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Project Report:

Royal Columbian Hospital Redevelopment Project Phases 2 and 3

March 2021

BRITISH COLUMBIA

Purpose of this Report

The purpose of this report is to provide key information to the public regarding the Royal Columbian Hospital Redevelopment Project – Phases Two and Three (the Project). This report describes the need for the Project and its features and benefits. It also provides an overview of the different procurement options analyzed, the procurement process, and a summary of the important aspects of the Design-Build Agreement (DBA) for Phase Two and Construction Management Agreement (CMA) for Phase Three.

The Government of B.C (the Government) is committed to a high standard of disclosure as part of its accountability for the delivery of public projects. Ministries, Crown Corporations, and other government agencies are publicly accountable for projects through regular budgeting, auditing, and reporting processes.

The Ministry of Health (MoH), the Fraser Health Authority (Fraser Health), and Infrastructure BC Inc. (Infrastructure BC) are accountable for the contents of this report.

Abbreviations

Abbreviations are defined in Table 1 below:

TABLE 1: ABBREVIATIONS

ACT	Acute Care Tower
B.C.	British Columbia
CAMF	Capital Asset Management Framework
CMA	Construction Management Agreement
CT	Columbian Tower
DB	Design-Build
DBA	Design-Build Agreement
DBF	Design-Build-Finance
EDDB	EllisDon Design Build Inc.
Government	Government of British Columbia
HCC	Health Care Centre
Infrastructure BC	Infrastructure BC Inc.
IPRC	Integrated Project Review Committee
MoH	Ministry of Health
RCH	Royal Columbian Hospital
RFP	Request for Proposals
RFQ	Request for Qualifications

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1. Executive Summary

The Royal Columbian Hospital (RCH) is an integral part of British Columbia's (B.C.) healthcare system. RCH has multi-faceted roles in providing highly specialized healthcare services for B.C., including the Lower Mainland population, and as a community hospital for residents of New Westminster, Burnaby, and Coquitlam.

The redevelopment of RCH is required to meet the current and future demand for healthcare services. The RCH redevelopment project has been broken into three phases due to complexity and to allow for continuity of hospital services throughout construction, demolition, and renovation work. Phase One was managed as a separate project and construction was completed in 2020.

The scope of the Project consists of Phase Two and Phase Three. Phase Two includes construction of a new Acute Care Tower (ACT) and demolition of several existing facilities on the site. Phase Three includes works related to the integration of the new ACT with the existing Health Care Centre (HCC), and renovation and expansions required to support the increase in capacity. The Project will result in:

- an improved model of care;
- better patient outcomes;
- additional capacity to meet the increasing demand for services at RCH;
- a healthier and safer work environment for staff; and
- an increase in capacity of acute care beds resulting in a total of 600 acute care beds by the completion of the Project.

Fraser Health received business plan approval in June 2018 to procure and deliver Phase Two using a Design-Build (DB) procurement model. Selection of a DB procurement model for Phase Two was based on a thorough analysis of the following procurement options:

- Design-Build (DB);
- Design-Build-Finance (DBF); and
- Design-Build-Finance-Maintain with Specified Union Participation.

The analysis demonstrated that the DB procurement model provides the best opportunity to meet Fraser Health's procurement and Project objectives and allows it to best manage and mitigate key Project risks to deliver the Project in a cost effective and efficient manner.

The business plan approval also incorporated the requirement for the design-builder to provide design and construction management services related to Phase Three as part of the same procurement process. This combined approach is expected to generate valuable synergies and interface efficiencies across the two phases and add value to the Project.

The procurement process was launched in September 2018 with the release of the request for qualifications (RFQ). Following the two-step RFQ and Request for Proposals (RFP) procurement process, Fraser Health entered into the following contracts with EllisDon Design Build Inc. (EDDB):

- a performance-based, fixed price contract (the DBA) for Phase Two; and
- a construction management contract (the CMA) for Phase Three.

The DBA includes a range of performance measures to ensure the Project is delivered on budget and on schedule. Fraser Health will pay EDDB progress payments during construction, subject to holdbacks for non-performance as required by the DBA.

FIGURE 1: PROJECT SITE VIEW RENDERING

The total capital cost of the Project is approximately $1.2 billion. The Project is being funded by the Government and the Royal Columbian Hospital Foundation, with the Government providing majority of the funding.

Phase Two construction is scheduled to complete in 2025. Phase Three construction is expected to start in 2025 following Phase Two, and complete in 2026. Fraser Health will own the ACT and retain responsibility for all healthcare delivery at the ACT as well as providing maintenance and life cycle services to the building during operations.

