



Riding Mountain
National Park

Parks Canada Agency Terms of Reference

Riding Mountain National Park Canada Visitor Centre Renewal

September 14, 2018



Parks
Canada

Parcs
Canada

Canada



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1 PROJECT DESCRIPTION

1.1 GENERAL

1.1.1 PURPOSE OF TERMS OF REFERENCE (TOR)

Parks Canada Agency (PCA) requires the services of an architectural firm (with demonstrated expertise and experience in heritage conservation), for the provision of services required for this project. The work of the Prime Consultant is to be coordinated with the work produced as a result of a separate contract for exhibit design.

1.1.2 PROJECT INFORMATION

PROJECT INFORMATION	
Project Title:	RMNP Visitor Centre Renewal
Project Location:	Riding Mountain National Park Visitor Centre, Wasagaming, MB.
Solicitation Number:	
Contract Number:	
Contracting Officer:	
Departmental Representative:	

2 PROJECT CONTEXT

2.1 PROJECT REQUIREMENTS

2.1.1 PROJECT REQUIREMENTS

- .1 Heritage: Ensure protection of Cultural Resources and Heritage Character Defining Elements in accordance with the *Parks Canada Cultural Resource Management Policy [2013]* and the *Standards & Guidelines for the Conservation of Historic Places in Canada [2nd Ed]*;
- .2 Fire & Life Safety: Update Fire and Life Safety systems in accordance with the *National Fire Code of Canada [2015]*;
- .3 Electrical: Upgrade electrical systems in support of new mechanical equipment and facilities described elsewhere in the contract documents.
- .4 HVAC: Replace the existing forced air heating system with a new ground source Heat Pump system to provide heating and air conditioning for the entire building including new HVAC controls. A geotechnical study, available upon award of contract, has been completed for a nearby areas and may help inform the design approach. A concept system plan is provided in the *Riding Mountain National Park Visitor Centre Concept Design Brief* .
- .5 Plumbing: Upgrade the plumbing systems to suit the facilities described elsewhere in the contract documents.
- .6 Domestic Hot Water: Replace the existing water heater with a unit fed by the



ground source Heat Pump system and sized to suit the systems described elsewhere in the contract documents.

- .7 Roof Assemblies: Replace existing cedar shake and flat rolled roofs while improving roofing insulation and building envelope performance including installation of new air, vapour and moisture barriers. The existing flat roof will be replaced with a new membrane covered roof with a least 2/12 pitch. A FBHRO recommendation has already been received for this portion of the roof assembly. The purpose of roof assembly improvements is to minimize heating and cooling requirements, increase occupants comfort, and minimize size and cost of the new HVAC equipment. Roof assembly improvements are to be designed in accordance with recommendations detailed in the *Visitor Centre Building Envelope Condition Assessment [2018]*, available upon award of contract, and as follows:
 - Construction Methodology: Work to be done from above for sloped roofs;
 - Ventilation: Sloped roofs are to be designed as cool roofs incorporating a ventilated cavity between the top of insulation and the underside of roof sheeting.;
 - Insulation: Outboard vapour permeable insulation is preferred. Polyurethane spray foam insulation shall not be used. The effective insulation value (R-value) of the roof assemblies shall be at no less than RSI 3.52 (R20).
 - Roof Assembly: The design shall minimise total assembly thickness in order to minimise impact on existing roof features. The eaves and fascias will be modified to suit final roof thickness.
 - Air/Vapour Control: Vapour control and weather resistive barrier membranes are to be installed on the roofs to reduce air infiltration, vapour transmission, and moisture infiltration.
- .8 Building Envelope: Install high quality, commercial grade weather stripping on all of the exterior doors to reduce air infiltration.
- .1 Storm windows will be constructed by PCA Restoration Workshop and is not be part of this contract.
- .9 Repairs and Maintenance: Review building condition and incorporate required repair and maintenance into the construction documents. The *Visitor Centre Condition Assessment Report [2017]*, available upon award of contract, indicates repairs and maintenance is required for interior finishes, flooring, millwork, exterior cladding, exposed log ends and chinking, exterior masonry, exterior windows, roofing, ground floor timber framing, exterior lighting fixtures, plumbing system, exterior landscape features, grading, and plantings.
 - .1 The consultant shall perform the necessary site investigations to confirm scope and extent of repairs and maintenance requirements. The consultant will present a preliminary Repair and Maintenance Strategy in table form including class "C" cost estimates for review and approval at the time of the first design submission. Exploratory openings will be prepared by PCA maintenance staff as directed by the consultant.
 - .2 Repairs are to be completed with materials matching existing and suitable for the new occupancy as described elsewhere in the contract documents.



