



ANNEX A

PROJECT MANUAL

**GENERIC SUPPORT
BUILDINGS
VARIOUS INSTITUTIONS
ONTARIO REGION
FOR
CORRECTIONAL SERVICE
CANADA**



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I. PROJECT DESCRIPTION

I.1. PROJECT MANUAL

I.1.1. PURPOSE

- .1 This Project Manual has been developed to engage the services of a Contractor team (Contractor) to undertake the design and construction of a Generic Support Building project and related site redevelopment while existing operations continue at the Correctional Service Canada (CSC) [specify] Institution in Ontario.
- .2 The Project Manual has been developed to ensure that the Contractor has a clear understanding of the project scope, procedures and performance requirements, in order to deliver the completed project within the agreed cost and on schedule.

I.1.2. RELATED DOCUMENTS

- .1 This Project Manual must be read, used and applied in conjunction with the Request for Proposal document and the terms and conditions of the contract.
- .2 In the event of a conflict between any of these documents, the contents of a higher precedence document must govern and override a lower precedence document.

I.2. GENERAL INFORMATION

I.2.1. PROJECT INFORMATION

Project Information	
Project Title:	Generic Support Building (s)
Project Locations:	Various – see table I
PWGSC Project Number:	R.056399
User Department:	Correctional Service Canada (CSC)

I.2.2. USER DEPARTMENT

- .1 The User Department referred to throughout the Project Manual is Correctional Service Canada (CSC).
- .2 CSC Mission: CSC, as part of the criminal justice system and respecting the rule of law, contributes to public safety by actively encouraging and assisting offenders to become law-abiding citizens, while exercising reasonable, safe, secure and humane control.

I.3. BACKGROUND INFORMATION

I.3.1. CONTEXT

- .1 CSC requires additional facilities to support their operations.
- .2 The new facilities must be designed, constructed and commissioned through this Turnkey contract.
- .3 The new facility is to be situated in close proximity to existing buildings at the [specify] Institution.

I.3.2. GENERIC DESIGN AND PROJECT CONFIGURATION



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- .1 The project consists of multiple Generic Inside and multiple Generic Outside Support Building(s)] of the configuration shown on the Concept Drawings produced by Canada.

I.3.3. CONSTRAINTS AND CHALLENGES

- .1 General
 - .1 The construction and associated works are situated in a Federal Institution where existing operations must be continuous and unimpeded throughout the term of the project. Therefore, work must be scheduled and performed so that it is done with minimum disruption to the operations of the Institution
 - .2 The Contractor must plan, schedule and consult towards an agreed upon provision of temporary built works to maintain existing operations during construction..
 - .3 .
 - .4 Members of the Contractor team (firms / organizations) are restricted and strictly prohibited from participating in the Independent Site Advisory Consultant Services tender process irrespective of whether a different office or section or division of the team member's organization / firm from a different geographical location is involved.

I.4. SCOPE OF WORK

I.4.1. OVERVIEW

- .1 The Contractor must ensure provision of comprehensive architectural and engineering services throughout the project phases through a single Prime Consultant of record.
- .2 The site requires new Generic Support Buildings as indicated on the drawings.
- .3 The facility is indicated in the Technical Requirements.
- .4 The Work includes adaptation of existing infrastructure and landscape and restoration of surrounding conditions.
- .5 The Work includes but is not limited to site development of sidewalks, access roads, site services, including waste water, water supply, storm drainage infrastructure, natural gas supply, power supply, vehicle access and parking, landscaping, site security and associated site work.
- .6 The Work includes all temporary services and security provisions as required to maintain the Correctional Institution's operations.

I.5. PROJECT DELIVERY APPROACH

I.5.1. TURNKEY APPROACH

- .1 Canada is proposing to use a Turnkey approach to complete the design and construction of the Generic Support Buildings.
- .2 Under this single source, responsibility will be fixed, maximum cost control will be achieved, and immediate responsiveness from the suppliers will be attained.



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- .3 Comprehensive Architectural and Engineering services must be provided throughout the Project phases.
- .4 The Contractor must provide a single prime consultant entity to fulfill the role of the registered professional of record for the Work including all cross discipline coordination. This prime consultant must be engaged for the entire project duration including design, construction, commissioning and satisfactory completion of the fully functioning facility.
- .5 Project Delivery Requisites:
 - .1 Deliver the project within the key milestones and according to the project schedule.
 - .2 Ensure that all members of the Contractor's team clearly understand the project requirements, for seamless delivery of the required services.
 - .3 Provide a quality management plan that includes rigorous quality reviews.
 - .4 Provide a continuous risk management program to address the risks associated with constructing new facilities, while ensuring the continuous operation of the existing facilities.

1.6. PROJECT SCHEDULE

1.6.1. GENERAL

- .1 As time is of the essence, this project is required to be complete and ready for operation as per the following schedule (or sooner).
- .2

1.6.2. MILESTONE LIST

ITEM	DELIVERABLES	COMPLETION DATE
1.0	Award of Contract	May 2012
2.0	Final Completion including Commissioning	14 Feb, 2013
3.0	Ten Month warranty inspection	14 Dec, 2013

1.6.3.

1.7. PROJECT COST

- .1 Canada will not accept scope creep or cost escalation of selected Proponent's proposal, except in the limited situations as stipulated in the terms of the contract.

1.8. EXISTING DOCUMENTATION

1.8.1. DOCUMENTS AVAILABLE IN ENGLISH ONLY;

- .1 Pdf file of Geotechnical Investigation for the site,
- .2 Pdf file of Site Coordination Drawing,
- .3 Pdf files of the Performance Specifications,
- .4 Pdf files of the Generic Drawings,
- .5 Pdf file of Topographic site drawing complete with utility information



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I.8.2. DOCUMENTS AVAILABLE TO THE SUCCESSFUL PROPONENT IN ENGLISH ONLY;

- .1 Pdf file of Geotechnical Investigation for the site,
- .2 AutoCAD file of Site Coordination Drawing,
- .3 Microsoft Word files of the Performance Specifications,
- .4 AutoCAD files of the Generic Drawings,
- .5 Pdf file of Topographic site drawing complete with utility information.



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2. REQUIRED SERVICES

2.1. PROJECT PROCEDURES

2.1.1. GENERAL

- .1 The Contractor must develop a Project Procedures Manual in consultation with the Departmental Representative for the execution of key Project activities.
- .2 This Project Procedures Manual must be a clear description of procedures, roles, responsibilities, levels of authority and the information systems for the execution of the Project, including details of the processes and sample formats.
- .3 This will include the process and methods to:
 - .1 Maintain all Project records including commissioning records, verifications and test sheets
 - .2 Implement a quality assurance program including project records;
 - .3 Prepare, update, monitor and maintain the Master Schedule;
 - .4 Update, monitor and maintain the Cost Plan and Cash Flow;
 - .5 Manage communications between Project Delivery Team participants based upon the documented roles, responsibilities and authority of Team members, and maintain a listing of meetings, frequency, type, etc.;
 - .6 Distribute correspondence electronically and by facsimile;
 - .7 Document the process for reviews and approvals of Construction Documents and Change Orders
 - .8 Maintain a decision log during the construction of the entire project, recording participants, date and place of all decisions affecting schedule, cost, scope or quality
 - .9 Process Shop Drawings;
 - .10 Implement Commissioning and associated training and transition activities;

2.2. PROJECT MONITORING AND REPORTING

2.2.1. GENERAL

- .1 The Contractor must Prepare and submit regular (at least monthly) monthly progress reports during the Contract, in a format agreed to with the Departmental Representative.
- .2 The purpose of the report will be to review and monitor the progress of the Services by the Contractor. The report must:
 - .1 Identify the progress of the work
 - .2 Identify the cash flow (invoices to Canada)
 - .3 Identify all instances where the schedule is not being met;
 - .4 Outline remedial measures being taken; and
 - .5 Identify any anticipated or potential problems to be addressed.



