



Architectural & Engineering Services

## Appendix “A” - Project Brief

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TPOF Building 405 Code Deficiency Upgrades

1426 St. Joseph Blvd., Ottawa, Ontario, K1A 0R2

October 20, 2022



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# 1. PROJECT DESCRIPTION

## 1.1 General

### 1.1.1 Propose of Project Brief

- 1.1.1.1 Royal Canadian Mounted Police (RCMP) requires the services of an architectural firm (the “Consultant”) together with multi-disciplinary team of sub-consultants to undertake the design and construction administration and review services needed to address Building Code and Fire Code deficiencies required for this project.

### 1.1.2 Project Information

- 1.1.2.1 Project Title: Technical and Protective Operations Facility (TPOF) Bldg. 405 Code Deficiency Upgrades
- 1.1.2.2 Location of Project: 1426 St. Joseph Blvd., Ottawa, Ontario, 1KA 0R2

### 1.1.3 The Project Brief and RCMP’s Project Delivery Manual

- 1.1.3.1 The Project Brief describes project-specific requirements, services and deliverables while the Project Delivery Manual (PDM) document outlines project administration, documentation, delivery and definitions common to all projects.
- 1.1.3.2 The Project Brief must be used in conjunction with the PDM, as the two documents are complementary.
1. In the case of a conflict between the two documents, the requirements of the Project Brief override the PDM document.

## 1.2 Background Information

### 1.2.1 User Department

- 1.2.1.1 The User Department, referred to throughout the Project Brief, is The Royal Canadian Mounted Police (RCMP).
1. RCMP Mission: The RCMP is Canada's national police service. Proud of our traditions and confident in meeting future challenges, we commit to preserve the peace, uphold the law and provide quality service in partnership with our communities.

### 1.2.2 RCMP Needs and Existing Conditions

- 1.2.2.1 RCMP acquired Building 405 at the Technical Protective Operations Facility (TPOF), located in Ottawa, Ontario, from DND in 1995.

Since then a multitude of operationally necessary but independently planned renovations have been undertaken.

The cumulative impact of the renovations is that the building no longer meets the prescriptive requirements of the applicable National Building Code of Canada (NBC) and National Fire Code (NFC). More importantly, the current configuration of the building does not provide the required level of life and fire safety, potentially exposing occupants to serious risk.

Morrison Hershfield was engaged in 2019 to conduct a study to identify issues of non-compliance with applicable codes resulting in a report titled “*Building 405, Fire and Life Safety Code Review, Non-Compliant Code Issues and Options Report*” dated April 2020. This document makes significant references to this report.

The report provides analysis of all Code related issues, details specific deficiencies and identifies the following significant life safety and property protection risks in Building 405:



- Risk of occupants being exposed to fire and smoke during evacuation:
  - Two commonly used internal stairs E and F providing egress from the second floor do not conform to Code requirements as exit stairs and do not provide a continuous exit path to the exterior. The path of travel leading to an exit is through the “garage” which exposes occupants to unacceptable risk of exposure to fire and smoke.
  - Several current egress paths significantly exceed the permitted travel distance to an exit. These conditions may lead to delayed egress and injury to persons in case of a fire event.
- Risk of occupants not having access to a 2<sup>nd</sup> exit:
  - With specific exceptions in the Code, occupants in all areas of a building must have a choice of two paths to exit a building. If an occupant in some areas of 405 finds that their first choice of exit is obstructed by smoke or fire, and they do not have a valid security access card on their person, there is risk they will not be able to gain access to another safe exit due to security door hardware and location of exits. In case of a fire event, this may lead to entrapment or delayed egress, thus incurring risk of injury.
- Risk of occupants being exposed to a fire starting in the repair garage:
  - The repair garage in Building 405 currently accommodate the Post- Garage and is used to complete in-house repairs or modifications to the NHQ and National Division Fleet of vehicles.
  - Due to its functionality and the activities on going within this space, a repair garage has greater fire hazards than other areas in this building, including the parking/storage garage area. If a fire starts in the repair garage (which is currently open to the parking/storage garage) then the smoke and hot gases will likely spread throughout the garage.
  - Currently the assumed exit path from Interior Stairs E and F lead through the open garage thus exposing occupants using this non-conforming exit route to smoke and fire from any source of combustion in the repair or storage garage. This may lead to delayed egress and injury to persons in case of a fire event.
- Risk of fire growth and fire spread leading to structural collapse of overall building:
  - Building renovations over the years have not been compliant with Code requirements resulting in a lack of continuity of fire walls and unprotected (not fire proofed or unrated) floor assemblies
  - Discontinuities in the firewall construction in conjunction with unrated floor assemblies and supporting structure may lead to fire spread throughout the building, leading to collapse of the unrated floor assemblies and supporting construction. This poses a risk to firefighters and to protection of property.

Current Canada Occupational Health and Safety Regulations require that this existing building meets the National Building Code to the full extent feasible. The Treasury Board Fire Protection Standard requires that the building meet the National Fire Code throughout its life cycle. Failure to meet these legislative and policy requirements carries a liability if there is injury or damage caused or made worse by the deficiencies in the existing building.



- 1.2.2.2 The observed deficiencies in the building are not considered an immediate risk to life safety under normal conditions, however in a fire emergency or other emergency requiring evacuation, they may contribute to a serious life safety or property protection risk. The main characteristics of the building are it is two-storey multi purpose operational building occupied 24/7. It is the main operations and administration building at the TPOF campus and accommodates many critical operational and administrative functions. This building accommodates office space, workshops, interior parking/storage area and a repair garage.
- 1.2.2.3 Depending on the final design solution, it is anticipated that most of the work will be conducted on the interior of Building 405 with the exception of possible new exit doors or additions to accommodate next exit stairs.
- 1.2.2.4 The interior exit stairs are within the center of the building.

### **1.2.3 Constraints and Challenges**

- 1.2.3.1 The Consultant must become familiar with the project site and obtain local information as required.
- 1.2.3.2 The Consultant must obtain security clearances for all the firm's personnel as well as any sub-consultants.
- 1.2.3.3 All site visits must be arranged through the Departmental Representative.
- 1.2.3.4 The construction on the project will be performed during the full operation of the facilities:
  1. Project phasing must be planned to ensure that disruption to the daily operation of the facilities is kept to a minimum.
- 1.2.3.5 Work must be carried out during normal working hours, when the facility is fully occupied and operational with the exception of activities that generate excessive noise, dust or fumes.
- 1.2.3.6 The Consultant may be required to coordinate the scope of work and drawings with other stakeholders, as directed by the Departmental Representative.
- 1.2.3.7 The in-service date for the RCMP is scheduled for March 31, 2024.
- 1.2.3.8 The Consultant must complete an inventory of existing equipment and furniture for re-use in the Pre-Design phase.
- 1.2.3.9 Long lead-time items: to be identified by the Consultant. The following is a potential list:
  1. Door frames, doors and hardware.
  2. Office furniture and equipment components procured by the RCMP using Consolidated Procurement Instruments (CPI).
- 1.2.3.10 Environmental conditions must be kept under control during all phases of the work.
- 1.2.3.11 The project scope must be tailored to meet the RCMP's budget. Diligent cost estimating and cost control is required.
- 1.2.3.12 Consultant's key personnel must be available to respond to emergencies within 24 hours.
- 1.2.3.13 Align all constraints and challenges with PM's Risk Management Plan – if available.
- 1.2.3.14 Maintain program integrity and ensure continuous means of exiting the building from all areas, temporary works may be required.
- 1.2.3.15 Temporary facilities will be required to accommodate existing functions, which may have to be modified to accommodate the work.
- 1.2.3.16 Correction of identified code deficiencies should take priority over other proposed renovations or alterations.
- 1.2.3.17 Existing structure and building configuration may limit possible solutions.
- 1.2.3.18 Code requirements for exiting to ensure egress (life safety) of occupants must take precedence over security considerations. Security policy, procedures and technology in support of physical security must be respected but may have to be reviewed and altered to ensure priority is given to life safety considerations.
- 1.2.3.19 Complexity and interdependence of required solutions may require construction to be implemented in phases requiring flexible contracting protocols.



## **1.2.4 Hazardous Materials**

- 1.2.4.1 The hazardous materials must be identified at this site through various audits of this building.
- 1.2.4.2 Departmental Representative to provide designated Substance Survey/report.
- 1.2.4.3 The Consultant is responsible to co-ordinate with hazardous materials abatement work to be carried out under a separate contract.
- 1.2.4.4 There is always the possibility of encountering unknown hazardous materials such as mould and asbestos. If hazardous material is suspected, stop work immediately and inform the Departmental Representative.