- .3 Masonry repairs and repointing will be done by PCA Restoration Workshop and is not be part of this contract.
- .10 Washrooms: Renew existing ground floor accessible washroom and provide a larger gender neutral washroom facility (in the room formerly occupied by a retail outlet) designed to suit the new occupancy described elsewhere in the contract documents. The approved locations and general design/layout of the washroom facilities are provided in the *Riding Mountain National Park Visitor Centre Concept Design Brief*.
- .11 Event Space: Transform the existing Theatre and nearby spaces into a multi-functional revenue generating event space complete with serving kitchen, improved washroom facilities, circulation and egress. The space must be designed to accomodate the maximum occupancy of 216 individuals. The capacity of the existing ground floor structure must be assessed and improved to suit the increased occupancy. The approved locations and general design/layout of the space is provided in the *Riding Mountain National Park Visitor Centre Concept Design Brief*.
- .12 Exterior Facilities: Provide an exterior verandah including an overhead structure and exterior furniture. The approved locations and general design/layout of the deck is provided in the *Riding Mountain National Park Visitor Centre Concept Design Brief*.
- .13 Accessibility: Upgrade the RMNP Visitor Centre to address the following in accordance with Treasury Board Policy and CSA B651-14:
 - .1 Develop a holistic accessibility strategy for the Visitor Centre.
 - .2 Re-design the south entrance to make it accessible in accordance with all codes and policies. The south entrance is to be made the main entrance to the building.
 - .3 Improve all exterior stairways to comply with applicable codes and policies.
- .14 Landscape and Site development: Review the concept landscape plans and develop a schematic design for the preferred site develop option including class "C" cost estimate. The site development plan must be considered when designing improvements for enhanced accessibility of the building. The preferred concept design option is provided in the *Riding Mountain National Park Visitor Centre Concept Design Brief*.

2.2 INFORMATION

2.2.1 USER DEPARTMENTS

- .1 The User Departments referred to throughout the Terms of Reference (TOR) are Parks Canada Agency (PCA) and Riding Mountain National Park of Canada (RMNP).
- .2 PCA Mandate: On behalf of the people of Canada, we protect and present nationally significant examples of Canada's natural and cultural heritage and foster public understanding, appreciation and enjoyment in ways that ensure their ecological and commemorative integrity for present and future generations.
- .3 Riding Mountain National Park Visitor Centre Significance:



“The Visitor Centre (VC) at Riding Mountain is a picturesque rustic log and stone building with Tudor inspired decorative elements. The VC is valued for its aesthetic design, very good functional design, and its excellent craftsmanship and materials. It was purposefully intended as a conspicuous landmark for Riding Mountain National Park of Canada.

The character-defining elements of the Visitor Centre include:

- The whole of its exterior, interior and grounds – the continuity between the three was an essential element of the original design, and continues to give the building its significance.
- The one-and-a-half storey log and stone structure, placed on concrete foundations faced with stone.
- The use of bearing log construction.
- Decorative Tudor elements – decorative rafter tails bracketing the eaves, false half-timbering of the stuccoed gables, leaded casement windows, stone and brick chimneys.
- Interior peeled log truss system with unique pole siding finish on the sloping roof surfaces
- The surrounding landscape enhances the picturesque quality of the building’s design and still retains remnants of the 1930’s formal garden.
- The relationship of the building to its parkland site remains intact and this notion is important in the creation of any new additions and in respecting heritage character.

.4 Key issues facing RMNP Visitor Centre:

- .1 Renewing the Relevance of the Visitor Experience Program and Increasing Attendance.
- .2 Telling Broader Stories – ‘Riding Mountain is Home’.
- .3 Partnering and Collaborating with Others.
- .4 HVAC Systems Upgrades including Climate Control.

2.2.2 EXISTING CONDITIONS

- .1 Riding Mountain National Park (RMNP) Visitor Centre was constructed in 1933. A PCA Condition Assessment was completed in 2017 and will be available to the successful bidder for review.
- .2 The RMNP Visitor Centre comprises one designated building and adjoining grounds;
 - .1 The RMNP Visitor Centre was designated a “Classified” heritage building by the Federal Heritage Building Review Office (FHBRO).
 - .2 A major renovation of the building HVAC systems and structure was undertaken in the 1990s.

2.2.3 CONSTRAINTS/CHALLENGES/STAKEHOLDERS

- .1 The building is a designated heritage building and is subject to stringent policies to ensure the protection of the integrity of heritage character.



