid from the private partner. Both the PSC and PPP method consider detailed financial inputs that reflect key project components during the construction and operating periods, as well as associated public sector costs under each option.

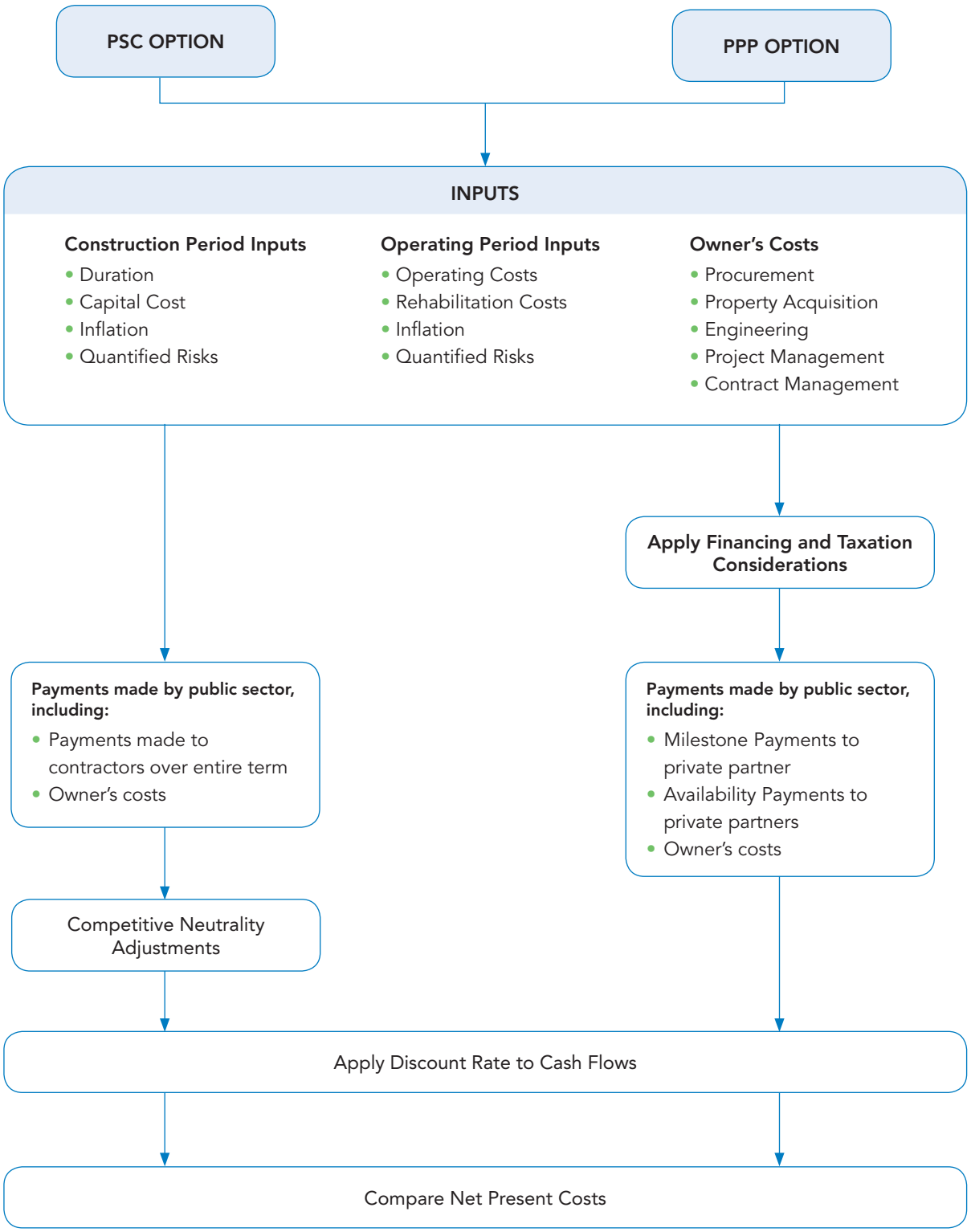
To ensure that a like-for-like comparison is being made, the analysis also considers inputs that address financing and taxation issues along with adjustments to ensure competitive neutrality that include items such as how each model accounts for insurance costs. Without these adjustments, the PSC may be understated in some areas and consequently would not reflect the true cost to government of traditional procurement. A discount rate is applied to the projected future cash flows to facilitate an accurate comparison of the two approaches in present day dollars. Applying a discount rate allows procurement methods with different cash flow impacts—such as all payments made in the first year of a 30-year period versus payments spread over the 30 years—to be compared on a like-for-like basis. Comparing competing options in this way provides an objective means of determining the approach that provides the best value in terms of cost.

The discount rate applied to the cash flows results in a net present cost (NPC) for the project under both the PSC and PPP financial models. NPC expresses future dollar amounts in today's dollars. It takes into account the time value of money. [For example, a dollar received today is more valuable than a dollar received a year from now because the dollar received today can be invested and start generating a return immediately, whereas the dollar received a year from now cannot earn a return in the current year.]

The results of this quantitative comparison between the PSC and the PPP procurement method, together with the qualitative criteria, are used to determine the procurement method that is expected to provide the best value for money.

The following diagram illustrates the financial modeling approach used to compare a traditional procurement method (public sector comparator) and a public private partnership method.