2. Project Background, Project Objectives and Scope

2.1 Project Background

RCH is the largest volume cardiac site in B.C. for interventional and open-heart surgery services and is the largest volume direct-arrival trauma centre in the province. This is coupled with the ability to provide services to complex populations such as pregnant women requiring extra-corporeal membrane oxygenation and trauma services. RCH is also an academic powerhouse for clinical teaching and provides unparalleled clinical learning opportunities for the University of British Columbia clinical program and multiple nursing and allied health schools.

Fraser Health has developed three regional referral centres that provide a delivery network of tertiary and secondary level hospital services. The three regional centres, RCH, Surrey Memorial Hospital, and Abbotsford Regional Hospital support local community hospitals in a network structure with connections between each of the three regional hospitals and their local community hospitals. Patients are referred to RCH when care is required that is not available at another regional hospital. All Fraser Health hospitals also refer directly to RCH for highly specialized tertiary and some levels of quaternary services. Examples include acute myocardial infarction, acute neuro-radiology treatment for stroke, and extracorporeal membrane oxygenation. A life-limb and threatened organ protocol that includes time to transfer benchmarks, means RCH must be maintained as a dynamic, non-refusal site for the most ill and complex patients in the region.

The importance of RCH is also linked to the hospital's unique combination of services and specialties. RCH serves patients from a number of different communities across Fraser north, the lower mainland, and BC. Although RCH is located within the city of New Westminster, only approximately 18 percent of RCH's patients are residents of New Westminster.

RCH has a vital role in the provision of health care. However, it is challenged by consistently running over-capacity, in sub-optimal clinical space and outdated buildings that are reaching the end of their useful life. The redevelopment of RCH is required to meet the current and future demand for services, to address critical infrastructure issues and to continue the expanding role as a provincial trauma and specialized care resource.

The RCH redevelopment project has been broken into three phases due to complexity and to allow for continuity of hospital services throughout construction, demolition, and renovation work. Phase One provides foundational elements for the site in preparation for Phases Two and Three. Phase One was run as a separate procurement process and reached substantial completion in March 2020.

The scope of the Project consists of Phase Two and Phase Three. Phase Two includes construction of a new ACT, including parkade and heliport, and demolition of several existing facilities on the site. Phase Three includes works related to the integration of the new ACT with the existing HCC, and renovation and expansions required to support the increase in capacity.

Fraser Health received business plan approval in June 2018 to procure and deliver Phase Two using a DB procurement model and to incorporate the requirement for the design-builder to provide design and construction management services related to Phase Three as part of the same procurement process.

The total capital cost of the Project is approximately $1.2 billion. The Project is being funded by the Government and the Royal Columbian Hospital Foundation, with the Government providing majority of the funding.

2.2 Project Objectives

The achievement of clinical outcomes and clinical operational excellence is the driver for the RCH redevelopment project and is held as a measure of success.

The Project supports this vision through planning and implementation related to clinical capacity requirements, clinical service delivery planning, clinical redesign and change management, and facility /space design and development. Broadly, the Project objectives include:

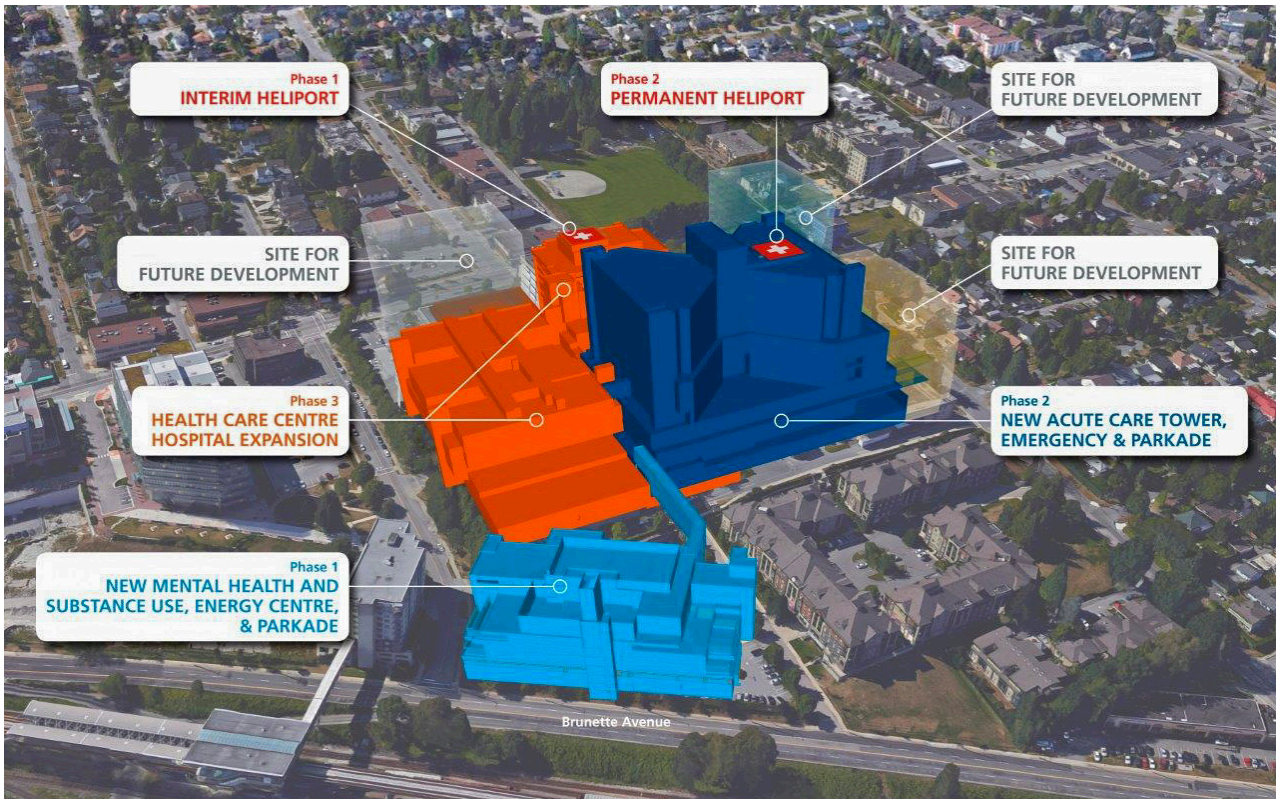
(a) improved quality of patient care and patient experience; achieved through partnership with patients and families and adoption of patient-centred principles.
(b) improved safety in patient care delivery and contribute to staff well-being and increase the experience of physical and emotional safety in the work environment.
(c) improved access to patient care services.
(d) addressing the critical lack of capacity through planned expansion and critical enabling works.
(e) upgrading and replacing sub-optimal clinical space and aging facilities that are critical to delivery of high-quality patient care.
(f) provision of a facility with flexible and adaptable space that accommodates changes in health service delivery.
(g) design and implementation of flexible systems that support adaptation over time and provide efficiencies at common points where patients connect with services in their healthcare journey.
(h) creating and supporting opportunities to do things differently to align with patient centred care principles, optimizing capacity and best available evidence.
(i) promoting development as a learning organization capable of adapting to meet the changing needs of the population and the priorities of the healthcare system.

Completion of the Project will have a profoundly positive impact on the patients and the community served by RCH.

2.3 Scope

A graphic representation of the RCH campus showing Phases One, Two and Three is illustrated in Figure 2 below:

FIGURE 2: RCH REDEVELOPMENT PROJECT PHASES OVERVIEW



The scope of Phases Two and Three includes construction of the ACT, the enabling works related to the integration of the ACT with the existing HCC, and renovation and expansions required to support the increase in capacity.

2.3.1 Phase Two

Phase Two is comprised of two key components including the ACT and demolition:

2.3.1.1 Acute Care Tower including Parkade and Heliport

The construction of the ACT will provide additional operational acute care beds, new clinical, administrative, and support spaces, and a rooftop heliport, in addition to two levels of underground parking.

The major program components of the ACT are outlined in the table below:

TABLE 2: ACT PROGRAM COMPONENTS

ACUTE CARE TOWER
• Medical/surgical inpatient units (240 beds) • Critical care inpatient unit (60 beds) • Maternity centre (48 beds) with a delivery/ operating room suite and Neonatal intensive care unit (24 bassinettes) • Pediatric inpatient unit (16 beds) and maternal infant child youth outpatient area • Interventional floor with surgical and interventional suites and an interventional computed tomography • Interventional command centre(s) • Anesthesia care unit • New and expanded emergency department with 75 treatment spaces across five zones and a satellite imaging department • Medical device reprocessing • Loading dock, materials management, central equipment garage and other logistical supports • Underground parking (350 stalls) • Rooftop heliport

2.3.1.2 Demolition

Phase Two scope also includes demolition of several existing facilities on the RCH campus including the Sherbrooke building, laundry and maintenance building, power plant, main entrance, support trailer and surface parking. There are also underground service tunnels and links connecting these buildings to the rest of the RCH campus that will need to be demolished and removed.

2.3.2 Phase Three

Phase Three is the enabling renovation works required to support the RCH campus' increased capacity and to improve the delivery of patient care. It includes upgrades and expansion of the services located in the HCC and Columbian Tower (CT). The expansion includes laboratory services, medical imaging, diagnostic services, pharmacy, satellite medical device reprocessing and food services to support the increase in bed capacity.

