

AUGUST 23<sup>RD</sup> 2019

**NEW SECURE COURTYARDS**  
**DONNACONA DETENTION FACILITY**  
**UIS 321-3907**

**ARCHITECTURE TECHNICAL SPECIFICATIONS**  
ISSUED FOR TENDER

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## NEW SECURE COURTYARDS UIS 321-3907 DONNACONA DETENTION FACILITY

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**GENERAL REQUIREMENTS AND TECHNICAL SPECIFICATIONS**

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**Part 1 General**

**1.1 REFERENCES**

- .1 Public Works Government Services Canada [PWGSC] Standard Acquisition Clauses and Conditions [SACC]-ID: R0202D, Title: General Conditions "C", In Effect as Of: May 14, 2004.

**1.2 PROJECT CLEANLINESS**

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, including that caused by Departmental Representative or other Contractors.
- .2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .3 Clear snow and ice from access to building, bank/pile snow in designated areas only.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on-site garbage and recycling containers for collection of waste materials and debris.
- .6 Provide and use clearly marked separate bins for recycling. Refer to Section 01 74 21 - Waste Management And Disposal.
- .7 Remove waste material and debris from site and deposit in waste container at end of each working day.
- .8 Clean interior areas prior to start of finish work, and maintain areas free of dust and other contaminants during finishing operations.
- .9 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .10 Seal all openings in all ductwork from the time it is installed until directed by the Departmental Representative to remove.
- .11 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .12 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .13 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

**1.3 FINAL CLEANING**

- .1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.

- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review, remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste products and debris including that caused by Departmental Representative or other Contractors.
- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .8 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, ceilings and floors.
- .9 Clean lighting reflectors, lenses, and other lighting surfaces.
- .10 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .11 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .12 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .13 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .14 Remove dirt and other disfiguration from exterior surfaces.
- .15 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .16 Sweep and wash clean paved areas.
- .17 Clean equipment and fixtures to a sanitary condition; clean or replace filters of mechanical equipment.
- .18 Clean roofs, downspouts, and drainage systems.
- .19 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.
- .20 Remove snow and ice from access to building.

**1.4 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

**Part 2**            **Products**

**2.1**                **NOT USED**

.1                  Not Used.

**Part 3**            **Execution**

**3.1**                **NOT USED**

.1                  Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 WORK COVERED BY CONTRACT DOCUMENTS**

- .1 Work of this Contract comprises general construction of new secure courtyards; as indicated on the Drawings.

**1.2 CONTRACT METHOD**

- .1 Construct Work under single, stipulated price contract.

**1.3 CONTRACTOR USE OF PREMISES**

- .1 Unrestricted use of site until Substantial Performance.

**1.4 DEPARTMENTAL REPRESENTATIVE FURNISHED ITEMS**

- .1 Departmental Representative Responsibilities:
  - .1 Arrange for delivery of shop drawings, product data, samples, manufacturer's instructions to Contractor.
  - .2 Deliver supplier's bill of materials to Contractor.
  - .3 Arrange and pay for delivery to site in accordance with Progress Schedule.
  - .4 Inspect deliveries jointly with Contractor and supplier.
  - .5 Submit claims for transportation damage to supplier.
  - .6 Arrange for replacement of damaged, defective or missing items.
- .2 Contractor Responsibilities:
  - .1 Designate delivery date required by Contractor for each product in progress schedule.
  - .2 Review shop drawings, product data, samples, and other submittals. Submit to Departmental Representative notification of any observed discrepancies or problems anticipated due to non-conformance with Contract Documents within two weeks of receipt.
  - .3 Receive and unload products at site.
  - .4 Inspect deliveries jointly with Departmental Representative; record shortages, and damaged or defective items.
  - .5 Handle products at site, including uncrating and safe storage.
  - .6 Protect products from damage, and from exposure to elements.
  - .7 Assemble, install, connect, adjust, and finish products as required for professional installation.
  - .8 Provide installation inspections required by public authorities.
  - .9 Repair or replace items damaged by Contractor or sub contractor on site [under his control].
- .3 Schedule of Departmental Representative furnished items:
  - .1 All furniture and items noted on the Drawings as "Departmental Representative Supplied" shall be supplied by the Departmental Representative and installed and coordinated by the Contractor.

**1.5 DOCUMENTS REQUIRED**

- .1 Maintain at job site, one copy each of the following:
  - .1 Contract drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Reviewed shop drawings.
  - .5 List of Outstanding Shop Drawings.
  - .6 Change orders.
  - .7 Other modifications to Contract.
  - .8 Field test reports.
  - .9 Copy of approved Work schedule.
  - .10 Manufacturers' installation and application instructions.
  - .11 Labour conditions and wage schedules.
  - .12 Health and Safety Plan and Other Safety Related Documents.
  - .13 Other documents as specified.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**



**Part 1            General**

**1.1                ACCESS AND EGRESS**

- .1        Design, construct and maintain temporary "access to" and "egress from" work areas, including stairs, runways, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

**1.2                USE OF SITE AND FACILITIES**

- .1        Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated.
- .2        Maintain existing services to building and provide for personnel and vehicle access.
- .3        Where security is reduced by work provide temporary means to maintain security.
- .4        Refer to article 1.11 in Section 01 52 00 – Construction Facilities for information on sanitary facilities.
- .5        Closures: protect work temporarily until permanent enclosures are completed.