- .1 The Visitor Centre is designated “Classified” by the Federal Heritage Building Review Office (FHBRO).
- .2 Interventions to “Classified” buildings must be submitted to FHBRO for review. (See 2.3 Schedule). PCA will submit consultant package as required.
- .3 Conservation advice must be sought from Cultural Resource Management (CRM) and Built Heritage for interventions to heritage buildings.
- .2 Construction schedule as presented in TOR has fixed start and end dates.
- .3 Presented concept has been generated as a result of an internal options analysis and has been submitted by PCA to FHBRO for review. An additional submission upon completion of Design Development/Contract Documentation is required.
- .4 PCA has retained an Exhibit Design Consultant to redesign the exhibitry throughout the whole facility. The consultant shall coordinate with the Exhibit Design Consultant to ensure continuity of design and construction processes throughout the life of the project.
- .5 PCA Departmental security officer review of security system may be required.

2.2.4 HAZARDOUS MATERIALS

- .1 A Designated Substance Report has been completed by PCA. Asbestos was not found but due to the log construction and historic nature of the building the presence of hazardous materials may not be completely understood and could be discovered on site.
- .2 The Consultant must:
 - .1 Review the Designated Substance Report (DSR);
 - .2 Coordinate with any additional abatement consultants and/or contractors working on site.
 - .3 Advise PCA of any additional suspected hazardous materials observed during investigations.
 - .4 Should hazardous material be discovered the consultant shall include abatement in the scope of Construction Documents;

2.3 OBJECTIVES

2.3.1 GENERAL GOALS

- .1 Ensure the design is efficient and cost effective considering both construction cost and operation & maintenance costs over a life cycle of 30 years, taking into account time value of money.
- .2 Meet or exceed the service obligations and project expectations indicated in this TOR.
- .3 Develop a well-organized and highly communicative working relationship with the key stakeholders in the Project.
- .4 Consultants must work with all disciplines in an Integrated Design manner such that all disciplines are involved early and provide input; engineering input begins with commentary on existing conditions.



- .5 Review PCA proposed concept designs; develop detailed design and construction documents.

2.3.2 FUNCTIONAL REQUIREMENTS

- .1 The functional requirements described in *Riding Mountain National Park Visitor Centre Concept Design Brief* and the *Riding Mountain National Park Visitor Centre Needs & Approach Analysis*, available upon contract award, must be fully resolved by the Consultants' proposed solution for the project.
- .2 The Consultant will need to work with the User Departments to best integrate the functional requirements with any budget and functional limitations.
- .3 Where any compromises in the functional requirements are necessary, options must be explored and all findings highlighted in a revised Design Brief.

2.3.3 DESIGN PERFORMANCE

- .1 Provide a final design that meets the functional needs of PCA and RMNP as indicated in the functional requirements and PCA Design exploration and that:
 - .1 Respects the natural environment and the historic context of Wasagaming.
 - .2 Meets or exceeds the requirements of the National Building Code of Canada (2015).
 - .3 Will endure and remain serviceable for its unique purpose by:
 - .1 Incorporating suitable materials that are of a high quality, durable and are constructed with the best workmanship possible;
 - .2 Fully integrating all components and systems, including architectural, structural, mechanical, electrical, IT, (multi-media and furnishing will be part of the exhibitry contract; however this consultant will have to work with the exhibit firm) equipment and security design; and
 - .3 Welcoming access by visitors while respecting security requirements.
- .2 The building must:
 - .1 Provide a healthy and safe working environment that meets or exceeds all codes for fire, health, and life safety, including the Canada Labour Code, that fully supports optimum work productivity;
 - .3 Fully integrate and optimize the performance of components and systems;
 - .1 Incorporate contemporary sustainable design principles and implement work in an environmentally responsible manner;
 - .2 Design for ease of maintenance, with systems that can be accessed and easily repaired and / or replaced during the building's life cycle;
 - .3 Provide safety for occupants;
 - .4 Provide integration with User systems for security and information services.
- .4 The Design Solution must respect the Standards and Guidelines for the Conservation of Historic Places in Canada:
<http://www.historicplaces.ca/en/pages/standards-normes.aspx>



- .1 It is anticipated that the proposed intervention will be considered primarily to be a “Rehabilitation” treatment.
- .2 General standards 1-9 and 10-12 for Rehabilitation apply.
- .5 Design Submittals for the building must take into account the Heritage Character Statement for that building, available upon award of contract.