DETERMINING THE NET PRESENT COST (NPC) OF ALTERNATIVE PROCUREMENT APPROACHES - SUMMARY



Project Procurement Objectives

Procurement options were carefully considered through the development of procurement objectives based on the Project goals and objectives. The following procurement objectives were used to help identify and assess the range of procurement options for delivering phase two of the Project:

- Operational effectiveness: ensures that the procurement method chosen meets the Project goals such as improving the movement of people and goods, reducing east-west travel times and improving access, safety and reliability;
- Implementation effectiveness: a critical component in the success of any procurement, the Project will be implemented (in terms of procurement, construction and long-term operability) efficiently and effectively; and
- Transactional effectiveness: refers to the financial benefits from entering into the procurement. For example, the Project will ensure that value for money is provided to taxpayers and the Province.

Scope of Work

The Project scope is being completed in two phases. The Province is delivering the first phase of the Project with the remainder of the Project work in the second phase being procured using a DBFO partnership delivery model.

Phase One: Scope of Advance Work conducted by the Province

The Province began conducting site preparation and other works in 2008 to support the Project schedule and to help address certain project risks. The phase one work is being undertaken through a series of work packages using traditional procurement methods. The scope of advance work includes the following:

- Preload, drainage and utility construction over portions of the highway;
- Design and construction of components of the Highway 17 interchange;
- Design and construction of 64th Street and 36th Avenue structures over BC Rail and SFPR roadway;
- Closure of landfill sites between Tilbury and Sunbury;
- Selected utilities works;
- Selected environmental enhancement works;
- Irrigation system improvements in South Delta; and
- Stockpiling of sand at Highway 99, Tilbury, Sunbury and Tannery.

Phase Two: Scope of Work conducted by Concessionaire under DBFO

Under the Concession Agreement, the Province has entered into a performance-based, fixed price contract with the Concessionaire, Fraser Transportation Group Partnership, to design, build, finance and operate the Project for a term that spans the construction period plus a 20-year operating period.

Design and Construction

The Concessionaire is responsible for all aspects of the design and construction of the Project not delivered by the Province and as set out in the Concession Agreement. The scope of work to be designed and constructed by the Concessionaire includes:

- Approximately 160 lane-kilometres of road construction;
- Construction of seven major roadway connections;
- Construction of seven major overpass/underpass structures;
- Expansion of the cycling network;
- Improvements to municipal road connections; and
- Agricultural and environmental enhancement works.

Operations

The Concessionaire is required to operate, maintain and rehabilitate the SFPR over the 20-year operating period. This includes all services associated with the planning, management and delivery of the operations, maintenance and asset preservation activities. This generally includes:

- Operating the highway to minimize traffic delays and closures;
- Maintaining the highway, including road pavement, structures, pavement markings, drainage infrastructure, closed landfill sites, electrical systems and traffic counting devices;
- Rehabilitating the road pavement and structures;
- Managing the long-term structural integrity of the highway by implementing good asset management practices during the design and construction phase of the Project;
- Communications and reporting, including inventory and condition updates; and
- Quality management on a self-auditing basis.

Phase Two Procurement Options Analyzed

The Ministry of Transportation and Infrastructure and Partnerships BC analyzed the following procurement delivery options for the Project.

A summary of the delivery models is as follows:

Traditional Procurement Method

MOTI's traditional procurement method would involve the design and construction work associated with the project divided into a number of work packages. These work packages would have been delivered through either a Design Bid Build (DBB) or a Design Build (DB) delivery model depending on the scope and complexity of the work included in each package.

For the packages delivered using the DBB delivery model, the Province would retain the responsibility to develop the final detailed design of the project. Once the design was completed, the Province would issue a construction tender for procurement.

Construction of a new overpass to replace the existing at-grade rail crossing at 36th Avenue in Delta. The new overpass will allow continued access to farmland and local traffic flow.

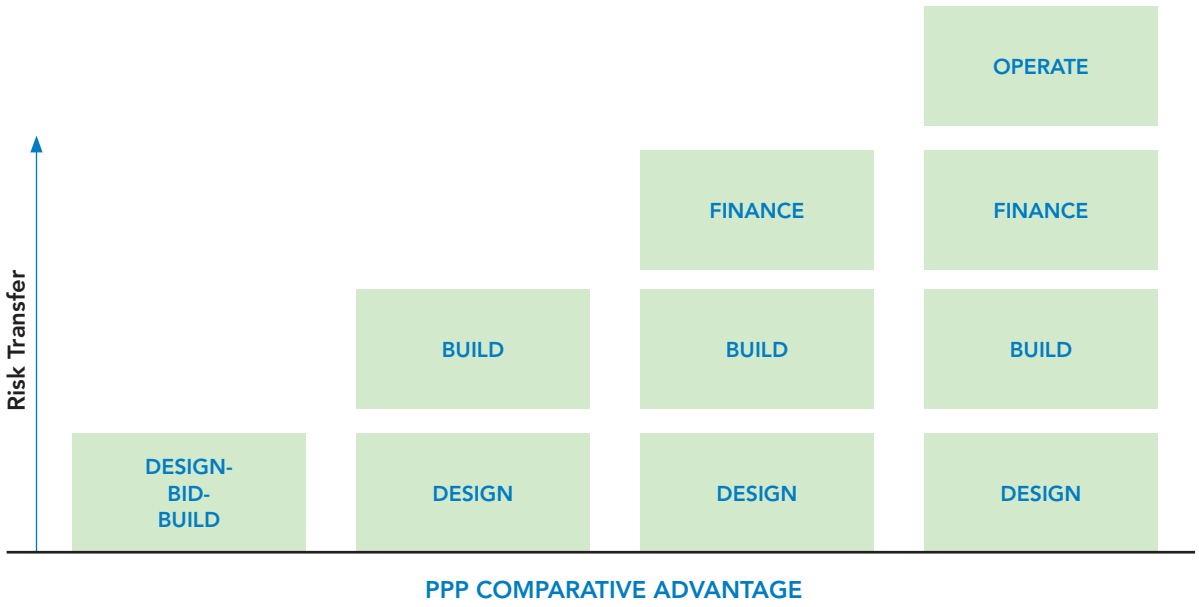
The lowest qualified price would be selected to undertake the construction through an industry standard contract. The construction contractor would take responsibility for constructing the asset to the specifications detailed in the design developed by the Province. The Province would retain full responsibility for design errors and omissions, whereas the contractor would only be responsible for construction errors. Payment would be made as monthly progress payments to the contractor through the construction period.