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2.3. TURNKEY PROCESS: DESIGN AND CONSTRUCTION

2.3.1. GENERAL

- .1 Canada has produced a Performance Requirements package. Refer to Part 4 of this Project Manual for a complete list.
- .2 The building and the site will require detailed design, construction, and integrated delivery of fully functioning site elements including civil, landscape, and site utilities.
 - .1 Design and construct site to accommodate groundwater, storm-water, snow piling, snow clearing, and any other measures required to manage precipitation / meteorological / weather / groundwater / surface drainage conditions that may occur on site.
 - .2 Provide signage, guards, temporary fences, health and safety features and any other workplace health and safety measures necessary to ensure the public, federal government staff, construction personnel and anyone else on the site is protected from injury in accordance with all federal and/or provincial laws, regulations and guidelines.
 - .3 The Contractor must identify, plan, schedule, and provide any and all temporary and permanent site elements or features including civil, landscape, and site utilities referenced in the Project Manual as required and to ensure the building is fully functioning, operational and safe throughout the duration of the project.
- .3 The Contractor will follow an iterative process to complete the design and construction documents, with a focus on refining the details of the design in accordance with the intent of the specific project performance requirements. The iterative process involves:
 - .1 Planning and execution on the part of the Contractor;
 - .2 Following specifically scheduled project submission requirements; and
 - .3 Accommodating the requirement for the PWGSC and CSC representatives to participate in the review process at all stages of the project.
- .4 The design process must be a collaborative process throughout the project from the early planning stages through to building and site occupation involving already identified stakeholders and the Contractors team.
 - .1 As part of the interactive process, following contract award the Contractor must develop with the Departmental Representative and CSC an acceptable CSC operations plan during construction.
- .5 The Contractor will deliver the project, utilizing industry best practices in conformance with PWGSC Standards, respecting the approved scope, quality, cost and schedule.
- .6 The Contractor will construct the building using modern and latest tools and techniques, as well as integrated phased construction methodologies in order to meet project objectives.

2.4. PROJECT PERFORMANCE REQUIREMENTS



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2.4.1. CONTEXT

- .1 Performance requirements define the minimum Work necessary to provide CSC with Generic Support Buildings.
- .2 Performance requirements do not necessarily include for every component, system and integrated system required for a complete and fully functional facility. The Contractor must design, construct and commission a complete and fully functional facility including all required components and systems.
- .3 The full impact of the existing site, aesthetics, functionality, general fit and all relevant Codes and regulations must be addressed in detail by the Contractor.
- .4 The final design may vary slightly, due to limiting factors yet to be examined, or because of necessary modifications in certain areas to satisfy authorities having jurisdiction, the Contractor must complete a fully functional new facility that meets all of CSC's basic minimum requirements.
- .5 The design work and commissioning must be carried out by registered professionals, licensed to practice in the Province of Ontario who must provide stamped final drawings.
- .6 The design must conform in all respects to the Technical Requirements.
- .7 Material colour and finish must be approved by the Departmental Representative.

2.4.2. CODES, STANDARDS AND AUTHORITIES

- .1 The contractor must ensure that the project is designed in accordance with NBCC 2010, provincial and municipal codes, standards and authorities having jurisdiction, including CSA B651-04, Accessible Design for the Built Environment, along with those listed in the Performance Specifications. In the event of conflict between these, the most stringent requirements shall apply

2.4.3. LIFE SAFETY

- .1 The Contractor must ensure that design addresses Code compliance required by the NBC and meets Federal Government of Canada's requirements as reviewed by Human Resources and Skills Development Canada (HRSDC), Fire Protection Engineer (FPE).
- .2 HRSDC FPE provides fire prevention, life safety engineering services and code reviews for the project

2.4.4. DESIGN QUALITY

- .1 The Contractor's team must maintain a high standard of design, based on recognized contemporary design principles. Architecture and engineering must be coordinated and be consistent with good design practices.

2.5. HEALTH AND SAFETY

- .1 The Contractor must assume responsibility as the Prime Contractor for work under this contract and appoint a qualified coordinator for the



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purpose of ensuring the coordination of health and safety activities for the location in accordance with the Workers Compensation Act

- .2 The Contractor shall be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.

2.6. PROJECT REVIEWS

2.6.1. GENERAL

- .1 Following the contract award the Contractor, must as part of the Design and Construction Documentation Process, submit to the Departmental Representative for review:
 - .1 Design and construction plan for CSC continued operations during the construction;
 - .2 Design Report;
 - .3 Commissioning Submissions
 - .4 A 50% progress set of working drawings and specifications package; and
 - .5 A 99% complete working drawings and specifications package.
 - .6 The final, 100% complete Construction Documents signed and sealed by the appropriate professional discipline responsible for the design. Design professionals must be licensed to practice in the province. Schedules will be required
- .2 For review purposes provide three (3) paper copy sets plus pdf file per discipline of all documents required for submission. Fourteen (14) calendar days prior to a scheduled review meeting, distribute copies as directed by the Departmental Representative.
- .3 Allow for two (2) weeks turnaround time for Departmental Representative to provide comments.
 - .1 A review meeting may be held to present and discuss each of the submissions. Review meetings are to be attended by the Contractor, the Designer, Sub-consultants, and representatives of PWGSC and CSC.
- .4 Contractor must respond in writing to the Departmental Representative's written review comments.

2.6.2. REVIEW OF PROJECT DELIVERABLES

- .1 While the Crown acknowledges the Contractor's obligations to meet project requirements, the project delivery process entitles the Crown to review all work.
- .2 The Crown reserves the right to reject undesirable or unsatisfactory work.
- .3 The Contractor must obtain Departmental Representative acceptance of all required deliverables for the Project.
 - .1 Acceptance indicates that, based on a general review of material for specific issues, the material is considered to



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- comply with the performance requirements and that the overall project objectives appear to be satisfied.
- .2 Acceptance does not relieve the Contractor of responsibility for the work and compliance with the contract.
- .3 Acceptance does not prohibit rejection of work, which is determined to be unsatisfactory at later stages of review.
- .4 Construction may not proceed for any portion of work until all pertinent Construction Documents have been reviewed and signed off by the Departmental Representative

2.6.3. FEDERAL GOVERNMENT

- .1 The PWGSC Departmental Representative, as well as the Federal Authorities identified below will review work in progress on a continuing basis.
- .2 The following are authorities having Federal Government jurisdiction over the project:
 - .1 Public Works and Government Services Canada,
 - .2 Human Resources and Skills Development Canada (HRSDC), Fire Protection Engineer (FPE).
 - a HRSDC FPE provides fire prevention, life safety engineering services and code reviews for the project.
- .3 The Contractor must:
 - .1 Provide a Submission Schedule to the FPE for the purpose of Review and Approval of Code, Health and Life safety issues;
 - .2 Allow 3 weeks in the design schedule for FPE review period and incorporation of FPE comments, as necessary.