2.3.4 PROJECT DELIVERY

- .1 The project is to be delivered using Design Bid Build.
- .2 The Consultant is to design the project so that it can be delivered within the total identified budget.
- .3 The Consultant is to deliver the project within the key milestones and according to the project schedule;
- .4 Each Consultant team member shall be expected to understand the project requirements, for seamless delivery of the required services.
 - .1 Ensure co-ordination of services with other consultants hired by PCA.
 - .2 Ensure the use of a rigorous internal quality management plan.
- .5 Provide complete tender package including drawings and specifications.

2.4 SCHEDULE

2.4.1 GENERAL

- .1 Deliver the project to be ready for occupancy in accordance with the project milestone listing identified below.
- .2 Completion dates shown are relative to an assumed letter of intent to proceed of January 15, 2019.
- .3 Prepare a Project Schedule, in accordance with the milestone list.



2.4.2 ANTICIPATED MILESTONE DATES

PROJECT PHASE	COMPLETION DATE
Consultant Contract Award	January 15, 2019
Design Document Review	
Design Submission PCA Review, heritage only	February 13, 2019
FHBRO Submission (PCA)	
Design Submission to FHBRO	February 21, 2019
Design Development Service	
Design Development Submission	March 22, 2018
Design Development Submission PCA Review, Heritage, FHBRO (overlaps with Construction Documents)	March 27, 2019
Construction Documents Service	
50% Construction Documents Submission	February 26, 2019
99% Construction Document Submission	April 9, 2019
Heritage and FHBRO Review	April 9, 2019
Final revisions, tender documents to PCA Real Property Contracting	May 17, 2019
Construction Tender open	July 16, 2019
Construction Tender Close	August 24, 2019
Award	September 13, 2019
Construction Start	September 14, 2019
* Substantial Completion of Construction	March 1, 2020
Final Inspection and Acceptance	March 31, 2020
Post Construction Warranty Evaluation	March 31, 2021

* Denotes MANDATORY DATES - All other dates are to be validated by consultant.

2.5 COST

2.5.1 CONSTRUCTION BUDGET

- .1 The construction estimate also includes Project Management fees, administration costs, Consultant fees, Risk Allowance, Escalation and GST and is in 'Budget-Year (Current)' dollars.

2.5.2 ESTIMATED CONSTRUCTION COST

- .1 The estimated construction cost (including GST), is anticipated at this time to be \$1.7 million.

2.6 EXISTING DOCUMENTATION

2.6.1 AVAILABLE FOR THE CONSULTANT

- .1 Limited as-built drawings will be available and the Consultant will be responsible for verifying the accuracy of the information.

2.6.2 AVAILABLE FOR THE CONSULTANT UPON CONTRACT AWARD

- .1 The Consultant will be provided with AutoCAD scaled floor plans and elevations of



the buildings.

- .1 The Consultant will be responsible for verifying the accuracy of the information.
- .2 Visitor Center Riding Mountain National Park 2017 Condition Assessment
- .3 Visitor Experience Strategy 2017
- .4 RMNP VC Needs and Approach Analysis, 2018
- .5 RMNP VC Concept Design Brief – Riding Mountain is Home, 2018
- .6 RMNP VC Building Envelope Condition Assessment, 2018
- .7 Designated substance report, 2018
- .8 Site Survey
- .9 Review of Fire Suppression System
- .10 Utility Locations.

2.6.3 DISCLAIMER

- .1 Reference information will be available in the language in which it is written.
- .2 The documentation may be unreliable and is offered, “as is” for the information of the Consultant.

2.7 CODES, ACTS, STANDARDS, REGULATIONS

2.7.1 GENERAL

- .1 The Authorities Having Jurisdiction (AHJ) on this project are:
 - .1 The Field Unit Superintendent (FUS) is the Project Sponsor.
 - .2 The Visitor Experience Manager is the Project Lead.
 - .3 The Project Coordinator is the Departmental Representative.
 - .3 Treasury Board of Canada accessed through the Departmental Representative.
- .2 The Consultant must identify, analyze and design the project in accordance with the requirements of all AHJs and all applicable Codes, Acts, Standards and Guidelines and Legislation.
 - .1 The consultant team must be fully versed with the legislation and requirements that are unique to Federal Government buildings in Canada.
 - .2 The consultant team must be fully versed with the legislation and requirements that are unique to Federal Government projects tendered through PCA.
- .4 Treasury Board Policy.

3 REQUIRED SERVICES

3.1 GENERAL REQUIREMENTS

3.1.1 SERVICES

- .1 Site Investigation Services



- .2 Design Development Services;
- .3 Construction Document Services;
- .4 Tender Services;
- .5 Construction Support Services;
- .6 Post Construction Services.