For the packages delivered using the DB delivery model, the Province would develop performance requirements based on a reference concept design. The Province would then seek proposals from contractors who would be responsible for designing and building an asset that met the performance specifications set out by the Province. The contractor would be responsible for ensuring their design and the asset constructed met the performance specifications. The DB contract would be a fixed-price contract, with monthly progress payments made over the course of construction. The asset delivered under a DB agreement would typically have a warranty that the asset met the performance requirements, which would last for an industry standard of two years.

The operations and maintenance of phase two of the project would be delivered through a series of short-term operations and maintenance contracts and MOTI-led rehabilitation. With the exception of the limited warranty provided by the DB work package, the Province would retain full responsibility for the performance and quality of the project for the entire life of the asset.

Partnership Delivery Method

The partnership delivery method is where the public sector would provide output specifications, invite competitive proposals to design, build, finance and operate (DBFO) the asset, and then pay a performance-based availability payment to the Concessionaire only after the asset is delivered. The Concessionaire would be responsible for designing and building the asset, arranging project financing specified, providing operations, maintenance and rehabilitation management services as well as meeting defined hand-back requirements at the end of the Concession Agreement term. The Concessionaire would assume all construction (cost and schedule), design, long-term maintenance cost and operational cost risks.



Results of the Analysis

The delivery models were assessed against both quantitative and qualitative factors. The quantitative analysis consisted of a comparison of discounted cash flows under the two models. The qualitative analysis assessed how well the delivery options met the following criteria including the:

- Ability to maximize interest from bidders to maximize competition;
- Availability of financing;
- Ability to address the construction and long-term performance challenges associated with the soil conditions;
- Ability to address stakeholder issues;
- Ability to enhance operations and asset performance for maximum user benefits; and
- Provision of schedule and cost certainty.

Based on the procurement options analyzed, the DBFO procurement method was selected and is expected to result in lower overall project costs compared to the DB and DBB delivery models. The DBFO method was best able to deliver the Project on time and on budget, transfer key risks to the Concessionaire and meet the Province's procurement goals and objectives.

Achieving Value for Money

Value for money is a broad term that captures both the qualitative and quantitative benefits that are expected to be achieved by the decision to deliver the project using the partnership model. Qualitative value is achieved when a particular procurement method is best able to support the qualitative goals and objectives of a project. Quantitative value for money is achieved through lower overall project costs resulting from a particular procurement method.

PARTNERSHIP PROJECTS TYPICALLY HAVE THE POTENTIAL TO PROVIDE THE FOLLOWING:

- **Competition and innovation:** The competitive nature of the bidding process encourages the Concessionaire teams to develop innovative solutions in all aspects of the project from design and construction through to operations.
- **Schedule certainty:** The Concessionaire receives a significant portion of their payment through monthly availability payments once the facilities are available for use, thereby providing a financial incentive to complete the project on time.
- **Cost Certainty:** The Concession Agreement is a fixed price contract.
- **Integration:** The Concessionaire is responsible for the design and construction, long-term operations, maintenance and rehabilitation of the asset. This creates opportunities and incentives to integrate these functions to optimize performance of the facilities over the duration of the Concession Agreement.
- **Life cycle maintenance:** The Concessionaire is responsible and accountable for ensuring the facilities are maintained and rehabilitated over the duration of the Concession Agreement otherwise the availability payments may be reduced.

5. Competitive Selection Process and Results

The competitive selection process had the following key objectives:

- Select a qualified, experienced Concessionaire to design, build, finance, operate and maintain the SFPR;
- Implement a fair, timely and competitive procurement process; and
- Achieve value for money, from both a quantitative and qualitative perspective.

The successful proponent, Fraser Transportation Group Partnership, was selected using a two-stage procurement process, which included a Request for Qualifications (RFQ) and Request for Proposals (RFP).[2] Of the six teams who responded to the RFQ, three teams were shortlisted to participate in the RFP stage as they were identified as best qualified to undertake the project in accordance with the evaluation criteria set out in the RFQ.

The two-stage procurement process was implemented and overseen by a fairness advisor with the aim of achieving a competitive, rigorous, fair and transparent process.