2.6.4. PROVINCIAL, MUNICIPAL AND OTHER AUTHORITIES HAVING JURISDICTION

- .1 Although the Federal Government is not formally subject to jurisdictions at other levels of government, voluntary compliance with the requirement of these other Authorities is a requirement unless otherwise directed by the Departmental Representative.
 - .1 Codes, regulations, by-laws and decisions of authorities identified herein as having jurisdiction must be observed.
 - .2 In areas of conflict between authorities, the Federal authority prevails.
 - .3 In areas of conflict between Codes, Standards and regulations, the most rigid requirements must be adhered to.
 - .4 The Contractor must identify other jurisdictions appropriate to the project.
- .2 Provincial Acts, Regulations, Standards and Inspections:
 - .1 The Federal government does not defer to provincial authorities, except for specific regulations, Standards and inspections noted below.



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- .2 Unless directed otherwise by the Departmental Representative, the Contractor will:
 - a Adhere to all applicable provincial Construction Health and Safety Acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations,
 - b Adhere to the requirements of the Labour Standards and Regulations in Ontario.
 - c Employment Standards,
 - d Construction Safety,
 - e Designated Substance Management and
 - f Workers' Compensation.

- .3 Municipal By-laws, Regulations, Standards and Inspections
 - .1 The Federal government does not defer to municipal authorities, except for specific by-laws, regulations, Standards and inspections noted below.
 - .2 Unless directed otherwise by the Departmental Representative, the Contractor will:
 - a Make preliminary municipal submissions at stages required by the respective Towns having jurisdiction over each site;
 - b Provide all required supporting documentation for permit applications;
 - c Apply for and obtain all permits and approvals necessary for the work, including, but not limited to Building, Electrical and Plumbing Permits;
 - d Resolve all Building Permit related issues, as may be required;
 - e Provide fire safety equipment and access for fire-fighting services, as required by the municipal authorities;
 - f Apply for an Occupancy Permit and co-ordinate the resolution of all outstanding issues related to obtaining the permit; and
 - g Provide Municipal authorities with access to the site as required and arrange for inspections of the construction work by the governing utility officials.

2.7. COMMISSIONING

2.7.1. GENERAL

- .1 Provide a comprehensive commissioning program and transition plan in accordance industry standard best practices,

2.7.2. INTENT

- .1 To define the operational and performance requirements of the Owner and User.
- .2 To ensure that responsibility for meeting those requirements and demonstrating compliance is defined in the design and contract documents.



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- .3 To ensure that appropriate and start-up and checkout procedures are employed for components, subsystems, including meaningful documentation for and certification of Quality Control reports and techniques under the normal or enhanced basic services and contractual procedures.
- .4 To ensure that the final product meets the specified requirements.
- .5 To document the operations, maintenance and management requirements, and transferring the completed works to qualified facility operators.
- .6 To minimize the life-cycle operating and maintenance costs.
- .7 To verify that the department's functional requirements are correctly interpreted during the design stage, and that the building systems operate consistently at peak efficiencies, under all normal load conditions, and within the specified energy budget.

2.7.3. SCOPE AND ACTIVITIES:

- .1 Commissioning is not a replacement for good design and construction practices. Commissioning of buildings ensures that when a building or facility is handed over to its owner as an operating entity it will meet the requirements of the occupants and owner, as described in the Project Brief. It requires coordinated efforts of the part of the Project Planning Team, the Design Team, the Commissioning Team, the Construction Team and the Project Management Team
- .2 The process consists of a series of checks and balances to ensure that the work is designed, installed and proven to operate as intended. The roles and responsibilities of the various teams involved are defined in the Commissioning Plan, Project Brief, Consultant Brief and Construction Specifications. These documents also will define the commissioning testing, reporting, witnessing, and acceptance requirements.
- .3 This commissioning approach has those responsible for the delivery of the build works, including the Contractor and the Design Consultant, utilized in the delivery of the commissioning service.
- .4 The Contractor will co-ordinate and facilitate the commissioning activities as part of the basic services and will execute the commissioning verifications, testing and reporting as a deliverable. The Contractor must:
 - .1 Provide commissioning resources who must:
 - a conduct a review of the design prior to the construction documents phase;
 - b conduct a review of the construction documents near completion of the construction document development and prior to issuing the contract documents for construction;
 - c review the contractor submissions relative to the systems being commissioned;
 - d provide a single manual that contains the required information for re-commissioning all building operating systems;
 - e provide for O&M training on all building operating and controls systems for the operations and maintenance staff;



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- f provide a plan that enables the resolution of outstanding commissioning-related issues within one year of the construction completion date.
- .2 Submit Commissioning Submissions as specified below:
- a Commissioning plan to be developed and updated to 95% completion during the design stage. The final update is to be completed early during the construction stage and be finalized prior to the start of the commissioning stage;
 - b commissioning documentation, i.e. specifications;
 - c commissioning operation and maintenance review of progress drawings and specifications submissions at 66%, 99% and final completion;
 - d commissioning operation and maintenance on-site verification reports including testing, adjusting and air balancing reports;
 - e commissioning documentation regarding the conducting of all equipment and integrated systems operational performance tests, witnessing and certification of the Fire Alarm Systems to ULC S536 and S537 requirements;
 - f off-site commissioning tests, e.g. factory equipment and software operational tests and reports;
 - g O&M training plan for operations and maintenance staff;
 - h hard copy and soft copy (on approved CADD software) as-built drawings;
 - i complete warranty information on all equipment and systems;
 - j commissioning debrief report and final commissioning document.
- .3 Provide a Transition Plan to ensure a smooth and seamless transition from the construction phase (under the control of the Contractor) to the operational phase (under the control of CSC). The Transition Plan will include but is not limited to the following:
- a the participation of CSC through the design, planning, construction and commissioning phases of the project;
 - b the O&M training of the operational staff for all building operating and controls systems;
 - c the provision of operations and maintenance manuals and drawings;
 - d the establishment of service contracts for Base Building equipment and controls systems with due regard for related warranty requirements. All service contracts will be structured to permit novation or transfer to CSC.;
 - e the acceptance and commissioning of the Building;
 - f the resolution of Building deficiencies;
 - g warranty management and related processes to ensure CSC has effective access to those suppliers and contractors, particularly in cases of emergency or where



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- rapid response is required, to safeguard the asset and the contents from further damage;
- h the Contractor's warranty management process to address its obligations including inspection, scope of repairs, scheduling remedial work, etc.



3. PROJECT ADMINISTRATION

3.1. GENERAL REQUIREMENTS

- .1 “Project Team” refers to key representatives involved in this project.
- .2 All team members must maintain a professional, cordial and collaborative relationship.

3.1.2. LANGUAGE

- .1 Construction documents must be prepared in [edit as required] English.

3.1.3. MEDIA

- .1 The Contractor must not respond to any media inquiry.
- .2 Direct all media requests to the Departmental Representative.