**1.3                ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING**

- .1        Execute work with least possible interference or disturbance to occupants, public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

**1.4                EXISTING SERVICES**

- .1        Notify Departmental Representative and utility companies of intended interruption of services and obtain required permission.
- .2        Where Work involves breaking into or connecting to existing services, give Departmental Representative 48 hours of notice for necessary interruption of mechanical or electrical service throughout course of work. Keep duration of interruptions minimum. Carry out interruptions after normal working hours of occupants, preferably on weekends.
- .3        Provide for personnel and vehicular traffic.
- .4        Construct barriers in accordance with Section 01 56 00 – Temporary Barriers and Enclosures.

**1.5                INSTITUTION REQUIREMENTS**

- .1        Comply with the document "Correctional Service Canada Security Requirements" for Contractors Working at the Institution distributed by the Departmental Representative at the pre-tender site meeting. These Security Requirements generally cover restrictions/requirements including, but not necessarily limited to contraband, prescription drugs, vehicles and their use, vehicle and worker searches, construction limits, security clearances, shipments to and from the site, tools and their use, and security and other hardware keys. Refer to Section 01 35 13.

**1.6 BUILDING SMOKING ENVIRONMENT**

- .1 Comply with smoking restrictions. See Section 01 35 13 – Security Requirements.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                RELATED REQUIREMENTS SPECIFIED ELSEWHERE**

- .1            Particular requirements for inspection and testing to be carried out by testing laboratory designated by Departmental Representative are specified under various sections.

**1.2                APPOINTMENT AND PAYMENT**

- .1            Departmental Representative will appoint and pay for services of testing laboratory except follows:
  - .1            Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
  - .2            Inspection and testing performed exclusively for Contractor's convenience.
  - .3            Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
  - .4            Mill tests and certificates of compliance.
  - .5            Tests specified to be carried out by Contractor under the supervision of Departmental Representative.
  - .6            Additional tests specified in the following paragraph.
- .2            Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by Departmental Representative to verify acceptability of corrected work.

**1.3                CONTRACTOR'S RESPONSIBILITIES**

- .1            Provide labour, equipment and facilities to:
  - .1            Provide access to Work to be inspected and tested.
  - .2            Facilitate inspections and tests.
  - .3            Make good Work disturbed by inspection and test.
  - .4            Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2            Notify Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3            Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4            Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by Departmental Representative.

**Part 2            Products**

**2.1                NOT USED**

- .1            Not Used.

□

- Part 3            Execution
- 3.1                NOT USED
- .1        Not Used.

END OF SECTION

**Part 1 General**

**1.1 ADMINISTRATIVE**

- .1 Schedule and administer bi-weekly (every two weeks) project meetings throughout progress of Work as determined by Departmental Representative.
- .2 Prepare agenda for meetings.
- .3 Distribute written notice of each meeting three (3) days in advance of meeting date to Departmental Representative.
- .4 Provide physical space and make arrangements for meetings.
- .5 Preside at meetings.
- .6 Record minutes. Include significant proceedings and decisions. Identify action by parties.
- .7 Reproduce and distribute copies of minutes within three (3) days after each meeting and transmit to meeting participants, affected parties not in attendance and Departmental Representative.

**1.2 PRECONSTRUCTION MEETING**

- .1 Within seven (7) days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Departmental Representative, Contractor, major Subcontractors, field inspectors and supervisors will be in attendance.
- .3 Establish time and location of meeting and notify parties concerned minimum three (3) days before meeting.
- .4 Agenda to include following:
  - .1 Appointment of official representative of participants in Work.
  - .2 Schedule of Work, progress scheduling in accordance with Section 01 32 16.07 - Project Time Management, Planning, Monitoring and Control System - Bar (GANTT) Charts.
  - .3 Schedule of submission of shop drawings, samples, colour chips in accordance with Section 01 33 00 - Submittal Procedures.
  - .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 01 51 00 - Temporary Utilities.
  - .5 Delivery schedule of specified equipment in accordance with Section 01 32 16.07 - Project Time Management, Planning, Monitoring and Control System - Bar (GANTT) Charts.
  - .6 Site security in accordance with Section 01 52 00 - Construction Facilities.
  - .7 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements.
  - .8 Departmental Representative provided Products.
  - .9 Record drawings in accordance with Section 01 78 00 - Closeout Submittals.

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- .10 Maintenance in accordance with Section 01 78 00 - Closeout Submittals.
- .11 Take-over procedures, acceptance, and warranties in accordance with Section 01 77 00 - Closeout Procedures and 01 78 00 - Closeout Submittals.
- .12 Monthly progress claims, administrative procedures, photographs, and holdbacks.
- .13 Appointment of inspection and testing agencies or firms in accordance with Section 01 45 00 - Quality Control.
- .14 Special project procedures, phasing, security.
- .5 Comply with Departmental Representative's allocation of mobilization areas of site; for field offices and sheds, access, traffic, and parking facilities.
- .6 During construction coordinate use of site and facilities through Departmental Representative's procedures for intra-project communications: Submittals, reports and records, schedules, coordination of drawings, recommendations, and resolution of ambiguities and conflicts.
- .7 Comply with instructions of Departmental Representative for use of temporary utilities and construction facilities.
- .8 Coordinate field engineering and layout work with Departmental Representative.