The table below lists the members of each of the shortlisted proponent teams that were invited to respond to the RFP:

RESPONDENT	DESIGN AND CONSTRUCTION	FINANCING	OPERATIONS
Fraser Transportation Group Partnership	• Bel Pacific • Dragados Canada • Ledcor CMI • Vancouver Pile Driving	• ACS Infrastructure Canada • Crédit Agricole • ING • Ledcor Development • Santander • Société Générale • Unicredit	• Fraser Transportation Group Partnership
South River Connector	• Peter Kiewit Sons • PCL Constructores Westcoast	• Babcock & Brown Public Partnerships Limited Partnership • Bilfinger Berger Project Investments SCA SICARE	• Miller Paving • Capilano Highway Services Company
The Riverway Partnership	• Ferrovial Agromàn S.A. • SNC-Lavalin Constructors (Pacific)	• Cintra Concesiones de Infraestructuras de Transporte S.A. • SNC-Lavalin	• SNC Lavalin • Cintra Concesiones de Infraestructuras de Transporte S.A

The RFP invited the proponents to submit proposals to design, build, finance and operate the SFPR. A draft Concession Agreement was issued with the RFP; during the procurement process proponents had the opportunity to identify issues or provisions for amendment. These collaborative discussions covered four broad areas: design and construction; technical; commercial and financial; and operations, maintenance and rehabilitation management. A Definitive Concession Agreement was issued at the end of the collaborative process and all Proponents submitted proposals on the basis of the Definitive Concession Agreement.

[2] The RFQ and RFP procurement documents are available on Partnerships BC's website: www.partnershipsbc.ca

The table below outlines the competitive selection process and timelines:

PROCUREMENT STAGE	TIMING	OUTCOME
RFQ	July 29, 2008 to September 29, 2008	The project was marketed provincially, nationally and internationally. Submissions from six respondents were evaluated and three shortlisted teams were announced January 12, 2009: • Fraser Transportation Group Partnership • South River Connector • The Riverway Partnership
RFP	April 9, 2009 to March 19, 2010	This stage included bilateral and collaborative discussions with the proponents. At the end of the RFP stage, RFP proposals were submitted by all three proponents.
Selection of Preferred Proponent	May 7, 2010	After evaluation of the proposals, Fraser Transportation Group Partnership was selected as the Preferred Proponent.
Concession Agreement Finalization	Financial Close achieved July 14, 2010	A Concession Agreement was signed by the Ministry of Transportation and Infrastructure and Fraser Transportation Group Partnership.

RFP Process and Evaluation of Proposals

MOTI appointed an evaluation committee to undertake the evaluation of the proposals by applying the criteria and procedures set out in the RFP. The overall objective of the evaluation was to select the proposal that provided the best project, met the terms of the RFP and achieved value for money.

Fairness Advisor

A fairness advisor, Jane Shackell QC of Miller Thomson LLP, was engaged to monitor the competitive selection process and offer an assessment about the procedures, and whether or not the selection process was carried out in a fair and reasonable manner. The fairness advisor was provided access to all documents, meetings and information related to the evaluation processes throughout both the RFQ and RFP stages. The report of the fairness advisor was presented to the Project Board, prior to final ratification.

The fairness advisor was satisfied with both the RFQ and RFP processes, and in the final report Ms. Shackell noted that, "Throughout the process I have found the project team to be thoughtful, thorough and diligent in its efforts to ensure the integrity of the process" and "I am satisfied that throughout the procurement of the Project to date, the processes and decisions developed by the Project team have been fair, reasonable and appropriate and that the Project team has reasonably implemented and materially complied with those processes and decisions."

Competitive Selection Costs

The cost of the competitive selection process is factored into the value for money analysis. The total competitive selection cost for phase two of the Project is approximately $8 million, including procurement, legal, evaluation and financial advisory services; in addition, each of the two unsuccessful proponents received partial compensation of $1.5 million. The decision to offer partial compensation is made on a case by case basis and can be used to: encourage competition; ensure the quality of proposals submitted; secure access to intellectual property; and, mitigate costs incurred by proponents in developing their proposals. Other competitive selection expenses include the cost of developing performance specifications, preparing procurement documentation and obtaining advice from external advisors. Partnerships BC uses a library of guidance documents and templates to improve the efficiency and quality of the procurement process.