3.1.4. PROJECT MANAGEMENT

- .1 Public Works and Government Services Canada administers the project on behalf of Canada and exercises continuing control over the project during all phases of development.
- .2 This project is to be organized, managed and implemented in a collaborative manner.
- .3 The PWGSC project management team, the Contractor and team and the User Department teams are to work cooperatively at every stage of the design and construction process.

3.1.5. SECURITY CLEARANCE AND SECURITY INFORMATION

- .1 The Contractor is responsible for maintaining appropriate security measures on site to ensure that equipment and various components are temporarily stored and protected against damage, theft and vandalism.
- .2 The Contractor must:
 - .1 Ensure Contractor’s project team including all construction workers and suppliers and manufacturers, are subject to CSC’s security clearance procedures prior to onsite work.
 - .2
 - .3 Be expected to reasonably protect the documents in their care and the information to which they have access.

3.2. ROLES AND RESPONSIBILITIES

3.2.1. CONTRACTOR

- .1 The Contractor is completely responsible for providing and coordinating the work of all professional disciplines and construction sub-contractor(s), for the completion of the project.
- .2 The Contractor must provide a single prime consultant entity to fulfill the role of the registered professional of record for the Work including all cross discipline coordination. This prime consultant must be engaged for the entire project duration including design, construction,



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- commissioning and satisfactory completion of the fully functioning facility.
- .3 The Contractor and their personnel identified in the completed Team Identification Form and elsewhere in the RFP submission, including Sub-Contractors and Specialists comprise the Turnkey Team. All team members must be eligible to work in the province of work.
 - .4 The Contractor will be required to maintain its team's expertise for the duration of the project and to comply with and adhere to:
 - .1 All the requirements in the Contract,
 - .2 All commitments made and included in the RFP submission and in the completed Declaration Form.
 - .5 The Contractor must:
 - .1 Attend meetings, (bi-weekly or as required),
 - .2 Record the issues and decisions,
 - .3 Prepare and distribute minutes within two working days of the meeting,
 - .4 Ensure all meetings are conducted in an environmentally friendly manner - i.e. using electronic documents,
 - .5 Ensure that all key personnel attend required meetings.
 - .6 The Contractor must:
 - .1 Assign qualified staff or engage the services of Specialist Contractors licensed to practice in the Province where the work is scheduled as required to provide the design services to meet the General Performance Requirements of this PM,
 - .2 Provide all necessary personnel to perform the Services and duties for the Project, either by assignment of Contractor qualified staff or by engagement of services contracted directly to the Contractor,
 - .3 Implement and deliver a rigorous design and construction Quality Assurance system,
 - .4 Carefully document and deliver comprehensive Field Review services and reports during the construction phase.
 - .5 Provide contact information for designated Contractor's personnel for the purpose of emergencies arising from activities of the Contractor (should their presence be required on site outside normal business hours throughout the duration of the project).
 - .6 Work constructively to ensure a collaborative and cooperative team approach with knowledgeable and timely input and contribution by all project team members.
 - .7 Commission the Work.

3.2.2. PWGSC TEAM

- .1 The PWGSC Project Manager is;
 - .1 The Departmental Representative,
 - .2 The liaison amongst and between the Contractor, Public Works and Government Services Canada and the User Departments.
- .2 PWGSC Centre of Expertise (COE) Team:



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- .1 Provides expert advice for architectural and engineering disciplines and specialties;
- .2 Participates in design phases and reviews construction documents;
- .3 May attend contractor meetings;
- .4 The PWGSC Centre of Expertise (COE) Architectural & Engineering Resources Team may include the following disciplines:
 - a Architecture & Interior Design,
 - b Structural Engineering,
 - c Civil Engineering,
 - d Mechanical Engineering,
 - e Electrical Engineering and
 - f Cost Planning Specialist.

3.2.3. USER DEPARTMENT TEAM

- .1 The Project Leader is responsible for the interests of Correctional Service Canada, in collaboration with the Departmental Representative.
- .2 Unless directed otherwise, all communications with Correctional Service Canada is through the Departmental Representative.

3.3. QUALITY ASSURANCE

3.3.1. GENERAL QUALITY ASSURANCE

- .1 The Contractor must ensure that:
 - .1 The performance of the Work is in accordance with the specific requirements outlined in this Project Manual or equivalent or better than standard accepted industry practices for the type of Work, if not stipulated more precisely in the requirements.
 - .2 The Work is performed in a neat and careful manner to retain Work plumb, square, and straight.
 - .3 Architects and Engineers provide full contract services as are outlined in the respective Professional Association Guidelines and Best Practices and typical Contracts to ensure conformance to the design and project requirements.
- .2 The Departmental Representative may inspect and test products during manufacture, fabrication, shop testing, installation, construction and testing phases of the Contract. Inspection and testing may be performed at place of manufacture / fabrication, storage or at the Site as advised by Departmental Representative. Ensure that assistance and access to products are provided wherever inspection and testing by Departmental Representative is to be performed. Where tests or inspections by designated Testing Laboratory reveal work not in accordance with requirements of Contractor, pay all costs for additional tests or inspections as required by Departmental Representative to verify acceptability of corrected work.

3.3.2. QUALITY ASSURANCE PLAN



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- .1 Provide a Quality Control Plan for the purpose ensuring;
 - .1 Documentation of the QA process,
 - .2 Proper lines of communication,
 - .3 Responsibility and accountability of the design,
 - .4 Routine and consistent checks,
 - .5 Conformity with specified performance Standards,
 - .6 Ensuring that materials and items of equipment delivered conform to specifications, before they are incorporated into Work,
 - .7 Identify items of Work that will be subjected to quality assurance measures.
- .2 Activities of the plan should include, but not necessarily be limited to, activities such as:
 - .1 Setting up a system of reviews by Designer's personnel,
 - .2 Engaging appropriately qualified Sub-contractors capable of producing good quality work,
 - .3 Ensuring adequate materials testing procedures are in place, and quality assurance tests carried out and the results acceptable,
 - .4 Consulting with personnel and Sub-contractors to confirm that requirements of the drawings and specifications are thoroughly understood,
 - .5 Close supervision during each stage of each construction operation to ensure Work is being done in accordance with drawings and specifications and in a workmanlike manner,
 - .6 Maintain a checklist and status of inspections, checks, tests.
- .3 Integrate the Quality Assurance Plan with the Commissioning Plan.

3.4. COMMUNICATION AND MEETINGS

3.4.1. COMMUNICATION

- .1 Unless otherwise directed by the Departmental Representative, the Contractor will conduct all project communication through the Departmental Representative only.
- .2 If any communication results in the need for any change to the Project's scope of work, quality, cost or schedule, the Contractor must inform the Departmental Representative, and seek direction, before taking any action.
- .3 Correspondence:
 - .1 All correspondence from the Contractor must be distributed as directed by the Departmental Representative,
 - .2 There must be no correspondence between occupants or users of the facility and the Contractor unless directed by the Departmental Representative,
 - .3 All correspondence must carry the Contract name/number, PWGSC Project title, PWGSC Project number and File number and a date (i.e. Month/Day/Year),
 - .4 Direct communication and correspondence between members of the PWGSC Project Team, Contractor and the User Departments on routine matters may be required to



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enable the project to proceed in a timely and efficient manner, however, no communication may alter the terms of the project scope, cost or schedules unless directed in writing by the Departmental Representative.