**1.3 PROGRESS MEETINGS**

- .1 During course of Work and two (2) weeks prior to project completion, schedule progress meetings bi-weekly (every two weeks).
- .2 Contractor, major Subcontractors involved in Work and Departmental Representative are to be in attendance.
- .3 Notify parties minimum three (3) days prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within three (3) days after meeting.
- .5 Agenda to include following:
  - .1 Review, approval of minutes of previous meeting.
  - .2 Review of Work progress since previous meeting.
  - .3 Field observations, problems, conflicts.
  - .4 Problems which impede construction schedule.
  - .5 Review of off-site fabrication delivery schedules.
  - .6 Corrective measures and procedures to regain projected schedule.
  - .7 Revision to construction schedule.
  - .8 Progress schedule, during succeeding work period.
  - .9 Review submittal schedules: expedite as required.
  - .10 Maintenance of quality standards.
  - .11 Review proposed changes for affect on construction schedule and on completion date.

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4 new secure courtyards

**Project Meetings**

**Section**

**01 31 19**

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.12 Other business.

**Part 2 Products**

**2.1 NOT USED**

.1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

.1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 DEFINITIONS**

- .1 Activity: An element of Work performed during course of Project. An activity normally has an expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart [GANTT Chart]. A graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: Original approved plan [for Project, work package, or activity], plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar [GANTT] Chart submission.
- .5 Duration: Number of work periods [not including holidays or other nonworking periods] required to complete an activity or other Project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: A summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: A significant event in Project, usually completion of major deliverable.
- .8 Project Schedule: The planned dates for performing activities and the planned dates for meeting milestones. A dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: Overall system operated by Departmental Representative to enable monitoring of project work in relation to established milestones.

**1.2 REQUIREMENTS**

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.
- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

**1.3 SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit to Departmental Representative within ten [10] working days of Award of Contract Bar [GANTT] Chart as Project Schedule for planning, monitoring and reporting of project progress.

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**1.4 PROJECT MILESTONES**

- .1 Project milestones form interim targets for Project Schedule.
  - .1 Interim Certificate [Substantial Completion] within [to be confirm by the Departemental Representative] working days of Award of Contract date.

**1.5 MASTER PLAN**

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart [GANTT].
- .2 Departmental Representative will review and return revised schedules within 5 working days.
- .3 Revise impractical schedule and resubmit within 5 working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

**1.6 PROJECT SCHEDULE**

- .1 Develop detailed Project Schedule derived from Master Plan.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows: Award.
  - .2 Shop Drawings, Samples.
  - .3 Permits.
  - .4 Mobilization.
  - .5 Excavation.
  - .6 Backfill.
  - .7 Foundations.
  - .8 Structural Steel.
  - .9 Masonry.
  - .10 Siding and Roofing.
  - .11 Interior Architecture [Walls, Floors and Ceiling].
  - .12 Detention Doors and Hardware.
  - .13 Plumbing.
  - .14 Lighting.
  - .15 Electrical.
  - .16 Piping.
  - .17 Controls.
  - .18 Heating, Ventilating, and Air Conditioning.
  - .19 Millwork.
  - .20 Fire Systems.
  - .21 Security Bars and Grilles.
  - .22 Testing and Commissioning.
  - .23 Supplied equipment long delivery items.
  - .24 Departmental Representative supplied equipment required dates.

**1.7 PROJECT SCHEDULE REPORTING**

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

**1.8 PROJECT MEETINGS**

- .1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not used.

**END OF SECTION**

**Part 1            General**

**1.1                ADMINISTRATIVE**

- .1        Submit to Departmental Representative submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2        Work affected by submittal shall not proceed until review is complete.
- .3        Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4        Where items or information is not produced in SI Metric units converted values are acceptable.
- .5        Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .6        Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7        Verify field measurements and affected adjacent Work are coordinated.
- .8        Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .9        Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .10      Keep one reviewed copy of each submission on site.

**1.2                SHOP DRAWINGS AND PRODUCT DATA**

- .1        Submit 6 prints of shop drawings for each requirement requested in specification Sections and as consultant may reasonably request.
- .2        Submit 6 copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .3        Delete information not applicable to project.
- .4        Supplement standard information to provide details applicable to project.
- .5        If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through