## **1.3 Summary of Work**

### **1.3.1 Base Building Renovation Work**

- 1.3.1.1 This project requires design work to complete renovations to the base building systems (stairs & common areas) to address Building and Fire Codes deficiencies throughout the building.
- 1.3.1.2 The following table identifies a short description of design and construction administration / review services required along with a tentative stage plans in order to mitigate time and space as well as egress requirements while portions of the building are being renovated. The Consultant must revise the stage plan below and put forward the most suitable plan that suits the work and RCMP requirements for building operation.



Project Stage #	Description
	<b>Stage Plan 1.1</b>
Stage 1.1.1	Investigate 2nd Floor assembly under the north portion of the Mechanical Room to provide a 2-hour fire resistance rating. Design package to Upgrade floor assembly according to findings.
	<b>Stage Plan 1.2</b>
Stage 1.2.1	Design package for construction of a new 2-hour fire separation with double doors and frame across corridor in west corridor of 2nd Floor near Stair E. Doors to be opposite swinging.
Stage 1.2.2	Design package to Create a 1-hour rated exit corridor leading from each of Stairs E to discharge to the exterior. Concept design is in Figure 9-9. Includes gypsum and steel stud construction, shaft wall, fire doors and frames, lighting.
Stage 1.2.3	Design package to upgrade the large west mezzanine exiting by removing access control on the door to the 2nd Floor, creating an extension of Exit Stair E (construct 1 hour rated vestibule) and providing free egress directly into Stair E.
Stage 1.2.4	Design package for Construction of a new storage room for the storage area (Room 1201 and 1202) having a 1½ hour fire resistance rating
	<b>Stage Plan 1.3</b>
Stage 1.3.1	Design package to construct a new 2-hour fire separation with door and frame across corridor northeast corner of 1st Floor near Stair D.
Stage 1.3.2	Design package of Fire separation of Stair F from the remainder of the building with a 1-hour rated fire separation. Includes mechanical and electrical modifications.
Stage 1.3.3	Design package to create a 1-hour rated exit corridor leading from each of Stairs F to discharge to the exterior. Concept design is in Figure 9-9. Includes gypsum and steel stud construction, shaft wall, fire doors and frames, lighting.
Stage 1.3.4	Design package to upgrade the large east mezzanine exiting by creating a new opening (with 1-hour rated door and frame) in the firewall. Create an extension of Exit Stair F (constructing 1 hour rated vestibule) and providing free egress directly into Stair F.
Stage 1.3.5	Construct a new garbage room having a 1 hour fire resistance rating
	<b>Stage Plan 1.4</b>
Stage 1.4.1	Design package to create a new exit for the west portion of the garage, either by a new door in the firewall (i.e. taking a corner of current repair garage), or with a new corridor to exterior door through one of the workshops along the south exterior wall.
Stage 1.4.2	Design package to construct a 2-hour fire separation for the repair garage consisting a new gypsum and steel stud 2-hour rated partition on top of existing wall to underside of roof, including lighting and ventilation changes.
Stage 1.4.3	Design package to construct a new storage room for the storage area north of Room 1650 having a 1½ hour fire resistance rating
	<b>Stage Plan 1.5</b>
Stage 1.5.1	Design package to remove existing glazed wall between Stair C and the 1st Floor and replace with 1-hour rated fire separation, or install window sprinklers. (Rated fire separation costed.)

## 1.4 Project Objectives

### 1.4.1 General

#### 1.4.1.1 Quality Design through the:

1. Appropriateness of the real property solution for its use and location;



2. Collaborative Project Delivery process – refer to RCMP Project Delivery Manual (PDM) section 6.2 Definitions;
  3. Economic viability of the real property solution considered and/or developed;
  4. Successful incorporation of environmentally sustainable solutions;
  5. Maintenance and development of effective and efficient facilities;
  6. Appropriate incorporation of innovations within the project delivery and solutions, and;
  7. Achievement through the design delivery of public policy, program and services to Canadian citizens resulting in inspiring and timeless solutions.
- 1.4.1.2 Fully integrate all components and systems including architectural, structural, mechanical, electrical, IT, security and BBC design;
- 1.4.1.3 Provide an integrated design and construction process involving:
1. Interdisciplinary collaboration, including all stakeholders as may be identified, design professionals, constructors and authorities having jurisdiction;
  2. Agreed upon design principles and decision-making protocols.
- 1.4.1.4 Consider the RCMP's changing needs and future uses to create solutions that are flexible and that are able to evolve over time;
1. Employ advanced systems and technologies to support contemporary operating requirements with capacity for growth and change.
- 1.4.1.5 Design for ease of maintenance with systems that can be accessed and easily repaired and/or replaced during the building's life cycle;
- 1.4.1.6 Enable a healthy, safe, positive and vibrant workplace for employees to advance wellbeing and productivity through the provision of good air quality, a balance of natural and artificial lighting, acoustic control, sufficient space requirements and efficient building systems;
- 1.4.1.7 Ensure conformance with appropriate fire protection measures and life safety requirements to assure a feeling of safety and security among building occupants at all times;
- 1.4.1.8 Enhance the local context for the benefit of both its direct users and the broader community;
- 1.4.1.9 Express civic significance in tangible terms through practical solutions and visual attractiveness;
- 1.4.1.10 Review trends and identify, through benchmarking, requirements necessary to provide creative, functional and cost effective renovation solutions;
- 1.4.1.11 Integrate innovative universal design and accessibility to enable inclusiveness and non-discrimination;
- 1.4.1.12 Provide a design that is efficient and cost effective considering both initial cost and operation & maintenance costs over a life cycle of 40 years.
- 1.4.1.13 Applying climate resilience guidance, integrating climate change adaptation aspects to reduce climate change risks into the design;
- 1.4.1.14 Maximizing the use of natural infrastructure and other nature-based solutions in new builds to protect physical assets;
- 1.4.1.15 Ensure sustainability through flexible solutions that address the RCMP's changing needs and potential future uses of the building;
- 1.4.1.16 Adopt clean technology and undertake clean technology;
- 1.4.1.17 Ensure solutions are designed to convey a sense of quality, durability and permanence;
- 1.4.1.18 Design to resilience to severe weather.

## 1.4.2 Project Delivery Approach

- 1.4.2.1 This project will use a traditional design-bid-build approach.
1. Construction will be procured through a publicly advertised bid process.
  2. It is anticipated that there may be multiple tender packages required for the Project. This will be dependant on the final plan and stages for construction. Separate tender package(s) will be required for the procurement of furniture.
- 1.4.2.2 The RCMP through various standing offer arrangements and/or competitive bidding will procure furniture.





- 1.4.2.3 Ensure co-ordination of services with other consultants and contractors engaged by RCMP including:
1. Shared Services Canada (information technology and telephone installations);
  2. Security Vendors;
  3. Furniture installers;
  4. Professional movers;
  5. Commissioning Agent
  6. Sound Acoustic Consultant;
  7. Mailroom Services;
  8. Fire Marshall.
- 1.4.2.4 The Consultant shall prepare each tender package and ensure full co-ordination of the work of all disciplines.

### 1.4.3 Functional Requirements

- 1.4.3.1 The Consultant must meet with the RCMP Representative to confirm and develop functional requirements.
- 1.4.3.2 Meeting RCMP Standards and Guidelines from the Property Management Manual, sections:
1. PMM 3.1 Space Standards an Guidelines
  2. PMM 3.3 Building Standards an Guidelines
  3. GC Workplace Guidelines

### 1.4.4 Environmental / Sustainable Development

- 1.4.4.1 Apply the Government of Canada's "Greening Government Strategy" to reduce greenhouse gas emissions and increase resiliency of assets, services and operations in order to adapt to changing climates and meet the FSDS GHG reduction target.
1. Web site: <https://www.canada.ca/en/treasury-board-secretariat/services/innovation/greening-government/strategy.html>
- 1.4.4.2 The Real Property Sustainability Handbook (2021), the Project GHG Options Analysis Methodology guideline and the Project Sustainability Planning and Tracking Tool will all be used to guide sustainable goals and requirements. Refer below for a condensed overview.
1. Prepare and recommend all required verifications to ensure net zero carbon has been achieved at the end of the project.
- 1.4.4.3 Integrate and track all applicable components of the above noted resources into the Sustainable Development strategy and update at all milestones.
- 1.4.4.4 Waste and Plastics / Water / Biodiversity / Materials / Employee Wellbeing
1. 90% diversion of construction and demolition waste from landfills;
    1. Total construction and demolition waste generated per m2 (tonnes/m2) to be documented during construction.
    2. Determine Percentage of construction and demolition waste diverted.
  2. 75% diversion of plastic waste from landfills;
  3. Low volatile organic compound (VOC) materials.