3.2 PROJECT REVIEW AND ACCEPTANCE

3.2.1 GENERAL

- 1. The design is to comply with all applicable laws and regulatory requirements as required by the General Conditions of the Contract.

3.2.2 FEDERAL GOVERNMENT

- .1 The federal authorities having jurisdiction over this project are:
 - .1 Treasury Board of Canada;
 - .1 The proposed project is part of an approved program of work.
 - .2 Federal Heritage Building Review Office (FHBRO);
 - .1 The purpose of this review is to consider impact on heritage character on “Classified” heritage buildings,
 - .2 Submissions will be prepared by the consultant and coordinated with by the Departmental Representative,
 - .3 Expected turnaround time for review is 3 weeks, and
 - .4 For each review, provide submission plus any follow-up submissions.

3.2.3 OTHER REVIEWS

- .1 The PCA project delivery team review includes both technical and heritage reviews to support acceptance of submissions:
 - .1 The purpose of this review is technical quality monitoring considering the project Terms of Reference (TOR) supporting documents, and existing documentation provided to Consultant;
 - .2 Expected turnaround time is 1 week; and
 - .3 For each review, Consultant is to provide submission plus requested follow-up clarification documents.

3.2.4 PROVINCIAL, TERRITORIAL AND MUNICIPAL AUTHORITIES.

- .1 The federal government defers to provincial and municipal authorities for specific regulations, standards and inspections but in areas of conflict, the more stringent authority prevails.
- .2 The Consultant will work with the DR in submitting for any required permits.

3.3 REVIEW OF DESIGN DOCUMENTS

3.3.1 GENERAL

- .1 The Consultant Team will review all available project information, consult with the





Departmental Representative, and review the PCA design solutions in the approved Needs Analysis and Conceptual Design Reports, and consult with the Departmental Representative. (who reserves the right to select the final option).

3.3.2 SCOPE & ACTIVITIES

- .1 The Consultant shall:
 - .1 Chair and minute bi-weekly meetings;
 - .2 Review project requirements, challenges, concerns and risks.
 - .3 Identify potential base building modifications to support fit-up, operational and service infrastructure, including all:
 - .1 Required special conditions to support the project program including those not identified in the contract documents,
 - .2 Security, acoustic and fire separation requirements,
 - .3 Potential Occupational Health and Safety Requirements upon occupancy due to operations or maintenance,
 - .4 Advice regarding IT requirements will be provided by the PCA Regional IT specialist.
 - .4 Conduct a building analysis to include the following;
 - .1 Visit the project site;
 - .2 Identify any challenges or potential additional work including potential impact on project scope, schedule and costs;
 - .3 Review Heritage Conservation considerations, supporting design standards and approach;
 - .4 The Consultant team is to review and respond to Section 1, The Conservation Decision Making Process of the *Standards and Guidelines for the Conservation of Historic Places in Canada*.
 - .5 Confirm the included code analysis of the Visitor Centre in relation to the National Building Code of Canada. Include floor area, construction type, occupant load and an analysis of exiting.
 - .6 Review the Condition Assessment and PCA reports demonstrating the following:
 - .1 Analysis of the accepted options to meet the functional and technical requirements for the project.
 - .1 Explore adding an interior or exterior vestibule to the building as outlined in the attached design drawings.



- .2 Recommend the preferred option by;
 - .1 Documenting potential conflicts, concerns, challenges and risks for each option
- .7 Update the budget, schedule and identify any conflicts that will need to be addressed with respect to scope, quality, schedule, cost;
 - .1 Prepare a Class 'C' Cost Estimate for the selected option.
- .2 Out of this process one option will be selected as the basis to proceed to Design Development.

3.3.3 DELIVERABLES

- .1 Agenda and Minutes complete with Issues, Decision and Action items from the Design Review stage.
- .2 Written response to formal reviews or written comments provided by Departmental Representative.
- .3 Prepare a submission of one option to FHBRO for review.
 - .1 The submission must explain the design process in relation to the Standards and Guidelines for Conservation of Historic Places in Canada.
 - .2 The FHBRO submission must explain the rationale of option exploration, convey the evaluation criteria and why the successful option was chosen.

3.4 DESIGN DEVELOPMENT

3.4.1 GENERAL

- .1 The Consultant Team is to further develop the selected Schematic Design option for refinement and deliver a Design Brief, in sufficient detail to facilitate design approval, confirm code compliance and obtain authorization to prepare the Construction Documents.