3. Project Benefits and Key Features

The Project will result in an improved model of care, better patient outcomes, additional capacity to meet the growing needs of increasing demand at RCH, and a healthier and safer work environment for staff. Benefits and key features of the ACT are summarized below.

3.1 Patient Centred Care

Patient-centred care is a central focus for the Project. Fraser Health has identified patient experience as a strategic priority focus for clinical care. The principles of dignity and respect, information sharing, participation and collaboration are recognized as integral to a patient centred environment.

The ACT will be designed based on continuous improvement and outcome-focused operational processes to ensure that the patients and their families remain the primary focus in the delivery of care. To do this, planning and design will focus on the patients' experience, their care, or their journey.

3.2 Access to Natural Light

Natural light and green space have been proven to enhance healing and reduce patients' length of stay in hospitals. Natural and borrowed light will be optimized and incorporated throughout the ACT.

FIGURE 3: ACT LOBBY RENDERING

3.3 Optimal Patient and Staff Safety

Outcomes such as reduced adverse surgical and medication events, hospital-acquired infections, patient falls, and staff injuries are targeted through the effective design of the ACT. The ACT design offers numerous features that have been empirically proven to enhance efficiencies and achieve optimal patient safety. These include:

- separation of routes between patients and staff in key areas;
- larger operating rooms to meet current clinical safety standards;
- single occupancy inpatient and outpatient treatment spaces with standardized layouts to reduced adverse events, improve clinical outcomes, increase patient satisfaction, and reduce lengths of patient stay; and
- increased key line of sight from care stations to patient bays that allow staff to better monitor patients.

3.4 Healing Environment

Interior design features will provide natural and calming environments which improve patient, family, and staff well-being, and reduce the length of patient stay. These design features incorporate patient-friendly and elderly-friendly design concepts and provide a confidential therapeutic environment, access to courtyards and natural environments, and ease of way finding.

3.5 Travel Distance Efficiency

Travel distance for staff and patients will be minimized and will help streamline the flow of supplies. The design provides efficient travel distances between key departments, such as operating rooms to patient recovery rooms, and maternity to operating rooms. This ensures that the departments are closely located, which will result in faster response time by staff, improved health and safety for both patients and staff, and improved infection control.

FIGURE 4: ACT TRIAGE RENDERING

4. Project Delivery Options

In accordance with Government's Capital Asset Management Framework (CAMF), the Project team, including Fraser Health and Infrastructure BC, undertook an extensive procurement options analysis to determine an optimal procurement method for the Project. Procurement options were evaluated to identify a method of delivery that delivers value and reduces risks for the taxpayer while ensuring Project goals are met. Project characteristics such as size, complexity, opportunity for innovation and the nature of project risks influence the selection of a preferred procurement model.

4.1 Procurement Options Analyzed

The following three procurement models were considered as part of the procurement options analysis for Phase Two:

Design-Build: Fraser Health would engage designers and engineers to develop a concept design for the Project, and then conduct a competition to select a DB team to undertake the detailed design and construction of the Project, based primarily upon the performance specifications prepared by Fraser Health's technical team. The successful DB team would enter a fixed price contract with full payments being made by Fraser Health on a progress basis, subject to performance holdbacks as required by the DBA.

In this model, design and construction risk, including cost and schedule, is transferred to the design builder, while Fraser Health retains life cycle and maintenance risks. The benefits of a DB procurement model include enhanced risk transfer, schedule and cost certainty, and innovation that comes from integrating design with construction.

Design-Build-Finance: A DBF model is similar to the DB model, with the addition of private financing for a portion of the capital requirements during construction. The amount of private finance is typically repaid to the contractor at substantial completion.

The DBF option includes enhanced security for achieving the intended risk transfer related to cost and schedule. Performance measures can result in the contractor owing payments to Fraser Health as a result of its non-conforming performance. Consequently, lenders would maintain a keen interest in the contractor's performance throughout the Project. Additional benefits of the DBF model include lender due diligence, enhanced enforceability of the contract terms and a lower likelihood of scope changes.

Design-Build-Finance-Maintain with Specified Union Participation: Fraser Health would engage designers and engineers to develop a concept design for the Project and develop design and construction performance specifications as well as performance requirements for the maintenance of the facility and condition of the facility at the end of the contract term (typically construction plus a 30-year operating period).

In this model, Fraser Health would enter into a project agreement with a private sector partner who would be required to design, build, partially finance and maintain the facility over the specified term of the project agreement. The partner would be paid as set out in the project agreement through progress payment during construction and through regular payments during operations. Payments during operations are made monthly at a fixed amount determined at contract close. Payments only commence once the facility is complete as required under the contract and as determined by an independent third party. If performance measures are not met, deductions are made from the payment. The inclusion of private sector partner equity and lenders would provide a long-term commitment and due diligence on the Project. This would result in a degree of owner-type behaviour from the private sector partner, as they have a direct interest in ensuring that performance measures are met, and payments are received.