## 1.5 Summary of Services and Specialties

### 1.5.1 General Services

- 1.5.1.1 The Consultant Team shall be comprised of competent and qualified personnel having professional and technical expertise with extensive relevant experience.
- 1.5.1.2 Members of the Consultant Team may have the necessary qualifications and expertise to provide services in more than one discipline or specialty.
- 1.5.1.3 Consultants may expand their Consultant Team, upon approval by the Departmental Representative, to include additional disciplines as required, in order to successfully deliver the project.



- 1.5.1.4 The Consultant Team must maintain its expertise for the duration of the project.
- 1.5.1.5 The Consultant must provide a full consulting team including the following consultant services and specialties:
1. Professional Architectural Services;
    1. Consultant,
    2. Interior Design specialist,
  2. Professional Engineering Services;
    1. Structural Engineering,
    2. Mechanical Engineering,
    3. Electrical Engineering:
      1. Witnessing fire alarm testing as required by Authority Having Jurisdiction (AHJ),
    4. Fire Protection Engineering:
      1. Code Consultant,
      2. Sprinkler Consultant,
      3. Fire Modeling.
  3. Commissioning Services;
    1. Independent from the mechanical and electrical engineers above to conduct the work as described in this Project Brief.
    2. Consultant to lead commissioning services;
    3. Consulting engineers may function as the commissioning agents.
  4. Schedule Management specialist;
  5. Cost Estimating specialist.

## 1.6 Security Clearance

### 1.6.1 General

- 1.6.1.1 The Consultant is responsible to complete the applicable security forms within 15 business days of receipt of access to the online security-screening portal, unless otherwise approved by the Departmental Representative.
1. Obtaining security clearances will be through the online security screening portal.
  2. Additionally, the following may be required for the application:
    1. Personnel Security Screening Checks above the Policy on Government Security requirements;
    2. Security interview; and
    3. Fingerprints.
    4. See Personnel Security Section of SRCL Security Guide

## 1.7 Schedule

### 1.7.1 General

- 1.7.1.1 The scope of Consultant work for this project is separated into phases as described in the Summary of Work.
- 1.7.1.2 Deliver the project to be ready for occupancy in accordance with the project milestone listing identified below.
- 1.7.1.3 Prepare a Project Schedule in accordance with the anticipated milestone list within 10 business days of contract award.



## 1.7.2 Anticipated Milestone Dates

Milestones	Number of Weeks
Consultant Contract Intent to Award	
Consultant Security Clearance Process	3 weeks
Phase #1 Pre-Design	2 weeks
Quality Assurance Review	1 weeks
Phase #2 Schematic Design	2 weeks
Quality Assurance Review	1 weeks
Phase #3 Design Development	2 weeks
Quality Assurance Review	1 weeks
Phase #4 33% Construction Documents	4 weeks
Quality Assurance Review	1 weeks
66% Construction Documents	4 weeks
Quality Assurance Review	1 weeks
100% Draft Furniture Tender Documents	2 weeks
Quality Assurance Review	1 weeks
100% Furniture Tender Documents	2 weeks
99% Construction Documents	4 weeks
Quality Assurance Review	1 weeks
Phase #5 Tender Documents	2 weeks
Phase #6 Tender & Award	8 weeks
Construction Contractor Security Clearance Process	3 weeks
Substantial Completion of Construction	25 weeks
Building Component and Connectivity	4 weeks
Commissioning	2 weeks
Final Completion	1 weeks
Occupancy	1 weeks
Post Construction Deliverables	4 weeks
Post Construction Warranty Evaluation	12 months

## 1.8 Cost

### 1.8.1 Construction Budget

- 1.8.1.1 The construction estimate does not include project management fees, administration costs, Consultant fees, risk allowance, escalation or HST and is in 'Budget-Year (Current)' dollars.
- 1.8.1.2 Deliver the project within the construction budget established during preliminary project approval.

### 1.8.2 Estimated Construction Budget

- 1.8.2.1 The Class D estimated construction cost (excluding HST), is anticipated at this time to be approximately eight hundred and eight thousand dollars \$808,024.00. This was pre COVID and may increase.

## 1.9 Existing Documents

### 1.9.1 Available for the Consultant

- 1.9.1.1 Limited as-built drawings will be available at the start of the Pre-Design phase. The Consultant must verify the accuracy of the information incorporated into the design.
- 1.9.1.2 Building drawings in AutoCAD (dwg) format.
1. The drawings must be modified by the Consultant.



2. The drawings require the Consultant's verification of all critical dimensions and features pertaining to the fit-up.
- 1.9.1.3 Morrison Hershfield; "Building 405, Fire and Life Safety Code Review, Non-Compliant Issues and Options Report" dated April 2020.
- 1.9.1.4 Existing furniture and equipment layout drawings.

## 1.9.2 Disclaimer

- 1.9.2.1 Reference information will be available in the language in which it is written.
- 1.9.2.2 The documentation may be unreliable and is offered, "as is" for the information of the Consultant.

# 1.10 Codes, Act, Standards and Regulations

## 1.10.1 General

- 1.10.1.1 In addition to Provincial/Territorial and Municipal Acts, Codes, By-laws and regulations appropriate to the area of concern, the following Codes, Acts, Standards and Guidelines are applicable to this project:
1. NRC National Building Code of Canada 2021;
  2. NRC National Fire Code of Canada 2015;
  3. NRC National Plumbing Code of Canada 2015;
  4. NRC National Energy Code of Canada for Buildings 2017;
  5. CSA/B561-12, Accessible Design for the Built Environment;
  6. The Canada Labour Code (CLC);
  7. The Canada Occupational Health and Safety Regulations;
  8. Royal Canadian Mounted Police Directives, Standards and Guidelines;
  9. PSPC Seismic Standard bulletin, 2018-03-02;
  10. PSPC Real Property Sustainability Handbook (2021);
    1. Project Sustainability Planning and Tracking Tool;
  11. Project GHG Options Analysis Methodology Guidelines
- 1.10.1.2 The Authorities Having Jurisdiction (AHJ) on this project are:
1. The local AHJs;
  2. Treasury Board of Canada Secretariat, accessed through the Departmental Representative;
    1. The Royal Canadian Mounted Police (RCMP)
      1. Departmental Representative
- 1.10.1.3 The Consultant must identify, analyse 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 Royal Canadian Mounted Police.
  3. Local and/or municipal codes and bylaws:
- 1.10.1.4 In the event of a conflict between codes, the more stringent shall take precedence.



## 2. REQUIRED SERVICES

### 2.1 General Requirements

#### 2.1.1 Services

- 2.1.1.1 Commissioning Service.
- 2.1.1.2 Cost Estimating Service.
- 2.1.1.3 Office Furniture Support Services.
- 2.1.1.4 Building Components and Connectivity (BCC).
- 2.1.1.5 Schematic Design Service.
- 2.1.1.6 Design Development Service.
- 2.1.1.7 Construction Document Service.
- 2.1.1.8 Tender Services - to assist the Departmental Representative.
- 2.1.1.9 Construction Support Service.
- 2.1.1.10 Post Construction Service.

### 2.2 Project Review and Acceptance

#### 2.2.1 General

- 2.2.1.1 Comply with all applicable laws and regulatory requirements as required by the General Conditions of the Contract.