same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

- .6 The review of shop drawings by Departmental Representative is for sole purpose of ascertaining conformance with general concept. This review shall not mean that Departmental Representative approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of all sub-trades.
- .7 For all sections of Work which require the Contractor or Sub Contractor to provide professional engineering services, the Contractor's or Sub Contractor's Registered Professional Engineer in the Province of [Province] shall design and engineer components for the project which the Contractor's or Sub Contractor's Registered Professional Engineer is responsible for, and shall sign and seal all shop drawings and supporting documentation. The Contractor's or Sub Contractor's Registered Professional Engineer shall review all fabrication and installation of such components. At completion of the Work, each of the Contractor's and/or Sub Contractor's Registered Professional Engineers shall provide to the Consultant, a letter confirming that:
  - .1 All civil, structural, architectural, mechanical, electrical and other components are fabricated and erected in conformance with their design.
  - .2 All components are capable of supporting all the loads or capable of performance specified or indicated on the reviewed shop drawings.
  - .3 All changes to the contract documents have been reviewed and are acceptable.
  - .4 All components have been designed, fabricated and installed to substantially comply with the applicable requirements of the National Building Code.
  - .5 All components have been designed and installed to conform with the seismic restraint requirements of the National Building Code 2010.
  - .6 The fabrication and installation of such components has been reviewed and accepted by the Contractor's and/or Sub Contractor's Registered Professional Engineers.
  - .7 All components are fabricated and erected in accordance with the reviewed shop drawings.

### **1.3 SAMPLES**

- .1 Submit for review samples in triplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Departmental Representative's business address.
- .3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.

- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

#### **1.4 MOCK-UPS**

- .1 Erect mock-ups in accordance with 01 45 00 - Quality Control.

#### **1.5 PROGRESS PHOTOGRAPHS**

- .1 Employ a competent individual to take all photographs.
- .2 Upon commencement of Work and at monthly intervals thereafter, email to the Departmental Representative, digital electronic copies of photographs, of twelve [12] different views to clearly indicate progress of all parts of the Work. Provide photos from locations as directed by the Departmental Representative. Electronic copies to indicate date when photos were taken.
- .3 Progress Photographs [Digital Format]:
  - .1 Sizes: minimum 4 mega pixels image file size or 600 dpi print density.
  - .2 Type: digital colour with binding margin at one end.
  - .3 Format: jpeg or Kodak Photo CD [\* .pcd].
  - .4 Number of copies: as requested
  - .5 Identification: Rich Text Format [\* .rtf] reference to photo file with name, location, purpose, and number of project and date of exposure.
  - .6 Viewpoints: interior and exterior locations. Viewpoints determined by Departmental Representative.
- .4 Final Photographs:
  - .1 Sizes: minimum 4 mega pixels image file size or 600 dpi print density.
  - .2 Type: digital colour with binding margin at one end.
  - .3 Format: jpeg or Kodak Photo CD [\* .pcd].
  - .4 Number of copies: 1 set.
  - .5 Identification: Rich Text Format [\* .rtf] reference to photo file with name, location, purpose, and number of project and date of exposure.
  - .6 Viewpoints: interior and exterior locations. Viewpoints determined by Departmental Representative.
- .5 Distribution of Photographs:
  - .1 Submit one set of progress and final photographs to the Departmental Representative.
  - .2 Submit photographs with each Progress Claim, and continuing until Final Certificate.
  - .3 Submit progress photographs on CDROM, files compressed with file names referencing progress time when each photograph was prepared, e.g. 2010-10-15 Foundation 1, placement of reinforcing steel.
  - .4 Include all photographs in the final submission and submit on a CDROM files compressed with file names referencing progress time when each photograph was prepared e.g. 2010-10-15 Roof 10, Installation of roof vents.

**Part 2            Products**

**2.1                NOT USED**

.1                Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1                Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                PURPOSE**

- .1        To ensure that both the construction project and the institutional operations may proceed without undue disruption or hindrance and that the security of the Institution is maintained at all times.

**1.2                DEFINITIONS**

- .1        "Contraband" means:
  - .1        an intoxicant, including alcoholic beverages, drugs and narcotics,
  - .2        a weapon or a component thereof, ammunition for a weapon, and anything that is designed to kill, injure or disable a person or that is altered so as to be capable of killing, injuring or disabling a person, when possessed without prior authorization,
  - .3        an explosive or a bomb or a component thereof,
  - .4        currency over \$25, when possessed by an inmate without prior authorization, and
  - .5        any item not described in paragraphs [1] to [4] that could jeopardize the security of a Penitentiary or the safety of persons, when that item is possessed without prior authorization
- .2        "Unauthorized Smoking Items" means all smoking items including, but not limited to, cigarettes, cigars, tobacco, chewing or snuffing tobacco, cigarette making machines, matches and lighters.
- .3        "Commercial Vehicle" means any motor vehicle used for the shipment of material, equipment and tools required for the construction project.
- .4        "CSC" means Correctional Service Canada.
- .5        "Construction employees" means persons working for the general Contractor, the sub-contractors, equipment operators, material suppliers, testing and inspection companies and regulatory agencies.
- .6        "Departmental Representative" means the Public Works and Government Services Canada [PWGSC] or the Correctional Service Canada [CSC] project manager depending on project.
- .7        "Perimeter" means the fenced or walled area of the institution that restrains the movement of the inmates.
- .8        "Construction zone" means the area as shown on the contract drawings where the contractor will be allowed to work. This area may or may not be isolated from the security area of the institution.