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3.4.2. MEETINGS

- .1 Meetings with PWGSC, the Contractor and CSC will normally be held in [adapt to project] during the design phase and in [adapt to project] during the construction phase.
- .2 Upon award of the contract, a schedule and an initial start up meeting with all involved parties in attendance, will be arranged by the Departmental Representative. The initial meeting will be chaired by the Departmental Representative who will prepare and distribute minutes within four (4) calendar days. The meeting will serve to introduce all key personnel involved, clarify any matters of contract, distribute forms and other informational materials, and review contract procedures. An agenda for this meeting will be prepared by the Departmental Representative and forwarded to the Contractor seven (7) calendar days prior to the meeting.
- .3 Contractor will arrange meetings bi-weekly, or scheduled at a frequency acceptable to the Departmental Representative, with representatives from:
 - .1 PWGSC;
 - .2 Contractor team; and
 - .3 CSC representatives.
- .4 Contractor will be responsible for:
 - .1 Preparing minutes of meetings, and
 - .2 Forwarding minutes to the Departmental Representative and CSC
 - .3 These meetings are for the accurate exchange of information.
 - .4 All requests and decisions taken must follow the formal lines of communications.
- .5 Contractor must:
 - .1 Arrange and coordinate all construction meetings on site:

3.4.3. SUBMISSIONS TO PWGSC

- .1 Where submissions to PWGSC include summaries, reports, network diagrams, drawings, plans, specifications or finish schedules, submit one (1) original to the Departmental Representative in electronic format, unless otherwise directed in writing.
- .2 Electronic format.
 - .1 The electronic deliverables must be provided using Microsoft applications.
 - .2 Alternatively, the Contractor may submit all work in Adobe Acrobat *.pdf format except for Network Diagrams which must be submitted in their original electronic format.

3.4.4. PROJECT RESPONSE TIME



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- .1 It is a requirement of this project that the key personnel of the Contractor are personally available to attend all meetings and respond to inquiries promptly.
- .2 During the project, the Contractor's Key Personnel must be:
 - .1 Available to attend meetings and respond to inquiries within one (1) working day's notice,
 - .2 Able to respond to emergencies within one (1) hour, including those emergencies occurring during off-hours and on weekends/ holidays.
- .3 On occasion, there may be urgent, problem-solving meetings.
 - .1 The Contractor must be available to attend such meetings in [adapt to project], within four (4) business hours.

3.5. SCHEDULE MANAGEMENT

3.5.1. PROJECT SCHEDULE

- .1 A Detailed Project Schedule is a schedule developed in reasonable detail to ensure adequate Time Management planning and control of the project.
- .2 Project Schedules are used as a guide for the planning, design and implementation phases of the project, as well as to communicate to the project team when activities are to happen, based on network techniques using Critical Path Method (CPM).
- .3 When building a Project Schedule, the Contractor must consider:
 - .1 The level of detail required for control and reporting;
 - .2 The reporting cycle must be monthly, unless otherwise identified in the Project Manual
- .4 Develop an updated detailed work breakdown structure, schedule and cash flow (anticipated invoicing to Canada) that incorporates all of the design and construction activities including allowances for reviews and approvals for each stage of the project life cycle including deliverable requirements to be provided by the User Department for Information Services and Security to be integrated into base building.

3.5.2. MILESTONES

- .1 The Major Milestones are standard Deliverables and Control Points and are required in all schedule development.
- .2 Milestones may also be external constraints such as the completion of an activity, exterior to the project, affecting the project.

3.5.3. MONITORING AND CONTROL

- .1 The Contractor is to provide continuous monitoring and control, timely identification and early warning of all unforeseen or critical issues that affect or potentially affect the project in accordance with the PM.
- .2 If unforeseen or critical issues arise, the Contractor will advise the Departmental Representative and submit proposed alternative solutions.
- .3 At each submission or deliverable stage and monthly during construction, provide an updated schedule and cash flow.



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3.6. DESIGN REPORT

3.6.1. INTENT

- .1 The intent of this report by the Contractor is to review and report on all aspects of the project. The Contractor will review and analyze all available information, consult with the PWGSC and the User Department, and deliver a Design Report. The Report by the Contractor must be in sufficient detail to illustrate and communicate the Design of the building, site adaptations and service connection required for the construction.

3.6.2. SCOPE AND ACTIVITIES:

- .1 Analyze the Technical Requirements;
- .2 Identify all design or Building Code concerns;
- .3 Provide a narrative of all changes that will be made to the Generic Package;
- .4 Identify all additional information that will be needed to deliver the project;
- .5 Identify and verify all authorities having jurisdiction over the project and codes, regulations and standards that apply; and
- .6 Analyze the geo-technical report and site survey information.;
 - .1 Collect additional field information if required.
- .7 Determine sewer, domestic water and fire protection flow requirements for the new facility as well as storm-water run-off rates;
- .8 Present and submit preliminary site adaptations and service connection design for review and approval to committees, review groups and authorities having jurisdiction;

3.7. DESIGN AND CONSTRUCTION DOCUMENTS

3.7.1. PURPOSE

- .1 This section provides direction in the preparation of construction contract documents (namely specifications, drawings and addenda).
- .2 Drawings, specifications and addenda must be complete and clear. Standard practice for the preparation of construction contract documents requires that:
 - .1 Drawings are the graphic means of showing work to be done, as they depict shape, dimension, location, quantity of materials and relationship between building components.
 - .2 Specifications are written descriptions of materials and construction processes in relation to quality, colour, pattern, performance and characteristics of materials, installation and quality of work requirements.
 - .3 Addenda are changes to the construction contract documents or tendering procedures, issued during the tendering process.

3.7.2. QUALITY ASSURANCE



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- .1 Contractors are required to undertake their own quality control process and must review, correct and coordinate (between disciplines) their documents before issuing them to PWGSC.

3.7.3. DRAWINGS

- .1 Computer Aided Design & Drafting (CADD)
 - .1 Drawings must produced in CADD be in accordance industry standards and CSA B78.3.
- .2 Title Blocks
 - .1 All drawings must include a title block..
- .3 Dimensions
 - .1 Dimensions are to be in metric only (no dual dimensioning).
- .4 Information to be included
 - .1 Drawings must show the quantity and configuration of the project, the dimensions and details of how it is constructed.
 - .2 There should be no references to future work and no any information that will be changed by future addenda.
 - .3 The scope of work should be clearly detailed and elements not in contract should be eliminated or kept to an absolute minimum.
- .5 Drawing Numbers
 - .1 Number drawings in sets according to the type of drawing and the discipline involved as follows:
 - .2 During the Design Phase of the project each submission and review must be noted on the Notes block of the drawing title, but at the time of construction document preparation, all revision notes should be removed.

Discipline	Drawing
Demolition	D1, D2, etc.
Architectural	A1, A2, etc.
Civil	C1, C2, etc.
Landscaping	L1, L2, etc.
Mechanical	M1, M2, etc.
Electrical	E1, E2, etc.
Structural	S1, S2, etc.
Interior Design	ID1, ID2, etc.