#### 2.2.2 Quality Assurance Review, Acceptance and Presentations

- 2.2.2.1 Each submission at each stage of the project is subject to review by the Departmental Representative and other project stakeholders.
- 2.2.2.2 The federal government generally defers to provincial and municipal authorities for specific regulations, standards and inspections but in areas of conflict, the more stringent authority prevails.
- 2.2.2.3 At each submission:
  - 1. Provide 1 electronic copy to Departmental Representative, unless otherwise noted under the deliverables for the specific service.
  - 2. Review submissions to be emailed in searchable PDF format;
  - 3. Expected turnaround time for each review is 10 working days;
  - 4. The Consultant will receive review comments in the form of an editable MS Word document or MS Excel document;
  - 5. The consultant shall provide a single coordinated written response to the comments within 2 weeks of receiving QA Comments.
- 2.2.2.4 The Departmental Representative shall not accept documents for review that have not been reviewed and signed off by the Consultant's authorized representative(s).
- 2.2.2.5 RCMP reviews are not intended to indicate complete and detailed checks of documents, and in no way relieves the Consultant of their professional responsibility for reviewing their own work or that of their sub-consultants.
- 2.2.2.6 The Consultant must employ its own quality control program and remain fully responsible for the design and services provided.
- 2.2.2.7 The Consultant shall ensure all deliverables are submitted to the Departmental Representative for review. Revise as required by the Departmental Representative, and resubmit for final approval prior to further action or implementation.
- 2.2.2.8 The Consultant shall allow for the preparation of a maximum of two (2) revisions per deliverable. More than two (2) revisions may be requested throughout the duration of the project at an additional cost.



## 2.3 Risk Management

### 2.3.1 Context

- 2.3.1.1 The Departmental Representative prepares the Risk Management Plan.
- 2.3.1.2 Assist the Departmental Representative with the identification of risk items and factors arising from the technical requirements of the project.

## 2.4 Commissioning Service

### 2.4.1 General

- 2.4.1.1 The purpose of the Commissioning Service is to certify that a fully functioning project, meeting the Department's project requirements, is delivered to the RCMP through appropriate design and construction verifications.
- 2.4.1.2 Commissioning (Cx) is an integral part of the Consultant's required services.
  - 1. Required Cx activities and deliverables are listed within each project phase service.
- 2.4.1.3 Participation in commissioning is based on the project scope, complexity and risk.
- 2.4.1.4 Commissioning for the project as applicable to the systems employed, in accordance with the requirements in CAN/CSA Z320-11.

### 2.4.2 Scope and Services

- 2.4.2.1 Refer to Pre-Design to Post-Construction Services for commissioning scope and activities.

### 2.4.3 Deliverables

- 2.4.3.1 Refer to Pre-Design to Post-Construction Services for commissioning deliverables.

## 2.5 Cost Estimating Service

### 2.5.1 General

- 2.5.1.1 In addition to the cost estimating requirements in the PDM include the following cost management services:
  - 1. Cost estimates, construction bidding and Consultant billing are required to be broken down by fiscal year (i.e. April 1 - March 31).
  - 2. Include a cost breakdown for commissioning activities in all cost estimates.
  - 3. Provide breakdown cost estimates as per the following funding accountabilities:
    - RCMP Capital;
    - RCMP O&M;
    - RCMP O&M Immovable.

## 2.6 Office Furniture Support Services

### 2.6.1 General

- 2.6.1.1 Provide complete and integrated Office Furniture Support Services for the RCMP's project from Pre-Design to Project Close Out.
  - 1. Office Furniture Support Services are the seamless integration of all furniture, equipment and appliances required for a finished project that is ready for use by the occupants in compliance with the Government of Canada Fit-Up Standards, and the Property Management Manual (PMM).
- 2.6.1.2 Confirm the following with the Departmental Representative:
  - 1. Roles and responsibilities within the furniture procurement models;
  - 2. Lines of Communication, and;



3. RCMP Project specific Furniture Procurement Strategy are indicated below:
  1. Furniture to be procured by the RCMP.
    1. Installed by RCMP
    2. Installed by Construction Contract
  2. Furniture to be procured and installed by a separate contract.

## 2.6.2 Reports

### 2.6.2.1 Existing Furniture Assessment

1. Prepare a furniture assessment including:
  1. Manufacture, series, model type;
  2. Age of furniture and applicable warranties;
  3. Location of existing furniture;
  4. The technical nature, condition, aesthetic, ability to procure additional parts and services for the existing furniture and ease of facility management as it pertains to the health, safety, and welfare of the end-users;
  5. Recommendations and percentage of existing furniture for reuse in “as-is” condition, refurbished for reuse, slated for surplus through Crown Assets, slated for recycling/landfill or a combination thereof;
    1. Suitability of the existing furniture to be incorporated into a new floor plan, should consider the sizes of the components (e.g. height of system panels, adjustability of work surfaces, reduction in paper storage, etc.).
  6. Cost Benefit Analysis;
    1. Prepare a Cost Benefit Analysis (may be associated with an existing RCMP Furniture Assessment) including:
    2. Justifications and recommendations for a furniture reuse strategy based on best value;
      - 1 Non-monetary costs and considerations (e.g. environmental impact, disruption to operations, etc.).

### 2.6.2.2 Existing Furniture Inventory for Reuse:

1. Provide a complete inventory of all screens/partitions, workstations and components, freestanding furniture, equipment, and appliances suitable for the project as per the Existing Furniture Assessment.
2. Include quantity, size and details unique to the project.
3. Based upon the Functional Program provide a spreadsheet showing all existing furniture, equipment and appliances to be reused, repurposed, reconfigured and/or stored as surplus as part of the project.
4. Update the report throughout the project as required.

### 2.6.2.3

1. Based upon the selected schematic design option, in conjunction with the Departmental Representative, provide a detailed list for all new furniture, equipment and appliances for the project.
2. Tag furniture and equipment to reflect the recommendations of the Existing Furniture Assessment and Cost Benefit Analysis.

### 2.6.2.4 Furniture Procurement

1. Workbook Summary of:
  1. CST and EMV;
  2. Installation phasing for each commodity.
2. Site and project information (e.g. site location, elevator and loading dock constraints).
3. Appendices (drawings):
  1. Systems partitions;
  2. Workspaces;





1. Categories 2 to 6 (NMSA);
  2. Seating NMSA;
  3. Reused Furniture and Equipment;
  4. Furniture to be procured by the RCMP.
4. Update the Workbook as required.

### 2.6.3 Furniture Tender Documents

- 2.6.3.1 Develop furniture procurement packages. Include the following in each procurement package:
1. Furniture commodities and quantities to be procured;
  2. Components, loose furniture commodities and accessories required to support the design;
  3. Supporting infrastructure and building systems;
  4. Coordinated Furniture Plans and Elevations;
  5. Master Furniture Plan, including:
    1. Furniture for each procurement method and category on separate layers;
      1. All furniture items should be individually identifiable by *Government of Canada Unique Identification Code (GoCUIC)* numbers to determine quantities required.
    2. Legend with;
      1. Full description,
      2. Overall dimensions, and
      3. Quantities and GoCUIC number (where applicable).
    3. Identification of all accessories and lighting components to be supported from the panels;
    4. Critical installation dimensions (aisle lengths, widths, location relative to architectural elements).
  6. Panel Plan drawings (if required) showing:
    1. Differentiation between powered and non-powered panels;
    2. Power, voice and data outlets;
    3. Power spines;
    4. Top and base feed locations;
    5. Typical panel elevations, showing locations of outlets, glazed panels and accessories;
    6. Locations of connectors at X, L and T panel junctions, and;
    7. The number of workstations.
  7. Class 'A' cost estimate for each furniture category, including delivery, installation and taxes.

### 2.6.4 Move Management

- 2.6.4.1 Prepare a Move Plan in compliance with the Departmental Representative's Move Process (refer to the Move Plan and Move Process Definitions).
- 2.6.4.2 Provide field reviews at delivery, installation and as required assisting the Departmental Representative with administration services.
1. Provide recommendation for DR to reject unsatisfactory Work;
  2. Provide written reports on field reviews.
- 2.6.4.3 Coordinate and report on the replacement, storage, packing, shipping and return of damaged and incorrectly ordered furniture, components, equipment and appliances.
- 2.6.4.4 Confirm that power, telecommunications and other applicable building infrastructure is connected as required to furniture, equipment and appliances.

### 2.6.5 Deliverables – Pre-Design to Construction Documents Services

- 2.6.5.1 Submit all 'Reports' for review during Pre-Design and Schematic Design Services (schedule to be confirmed at the project start-up meeting).
1. Revise as required by the Departmental Representative.





2. All reports must be approved by the Departmental Representative before proceeding with the Design Development Service.
  3. Provide one (1) electronic searchable PDF copy on the project FTP site via email.
- 2.6.5.2 Submit completed 'Furniture Tender Documents' and the 'Move Plan' for review during the preparation of the project construction documents.
1. Revise as required by the Departmental Representative.
  2. The Furniture Tender Documents and the Move Plan must be approved by the Departmental Representative before proceeding with the Tender Service.
  3. Provide one (1) electronic searchable PDF.