**1.3                PRELIMINARY PROCEEDINGS**

- .1        Prior to the commencement of work, the Contractor will meet with the Departmental Representative to:
  - .1        Discuss the nature and extent of all activities involved in the Project.
  - .2        Establish mutually acceptable security procedures in accordance with this instruction and the institution's particular requirements.
- .2        The Contractor will:
  - .1        Ensure that all construction employees are aware of the CSC security requirements.
  - .2        Ensure that a copy of the CSC security requirements is always prominently on display at the job site.

□

- .3 Co-operate with institutional personnel in ensuring that security requirements are observed by all construction employees.

**1.4 CONSTRUCTION EMPLOYEES**

- .1 Submit to the Departmental Representative a list of the names with date of birth of all construction employees to be employed on the construction site and a security clearance form for each employee. [*Institutional Access CPIC Clearance Request* form CSC/SCC 1279].
- .2 Allow two [2] weeks for processing of security clearances. Construction employees will not be admitted to the Institution without a valid security clearance in place and a recent picture identification such as a provincial driver's license. Security clearances obtained from other CSC institutions are not valid at the institution where the project is taking place.
- .3 The Departmental Representative requires that facial photographs be taken of construction employees and these photographs be displayed at appropriate locations in the institution or in an electronic database for identification purposes. The Departmental Representative requires that Photo ID cards be provided for all construction workers. ID cards will then be left at the designated entrance to be picked upon arrival at the institution and shall be displayed prominently on the construction employees clothing at all time while employees are at the institution.
- .4 Entry to Institutional Property will be refused to any person there may be reason to believe may be a security risk.
- .5 Any person employed on the construction site will be subject to immediate removal from Institutional Property if they:
  - .1 appear to be under the influence of alcohol, drugs or narcotics.
  - .2 behave in an unusual or disorderly manner.
  - .3 are in possession of contraband.

**1.5 VEHICLES**

- .1 All unattended vehicles on CSC property shall have windows closed; doors and trunks shall be locked and keys removed. The keys shall be securely in the possession of the owner or an employee of the company that owns the vehicle.
- .2 The Departmental Representative may limit at any time the number and type of vehicles allowed within the Institution.
- .3 Drivers of delivery vehicles for material required by the project shall require security clearances and must remain with their vehicle the entire time that the vehicle is in the Institution. The director may require that these vehicles be escorted by Institutional staff or Commissionaires while in the Institution.
- .4 If the Departmental Representative permits trailers to be left inside the secure perimeter of the Institution, these trailer doors will be locked at all times. All windows will be securely locked when left unoccupied. All trailer windows shall be covered with expanded metal mesh. All storage trailers inside and outside the perimeter must be locked when not in use.



**1.6 PARKING**

- .1 The parking area[s] to be used by construction employees will be designated by the Departmental Representative. Parking in other locations will be prohibited and vehicles may be subject to removal.

**1.7 SHIPMENTS**

- .1 All shipments of project material, equipment and tools shall be addressed in the Contractor's name to avoid confusion with the institution's own shipments. The Contractor must have his own construction employees on site to receive any deliveries or shipments. CSC staff will NOT accept receipt of deliveries or shipments of any material equipment or tools.

**1.8 TELEPHONES**

- .1 There will be no installation of telephones, Facsimile machines and computers with Internet connections permitted within the perimeter of the institution unless prior approval of the Departmental Representative is received.
- .2 The Departmental Representative will ensure that approved telephones, Facsimile machine and computers with Internet connections are located where they are not accessible to inmates. All computers will have an approved password protection that will stop an Internet connection to unauthorized personnel.
- .3 Wireless cellular and digital telephones, including but not limited to devices for telephone messaging, pagers, BlackBerries, telephone used as 2-way radios, are not permitted within the perimeter of the Institution unless approved by the Departmental Representative. If wireless cellular telephones are permitted, the user will not permit their use by any inmate. Cellular telephones approved by the Departmental Representative must be signed in and out of the institution.
- .4 The Departmental Representative may approve and limit the use of two-way radios.

**1.9 WORK HOURS**

- .1 Work hours within the Institution are: [Monday to Friday 7:30 a.m. to 6:00 p.m.]
- .2 Work will not be permitted during weekends and statutory holidays without the permission of the Departmental Representative. A minimum of three [3] days advance notice will be required to obtain the required permission. In case of emergencies or other special circumstances, this advance notice may be waived by the Departmental Representative.

**1.10 OVERTIME WORK**

- .1 No overtime work will be allowed without permission of the Departmental Representative. Give a minimum twenty-four [24] hours advance notice when overtime work on the construction project is necessary and approved. If overtime work is required because of an emergency such the completion of a concrete pour or work to make the construction safe and secure, the contractor shall advise the Departmental Representative as soon as this condition is known and follow the directions given by the Departmental Representative. Costs to Canada for such events may be attributed to the contractor.
- .2 When overtime work, weekend statutory holiday work is required and approved by the Departmental Representative, extra staff members may be posted by the Departmental Representative or his designate, to maintain the security surveillance. The actual cost of this extra staff may be attributed to the contractor.