6. The Final Concession Agreement

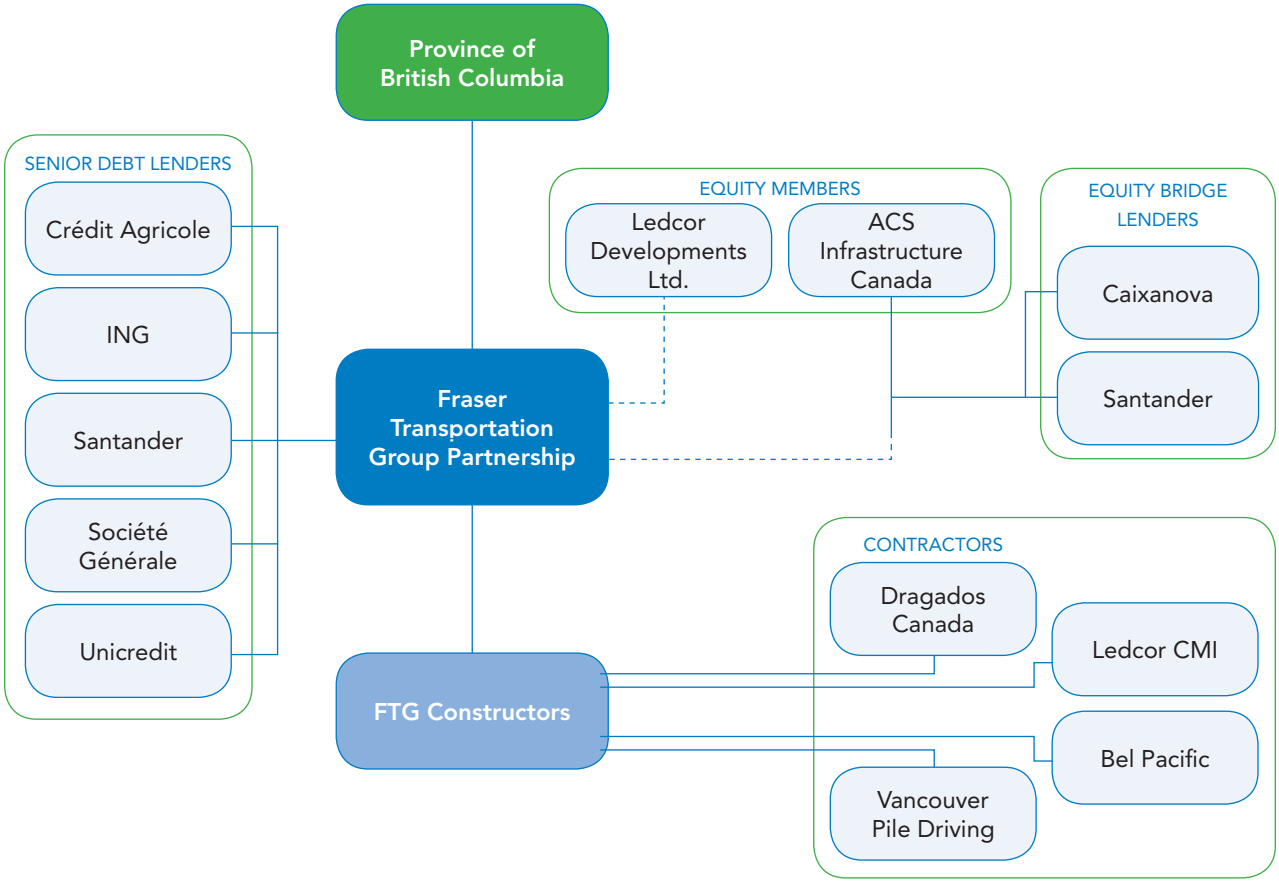
Final Concession Agreement Cost

The final Concession Agreement cost for phase two of the Project is the total cost for the Concessionaire to design, build, finance, operate and maintain the project over the entire term of the Concession Agreement. As described in further detail in a subsequent section, the Concessionaire will be paid a combination of milestone payments and availability payments to recover these costs.

During construction, the Concessionaire will receive milestone payments on a monthly basis. Upon completion of the construction of phase two of the project the Concessionaire will be paid monthly performance-based availability payments to repay the portion of the initial capital costs (e.g. design and construction) that they financed along with their ongoing operational, maintenance and rehabilitation costs for the term of the Concession Agreement.

Profile of the Private Sector Partner

Fraser Transportation Group Partnership will design, build, finance and operate the SFPR. The organization chart below depicts the relationship between the signatories to the final Concession Agreement.



The Fraser Transportation Group Partnership combines the strength, innovation and experience of local and international construction firms. The equity partners and Concessionaire are ACS Infrastructure Canada Inc., a global developer of more than 60 projects worldwide, and Ledcor Developments Ltd., a Canadian company, which has completed projects in nearly every sector of the construction industry. FTG Constructors is a joint venture of the following contractors: Dragados Canada Inc. with close to 70 years of worldwide construction experience; Ledcor CMI Ltd., a leader in the B.C. highway construction industry since the 1980s; as well as, Bel Pacific Excavating and Shoring LP and Vancouver Pile Driving, both of which have been involved in the construction industry in the Lower Mainland for many years.

Key Terms of the Concession Agreement

The Concessionaire has incorporated a single purpose entity, Fraser Transportation Group Partnership (FTG), to enter into the performance Concession Agreement to undertake the Project. FTG is responsible for the entire cost of the design, build, finance, operations, maintenance and rehabilitation for the 20-year operating period.

FTG has been granted a license to perform its obligations under the Concession Agreement. The contract has a fixed expiry date; at the end of the term, the highway must be to the standards specified in the Concession Agreement.

Scope Contracted with FTG

The Project will be designed and constructed to include a new four-lane, 80 kilometre per hour highway that will run along the south side of the Fraser River. The Project will extend from Deltaport Way in southwest Delta to 176th Street (Highway 15) in Surrey with connections to Highways 1, 15, 17, 91, 99 and TransLink's Golden Ears Bridge.

FTG is obligated to certify that construction works have been executed in compliance with Concession Agreement requirements and an independent engineer, on behalf of the federal and provincial governments, certifies the advancement of the works in order to trigger the milestone payments.

FTG is responsible for managing all environmental issues associated with the construction of the Project.