## 2.6.6 Furniture Tender Support

- 2.6.6.1 Meet with the Departmental Representative to review and confirm requirements to support the Furniture Procurement Strategy.
- 2.6.6.2 Provide the Departmental Representative written clarifications and responses to bidder queries. Supplementary drawings may be required to accompany written responses.
- 2.6.6.3 Participate on the Evaluation Board to confirm technical conformance of furniture bid submittals.
- 2.6.6.4 Provide colour and finish selections for awarded furniture packages that:
1. Coordinate with architectural colours and finishes (as approved in the Design Development phase) and;
  2. Support the intended usage and facility management of the furniture items.
- 2.6.6.5 Review furniture shop drawings and installation plans supplied by furniture suppliers.

## 2.6.7 Deliverables – Post Construction Services

- 2.6.7.1 Furniture Record Drawings.
- 2.6.7.2 Furniture Operations Manual.

## 2.7 Building Component and Connectivity (BCC)

### 2.7.1 General

- 2.7.1.1 Provide complete and integrated Building Components and Connectivity (BCC) for the RCMP's project from Pre-Design to Project Close Out.
1. BCC Services are the seamless integration of all specialized building component and connectivity required for a finished project that is ready for use by the occupants in compliance with the Property Management Manual (PMM).
- 2.7.1.2 Confirm the following with the Departmental Representative:
1. Roles and responsibilities within the procurement models;
  2. Lines of Communication, and;
  3. Project specific BCC Procurement Strategy:

### 2.7.2 Reports

- 2.7.2.1 Meet with the Departmental Representatives to review and confirm inventory of existing components and requirements to support the BCC Procurement Strategy.
- 2.7.2.2 Prepare a BCC Workbook with a summary of:
1. Existing BCC Inventory for reuse:
    1. Provide a complete inventory of components, equipment, and appliances suitable for the project.
    2. Include quantity, size and details unique to the project.
    3. Based upon the Functional Program provide a spreadsheet showing all existing BCC, equipment and appliances to be reused, repurposed, reconfigured and/or stored as surplus as part of the project.



2. BCC commodities and quantities to be procured;
  3. Installation phasing for each commodity;
- 2.7.2.3 Update the Workbook as required.

### 2.7.3 Scope and Services

- 2.7.3.1 Incorporate BCC into Pre-Design to Post-Construction Services including:
1. Components, commodities and accessories required to support the design;
  2. Supporting infrastructure and building systems;
  3. Coordinated BCC Floor Plans and details;
- 2.7.3.2 BCC to incorporate into the project include but are not limited to:
1. Telecommunication Systems
    1. Spaces and pathways
    2. Cabling
      1. Data cabling and LAN equipment will be procured and constructed outside of the construction contract by Shared Service Canada (SSC). The Consultant must coordinate the scope of work and drawings with SSC.
    3. Telecommunication Equipment
  2. Security Furnishing and Systems
    1. Access Control
    2. Intrusion Detection
    3. Duress Alarms
    4. CCVE System
    5. Specialty hardware and locking systems
    6. Window treatments
    7. Perimeter and Vehicle control
  3. Police Equipment
    1. Gun Discharge
    2. Police Locker
    3. Weapon Storage Locker
    4. Pistol Locker
  4. Operational Systems
    1. Fire Alarm Monitoring System
    2. Digital Building Management System
  5. Audio Visual equipment and systems
  6. Furnishings and Equipment
    1. Window Covering
    2. Furnishing not included in Office Furniture Support Services:
      1. Steel Tables
      2. Steel Chairs
      3. Steel Storage Cabinets
      4. Filing Cabinet
      5. Lockers
      6. Open Solid Shelving
      7. Metal Shelving
      8. High Density Mobile Shelving
      9. Bench
    3. Wireless presentation technology (White Boards, Bulletin Board, wireless screen sharing equipment)



## 2.8 Pre-Design Service

### 2.8.1 General

- 2.8.1.1 The Pre-Design Report must demonstrate the Consultant's readiness to commence the Work and consolidate the scope of the design.
- 2.8.1.2 The Pre-Design Report will be utilized as the benchmark project control document to monitor progress of the project.
- 2.8.1.3 Pre-Design comprised of the following activities:
  - 1. Assess existing site and conditions;
  - 2. Review all existing documents and reports;
  - 3. Confirm and document the Owner Project Requirements (OPR);
  - 4. Conduct a building code analysis to support the design requirements;
  - 5. Identify commissioning requirements;
  - 6. Identify BCC requirements;
  - 7. Confirm and document functional requirements.
- 2.8.1.4 The Consultant must:
  - 1. Meet with the Departmental Representative to confirm and document functional requirements;
  - 2. Meet with the Departmental Representative to develop a Functional Requirements Program;
  - 3. Review and analyse all available project information, consult with the Departmental Representative and deliver a comprehensive Pre-Design Report including functional requirements.
- 2.8.1.5 The Pre-Design Report will consolidate the scope of the design and will be utilized as the benchmark project control document to monitor progress of the project.

### 2.8.2 Scope and Activities

- 2.8.2.1 Participate in meetings, prepare agenda, minutes and decision logs.
- 2.8.2.2 Visit the project site, analyse site conditions and document any conditions that will affect project delivery and design.
- 2.8.2.3 Review and analyse:
  - 1. Existing reports, documents and material related to the project, including the functional requirements, OPR and all other requirements identified in this Project Brief;
  - 2. Security documentation including the statement of security intent;
  - 3. Information available on existing facilities including:
    - 1. Substructure (including foundations, basement, parking, etc.);
    - 2. Building shell (including superstructure, exterior enclosure, roofing, etc.);
    - 3. Interiors (including interior construction, stairs, interior finishes, etc.);
    - 4. Services (including elevators, escalators, plumbing, HVAC, fire protection, electrical, telecommunications, building automation, etc.);
    - 5. Equipment and furnishings, and;
    - 6. Special construction and demolition (including heritage structures, hazardous materials abatement etc.).
- 2.8.2.4 Analyse and confirm:
  - 1. Project specific goals and objectives;
  - 2. All the program information and project requirements to identify any conflicts or potential additional work and indicate the impact on project scope, schedule and costs;
  - 3. All existing information relating to this project and compare with site conditions;
  - 4. Base building requirements for Information Services, Multi-media, Security, and BCC requirements to confirm design standards;
    - 1. Specifications for requirements will be provided by Shared Services Canada (SSC).
  - 5. If seismic hazard is applicable to this project;



6. All additional information that will be required to deliver the project;
7. Preliminary summaries of regulatory and statutory requirements, AHJ, codes, regulations and standards;
8. Any conflicts that will need to be addressed with respect to scope, quality, schedule, cost;
9. Sustainable Development Strategies:
  1. Prepare a report to align with all applicable requirements of:
    1. PSPC The Real Property Sustainability Handbook (2021);
    2. Project Sustainability Planning and Tracking Tool;
    3. Project GHG Option Analysis Methodology Guideline;
    4. Prepare and recommend all required verifications to ensure net zero carbon has been achieved at the end of the project.
10. Prepare a Project Procedures Plan – refer to RCMP Project Delivery Manual (PDM) section 6.2 Definitions;
11. Report on adjustments required to the budget, risk analysis and schedule, including allowances for reviews and approvals for each stage of the project life cycle.
12. Initiate the Commissioning (Cx) Process;
13. Develop the Owner Project Requirements (OPR). Refer to RCMP Project Delivery Manual (PDM) section 6.2 Definitions;
  1. Confirm the extent of Commissioning (Cx) requirements;
  2. Define the Commissioning Team;
14. Develop a project specific design phase Commissioning Plan. Refer to RCMP Project Delivery Manual (PDM) section 6.2 Definitions;

### **2.8.3 Functional Programming Scope and Activities**

- 2.8.3.1 Based on the Departmental Representative's information, meet with the Departmental Representative to develop functional requirements.
- 2.8.3.2 Prepare agenda and questionnaire to facilitate an onsite assessment of the RCMP's functional space and operational/service requirements:
  1. Develop and document for RCMP approval the relationship and adjacencies of all functional areas.
- 2.8.3.3 Prepare a complete list of all functional needs clearly describing all space requirements including:
  1. Area requirements for each individual functional space / area type;
  2. Gross area summary needed to accommodate the functional program;
  3. A description of work activity within each space.
- 2.8.3.4 Confirm and compare space allocations against the RCMP organizational chart if available.
- 2.8.3.5 Ensure all space allocations can be accommodated within the parameters.
- 2.8.3.6 Provide a summary of each functional space type including:
  1. Plan diagram (including equipment and furnishings);
  2. Common spaces;
  3. Equipment spaces;
  4. Support spaces;
  5. Other functional spaces required by the RCMP.
- 2.8.3.7 Provide a summary of the number (and type) of staff for each functional space.
- 2.8.3.8 Provide a description of the technical requirements for each discipline including:
  1. Required operational and service infrastructure;
    1. Collaborate with identified lead RCMP representative and Departmental Representative to obtain professional and technical input,
    2. Identify all required special conditions to support the project program,
    3. Identify all security, acoustic and special fire separation requirements,
    4. Identify any potential Occupational Health and Safety requirements.