3.4.2 SCOPE AND ACTIVITIES

- .1 The Consultant shall:
 - .1 Chair and minute bi-weekly meetings;
 - .1 Participate in Value Engineering sessions as required;
 - .2 Further develop the selected design option;
 - .3 In addition; expand the intent for each design discipline to complete the Design for this project;
 - .1 Develop coordinated multi-disciplinary preliminary Design Drawings including:
 - .1 Plans, sections, furniture layouts, room layouts and service requirements.
 - .2 Reflected ceiling plans.
 - .3 Select large scale details.
 - .4 Partition requirements, complete with identified Fire Resistance, Acoustic, and Security requirements.



- .2 Review design against all applicable statutes, regulations and by-in support of a detailed code analysis;
 - .1 If required to support the design, prepare alternate solution submission for approval by Authorities having Jurisdiction; and
 - .2 Present / submit the design for review and comments to the local planning authority having Jurisdiction.
 - .3 Develop an energy simulation model and a heating/cooling load analysis of the building using industry recognized software to adequately size the HVAC equipment.
- .4 Develop outline specifications for all systems and main components and equipment, including update to establish performance criteria. Include;
 - .1 A waste diversion plan for the waste materials from the project site in a spreadsheet format to be incorporated into the Construction/Demolition Waste Management and Disposal NMS specifications.
 - .2 Applicable manufacturers' literature for all proposed systems and principle components and equipment, including documentation to support requirement for open, fair and transparent procurement.
- .5 Review, validate and update the design in support of the Heritage Conservation review comments from FHBRO;
- .6 Develop the:
 - .1 Preliminary Commissioning Plan in support of CSA Z320 and ASHRAE Standard 202.
- .7 Update the:
 - .1 Project Schedule.
 - .2 Project Requirements.
- .8 Confirm:
 - .1 Constructability of the project;
 - .2 Design compliance considering requirements identified in the PCA reports and updated in the Design Brief;
- .9 Prepare a Class 'B' cost estimate;
- .10 Provide a risk analysis based on dialogue with the DR.

3.4.3 DELIVERABLES

- .1 Agenda and Minutes complete with Issues, Decision and Action Logs for bi-weekly meetings;
- .2 Design Brief (draft and final) for review and acceptance by the Departmental Representative. Revise as required for acceptance.
- .3 Written response to formal reviews or written comments provided by Departmental Representative.



3.5 TENDER DOCUMENTS

3.5.1 GENERAL

- .1 The objective of this stage is to translate the developed design into tender drawings and specifications for the purpose of public tendering.
- .2 The Consultant shall prepare all specifications in NMS format.
- .2 The Consultant must obtain written authorization from the Departmental Representative before proceeding with Tender Documents.
- .3 Prepare one (1) tender package.
- .4 Ensure clear, concise and fully co-ordinated interdisciplinary tender package.
- .5 The Consultant will prepare a Project Log to track all approved decisions.

3.5.2 SCOPE AND ACTIVITIES

- .1 The Consultant shall:
 - .1 Create tender documents,
 - .1 Design according to the budget and schedule,
 - .2 Participate in Value Engineering sessions;
 - .3 Prepare documents in support of accepted Design Brief and Commissioning Plan;
 - .4 Provide updated energy simulation and heating/cooling load analysis including estimated annual energy cost using current energy cost for the project location;
 - .5 Develop outline specifications for all systems and principle components and equipment, including update to establish performance criteria. Include;
 - .1 Construction/Demolition Waste Management and Disposal NMS specifications;
 - .2 Commissioning specifications, PI/PV forms, training plans and integrated systems testing; include PI/PV forms within applicable sub-sections of the specifications;
 - .3 Applicable sections to support the accepted design;
 - .4 Develop the: Commissioning Plan in support of CSA Z320 and ASHRAE Standard 202.
 - .5 Develop generic Commissioning test and verification sheets to support the Commissioning Plan;
 - .2 Prepare a Class A estimate complete with a cost breakdown by division for review of bids and comparison with the successful Contractor's cost breakdown;
 - .1 Apply a process of continuing cost control, with increasing level of detail during production of contract/construction documents,
 - .1 At each review, prepare an up-to-date estimate demonstrating compliance with the Construction Cost Plan,



- .2 Non-compliance will require revisions to the contract documents,
- .3 Participate in the risk management process;
- .4 Update Project Log tracking approved major decisions;
- .5 Support Departmental Representative to resolve issues raised by FHBRO or other governmental authority officials raise, and adjust Tender Documents as required;
- .6 Update the schedule;