In this option, the project agreement would require all employees involved in maintenance of the ACT to be members of the Hospital Employees' Union.

All three procurement models would be undertaken in two stages, with the first stage being a RFQ where respondent teams submit qualifications for evaluation. Shortlisted teams from the RFQ stage are then invited to participate in a RFP stage. In all models, the successful proponent from the RFP stage is eligible to enter into a contract with Fraser Health to deliver the Project.

For all the procurement options analyzed for Phase Two, it was determined that the Phase Two design-builder would also be required to provide design and construction management services related to Phase Three renovation scope. This approach is expected to generate valuable synergies and interface efficiencies across the two phases and add value to the Project for the following reasons:

- maintains a consistent design and construction management responsibility across the two phases;
- provides a greater degree of coordination around the planning and decanting of the existing space which is critical for Phase Three; and
- using the Phase Two procurement process to procure the Phase Three design and construction management services is anticipated to result in efficient pricing for these services.

4.2 Results of Procurement Options Analysis

The DB model was selected for Phase Two as it is expected to best meet Fraser Health's procurement and overall Project objectives and allow Fraser Health to best manage and mitigate key Project risks to deliver the Project in a cost effective and efficient manner.

5. Procurement Process

The timeline of the Project's two-stage RFQ and RFP procurement process is outlined in the table below[1].

TABLE 3: PROCUREMENT TIMELINE

PROCUREMENT STAGE	TIMING
Request for Qualifications	September 2018 to May 2019
Procurement Strategies Analysis	March to June 2019
Request for Proposals – First Gate	July to December 2019
Request for Proposals – Second Gate	January to September 2020
Contract Finalization	October to December 2020

5.1 The RFQ Process

A competitive RFQ process took place between September 2018 and May 2019. Despite significant efforts made by the Project team, including Fraser Health and Infrastructure BC, to generate competition for the Project, only one response was received at the RFQ submission time. The primary reasons for lack of market interest for the Project included the following:

- the construction market in general, and particularly in B.C., was very busy, particularly in the healthcare infrastructure sector; and
- the Project is too large for most construction firms to pursue on their own which further limits market capacity. Smaller firms did not form joint ventures to pursue the Project due to the amount of work available that they could pursue on their own.

The Fraser Health Capital Project Board (Project Board) appointed an evaluation committee to evaluate the submission received based on the criteria set out in the RFQ. Following the evaluation, it was determined that the respondent, EllisDon Design Build Inc. (EDDB), was qualified to proceed to the RFP phase.

5.2 Procurement Strategies Analysis

In light of the one respondent and in parallel with RFQ evaluation activities, the Project team explored and analyzed the following procurement strategies for the Project for Government review and approval:

- **Strategy 1:** Proceed with the qualified respondent through a modified RFP process (described in detail in section 5.3) using a DB approach;
- **Strategy 2:** Cancel the procurement and re-procure through a Design-Bid-Build (DBB) or Construction Management (CM) approach or consider further phasing of the Project; and
- **Strategy 3:** Cancel the procurement and delay the Project until sufficient market capacity exists to ensure competition.

[1] The RFQ and RFP procurement documents are publicly available at www.infrastructurebc.com.

Based on the procurement strategies analysis, Government elected to pursue Strategy 1. This strategy has the following attributes:

- the process and objectives closely align with DB approach as set out in the RFQ, which provided the highest likelihood of Fraser Health being able to enter into a DBA with the design-builder. This strategy would allow for the continuation of the DB procurement process, and optimizes utilization of the majority of the existing DB procurement documents and contracts;
- it outperforms the other strategies in terms of schedule and cost certainty and offers potential for the shortest overall Project schedule, avoiding significant construction escalation compared to the other strategies;
- this strategy provides an off-ramp option for Fraser Health as described in more detail in section 5.3; and
- upon the successful execution of the DBA, the design-builder would proceed with the typical construction obligations and risk transfer in a DBA. The design-builder would be responsible for all typical post construction obligations including commissioning, deficiency rectification and warranty.