2. Identify all Building Component and Connectivity (BBC);
  3. A review and definition of all IT requirements;
    1. Collaborate with the RCMP and Shared Services Canada (SSC).
- 2.8.3.9 Identify major equipment and casework requirements for each functional space.
- 2.8.3.10 Review and define the RCMP's storage requirements:
1. Size, locations and furnishings/equipment.
- 2.8.3.11 Prepare a preliminary building code analysis:
1. Include the preliminary building code analysis with the pre-design report.
- 2.8.3.12 Prepare an estimate of the improvements costs:
1. Prepare, based on Functional Program, a budgetary summary of design items/components and estimated cost breakdown;
  2. Include a Class 'D' construction and soft cost estimate in the compiled Functional Program document.  
CSC/CSI UniFormat™ Level 2 detail is required;
  3. Include the Basic of Estimate (BOE) – refer to RCMP Project Delivery Manual (PDM) section 6.2 Definitions;
- 2.8.3.13 Based upon the approved draft Functional Program, develop, for acceptance by the Departmental Representative the following:
1. Spatial relationship diagrams to indicate adjacency requirements between each of the spaces and groups of spaces;
  2. Block plans;
    1. Showing the location of each functional component,
    2. To determine reasonable net to gross area ratios for the total building addition (including service spaces).

## 2.8.4 Deliverables

- 2.8.4.1 Pre-Design Report documenting the Pre- Design Scope and Activities:
1. Revise as required.
  2. Provide one (1) electronic searchable PDF copy.

## 2.9 Schematic Design Service

### 2.9.1 General

- 2.9.1.1 Obtain written authorization from the Departmental Representative before proceeding with schematic design.
- 2.9.1.2 Schematic Design process:
1. Explore, develop and compare design options for increased program and space efficiencies, operational effectiveness, and potential areas of optimization, performance verification, preliminary cost analysis and alternatives.
  2. Facilitate the selection of one (1) design option for further detail development and evaluation: Establishes the Basis of Design (BOD) to confirm completeness of response to functional programming requirements.
  3. Present Schematic Design Options for: RCMP Quality Assurance (QA) review, and; Departmental Representative sign-off and approval to proceed to Design Development Services.

### 2.9.2 Scope & Activities

- 2.9.2.1 Participate in meetings, prepare agenda, minutes and decision logs.
- 2.9.2.2 Prepare Schematic Options documenting the review and analysis of a minimum of three (3) viable and distinct multi-disciplinary options.



1. Develop, for the Departmental Representative's acceptance, the evaluation parameters.
  2. Conduct design option feasibility studies exploring possible technical and environmental strategies which are viable and have potential for development.
  3. Analyse each option for compliance with the project functional and technical requirements in the approved Pre-Design report.
  4. Develop and include a Basis of Design (BOD) narrative for each option to demonstrate how the option meets the Owner Project Requirements (OPR) included in the Pre-Design report.
  5. Confirm compliance with applicable codes, acts and regulations for each option. If applicable, present alternate solutions for consideration by both the Departmental Representative and the AHJ.
  6. Identify and document risks for each option and recommend corrective measures.
- 2.9.2.3 Recommend one option to proceed to Design Development (DD).
- 2.9.2.4 Obtain the Departmental Representative's acceptance of the recommended option.
- 2.9.2.5 Update the OPR and Commissioning Plan.
1. For each of the respective design options and the fully developed final selected design submission milestones, provide a BOD narrative and a Preliminary Project Description (PPD) using PPDFormat™, latest version – refer to RCMP Project Delivery Manual (PDM) section 6.2 Definitions; for further detail:
  2. Discuss with the Departmental Representative the acceptable Level(s) of Detail, and;
  3. Submit Cost Estimates based on respective PPDFormat™ Level(s) of Detail.
- 2.9.2.6 Review, validate and update the details of the Functional Program requirements, including space data sheets.
- 2.9.2.7 Update the sustainable design strategy and report on sustainability targets.
- 2.9.2.8 Provide energy simulation of the proposed design options including estimated annual energy cost, as may be directed by the Departmental Representative:
1. Predicted by using current energy cost for the appropriate area or by;
  2. Provision of Government of Canada (GoC) bulk energy commonly supplied where available.
- 2.9.2.9 Update the Budget, schedule and risk analysis and identify any conflicts that will need to be addressed with respect to scope, quality, schedule, and cost:
1. Prepare a Class 'C' Cost Estimate for each option.  
CSC/CSI UniFormat™ 2010;  
Indicative (+/- 15%), UniFormat™ Level 3 detail is required;
  2. Include the Basis of Estimate (BOE) – refer to RCMP Project Delivery Manual (PDM) section 6.2 Definitions;
- 2.9.2.10 Anticipate minor revisions to the schematic designs prior to sign-off by the Departmental Representative.

### 2.9.3 Deliverables

- 2.9.3.1 Schematic Design Report documenting the Schematic Design Scope and Activities
1. Provide one (1) electronic searchable PDF copy via email.

## 2.10 Design Development Service

### 2.10.1 General

- 2.10.1.1 Obtain written authorization from the Departmental Representative before proceeding with design development.
- 2.10.1.2 Refine and develop the selected design option prepared and approved in Schematic Design.
- 2.10.1.3 Finalize all major design components, technical criteria and performance objectives, cost estimates schedule and codes/standards regulatory compliance prior to advancing to Construction Document Services.



- 2.10.1.4 Confirm that the design continues to support the project specific objectives documented in the Pre-Design phase.
- 2.10.1.5 Integrate all components and systems, including architectural, structural, mechanical, electrical, information technology (IT), multimedia, security, BCC, and furniture design.

## 2.10.2 Scope and Activities

- 2.10.2.1 Participate in meetings, and prepare agenda, minutes and decision logs.
- 2.10.2.2 Prepare a Design Development Report to further develop the selected schematic design option and expand the intent for each design discipline to complete the design for this project.
- 2.10.2.3 Develop sub-system options for various disciplines;
- 2.10.2.4 Present and submit the design for review and authorities having jurisdiction as required;
- 2.10.2.5 Continue to review all applicable statutes, regulations and by-laws in relation to the design of the project and conduct a detailed code analysis to demonstrate compliance:
  - 1. If there are non-compliance issues, develop alternative solutions to support the design and submit for approval to the AHJ.
- 2.10.2.6 Analyse the constructability of the project and advise on the construction phasing process and duration.
  - 1. Develop a Preliminary Project Description to Uniformat Level of Detail 5 – refer to Preliminary Project Description PPDFormat™ RCMP Project Delivery Manual (PDM) section 6.2 Definitions for further detail;
- 2.10.2.7 Update the Budget, schedule, risk analysis and identify any conflicts that must be addressed with respect to the scope, quality, schedule and cost.
  - 1. Include the BCC and Furniture Procurement Strategy.
- 2.10.2.8 Corresponding directly to the Preliminary Project Description PPDFormat™ prepare a Class 'B' cost estimate;
- 2.10.2.9 Update the sustainable design strategy and report on sustainability targets.
- 2.10.2.10 Identify proposed architectural/interior design materials, finishes and colours:
  - 1. Submit (electronic or hard copy) three (3) finish and colour scheme options on three (3) finish sample boards;
  - 2. Final furniture finish choices will be made after the award of the furniture contracts.
- 2.10.2.11 Update the OPR, BOD and Commissioning Plan.
  - 1. Confirm BOD and Commissioning Plan conformance to OPR.
- 2.10.2.12 Develop system component lists including equipment, components, systems and different levels of integration between systems to be commissioned:
  - 1. List of components that delineate and make up the respective systems;
  - 2. List of systems that delineate and make up the respective integrated systems, and;
  - 3. List of integrated systems.
- 2.10.2.13 Develop Commissioning forms and verification check sheets specific to pre-functional (static installation and start-up) and functional performance verification tests (dynamic operation and integrated operation) for all components, systems and integrated systems specific to the project.
- 2.10.2.14 Develop a Commissioning Issues/Resolution log.
- 2.10.2.15 Provide a written response to the RCMP Schematic Design Quality Assurance (QA) review.
- 2.10.2.16 Coordinate a multi-disciplinary approach to heritage conservation, sustainability, program design, site design, building design and commissioning.
- 2.10.2.17 Facilitate a presentation of the Design Development report involving the Departmental Representative.
  - 1. Anticipate minor revisions prior to Acceptance by the Departmental Representative.