**1.11 TOOLS AND EQUIPMENT**

- .1 Maintain on site a complete list of all tools and equipment to be used during the construction project. Make this inventory available for inspection when required.
- .2 Throughout the construction project maintain up-to-date the list of tools and equipment specified above.
- .3 Keep all tools and equipment under constant supervision, particularly power-driven and cartridge-driven tools, cartridges, files, saw blades, rod saws, wire, rope, ladders and any sort of jacking device.
- .4 Store all tools and equipment in approved secure locations.
- .5 Lock all toolboxes when not in use. Keys to remain in the possession of the construction employees of the Contractor.
- .6 Scaffolding shall be secured and locked when not erected and when erected, shall be secured in a manner agreed upon with the Departmental Representative.
- .7 All missing or lost tools or equipment shall be reported immediately to the Departmental Representative.
- .8 The Departmental Representative will ensure that the security staff members carry out checks of the Contractor's tools and equipment against the list provided by the Contractor. These checks may be carried out at the following intervals:
  - .1 At the beginning and conclusion of every construction project.
  - .2 Weekly, when the construction project extends longer than a one week period.
- .9 Certain tools/equipment such as cartridges and hacksaw blades are highly controlled items. The contractor will be given at the beginning of the day, a quantity that will permit one day's work. Used blades/cartridges will be returned to the Departmental Representative at the end of each day. All power "shot", Ram-set, Hilti or any other power-driven tool must have all cartridges accounted for including those which have been used. The correct count of these tools must be verified entering and leaving the institution at the beginning and end of each day. All broken blades and tools must be accounted for and broken tools are not to be thrown away. Particular attention must be given to power driven tools, files, saw blades, rod saws, wire, rope and ladders. Tool kits must be locked when the area is unattended.
- .10 If propane or natural gas is used for heating the construction, the institution will require that an employee of the contractor supervise the construction site during non-working hours.

**1.12 KEYS**

- .1 Security Hardware Keys
  - .1 The Contractor shall arrange with the security hardware supplier/installer to have the keys for the security hardware to be delivered directly to the Institution, specifically the Security Maintenance Officer [SMO].
  - .2 The SMO will provide a receipt to the Contractor for security hardware keys.
  - .3 The Contractor will provide a copy of the above-mentioned receipt to the Departmental Representative.
- .2 Other Keys

- .1 The Contractor will use standard construction cylinders for locks for his use during the construction period.
- .2 The Contractor will issue instructions to his construction employees and sub-trades, as necessary, to ensure safe custody of the construction set of keys.
- .3 Upon completion of each phase of the construction, the CSC representative will, in conjunction with the lock manufacturer:
  - .1 Prepare an operational keying schedule
  - .2 Accept the operational keys and cylinders directly from the lock manufacturer.
  - .3 Arrange for removal and return of the construction cores and install the operational core in all locks.
- .4 Upon putting operational security keys into use, the CSC construction escort shall obtain these keys as they are required from the SMO and open doors as required by the Contractor. The Contractor shall issue instructions to his construction employees advising them that all security keys shall always remain with the CSC construction escort.

**1.13 SECURITY HARDWARE**

- .1 Turn over all removed security hardware to the Departmental Representative of the Institution for disposal or for safekeeping until required for re-installation.

**1.14 PRESCRIPTION DRUGS**

- .1 Employees of the Contractor who are required to take prescription drugs during the workday shall obtain approval of the Departmental Representative to bring a one-day supply only into the Institution.

**1.15 SMOKING RESTRICTIONS**

- .1 Contractors and construction employees are not permitted to smoke inside correctional facilities or outdoors within the perimeter of a correctional facility and must not possess unauthorized smoking items within the perimeter of a correctional facility.
- .2 Contractors and construction employees who are in violation of this policy will be requested to immediately cease smoking or dispose of any unauthorized smoking items and, if they persist, will be directed to leave the institution.
- .3 Smoking is only permitted outside the perimeter of a correctional facility in an area to be designated by the Departmental Representative.

**1.16 CONTRABAND**

- .1 Weapons, ammunition, explosives, alcoholic beverages, drugs and narcotics are prohibited on institutional property.
- .2 The discovery of contraband on the construction site and the identification of the person[s] responsible for the contraband shall be reported immediately to the Departmental Representative.
- .3 Contractors should be vigilant with both their staff and the staff of their sub-contractors and suppliers that the discovery of contraband may result in cancellation of the security clearance

of the affected employee. Serious infractions may result in the removal of the company from the Institution for the duration of the construction.

- .4 Presence of arms and ammunition in vehicles of contractors, sub-contractors and suppliers or employees of these will result in the immediate cancellation of security clearances for the driver of the vehicle.

**1.17 SEARCHES**

- .1 All vehicles and persons entering institutional property may be subject to search.
- .2 When the Departmental Representative suspects, on reasonable grounds, that an employee of the Contractor is in possession of contraband or unauthorized items, he may order that person to be searched.
- .3 All employees entering the Institution may be subject to screening of personal effects for traces of contraband drug residue.

**1.18 ACCESS TO AND REMOVAL FROM INSTITUTIONAL PROPERTY**

- .1 Construction personnel and commercial vehicles will not be admitted to the institution after normal working hours, unless approved by the Departmental Representative.