5.3 The RFP Process

Upon Government approval of the procurement strategy, the Project proceeded to the RFP phase with the qualified respondent. The modified RFP process used was aligned with the typical RFP process with amendments made to maintain negotiating tension to drive value for Fraser Health. Key aspects of the modified RFP process included the following:

- the RFP required the proponent to submit proposals to demonstrate how they would substantially meet the technical and affordability requirements of the RFP and the DBA;
- it provided a structure which allowed the Project to advance design under a design early works agreement, with the intent of entering the DBA at a pricing point that delivers value;
- it involved significant structured interaction (i.e., collaborative design development meetings and technical, legal and commercial meetings) with the proponent, to optimize the procurement and the design process;
- the RFP stated that a proposal that delivers value and is affordable would be a pre-requisite for Fraser Health to enter into the design early works agreement and DBA. The RFP set the following two gates through the evaluation process, and the ability to deliver value was a focus of the evaluation process:
  - first gate: design development proposal and design early works agreement;
  - second gate: design and financial proposals and evaluation; and
- the RFP described an off-ramp where if Fraser Health determines that it is unlikely to reach a final agreement with the proponent, Fraser Health may terminate the process, and through the assignment rights, have the same design team continue the design work, and proceed with the Project in some other manner, including using other contractors.

5.3.1 Evaluation of Proposals

The RFP requires that the proponent submit the following:

- a fixed price design development proposal to enter into the design early works agreement to provide 100% of design services and preconstruction services; and
- subsequent fixed price design and financial proposals, under the affordability requirements set out for the Project, to enter into the DBA to provide construction and the remaining design services, at defined pricing points during design development as deemed reasonable and optimal from a pricing perspective.

The RFP includes two gates through the evaluation process, to ensure that value is achieved for the Project.

- **First Gate – Design Development Proposal and Design Early Works Agreement**
  As per the RFP requirement, the proponent submitted a fixed price design development proposal in September 2019. The proponent had an incentive to provide a fixed fee that was reasonable and delivered value, and that remained within the overall affordability requirement in order to have the best chance to move forward and eventually enter into the DBA. Based on evaluation of the proposals and negotiations with the proponent, Fraser Health entered into the design early works agreement with EDDB in December 2019. The scope of the design early works agreement was primarily focused on design services. It also included additional services to be provided by the design-builder including design coordination and constructability review, development of project management plans, contract and schedule management, cost control and compliance tracking, and pre-construction services. Fraser Health made progress payments to the proponent for the services performed under the design early works agreement.
- **Second Gate – Design and Financial Proposals and Evaluation**
  After execution of the design early works agreement, the proponent and Fraser Health proceeded with design development as per the requirements set out in the design early works agreement.

  Concurrent with design development, the RFP set out several defined pricing points at which Fraser Health would test whether the Project is affordable and if the DBA could be executed at an acceptable price with an acceptable design. If, based on the evaluation of the final design and financial proposal, Fraser Health was unable to conclude the negotiations at an acceptable price, Fraser Health would not be obligated to proceed to sign the DBA, but would have the right to continue with design and request another financial submission at a later date, or take the off-ramp option and use the design completed under the design early works agreement. This gate would incentivize the proponent to provide a reasonable price so as to not lose the opportunity to enter into the DBA and complete the construction of the Project.

In addition, for the design development proposal and design and financial proposals received, the Project team adopted the following steps to ensure that a robust evaluation process was in place:

- the Project Board appointed an evaluation committee to evaluate the proposals based on the criteria set out in the RFP. For each proposal received, the evaluation committee made its recommendation to the Project Board based on a thorough evaluation and due diligence process as set out in the RFP and the evaluation manual;
- the Project team engaged a quantity surveyor to provide shadow pricing to assist with assessing the value of the proposals put forward by the proponent for the purpose of entering into the design early works agreement and the DBA. The intent of developing shadow pricing is to assess reasonableness of the proposals and to assess whether value has been achieved;

- the Project team also considered additional supporting information from the proponent including sub-contractors' pricing and terms, a detailed breakdown of general expenses, unit prices and calculation of certain cost elements. EDDB was highly collaborative and transparent in providing the requested information;
- as a result of evaluating the first design and financial proposal, Fraser Health determined that the design needed to progress further in order to demonstrate that it substantially met the Project requirements. The Project team identified a list of key design issues which needed to be resolved in preparation for the second design and financial proposal;
- after evaluating the second design and financial proposal, Fraser Health determined while the proponent has provided a design that substantially met the Project requirements, the proposal did not sufficiently demonstrate value. Subsequently, Fraser Health proceeded with requesting a third design and financial proposal with a focus on working with the proponent to achieve value for the Project; and
- as a result of evaluating the third design and financial proposal, Fraser Health determined that the proposal demonstrated value based on the following:
  - the proposal price reflected the work undertaken by both Fraser Health and the proponent in identifying value opportunities including alternative design solutions and areas for design optimization. This process was independently observed and reviewed at a high level by the authority's technical advisor who has provided a letter in support of the activities undertaken by Fraser Health in identifying value opportunities with the proponent. This exercise resulted in significant price reduction compared to the second design and financial proposal.
  - the proposal price was based on a comprehensive pricing competition that the proponent has undertaken with the subtrades in Canada and the U.S.
  - the proposal price was below the shadow price prepared by the quantity surveyor based on the proponent's design.