## 2.10.3 Deliverables

- 2.10.3.1 Design Development Report documenting the Design Development Scope and Activities
  - 1. Provide one (1) electronic searchable PDF copy.





## 2.11 Construction Documents Service

### 2.11.1 General

- 2.11.1.1 Obtain written authorization from the Departmental Representative before proceeding with construction documents.
- 2.11.1.2 Develop the necessary construction documents required to tender the approved design.

### 2.11.2 Scope and Activities

- 2.11.2.1 Coordinate, chair, record minutes and report on project meetings.
  - 1. Present the updates and supporting analysis within project meetings.
- 2.11.2.2 Prepare tender packages coordinated with all disciplines.
  - 1. Include phasing plans coordinated with the project schedule.
- 2.11.2.3 Prepare space planning (swing space) drawings to assist with the temporary relocation of building occupants during construction.
- 2.11.2.4 Create construction documents in accordance with the PDM.
  - 1. Finalize designs according to the Budget and schedule;  
Coordinate the Work, including scope changes required to remain within Budget,
  - 2. Apply a process of continuing cost control, with increasing levels of detail during the production of construction documents and update the cost estimates as the Work progresses.
- 2.11.2.5 Update the project schedule.
- 2.11.2.6 Establish a quality control process for the construction and contract administration stage.
- 2.11.2.7 Participate in stakeholder coordination and Value Engineering sessions.
- 2.11.2.8 Update the BOD and OPR.
- 2.11.2.9 Develop commissioning construction documentation complete with verification forms using National Master Specifications (NMS) Division 01 specifications including:
  - 1. An updated Cx Plan with detailed commissioning strategies, Cx forms/check sheets and training requirements;
  - 2. Cx forms and verification check sheets ready for commissioning of specific components, equipment, systems and integrated systems specific to the project;
    - 1. Component verification (Static Verification), Installation verification,
    - 2. Start-up,
    - 3. Systems verification test,
    - 4. Integrated system functional performance verification for dynamic operation, and;
    - 5. Cx issue log.
  - 3. Expected design performance parameters;
    - 1. Observed performance including any indication of whether or not this performance is acceptable, and;
    - 2. Design Engineer of Record date and signatures along with those performing and witnessing the test.
- 2.11.2.10 Provide written response to RCMP comments at review stages and integrate comments into the final construction documents.
- 2.11.2.11 Participate in the Risk Management process.
- 2.11.2.12 Include in the construction documents a requirement for the contractor to develop a waste reduction and management plan during the construction of this project.
- 2.11.2.13 Update the Project Log tracking with major decisions approved by the Departmental Representative.
- 2.11.2.14 Establish a quality control process for the construction and contract administration phase.

### 2.11.3 Deliverables





- 2.11.3.1 Deliverables include items listed in the “Scope and Activities” section above, the RCMP PDM document and items listed below.
- 2.11.3.2 Updated report at each submission noting any deviations from earlier Basis of Design submissions and, as necessary, reconfirming key Department’s Project Requirements, goals and objectives, along with:
1. An updated estimate demonstrating compliance with the Construction Cost Plan;
  2. An updated project log, tracking approved major decisions;
- 2.11.3.3 33% complete Construction Documents:
1. An updated Class “C” Estimate;
  2. A Class “B” Estimate;
  3. Updated OPR and BOD documents;
  4. An updated project schedule;
  5. Construction Drawings;
    1. Drawings should reflect 50% completeness with all Plan, Elevation, Details, and Sections shown.
  6. Specifications;
    1. Index to specifications,
    2. Draft Division 01 including,
      1. Health and Safety Requirements (Section 01 35 29), this section does not include any information in the SACC regarding H&S.
      2. Commissioning sections.
  7. Provide one (1) electronic searchable PDF copy.
- 2.11.3.4 66% complete Construction Documents:
1. This submission incorporates all revisions required by the review of the previous submission and a written response to the previous review comments
  2. [Updated class “B” estimate;]
  3. [A Class “B” Estimate;]
  4. Updated OPR and BOD documents;
  5. Updated project schedule;
  6. Construction Drawings;
    1. All drawings sheets and specifications sections required for tendering should be included in this submission.
  7. Provide one (1) electronic searchable PDF copy.
- 2.11.3.5 99% complete Construction Documents (fully coordinated as if ready for tender):
1. This submission must incorporate all revisions required by the review of the previous submission and a written response to the previous review comments;
  2. The Consultant shall submit documents to the Departmental Representative, local municipality, or any other Authority having jurisdiction;
  3. Class “A” estimate;
  4. An updated project schedule;
  5. Construction Drawings;
    1. Drawings should reflect 99% completeness as a complete design without any incomplete drawings (as if ready for tendering).
  6. Complete Specifications;
    1. Specifications should be complete with all sections and thoroughly coordinated with the drawings,
    - 2.
    3. Commissioning specifications, including forms applicable to Pre-Functional verification (static verification, installation, and start-up) and functional performance testing (operational and dynamic)



4. RCMP BCC elements.
  7. Updated Commissioning Plan.
  8. Provide one (1) electronic searchable PDF copy.
- 2.11.3.6 Final (100%) Construction Documents ready for tendering:
1. This submission incorporates all revisions required by the review of the previous submission and a written response for the RCMP 99% QA review;
  2. Advise the Departmental Representative of all issues raised by other officials;
  3. The submittal shall include:
    1. Signed and sealed documents in both official languages:
      1. 3 English – hard copies;
      2. 1 English – electronic searchable PDF format copy.
      3. 1 French – electronic searchable PDF format copy.
    2. An updated Class 'A' cost estimate,
    3. An updated project schedule,
    4. Construction Drawings & Specifications as per the PDM document.
  4. The Consultant must confirm in writing that;
    1. The documents are ready to be issued for tender,
    2. The checklist in the PDM Document has been reviewed in concert with the requirements of the Consultant Agreement and;
    3. A full review and coordination of the Construction Documents are complete and in accordance with professional standard of care.

## 2.12 Construction Tender Services

### 2.12.1 General

- 2.12.1.1 Support the Departmental Representative with the tender.
- 2.12.1.2 The Contracting Authority for this project is the RCMP Real Property Contracting branch.
- 2.12.1.3 Tendering will be using the Public Services and Procurement Canada (PSPC) Government Electronic Tendering Services (GETS), BuyandSell.gc.ca (<https://buyandsell.gc.ca>).

### 2.12.2 Scope and Activities

- 2.12.2.1 When requested, the Consultant must:
  1. Provide the Departmental Representative with information required by bidders to interpret construction documents;
  2. Prepare addenda in response to all questions within two (2) business days during the bidding period and submit to the Departmental Representative. Addenda shall be provided in English unless otherwise requested by the Departmental Representative.
  3. Attend construction tender stage site visits as required;
  4. If RCMP 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.
  6. Provide a cost breakdown by unit rate and/or trade for review of bids and comparison with the successful Contractor's cost breakdown.

### 2.12.3 Deliverables

- 2.12.3.1 Addenda.
- 2.12.3.2 Written responses to all questions.
- 2.12.3.3 Bid analysis and/or recommendations.



## 2.13 Construction Support Service

### 2.13.1 General

2.13.1.1 Support the Departmental Representative with the construction phase and confirm that the quality, budget and schedule meet the project requirements.

### 2.13.2 Scope and Activities

2.13.2.1 The Consultant shall share all project information with RCMP:

1. All material specifications, mixes and test results shall be turned over to the Departmental Representative for future maintenance by RCMP and others.