**1.19 MOVEMENT OF VEHICLES**

- .1 Escorted commercial vehicles will be allowed to enter or leave the institution through the vehicle access gate during the following hours:
  - .1 [07:30 a.m. to 11:00 a.m.]
  - .2 [1:00 p.m. to 3:30 p.m.]Construction vehicles shall not leave the Institution until an inmate count is completed.
- .2 The contractor shall advise the Departmental Representative twenty four [24] hours in advance to the arrival on the site of heavy equipment such as concrete trucks, cranes, etc.
- .3 Vehicles being loaded with soil or other debris, or any vehicle considered impossible to search, must be under continuous supervision by CSC staff or Commissionaires working under the authority of the Departmental Representative.
- .4 Commercial vehicles will only be allowed access to institutional property when their contents are certified by the Contractor or his representative as being strictly necessary to the execution of the construction project.
- .5 Vehicles shall be refused access to institutional property if, in the opinion of the Departmental Representative, they contain any article which may jeopardize the security of the institution.
- .6 Private vehicles of construction employees will not be allowed within the security perimeter of medium or maximum security institutions without the authorization of the Departmental Representative. Contractor's employees will park their vehicles in a designated area outside the perimeter of the institution.
- .7 With the approval of the Departmental Representative, certain equipment may be permitted to remain on the construction site overnight or over the weekend. This equipment must be

securely locked, with the battery removed. The Departmental Representative may require that the equipment be secured with a chain and padlock to another fixed object.

**1.20 MOVEMENT OF CONSTRUCTION EMPLOYEES ON INSTITUTIONAL PROPERTY**

- .1 Subject to the requirements of good security, the Departmental Representative will permit the Contractor and his employees as much freedom of action and movement as is possible.
- .2 However, notwithstanding paragraph above, the Departmental Representative may:
  - .1 Prohibit or restrict access to any part of the institution.
  - .2 Require that in certain areas of the institution, either during the entire construction project or at certain intervals, construction employees only be allowed access when escorted by a member of the CSC security staff or a commissionaire.
- .3 During the lunch and coffee/health breaks, all construction employees will remain within the construction site. Construction employees are not permitted to eat in the officer's lounge or the dining room of the institution.

**1.21 SURVEILLANCE AND INSPECTION**

- .1 Construction activities and all related movement of personnel and vehicles will be subject to surveillance and inspection by CSC security staff members to ensure that established security requirements are met.
- .2 CSC staff members will ensure that an understanding of the need to carry out surveillance and inspections, as specified above, is established among construction employees and maintained throughout the construction project.

**1.22 STOPPAGE OF WORK**

- .1 The Departmental Representative may order at any time that the contractor, his employees, sub-contractors and their employees to not enter or to leave the work site immediately due to a security situation occurring within the Institution. The contractor's site supervisor shall note the name of the CSC staff member giving this instruction, the time of the request and obey the order as quickly as possible.
- .2 The contractor shall advise the Departmental Representative of this interruption of the work within 24 hours.

**1.23 CONTACT WITH INMATES**

- .1 Unless specifically authorized, the contractor is not encouraged to come into contact with inmates, to talk with them, to receive objects from them or to give them objects. Any construction employee doing any of the above without permission will be removed from the site and his security clearance revoked.
- .2 It is to be noted that cameras are not allowed on CSC property except if required for photographic history of the project. In this case, the contractor will be asked to use a designated memory card for the project.

- .3 Notwithstanding the above paragraph, if the Departmental Representative approves of the usage of cameras, it is strictly forbidden to take pictures of inmates, of CSC staff members or of any part of the Institution other than those required as part of this contract.

**1.24 COMPLETION OF CONSTRUCTION PROJECT**

- .1 Upon completion of the construction project or, when applicable, the takeover of a facility, the Contractor shall remove all remaining construction material, tools and equipment that are not specified to remain in the Institution as part of the construction contract.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 SECTION INCLUDES**

- .1 Health and safety considerations required to ensure that PWGSC shows due diligence towards health and safety on construction sites, and meets the requirements laid out in PWGSC/RPB Departmental Policy DP 073 - Occupational Health and Safety - Construction.

**1.2 REFERENCES**

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Health Canada/Workplace Hazardous Materials Information System [WHMIS]
  - .1 Material Safety Data Sheets [MSDS].
- .3 Workplace Hazardous Materials Information System
  - .1 Art respecting occupational health and safety, L.R.Q, Chapter S-2.1.
- .4 Safety Code for the construction industry, S-2.1, r.6.

**1.3 SUBMITTALS**

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
  - .1 Results of site-specific safety hazard assessment.
  - .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
- .3 Submit 2 copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative, weekly.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 02 81 01 - Hazardous Materials.
- .7 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 7 days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 7 days after receipt of comments from Departmental Representative.
- .8 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.