3.5.3 DELIVERABLES

- .1 50% and 99% complete Tender Documents (as required with all code requirements clearly documented) including but not limited to the following:
 - .1 A Class “B” Estimate
 - .2 An updated project schedule;
 - .3 Tender Drawings;
 - .1 Drawings should reflect 50% and 99% completeness with all Plan, Elevation, Details, and Sections shown.
 - .4 Specifications edited to support project requirements including:
 - .1 Index to specifications;
 - .2 Draft Division 1 (to be provided by PCA);
 - .3 Draft Commissioning Sections; and
 - .4 Project applicable Specifications.
- .2 Complete Tender Documents, fully coordinated and ready for tender.
 - .1 The Consultant shall submit documents to the Departmental Representative, or any other applicable Authority having jurisdiction;
 - .2 This submission incorporates all revisions required by the review of the previous submission. The submittal shall include fully coordinated, signed and sealed;
 - .1 Tender Drawings stamped by the Architects and Engineers of Record
 - .2 Complete Specifications.
 - .3 A Class “A” Estimate
 - .4 A Bid Form
 - .5 An updated project schedule
 - .6 The Consultant must confirm in writing that:
 - .1 The documents are ready to be issued for tender; and
 - .2 A full review and coordination of the Contract Documents are complete and in accordance with professional standard of care.
- .3 Written response to formal reviews or written comments provided by Departmental Representative.



3.6 TENDER SERVICES

3.6.1 GENERAL

- .1 The object of this phase is to support the Departmental Representative with the tender.
- .2 The Contract Authority for this project is the National Contracting Services, Parks Canada Agency.

3.6.2 SCOPE AND ACTIVITIES

- .1 When requested, the Consultant will be required to;
 - .1 Provide the Departmental Representative with information required by bidders to interpret tender documents.
 - .2 Prepare addenda, in response to all questions within two (2) business days during the bidding period and submit to Departmental Representative,
 - .3 Attend pre-tender site visits,
 - .4 If PCA decides to re-tender the project, or any specific tender package, provide full services to the Departmental Representative,
 - .5 During Bid Review and Analysis, assist the Departmental Representative, as required, by analyzing and reconciling any differences between pre-tender estimates and submitted bids.

3.6.3 DELIVERABLES

- .1 Addenda and recommended responses to bidders' questions;
- .2 Written bid review and analysis; and
- .3 Issued for Construction Documents incorporating all addenda issued during the Tender Service.
 - .1 This submission incorporates all revisions required by the review of the previous submission.
 - .2 The submittal shall include:
 - .1 An updated Class 'A' cost estimate,
 - .2 An updated project schedule,
 - .3 Construction Drawings & Specifications.

3.7 CONSTRUCTION SERVICES

3.7.1 GENERAL

- .1 The object of this phase is to support the Departmental Representative with the construction phase and ensure the quality, budget and schedule of the project.

3.7.2 SCOPE AND ACTIVITIES

- .1 The Consultant shall:
 - .1 Share all project information with the Departmental Representative.
 - .1 All material specifications, mixes and test results shall be turned over to the



- Departmental Representative for future maintenance by PCA and others;
- .2 Provide Construction Administration Services including:
 - .1 Review Contractor submissions/shop drawings and requests for information;
 - .2 Update Project Log tracking approved major decisions, including those impacting project scope, budget and schedule;
 - .3 Prepare and issue a communications protocol and a submission review protocol in consultation with the Departmental Representative;
 - .4 Prepare Area Measurement and track construction quantities,
 - .5 Permits:
 - .1 Assist the Contractor and provide required documentation in order to obtain the building permit (if required). A business permit will be required for all contractors working in the Park.)
 - .2 Assist the Departmental Representative to prepare Certificate of Substantial Completion;
 - .3 Provide sign-off/recommendation in support of Occupancy Permit;
 - .6 Conduct bi-weekly Site Visits, supplemented as required to fulfil the Consultant's professional obligations to monitor the construction activities throughout the construction period;
 - .7 Monitor performance of the Contractor;
 - .8 Provide written field reviews/reports to keep Departmental Representative informed of work progress;
 - .9 Reject unsatisfactory work.
 - .10 Provide Time Management Report, based on Contractor's submissions and on-site performance;
 - .11 Provide details for evaluating the project's cost performance;
 - .12 Interpret contract documents as required:
 - .1 Furnish Supplemental Instructions/Contemplated Change Orders/Contemplated Change Notices to the Departmental Representative with reasonable promptness or in accordance with a pre-determined schedule. Documents are to be issued only to the Departmental Representative unless otherwise formally directed;
 - .2 Provide additional drawings to clarify or supplement Construction Documents;
 - .13 Arrange construction meetings, update Master Schedule, obtain detailed cost breakdown from the contractor, ensure compliance with labour laws and bylaws, provide construction inspection services, provide clarifications, measure work, provide detail drawings and examine shop drawings, monitor training.
 - .14 Review and comment on various documents such as Contractor's Progress Claims and updated schedules;
 - .1 Certify payments to the Contractor if requested.