As outlined above, the Project team developed a detailed negotiation strategy as part of the RFP which laid out the process, and implemented the procurement process with a high-level of diligence to ensure that value is demonstrated and achieved for the Project. Ultimately the procurement process was successful and resulted in EDDB committing to a fixed-price, fixed-schedule delivery of Phase Two scope under the DBA, as well as the delivery of Phase Three scope under the CMA.

5.4 Fairness and Transparency

To ensure fairness and transparency of the procurement process, John Singleton, Q.C. of Singleton Urquhart Reynolds Vogel LLP was engaged as a fairness reviewer during the RFQ process to monitor all evaluation activities and provide an opinion as to whether the selection process was fair and transparent. A fairness reviewer's report was provided at the end of the RFQ process and is publicly available at www.infrastructurebc.com, together with the RFQ and RFP documents and the final redacted DBA.

Based on discussions with the Project's fairness reviewer and legal advisor, a fairness reviewer was not required for the RFP process because there was only one proponent.

6. Design-Build Agreement and Construction Management Agreement

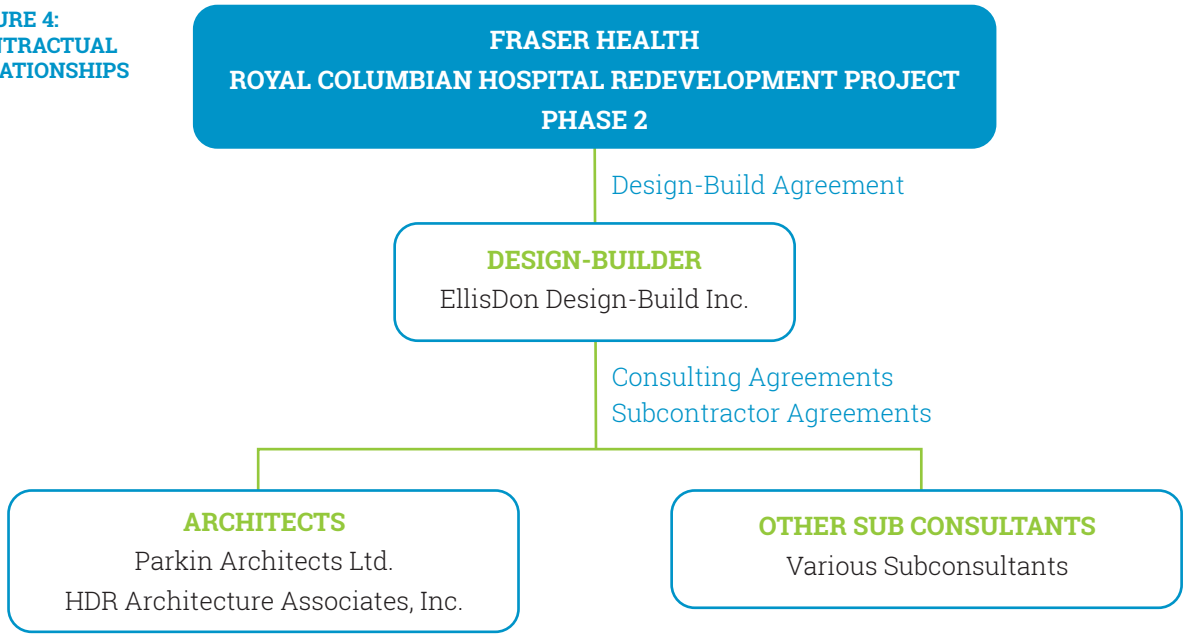
TABLE 4: PROJECT QUICK FACTS

QUICK FACTS	
Design-Builder	EllisDon Design Build Inc.
Facility Owner	Fraser Health Authority
Location	New Westminster, B.C.
Phase Two Construction Completion	2025
Phase Three Construction Completion	2026
Term of the Design-Build Agreement	Construction period plus a 2-year warranty period
Term of the Construction Management Agreement	Design and construction period
Design- Build Agreement Contract Price for Phase Two[2]	$807.0 million
Construction Management Agreement Contract Price for Phase Three	$19.1 million

6.1 Profile of Design-Builder

EDDB will deliver the Project using specialist providers and sub-contractors as well as self-performing certain aspects. As quoted "EllisDon is incredibly proud to have successfully completed the procurement process and entered into a Design-Build Agreement to deliver the Project. The highly collaborative and open process was a unique opportunity to unlock the full breadth of our design-build healthcare expertise. It allowed us to focus our resources on Project needs and Fraser Health requirements, while ensuring value for taxpayer's dollars. Looking forward, EllisDon is committed to working with Fraser Health to make this important Project a success for all stakeholders."