2.13.2.2 General Services:

1. Prepare minutes and reports on project and construction site meetings;
2. Review shop drawings, test reports, O&M Manuals contractor as-builts and other submissions;
3. Update the project log tracking approved major decisions, including those impacting project scope, budget and schedule;
4. Prepare and issue a communications protocol and a shop drawing review protocol in consultation with the Departmental Representative;
5. Assist the Contractor and provide required documentation in order to obtain the building permit;

2.13.2.3 Construction & Contract Administration:

1. Provide bi-weekly field reviews and as required to fulfill the Consultant's professional obligations to monitor the construction activities throughout the construction period and keep the Departmental Representative informed of work progress;
  1. Reject unsatisfactory work,
  2. Provide written reports.
2. Provide construction progress reports based on Contractor's submissions and on-site performance;
3. Furnish supplemental instructions to the Contractor, as directed by the Departmental Representative, with reasonable promptness or in accordance with a schedule for such instructions agreed to by RCMP and the Contractor;
4. Provide additional drawings to clarify, interpret or supplement the contract documents;
5. Review and comment on various documents such as the Contractor's Progress Claims and updated schedules;
6. Offer timely technical advice on all disputes and claims between RCMP and the Contractor;
7. Identify need for special tests, inspections and additional Work;
8. Assist the Departmental Representative to prepare the Certificate of Substantial Completion and provide sign-off;
9. Provide a Post-Construction Evaluation report.

2.13.2.4 Cost Services:

1. After issue of contract provide details for evaluating the project's cost performance;
2. Evaluate change orders, claims, work completed and cash flow;
3. Determine the amounts owing to the Contractor based on work progress and recommend the Departmental Representative certify payments to the Contractor.

2.13.2.5 Changes to the Work:

1. Assist the Departmental Representative to prepare Contemplated Change Notices (CCNs) and Change Orders (COs) to be issued by the Departmental Representative, resulting in a contract amendment to be issued by the Contracting Authority.

2.13.2.6 Review, witness, verify test, approve and sign off all commissioning submittals for performance parameters before test and after test and for adherence to OPR and BOD including:

1. All factory test reports and data;
2. Installation, start-up and Testing, Adjusting and Balancing TAB;



3. Components, systems and integrated systems based checks;
  4. Cx forms and verification checklists, process and procedures specific to components, systems and different levels of integration between systems;
  5. Cx schedule;
  6. Deferred, seasonal and re-test system deficiency;
  7. Review and assist with O&M and Owner Training Manual;
  8. Oversee and Document Functional Performance Testing;
    1. Follow up on testing issues as required;
  9. Update Cx Issues Log;
  10. Conduct field reviews complete with Cx site reports verifying components and systems being commissioned in accordance with the OPR and the BOD;
  11. Chair Cx Team meetings and report progress on a bi-weekly basis c/w minutes for distribution;
  12. Provide verification of final reports upon completion of the entire project;
  13. Lead and facilitate the Cx Team's Interim Acceptance Report sign-off;
  14. Engineer(s) of Record shall provide a Letter of Acceptance;
- 2.13.2.7 Update the Cx Plan, BOD and OPR.
- 2.13.2.8 Coordinate with the Departmental Representative Fire Protection Engineering for a Fire and Life Safety Inspection.

### **2.13.3 Deliverables**

- 2.13.3.1 Meeting minutes.
- 2.13.3.2 Field review and work progress reports (including construction photographs).
- 2.13.3.3 Reviewed shop drawings, test reports/certificates and other submissions.
- 2.13.3.4 Clarifications, Supplemental Instructions, Contemplated Change Notices and Change Order recommendations.
- 2.13.3.5 Reviewed and certified Contractor Progress Claims.
- 2.13.3.6 Comments to Contractor Schedule, and Change Orders.
- 2.13.3.7 Completed Certificate of Substantial Performance.
- 2.13.3.8 Standard Operating Procedures - refer to RCMP Project Delivery Manual (PDM) section 6.2 Definitions.
- 2.13.3.9 Interim Commissioning Report - refer to the Commissioning Report Definition.

## **2.14 Post Construction Service**

### **2.14.1 General**

- 2.14.1.1 Support the Departmental Representative in obtaining all final documents required for project close out.

### **2.14.2 Scope and Activities**

- 2.14.2.1 Project Close-out Services:
  1. Revise documentation to reflect all changes, revisions and adjustments after completion of commissioning;
  2. Prepare record drawings (AutoCAD format as per PDM requirements) 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. Finalize the Commissioning Manual;
    1. Oversee, follow up and ensure any deficiencies not completed by the Contractor are completed
    2. Resolution of any warranty issues on commissioned systems during the warranty period;



3. Provide ongoing consultation with the construction teams in support of their project closeout activities and submittals related to systems and assemblies commissioning specific deliverables in compliance to the Commissioning Plan, Commissioning Specifications and Owner's Project Requirements (OPR);
  4. Finalize the Commissioning Report based on;
    1. Final Cx Plan and associate testing and verification documents,
    2. Final Cx issues Log,
    3. Post occupancy changes,
    4. Deferred commissioning,
    5. Information not available or incomplete at Interim Acceptance.
  5. Coordinate deferred commissioning for those systems that have been functionally tested and/or turned over where re-testing and commissioning is required;
  6. Certify that all installations have been completed and function in accordance with the Cx Plan, OPR and the Consultant's Basis of Design (BOD);
  7. As per the Commissioning Plan, ensure that all completed operating and maintenance manuals, warranties, guarantees and other required submittals are turned over to the Departmental Representative
6. Participate in Lessons Learned workshops if requested.
- 2.14.2.2 Warranty Services:
1. Sign-off on the Final Completion of the construction contract;
  2. Participate in warranty inspections with the Departmental Representative and Contractor;
  3. Provide warranty deficiency list.
  4. Monitor and certify rectification of deficiencies before expiry of warranties;
  5. Monitor environmental and life safety system checks to be carried out by Contractor / O&M staff before expiration of warranties;

### 2.14.3 Deliverables

2.14.3.1 Warranty Deficiency List.

2.14.3.2 Final Certificate of Completion.

2.14.3.3 Record Documents:

1. One (1) hard copy – Full size sets, and one (1) electronic searchable PDF copy of each record document;
2. One (1) copy of each record drawing in AutoCAD - DWG file format.
  1. Refer to the PDM for AutoCAD drawing requirements and standards.
3. Include furniture and BCC

2.14.3.4 Operations and Maintenance Manual(s):

1. Three (3) hard copies.
2. One (1) electronic searchable PDF copy.
3. Include furniture and BCC.

2.14.3.5 Final Commissioning Manual (signed) - refer to the RCMP Project Delivery Manual (PDM) section 6.2 Definitions.

2.14.3.6 Final Systems Operation Manual (signed) - refer to the RCMP Project Delivery Manual (PDM) section 6.2 Definitions.

2.14.3.7 Recommissioning Manual - refer to the RCMP Project Delivery Manual (PDM) section 6.2 Definitions.

2.14.3.8 Final Warranty Review Report.

1. Final certification of installation and warranty from manufacturers.
2. Sign-off on Warranty



# 3. PROJECT ADMINISTRATION

## 3.1 General

3.1.1.1 In addition to the Project Administration within RCMP's Project Delivery Manual, the following applies to this project.

## 3.2 Language Requirements

3.2.1.1 The Consultant shall ensure that the Consultant Team is capable of providing services in both official languages.

3.2.1.2 The languages (English and French) are considered equal in status; neither is considered to be a translation of the other.

3.2.1.3 The Consultant shall provide the following required deliverables, in both official languages:

1. 100% construction drawings and specifications;
2. Addenda(s)
3. Record drawings, and specifications.

3.2.1.4 Written suggested responses to supplier questions during the construction solicitation period are to be delivered in English to the Departmental Representative.

3.2.1.5 Separate sealed construction documents shall be prepared for each official language.

## 3.3 Meetings

### 3.3.1 Design Phase:

3.3.1.1 Bi-weekly meetings with RCMP and the Consultant Team will normally be held via teleconference.

### 3.3.2 Construction Phase:

3.3.2.1 Bi-weekly meetings with RCMP, the Consultant Team and the Contractor will normally be held teleconference for the duration of the project and as required.

3.3.2.2 Additional site meetings may include the following activities:

1. Field Reviews;
2. Commissioning & Verification, including an inspection by the RCMP Fire Protection Engineer;
3. Substantial Performance;
4. Final Completion;
5. Post Construction Warranty.