Further improvements to the highway can be made by the Province at its discretion throughout the term of the contract.

Photo of Alex Fraser Tidal Wetlands. The SFPR includes significant environmental enhancements along the corridor. For example, the tidal wetlands will provide a nursery and rearing home for young salmon and other fish.

Performance-Based Payment Principles

During construction, the Province will make milestone payments to the Concessionaire on a monthly basis. Milestone payments are made during the construction period on the basis of the progress made towards achieving pre-agreed milestones. The amount of milestone payments made in a month is based on a percentage of the eligible construction costs incurred by the Concessionaire in that month as certified by an independent engineer. The Concessionaire is required to compensate the Province for non-compliance with performance measures or for causing a non-permitted traffic disruption during construction.

Once construction is finished and substantial completion is achieved, the Province is responsible for paying monthly performance-based availability payments to the Concessionaire. If substantial completion is delayed, the corresponding monthly availability payments will be lost by the Concessionaire. Once highway operations have commenced, unavailability events or non-compliance with performance measures can also result in a deduction to the availability payment.

Payment deductions are based on the severity of the failure to meet performance indicators. For example, if both lanes in one direction of a road section are not available for an hour at a time of day when that road section would normally experience traffic volumes of two thousand cars per hour, then a significant deduction could occur.

Construction Schedule

Construction of SFPR is being completed in two segments: a western and an eastern segment. The eastern segment of the SFPR is the portion of highway that is east of 136 Street and the western segment is the portion of highway that is west of 136 Street. FTG is responsible for completing construction on the eastern segment of the road by the end of 2012, and the western segment is anticipated to be open to traffic by the end of 2013 with substantial completion by summer 2014.

Ownership

The Province retains ownership of the highway. For the purposes of carrying out the necessary obligations under the Concession Agreement, FTG has been granted a non-exclusive license to access and use the highway as well as its structures.

Operations, Maintenance and Rehabilitation

FTG is responsible for the operation, maintenance and rehabilitation of the highway from when the road is opened to traffic until the end of the 20-year term of the Concession Agreement.

FTG is responsible for delivering the following services:

- Maintenance of highway surfaces and structures to agreed upon safety standards;
- Drainage system maintenance;
- Winter operations, including snow and ice removal;
- Operations and maintenance of traffic control systems; and
- Roadside and landscape maintenance.

Risk Allocation Summary

The Concession Agreement for the Project includes detailed risk allocation provisions over the 20-year operating term, post construction. This approach transfers key risks to FTG and adds value through design and private sector innovation, which contributes to value for money. It ensures greater accountability for performance as ongoing payments by the public sector are conditional on FTG continuously meeting performance standards.

The risk allocation is supported through performance availability payments which begin once the Project reaches substantial completion; the expiry date is fixed, providing a significant incentive to complete construction and commissioning of the asset on schedule. Availability payments are subject to deductions if quality and performance standards are not met. The condition of the highway at the end of the term is specified in the Concession Agreement.

Overview of the allocation of key risks in the Concession Agreement:

DESCRIPTION OF RISK	CONCESSIONAIRE	PUBLIC SECTOR
Design	✔	
Construction	✔	
Functionality of Design	✔	
Ground Conditions	✔	
Traffic Management	✔	
Operations & Maintenance	✔	
Rehabilitation	✔	
Financing	✔	
Force Majeure/Relief Events	✔	✔
Change in Law	✔	✔
Property Acquisition within the Identified Right of Way		✔
Property Acquisition outside the Identified Right of Way	✔	
Scope Changes initiated by Public Sector		✔

Quantitative Benefits of the Concession Agreement

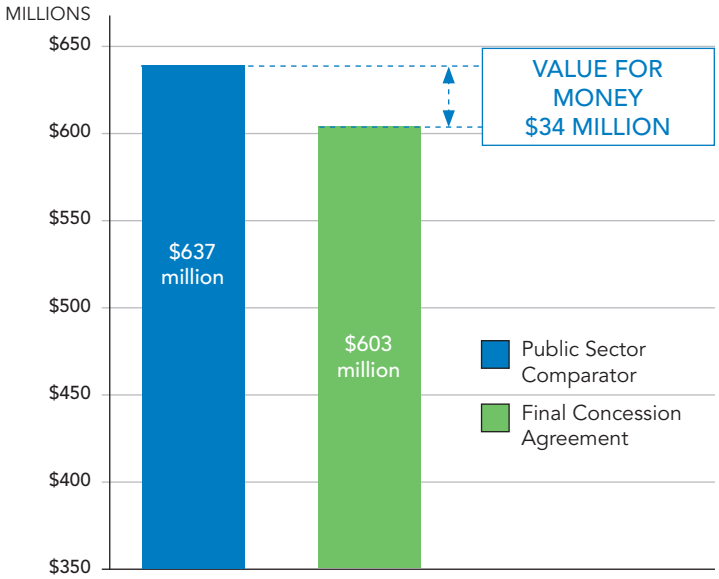
Financial value for money is the difference between the net present cost of the payments over the life of the Concession Agreement and the expected net present cost of the public sector comparator (PSC).