- .6 Prints
 - .1 Print with black lines on white paper.
 - .2 Blue prints are acceptable for progress document submissions.
 - .3 Confirm with Departmental Representative the size of prints to be provided for review purposes.
- .7 Binding
 - .1 Staple or otherwise bind prints into sets.



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- .2 Where presentations exceed 20 sheets, the drawings for each discipline may be bound separately for convenience and ease of handling.
- .8 Legends
 - .1 Provide a legend of symbols, abbreviations, references, etc., on the front sheet of each set of drawings or, in large sets of drawings, immediately after the title sheet and index sheets.
- .9 Schedules
 - .1 Where schedules occupy entire sheets, locate them next to the plan sheets or at the back of each set of drawings for convenient reference.
 - .2 See CGSB 33-GP-7 Architectural Drawing Practices for schedule arrangements.
- .10 North Points
 - .1 On all plans include a north point.
 - .2 Orient all plans in the same direction for easy cross-referencing.
 - .3 Wherever possible, lay out plans so that the north point is at the top of the sheet.
- .11 Drawing Symbols
 - .1 Follow generally accepted drawing conventions, understandable by the construction trades..

3.7.4. SPECIFICATIONS

- .1 In preparing project specifications, the Contractor must use the current edition of the National Master Specification (NMS) in accordance with the “NMS User’s Guide”, or other industry standard specification formats such as CSI Master format.
 - .1 The Contractor retains overriding responsibility for content and must edit, amend and supplement the standard specifications as deemed necessary to produce an appropriate project specification, free of conflict and ambiguity.
- .2 Standards
 - .1 It is the responsibility of the Contractor to ensure that the project specification uses the latest applicable edition of all references quoted.
 - .2 Canadian standards should be used wherever possible.

4. PERFORMANCE REQUIREMENTS

4.1. SUMMARY DESCRIPTION – GENERIC SUPPORT BUILDING OUTSIDE (GO

4.1.1. BACKGROUND

- .1 CSC has developed a generic support building to be reused at various Institutions across the country and constructed outside the



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secure institutional perimeter. The building is designed to be free egress but with areas that have restricted or limited access. Secure construction is limited to specific rooms as detailed in Section 3.3 Security Considerations below.

- .2 The GO building is a single building with the initial design of three distinct Functional Zones.
 - .1 The Storage Zone
 - .2 The Administration Zone
 - .3 The Staff Zone
- .3 The Storage Zone is generally considered to be an open warehouse area and is located on one side of the support functions and covers space on both the ground and second level. This area includes a ground level receiving area, two storey open storage and one storey high storage areas on both ground floor and in platform storage on the second level.
- .4 The Administration Zone is generally considered to be a staff area and is located on the second level of the building and has limited access. The area will support various staff functions including offices, open cubicles, meeting room, storage as well as support functions such as washrooms, copy and fax centres.
- .5 The Staff Zone is an area of support functions for the staff of the institution. This includes locker rooms, change rooms, and a large meeting room.

4.1.2. PROJECT SCOPE

- .1 Code review, design modifications and update of the Generic Design, for all disciplines, shall be reviewed by the Consultant to suit the new location of CSC Institution.
- .2 Construction of a new building at the CSC site to house the staff, programs and services of the support building.
- .3 Site adaptation of the building:
 - .1 The project includes site preparation, site services (new and upgraded to project needs), and connections to the Institution and or City services.
 - .2 Construction outside the secure perimeter.
 - .3 Location of the building relative to other support buildings will be considered in developing the site.
- .4 Complete compatibility of new building systems is required with the following existing Institution's systems:
 - .1 Life Safety Systems;
 - .2 Security Systems;
 - .3 IT Communications;
 - .4 Building Management Systems;
 - .5 Any other systems as deemed necessary by CSC.

4.1.3. DESIGN CONSIDERATIONS

- .1 Architectural Considerations
 - .1 Design parameters as well as construction systems shall meet Correctional Service Canada Standards,



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Accommodation Guidelines and Technical Criteria, together with the National Building Code standards for the usage intended for this building and any other codes, guidelines or authorities having jurisdiction.

.2 Additionally:

- a Layout of spaces shall be flexible and encourage positive interaction of users and integrate security;
- b Interior circulation shall be clear and as open as possible. Natural light in work spaces shall be provided whenever possible;
- c The building shall be fully accessible to the physically impaired. The Federal Government standard is CSA B651-04 Barrier-Free Design;
- d Built-in furniture, cabinets and shelving shall be part of the design and shall be included in the scope of work;
- e The Consultant shall develop layouts of all the furniture, built-in and moveable. All services, electric power, IT communications, lighting and cable vision shall be shown on the plans in reference to the position of the furniture;
- f Construction materials shall be selected according to the security rating and the use of each area. Finishes shall be selected for durability and ease of maintenance.

.2 Fire Safety Considerations

- .1 In addition to conforming to the latest National Building Code, the National Fire Code, the Treasury Board Occupational Safety and Health Manual and the Fire Commissioner's Directives, the new building shall be sprinklered.
- .2 All new life safety systems will need to be linked to the Institution's Central monitoring point.
- .3 Existing fire hydrant coverage and fire department access for the new structure shall be reviewed in accordance to the NBC requirements and modified as required.

.3 Security Considerations

- .1 Security design includes the following areas:
 - a IT LAN and Telecom/communications rooms;
 - b Controlled access areas as required by the project.
- .2 Security Systems includes to support the following:
 - a CCTV; infrastructure only
 - b Access control systems, Door alarms; infrastructure only
 - c PA.
- .3 Systems must be compatible and consistent with existing Institution's systems. (Specific sites may require more devices than those listed.)
- .4 All security systems shall be linked and integrated to the Institution's Central Monitoring Capability as well as a Central Location within this building.



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- .4 Mechanical Considerations
 - .1 Ventilation systems shall be designed to serve different usages in different areas of the new facility, i.e. Administration areas, staff areas and storage.
 - .2 Air conditioning shall be provided for each floor of the GI and GO building.
 - .3 All new systems shall be designed with DDC controls.
- .5 Electrical Considerations
 - .1 CSC will provide the consultant with information on the type of wiring to be used for telephone, informatics, etc.
 - .2 Voice and data connections are required in all offices. CSC will provide active equipment and final systems hook-ups.
 - .3 A centralized Public Address system shall be provided and linked to the main Institution System.
 - .4 It is the responsibility of the consultant to verify on site and insure that the existing electric power supply of the Institution can meet the demand of the new building.
- .6 Environmental Considerations
 - .1 One of CSC's corporate objectives is "to increase the Service's contribution to improving Canada's environmental performance". In accordance with Federal Sustainable Development Strategy, this new construction will achieve an industry-recognized level of high environmental performance
 - .2 Design considerations should respond to issues of effective and efficient use of energy and sound environmental practices. Among other things:
 - a CSC prohibits the use of ozone depleting chemicals in refrigerants, cooling systems, insulating foams and fire control equipment;
 - b Water consumption must be minimized using water saving devices and appliances;
 - c Environmental impact of materials should be considered throughout both product and facility life cycles, including source and eventual disposal.
 - d Energy target of 1400MJ/m² or less.
- .7 Site Services
 - .1 A physical Plant Survey of the applicable Site shall be provided to the Contractor for information on site services.
 - .2 It is the responsibility of the consultant to verify on site and insure that all existing services can meet the demand of the new building.