- .15 Offer timely technical advice on all disputes and claims between PCA and the Contractor;
- .16 Authorize special tests, inspections and minor works that do not impact project cost and schedule; and
- .17 Monitor, review, witness and report on commissioning activities in support of CSA Z320 & ASHRAE 202:
 - .1 Confirm that verification sheets are appropriately completed by the contractor;
 - .2 Review commissioning schedule;
 - .3 Witness all component, system and integrated systems tests;
 - .4 Review and comment on commissioning test results;
 - .5 Provide advice and recommendations for fine tuning; and
 - .6 Finalize the Client / Users O&M Manual to reflect as-commissioned operation and maintenance of each system.
- .3 For cost services:
 - .1 Assist the Construction team with cost management advice, if requested;
 - .2 Evaluate change orders, claims, work completed and cash flow.
- .4 For Scheduling Services:
 - .1 Review contractor's monthly schedule report; report findings and recommendations to the PCA for further discussion with the Contractor.
- .5 Assist the Departmental Representative to prepare Certificate of Final Completion and provide sign-off.

3.7.3 DELIVERABLES

- .1 Bi-weekly written site visit and deficiency reports;
- .2 Project Records and Submission reviews including but not limited to;
 - .1 Signed off documents such as:
 - .1 Permits, Reviewed Claims, Certificates;
 - .2 Contemplated Change Notice (CCN), Supplemental Instruction (SI), Memorandums, etc.
 - .3 Other reports or surveys as may be requested by the Departmental Representative in support of the design.
 - .4 Final Commissioning Plan,
 - .5 Reviewed and Accepted Commissioning (Evaluation) Report.

3.8 POST CONSTRUCTION SERVICE

3.8.1 GENERAL

- .1 The purpose of this phase is to support the Departmental Representative in obtaining all final documents required for project Close Out.



3.8.2 SCOPE AND ACTIVITIES

- .1 Project Close-out Services
 - .1 Revise documentation to reflect all changes, revisions and adjustments after completion of commissioning
 - .2 Prepare Record Drawings and specifications based on Contractor's as-builts;
 - .3 Prepare and submit Final Certificate of Completion and final records.
 - .4 Review the Operations and Maintenance Manual.
 - .5 Review the integrated Commissioning Documentation.
 - .6 Prepare Post-Construction Evaluation report.
 - .7 Participate in Lessons Learned workshops if requested
- .2 Warranty Services
 - .1 Monitor and certify rectification of deficiencies before expiry of warranties
 - .2 Monitor environmental and life safety system checks to be carried out by Contractor/O&M staff before expiration of warranties
 - .3 Sign off on the Final Completion of the construction contract,
 - .4 Participate in warranty inspections with Departmental Representative and Contractor
 - .5 Provide warranty deficiency list,
 - .6 Provide Final Warranty Review report.

3.8.3 DELIVERABLES

- .1 Warranty Deficiency List
- .2 Final Certificate
- .3 As-Built and Record Drawings and As-Built Specifications.
- .4 Comments to O&M Manual
- .5 Signed final Commissioning Manual
- .6 Sign-off on Warranty

4 REFERENCE DOCUMENTS

- .1 Historicplaces.ca (FHBRO Heritage Character Statement – Riding Mountain National Park Interpretive Centre)
- .2 PCA Condition Assessment 2017
- .3 PCA Feasibility and Needs Analysis 2017
- .4 PCA Concept Design 2018
- .5 RMNP VC Building Envelope Condition Assessment, 2018



- .6 Federal Heritage Buildings Review Office, Review of Intervention Reports
- .7 3-D Autocad renderings of the Visitor Centre interior
- .8 Elevations of interior walls of the Visitor Centre

5 REGULATORY BODIES

- .1 Environmental Management Act, Government of British Columbia.
- .2 Canadian Environment Protection Act (CEPA): 1999 (CEPA 1999), Government of Canada.
- .3 Canadian Environmental Assessment Act: CEAA 2012, Government of Canada.
- .4 Canada National Parks Act: 2000, Government of Canada.

6 APPENDIX

- .1 Riding Mountain National Park – Visitor Centre – Concept Design Brief – Riding Mountain is Home – Ver 2.0