FIGURE 4: CONTRACTUAL RELATIONSHIPS



[2] A schedule of payments by the Government can be found in the redacted Design-Build Agreement. This amount includes the amount paid under the design early works agreement.

6.2 Responsibilities of Design-Builder

The design-builder has an obligation to design and construct the Project in accordance with the requirements set out in the DBA for Phase Two.

Key features of the DBA include:

- design and construction of the ACT, including integration of the various building components with each other;
- completion of preliminary works prior to commencement of construction of the ACT, including demolition of existing buildings, and construction of interim spaces to allow the RCH campus to remain fully operational throughout construction;
- Fraser Health making progress payments during construction, subject to performance holdbacks;
- allocation of risks to the party best able to manage them. Risks allocated to the design-builder include design, construction schedule and cost; and
- requirement for the design-builder to provide a two-year extended warranty for the Project.

Under the terms of the CMA for Phase Three, EDDB is responsible for providing design and CM services for the renovation scope including upgrades and expansion of the services located in the HCC and CT.

6.3 Risk Allocation Summary

The DBA for Phase Two includes detailed risk allocation provisions. The approach transfers key risks to the design-builder, such as design, construction, cost and schedule, and adds value through design and construction integration and private sector innovation.

Key Project risks and their allocation under the DBA are summarized below.

TABLE 4: RISK ALLOCATION UNDER DBA

RISK	RETAINED BY FRASER HEALTH	TRANSFERRED TO EDDB
Construction including cost and schedule		✔
Design including errors or omissions		✔
Geotechnical		✔
Life cycle	✔	
Maintenance	✔	
Escalation during construction		✔
Latent defects	✔	✔
Undisclosed hazardous materials	✔	
Fraser Health-supplied equipment	✔	
Fraser Health-driven scope changes	✔	

Risk allocation under the Construction Management Agreement is summarized below.

TABLE 5: RISK ALLOCATION UNDER CMA

RISK	RETAINED BY FRASER HEALTH	TRANSFERRED TO EDDB
Construction including cost and schedule	✔	
Design including errors or omissions		✔
Escalation during construction	✔	
Undisclosed hazardous materials	✔	
Fraser Health-driven scope changes	✔	

7. Ongoing Project Monitoring

The DBA includes specific provisions to ensure Project delivery, performance and quality standards are met. Monitoring spans every phase of the Project, from contract execution through design and construction to total completion.

7.1 Project Governance

A Project Board has been established to provide guidance and oversight for the implementation of Fraser Health's major capital projects including this Project. Members of the Project Board include representatives from Fraser Health, MoH, and Infrastructure BC.

Fraser Health has assembled an integrated project management team responsible for implementing the Project through design, construction, and transition into the operating period. This team reports through a chief project officer to the Project Board.

7.2 Design and Construction Phase

The DBA stipulates that each of Fraser Health and EDDB must appoint design and construction representatives. The Fraser Health representative is supported by a team of professionals (e.g., architects, engineers, lawyers) who, together, will have full access to the construction site, drawings and specifications, and will report observations to the Project Board regularly through the chief project officer. The EDDB representative serves as a key point of contact for Fraser Health during design and construction.

In addition, an Integrated Project Review Committee (IPRC) has been formed. The IPRC formalizes communications between Fraser Health and EDDB with the purpose of providing a formal forum for the parties to consult and cooperate on all matters relating to the Project during construction.

In support of the monitoring activities, Fraser Health and EDDB have also jointly appointed an independent certifier who will monitor and report on construction progress and provide certification that the conditions for payment have been achieved.

7.3 Quality Management

The DBA is structured to incentivize EDDB to ensure delivery, performance, and a high-quality solution. EDDB is required to implement a quality management system that complies with the requirements and principles of the quality standard ISO 9001, as well as other specified standards. The Project team will conduct quality audits as construction progresses to provide assurance that quality requirements are being met.

8. Glossary of Terms

Business Case: A contract that sets out the requirements for the delivery of a project under a partnership delivery model in terms of cost, schedule and performance that typically governs the performance-based payment to a private partner.

Construction Management Agreement: A contract that sets out the requirements for the provision of construction management services by a construction manager. For Phase Three, the construction manager's scope also includes providing design services.

Project: Phases Two and Three of the Royal Columbian Hospital redevelopment project.

Project Board: The Fraser Health Capital Project Board has been established to provide guidance and oversight for the implementation of Fraser Health's major capital projects.

Request for Proposals (RFP): The document issued by a project owner as the second stage of the procurement process for qualified proponents to submit proposals to deliver a project.

Request for Qualifications (RFQ): The document issued by a project owner as the first stage of the procurement process inviting interested parties to submit their qualifications for delivering a project.

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