4.1.4. SPECIFIC FACILITY REQUIREMENTS



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- .1 Facility Role Statement
 - .1 The Support Building was developed to be added physical space to accommodate various ancillary services required by an increase in inmate population. The Support Building shall be a stand-alone building with areas to accommodate administration, support and storage functions needed for the institution.

- .2 Zoning/Circulation
 - .1 In general the building has been developed to be in two distinct sections.
 - a Section A: General warehouse and storage functions.
 - b Section B: Administrative and Staff functions.
 - .2 Support functions are centralized on each level including core circulation, washrooms, mechanical and building systems.



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4.1.5. PROJECT LOGISTICS

- .1 Contractor shall be responsible to ensure staging and sequencing of all construction as well as temporary works inherent to the project:
 - .1 Site preparation, including safety isolation of the construction site as required, as well as lay down areas as required for the Contractor and Subs;
 - .2 Construction of the new building and associated site functions to accommodate the needs of the project.
- .2 The most economical and expedient solutions shall be considered in order to meet budget and schedule requirements while at the same time keeping in mind the required program, standards and specific requirements for the project as well as security needs.
- .3

4.1.6. FACILITY PROGRAM

- .1 Storage Zone:
 - .1 The storage zone may include the following functions:
 - a Receiving area,
 - b Open two level storage,
 - c One level storage areas,
 - d Closed storage rooms.
 - .2 Access to the Storage Zone shall be through the Main entrance or directly from the exterior.
- .2 Administration Zone:
 - .1 The administration zone includes the following functions:
 - a Closed Offices;
 - b Open Office Cubicles;
 - c Admin support areas / rooms for Clerical Staff, Copiers / fax, and storage;
 - d Staff facilities, and washrooms;
 - e Meeting room;
 - f Support functions, Storage, Washrooms, and Janitorial etc.
 - .2 This Zone provides a controlled environment for administrative staff and related activities that require additional security and separation. Activities, information and assets within this Zone may be of a highly confidential and protected nature, thereby requiring that access to it be restricted and controlled.
 - .3 Activities in this Zone may be confidential or protected, thereby justifying the use of enclosed offices. Offices shall be grouped in a suite but some may be directly off of the common area for enhanced supervision.



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- .3 Staff Zone:
 - .1 The Staff zone includes the following functions:
 - a Locker rooms;
 - b Change rooms;
 - c Large Meeting room.
 - .4 Support Functions:
 - .1 Include the following functions:
 - a Washrooms;
 - b Janitors closets;
 - c Telecom, Electronics and LAN rooms;
 - d Mechanical room;
 - e Electrical room.
 - .2 Some support functions may require increased security. Staff only shall have access to restricted rooms. Certain rooms that require more frequent access can be located in an area closer to the program or administration rooms or may be moved to other zones if required. Access to these functions shall be off of the general circulation and each room envelope must meet its designated Security Level. There may be the need to provide direct exterior or secondary access to this Zone for servicing of the Facilities Infrastructure.
 - .3 Access to critical facility infrastructure shall be restricted so as not to be compromised by attempts at unauthorized or uncontrolled access. These include:
 - a Water mains;
 - b Cooling and heating systems;
 - c Fire detection;
 - d Alarm systems;
 - e Electrical;
 - f Mechanical;
 - g Telephone and data lines and other service connections.



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4.2. SUMMARY DESCRIPTION – GENERIC SUPPORT BUILDING INSIDE (GI)

4.2.1. BACKGROUND

- .1 CSC has developed a generic support building to be reused at various Institutions across the country and constructed inside the secure institutional perimeter. The building is designed to be free egress but with areas that have restricted or limited access. Secure construction is limited to specific rooms as detailed in Section 3.3 Security Considerations below.
- .2 The GI building is a single building with the initial design of two distinct Functional Zones.
 - .1 The Programs Zone
 - .2 The Administration Zone
- .3 The Program Zone is generally considered to be an Inmate area and is located on the ground level and will have general inmate access as scheduled. This area may include program rooms, inmate group offices, meeting rooms, storage and other support functions.
- .4 The Administration Zone is generally considered to be a staff area and is located on the second level of the building and has limited inmate access. The area will support various staff functions including offices, open cubicles, meeting rooms, storage as well as support functions such as washrooms, kitchenettes, copy and fax centres.

4.2.2. PROJECT SCOPE

- .1 Code review, design modifications and update of the Generic Design, for all disciplines, shall be reviewed by the Consultant to suit the new location of CSC Institution.
- .2 Construction of a new building at the CSC site to house the staff, programs and services of the support building.
- .3 Site adaptation of the building:
 - .1 The project includes site preparation, site services (new and upgraded to project needs), and connections to the Institution and or City services.
 - .2 Construction within a secure perimeter will require consideration of site access.
 - .3 Location of the building relative to inmate activities will be considered in developing the site.



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- .4 Complete compatibility of new building systems is required with the following existing Institution's systems:
 - .1 Life Safety Systems;
 - .2 Security Systems;
 - .3 IT Communications;
 - .4 Building Management Systems;
 - .5 Any other systems as deemed necessary by CSC.

4.2.3. DESIGN CONSIDERATIONS

- .1 Architectural Considerations
 - .1 Design parameters as well as construction systems shall meet Correctional Service Canada Standards, Accommodation Guidelines and Technical Criteria, together with the National Building Code standards for the usage intended for this building and any other codes, guidelines or authorities having jurisdiction.
 - .2 Additionally:
 - a Layout of spaces shall be flexible and encourage positive interaction of users and integrate security;
 - b Interior circulation shall be clear and as open as possible. Natural light in work spaces shall be provided whenever possible;
 - c The building shall be fully accessible to the physically impaired. The Federal Government standard is CSA B651-04 Barrier-Free Design;
 - d Built-in furniture, cabinets and shelving shall be part of the design and shall be included in the scope of work;
 - e The Consultant shall develop layouts of all the furniture, built-in and moveable. All services, electric power, IT communications, lighting and cable vision shall be shown on the plans in reference to the position of the furniture;
 - f Construction materials shall be selected according to the security rating and the use of each area. Finishes shall be selected for durability and ease of maintenance.
- .2 Fire Safety Considerations
 - .1 In addition to conforming to the latest National Building Code, the National Fire Code, the Treasury Board Occupational Safety and Health Manual and the Fire Commissioner's Directives, the new building shall be sprinklered.
 - .2 All new life safety systems will need to be linked to the Institution's Central monitoring point.
 - .3 Existing fire hydrant coverage and fire department access for the new structure shall be reviewed in accordance to the NBC requirements and modified as required.



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.3 Security Considerations

- .1 Security design includes the following areas:
 - a IT LAN and Telecom/communications rooms;
 - b Controlled access areas as required by the project.
- .2 Security Systems includes to support the following:
 - a CCTV; infrastructure only
 - b Access control systems, Door alarms; infrastructure only
 - c PA and PPA
- .3 Systems must be compatible and consistent with existing Institution's systems. (Specific sites may require more devices than those listed.)
- .4 All security systems shall be linked and integrated to the Institution's Central Monitoring Capability as well as a Central Location within this building.