The expected net present cost (NPC) of the Project delivered using traditional procurement, the PSC, is an estimated $637 million (NPC). The partnership model including the final Concession Agreement with FTG has a NPC of $603 million. A high-level comparison of these numbers is provided below. In financial terms, the final Concession Agreement is estimated to achieve value for money for taxpayers' dollars of $34 million (NPC), when compared to the PSC. All numbers are in millions of dollars as of January 1, 2009, as per the RFP.

ESTIMATED PUBLIC SECTOR COMPARATOR	$Millions (Net Present Cost)	FINAL CONCESSION AGREEMENT	$Millions (Net Present Cost)
Phase 2 Capital Costs	$ 412	Availability Payments	$ 233
Life Cycle and Operating Costs	$ 66	Provincial Milestone Payments	$ 174
Risk Adjustment	$ 102	Federal Milestone Payments	$ 183
Competitive Neutrality Adjustment	$ 18	Province's Phase 2 Project Management Costs	$ 13
Province's Phase 2 Project Management Costs	$ 39		
Total Phase 2 Public Sector Comparator	**$ 637**	**Total Phase 2 under Final Concession Agreement**	**$603**
Value for Money (Millions Net Present Cost)[3]			**$34**
Percentage Savings from PSC			**5%**

[3]The discount rate used for the calculation of value for money is 7.41 per cent. Sensitivity analysis of the discount rate showed that the VFM would have been approximately $14 million (NPC) less if the discount rate was 50 basis points lower and about $19 million (NPC) more if the discount rate was 50 basis points higher.

Significant factors contributing to value for money include efficiencies from competitive construction pricing, integrating the design, build and finance teams and an efficient allocation of risk. The value for money analysis was made following Partnerships BC's quantitative analysis methodology[4]. The net present cost figures above were developed using a discount rate, which represents the costs of capital over time taking into account factors such as inflation and interest rates.



VALUE FOR MONEY - COST COMPARISONS

Additional Benefits

A significant benefit of the partnership model is the innovation of the procurement process during the RFP stage which allows proponents to bring forward new ideas to improve project outcomes, above and beyond what the Province originally anticipated.

The SFPR is a complex project to design and build with long-term risks, such as challenging ground conditions. The performance-based Concession Agreement transfers key design and construction risks, such as cost and schedule, and long-term operations, maintenance and rehabilitation, to the Concessionaire. This drives an optimized life cycle approach to the Project and promotes innovation in design and maintenance strategies.

FTG's proposal included a number of innovations, which enhance the benefits provided by the Project including the following:

- Significant initial investment in the design and construction of the road and associated structures, resulting in lower long-term operating and maintenance costs, and an efficient rehabilitation strategy over the 20-year operating period;
- Standardizing design elements and construction methods for structures;
- Optimized use of materials to reduce risk and provide significantly greater schedule certainty; and,
- Design innovation through the competitive process whereby proponents are encouraged to develop the best possible design, reflecting the best-in-class from around the world.

Accounting Treatment

B.C.'s Office of the Comptroller General is responsible for the overall quality and integrity of the government's financial management and control systems, and has established accounting guidelines for partnership projects. Based on the accounting guidelines for capital projects, the total project capital budget for the project is $1.264 billion.

TOTAL PROJECT CAPITAL BUDGET (millions)	
Capital costs of Provincial works	$ 298
Capital costs of FTG works	$ 666
Property (net of recoveries)	$ 258
Interest during Construction	$ 42
Total Project Capital Budget	**$1,264**

Finance

The Concessionaire will provide $200 million in private financing towards the funding of the Project.

[4]A discussion paper is available at Partnerships BC's website: www.partnershipsbc.ca

7. Ongoing Concession Agreement Monitoring

The agreement with FTG protects the public interest by ensuring delivery, performance and high standards of quality requirements are met. The standards for operation and maintenance services have been prescribed in the Concession Agreement, and payment deductions have been agreed where such standards are not adhered to.

Monitoring of standards spans every stage of the Project, from Financial Close through design and construction as well as operations and maintenance over the term of the agreement. The following describes the major phases in the Project monitoring schedule, the participants involved in each stage and their roles and responsibilities.

Quality Management

Under the terms of the Concession Agreement, the Concessionaire is required to implement a quality management system that is compliant with the ISO 9001:2008 Standard. This quality management system includes a nonconformity reporting process that reports any failure of the Concessionaire to perform its obligations under the Concession Agreement that are not rectified in an applicable time period. This system ensures the Concessionaire monitors and reports its performance to the Province. The quality management system is audited on an ongoing basis and non-conformities that are not reported could lead to additional performance deductions.

Design and Construction Phase

The Ministry of Transportation and Infrastructure has designated a Provincial representative who has the authority to act on behalf of the Province during the design and construction phases of the Project to review, approve, accept or confirm FTG's activities, in accordance with the Concession Agreement. MOTI representatives have full access to the construction site, drawings and specifications, and report their observations to MOTI. In addition, the independent engineer monitors and reports upon construction progress, and the independent certifier will provide certification that the conditions for substantial completion have been achieved.

Operations, Maintenance and Rehabilitation Phase

The Provincial representative's role will continue throughout the operations, maintenance and rehabilitation phases of the Project. The Concessionaire has identified an Operations Director who will be active during the design and construction phases to ensure that operations activities are taken into consideration during the development of the Project, and that preparations for operations are undertaken well in advance.