.4 Mechanical Considerations

- .1 Ventilation systems shall be suitably designed to serve different usages in different areas of the new facility, i.e. Administration areas, Program areas, support functions and storage.
- .2 Air conditioning shall be provided for both floors or each GI and GO building.
- .3 All new systems shall be designed with DDC controls.
- .4 Special exhaust ventilation for aboriginal smudging may be required in one meeting, program room of the building.

.5 Electrical Considerations

- .1 CSC will provide the consultant with information on the type of wiring to be used for telephone, informatics, etc.
- .2 Voice and data connections are required in all offices. CSC will provide active equipment and final systems hook-ups.
- .3 A centralized Public Address system shall be provided and linked to the main Institution System.
- .4 It is the responsibility of the consultant to verify on site and insure that the existing electric power supply of the Institution can meet the demand of the new building.

.6 Environmental Considerations



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- .1 One of CSC's corporate objectives is "to increase the Service's contribution to improving Canada's environmental performance". In accordance with Federal Sustainable Development Strategy, this new construction will achieve an industry-recognized level of high environmental performance
- .2 Design considerations should respond to issues of effective and efficient use of energy and sound environmental practices. Among other things:
 - a CSC prohibits the use of ozone depleting chemicals in refrigerants, cooling systems, insulating foams and fire control equipment;
 - b Water consumption must be minimized using water saving devices and appliances;
 - c Environmental impact of materials should be considered throughout both product and facility life cycles, including source and eventual disposal.
 - d Energy target of 100MJ/m² or less.
- .7 Site Services
 - .1 A physical Plant Survey of the applicable Site shall be provided to the Contractor for information on site services.
 - .2 It is the responsibility of the consultant to verify on site and insure that all existing services can meet the demand of the new building.

4.2.4. SPECIFIC FACILITY REQUIREMENTS

- .1 Facility Role Statement
 - .1 The Support Building was developed to be added physical space to accommodate various ancillary services required by an increase in inmate population The Support Building shall be a stand-alone building with areas to accommodate administration, support and program functions needed for the institution.
 - .2 A major portion of the new building will be dedicated to inmate programs and training. The area will include a variety of program rooms, offices, interview rooms as well as support functions. All program rooms should include built-in lockable storage to maximize flexibility in the room's uses. Each room should be flexible in allowing them to be reconfigured to accommodate different class settings. Visual supervision into the rooms from the corridors is part of the dynamic security for the area.

4.2.5. ZONING/CIRCULATION

- .1 In general the building has been developed to be in two distinct floors.
 - a Ground level: inmate focused activities and functions
 - b Second level: office and administrative functions



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- .2 Support functions are centralized on each level including core circulation, washrooms, mechanical and building systems.

4.2.6. PROJECT LOGISTICS

- .1 Contractor shall be responsible to ensure staging and sequencing of all construction as well as temporary works inherent to the project:
 - .1 Site preparation, including safety isolation of the construction site as required, as well as lay down areas as required for the Contractor and Subs;
 - .2 Construction of the new building and associated site functions to accommodate the needs of the project.
 - .3 The most economical and expedient solutions shall be considered in order to meet budget and schedule requirements while at the same time keeping in mind the required program, standards and specific requirements for the project as well as security needs.

4.2.7. FACILITY PROGRAM

- .1 Programs Zone:
 - .1 The program zone may include the following functions:
 - a Main entrance
 - b Programs rooms
 - c Meeting rooms
 - d Workrooms
 - e Recreational rooms
 - f Support functions, Storage, Washrooms, Janitorial etc.
 - .2 This zone includes areas for the provision of various programs designed to address the needs of the Institution. Programs are delivered to group sizes from four to twelve Offenders. While the frequency and duration of each program varies, Offenders attend one program at a time.
 - .3 Access to the Programs Zone shall be through the Main entrance.



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- .4 Program room's design shall permit multi-use functions such as:
 - a Meetings;
 - b Social events;
 - c Recreation;
 - d Programs;
 - e Educational classes.

- .2 Administration Zone:
 - .1 The administration zone includes the following functions:
 - a Closed Offices;
 - b Open Office Cubicles;
 - c Admin support areas / rooms for Clerical Staff, Copiers / fax, and storage;
 - d Staff facilities, and washrooms;
 - e Meeting room;
 - f Support functions, Storage, Washrooms, and Janitorial etc.
 - .2 This Zone provides a controlled environment for administrative staff and related activities that require additional security and separation. Activities, information and assets within this Zone may be of a highly confidential and protected nature, thereby requiring that access to it be restricted and controlled.
 - .3 Activities in this Zone may be confidential or protected, thereby justifying the use of enclosed offices. Offices shall be grouped in a suite but some may be directly off of the common area for enhanced supervision.

- .3 Support Functions:
 - .1 Include the following functions:
 - a Washrooms,
 - b Janitors closets,
 - c Kitchen,
 - d Telecom, Electronics and LAN rooms;
 - e Mechanical room;
 - f Electrical room.
 - .2 Some support functions may require increased security. Staff only shall have access to restricted rooms. Certain rooms that require more frequent access can be located in an area closer to the program or administration rooms or may be moved to other zones if required. Access to these functions shall be off of the general circulation and each room envelope must meet its designated Security Level. There may be the need to provide direct exterior or secondary access to this Zone for servicing of the Facilities Infrastructure.



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- .3 Access to critical facility infrastructure shall be restricted so as not to be compromised by attempts at unauthorized or uncontrolled access. These facilities include:
 - a Water mains;
 - b Cooling and heating systems;
 - c Fire detection;
 - d Alarm systems;
 - e Electrical;
 - f Mechanical;
 - g Telephone, data lines and other service connections.

4.3. TECHNICAL REQUIREMENTS

4.3.1. REFER TO APPENDIX A

4.4. CONCEPT DRAWINGS

4.4.1. REFER TO APPENDIX B I AND B2

- .1 A1 Generic Support Building Inside Perimeter – Level 1, Level 2 Plans
- .2 A2 Generic Support Building outside Perimeter – Level 1, Level 2 Plans
- .3 A3 Generic Support Building Inside and Outside Perimeter – Millwork Elevations
- .4 A4 Generic Support Building Inside and Outside Perimeter – Door Styles

4.5. ROOM DATA SHEETS

4.5.1. REFER TO APPENDIX C

- .1 Meeting Room – Large
- .2 Staff Locker Room
- .3 Warehouse
- .4 Staff Shower Room
- .5 Corridors
- .6 Electrical, Telcon and LAN
- .7 Janitor Closet
- .8 Kitchen
- .9 MAIN Vestibule, Stair
- .10 Meeting Room Small
- .11 Multi-Purpose room 1
- .12 Multi-Purpose Room 2
- .13 office 1



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- .14 Office 2
- .15 Open Workstations
- .16 Program Room 1
- .17 Program Room 2
- .18 Secondary Stair
- .19 Storage and Support
- .20 20 Washroom 1
- .21 Washroom 2

4.6. REFERENCE MATERIALS

4.6.1. REFER TO ATTACHMENTS

- .1 Geotechnical Report
- .2 Canadian Environmental Assessment Act Screening
- .3 Topographical Survey
- .4 Drawings – Existing Facility
- .5 Section SP Site - for construction fencing inside CSC Institutions
- .6 Section SU – Site utilities
- .7 CSC Room Numbering Standard
- .8 CSC Computer Facilities Guidelines