Long-Term Concession Agreement Review

MOTI will implement a process for reviewing the Concession Agreement on a regular basis from the start of operations. The review process enables the Province to confirm the Concession Agreement is functioning as intended, and that the expected benefits have been realized.

Role of the Project Office

MOTI has established a project team responsible for leading project oversight and monitoring efforts. An experienced project director, along with experts in design and construction, operations, maintenance, rehabilitation services and technical requirements will work in the project office. The project team is responsible for reporting to the Project Executive Board on all aspects of the FTG project.

Hand-Back Audit

Performance requirements must be met by FTG at the end of the 20-year Concession Agreement term. A hand-back audit process by the Province with retention payments during the last three years of the term is established to ensure compliance with these requirements. FTG is responsible for meeting the hand-back requirements at the end of the contract term.

8. Glossary of Terms

Availability Payments: Availability payments are operating period payments made on a monthly basis beginning once the asset is substantially completed and continuing over the remaining term of the agreement. The availability payment is paid to the private partner for capital and operating costs, as well as the agreed rate of return. The payment is subject to deductions due to unavailability events or non-compliance with performance measures.

Business Case: Document prepared in British Columbia by a project owner demonstrating the need and cost/benefit of a project, in addition to supporting a procurement method and providing an overview of the accounting impacts that a project may have.

Competitive Neutrality Adjustments: The aim of the competitive neutrality adjustment is to reflect financial benefits and costs that are not equally available to bidders under different procurement models. Competitive neutrality ensures that a like-for-like comparison is being made in any value for money analysis which compares the PSC and PPP procurment options. If competitive neutrality adjustments are not made then the PSC may be understated in some areas and will not necessarily reflect the true cost to the Province of traditional procurement. This may result in the selection of a sub-optimal procurement solution. The two most common competitive neutrality adjustments made are for insurance and taxation.

Concession Agreement: The Concession Agreement sets out the requirements for the delivery of an asset, such as a highway or road, under a PPP in terms of cost, schedule and life cycle performance that typically govern the performance-based payment to the Concessionaire.

Discount Rate: A rate used to relate present and future dollars. Discount rates are expressed as a percentage and are used to reduce the value of future dollars in relation to present dollars. This equalizes varying streams of costs and benefits, so that different alternatives can be compared on a like-for-like basis.

Financial Close: The point in the procurement process where negotiations with a preferred proponent are finalized and a Concession Agreement is executed, allowing construction to begin.

Life Cycle: The long-term requirements to maintain and rehabilitate an asset.

Milestone Payment: Milestone payments are construction period payments that are made on the basis of the progress towards achieving pre-agreed milestones. The amount of milestone payments made in a month is based on a percentage of the eligible construction costs incurred by the Concessionaire in that month as certified by an independent engineer.

Net Present Cost (NPC): A net present cost is the present value of a series of future cash flows to a common base date. It allows for a like-to-like comparison of cash flows that occur at different points in time, over the construction and operating period. For example, a dollar received today is more valuable than a dollar received a year from now because the dollar received today can be invested and start generating a return immediately, whereas the dollar received a year from now cannot earn a return in the current year.

Operations: The ongoing processes or activities that are involved in operating an asset, such as surface repairs, or snow and ice removal on a highway.

Owner: Usually a provincial ministry, authority or agency that is undertaking a needs assessment and benefit analysis to determine if a project will satisfy service delivery requirements, and that will own the project and fund the performance payments if a project proceeds as a PPP.

Partial Compensation: A payment made to unsuccessful short-listed bidders in a request for proposals process as partial compensation for expenses incurred in submitting a compliant proposal, and for securing rights to intellectual property by the Province.

Performance Specification: Specifications developed by the owner that define the output and performance levels required in relation to construction and life cycle performance of an asset, these ensure the completed project meets the owner's service delivery needs.

Preferred Proponent: A proponent selected from a short-list of qualified bidders to enter into negotiations with a project owner to reach financial close and deliver a project.

Public Private Partnership (PPP): Public private partnership whereby public sector infrastructure is procured using a long-term performance-based agreement with a private sector partner to deliver and maintain an infrastructure asset, including significant, upfront capital investment.

Public Sector Comparator (PSC): The public sector comparator, which is a financial model of a hypothetical public sector reference concept, is used in quantitative procurement analysis to compare the risk adjusted, life cycle cost of traditional delivery with the cost of procuring the same project as a PPP.

Request for Proposals (RFP): Document issued by an owner for qualified proponents to submit formal proposals to deliver a project.

Request for Qualifications (RFQ): Document issued by an owner inviting parties interested in participating in a RFP, to submit their qualifications for delivering a project.

Retained Risk: Risks associated with delivering a project that are not transferred to the Concessionaire under a PPP, representing a cost to the project regardless of the procurement approach.

Traditional Procurement: Methods by which the public sector has traditionally procured projects in B.C, through design bid build (DBB) or design build (DB) or a combination of both types of contracts.

Transferred Risk: Risk associated with delivering a project that is typically borne by the public sector under traditional procurement that is transferred to the private sector under a PPP.

Value for Money (VFM): Also commonly referred to as value for taxpayer dollars, VFM describes the benefits to the public expected to be realized through a particular procurement method, and can be quantitative and/or qualitative in nature. It is used determine whether or not a project offers the best value for taxpayers' dollars by looking at a broad range of factors including comparison of the final concession agreement to other benchmarks.

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