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- .10 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.
- 1.4 FILING OF NOTICE**
- .1 File Notice of Project with Provincial authorities prior to beginning of Work.
- 1.5 SAFETY ASSESSMENT**
- .1 Perform site specific safety hazard assessment related to project.
- 1.6 MEETINGS**
- .1 Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work.
- 1.7 REGULATORY REQUIREMENTS**
- .1 Do Work in accordance with Section 01 41 00 - Regulatory Requirements.
- 1.8 GENERAL REQUIREMENTS**
- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
- 1.9 RESPONSIBILITY**
- .1 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 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
- 1.10 COMPLIANCE REQUIREMENTS**
- .1 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.
- 1.11 UNFORSEEN HAZARDS**
- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.
- 1.12 POSTING OF DOCUMENTS**
- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Departmental Representative.



**1.13 CORRECTION OF NON-COMPLIANCE**

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

**1.14 BLASTING**

- .1 Blasting or other use of explosives is not permitted without prior receipt of written instruction by Departmental Representative.

**1.15 POWDER ACTUATED DEVICES**

- .1 Use powder actuated devices only after receipt of written permission from Departmental Representative.

**1.16 WORK STOPPAGE**

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not used.

**END OF SECTION**

**Part 1            General**

**1.1                FIRES**

- .1        Fires and burning of rubbish on site not permitted.

**1.2                DISPOSAL OF WASTES**

- .1        Do not bury rubbish and waste materials on site unless approved by Departmental Representative.
- .2        Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

**1.3                DRAINAGE**

- .1        Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2        Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3        Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

**1.4                SITE CLEARING**

- .1        Minimize stripping of topsoil and vegetation.

**1.5                POLLUTION CONTROL**

- .1        Maintain temporary erosion and pollution control features installed under this contract.
- .2        Control emissions from equipment and plant to local authorities emission requirements.
- .3        Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4        Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

**Part 2            Products**

**2.1                NOT USED**

- .1        Not Used.

**Part 3            Execution**

**3.1                NOT USED**

- .1        Not Used.

END OF SECTION

**Part 1            General**

**1.1                CONSTRUCTION SAFETY MEASURES**

- .1        Without restricting other provisions or requirements of the Contract, observe construction safety measures of National Building Code 2010, Part 8, Provincial Government, Workers'/Workmen's Compensation Board and municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.
- .2        Comply with requirements of FCC No. 301.
- .3        Provide fire extinguishers necessary to protect the work in progress and the Contractor's physical plant on site. Do not use specified permanent fire extinguishers for this purpose.

**1.2                REFERENCES AND CODES**

- .1        Perform Work in accordance with National Building Code of Canada [NBC] including all amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2        Meet or exceed requirements of:
  - .1        Contract documents.
  - .2        Specified standards, codes and referenced documents.
- .3        Contractor responsible for obtaining all necessary building permits from the City of Donnacona.

**1.3                FALSEWORK**

- .1        Design and construct falsework in accordance with CSA S269.1.

**1.4                BUILDING SMOKING ENVIRONMENT**

- .1        Comply with smoking restrictions and municipal by-laws.

**Part 2            Products**

**2.1                NOT USED**

- .1        Not Used.

**Part 3            Execution**

**3.1                NOT USED**

- .1        Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                INSPECTION**

- .1        Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2        Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
- .3        If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4        Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Departmental Representative shall pay cost of examination and replacement.

**1.2                INDEPENDENT INSPECTION AGENCIES**

- .1        Independent Inspection/Testing Agencies will be engaged by Departmental Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Departmental Representative.
- .2        Provide equipment required for executing inspection and testing by appointed agencies.
- .3        Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4        If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Departmental Representative at no cost to Departmental Representative. Pay costs for retesting and re-inspection.

**1.3                ACCESS TO WORK**

- .1        Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2        Co-operate to provide reasonable facilities for such access.

**1.4                PROCEDURES**

- .1        Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- .2        Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
- .3        Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

**1.5 REJECTED WORK**

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If in opinion of Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner may deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which shall be determined by Departmental Representative.

**1.6 REPORTS**

- .1 Submit 4 copies of inspection and test reports to Departmental Representative.
- .2 Provide copies to Subcontractor of work being inspected or tested and manufacturer or fabricator of material being inspected or tested.

**1.7 TESTS AND MIX DESIGNS**

- .1 Furnish test results and mix designs as may be requested.
- .2 The cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work shall be appraised by Departmental Representative and may be authorized as recoverable.

**1.8 MOCK-UPS**

- .1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.
- .2 Construct in all locations acceptable to Departmental Representative.
- .3 Prepare mock-ups for Departmental Representative's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
- .4 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .5 If requested, Departmental Representative will assist in preparing a schedule fixing dates for preparation.
- .6 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed and when.

**1.9 MILL TESTS**

- .1 Submit mill test certificates as required of specification Sections.

**1.10 EQUIPMENT AND SYSTEMS**

- .1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.

.2 Refer to appropriate Sections for definitive requirements.

**Part 2 Products**

**2.1 NOT USED**

.1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

.1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

**1.2 INSTALLATION AND REMOVAL**

- .1 Provide temporary utilities controls in order to execute work expeditiously.
- .2 Remove from site all such work after use.

**1.3 DEWATERING**

- .1 Provide temporary drainage and pumping facilities to keep excavations and site free from standing water.

**1.4 WATER SUPPLY**

- .1 The Departmental Representative shall provide a continuous supply of potable water for construction use in accordance with governing regulations and ordinances, from a designated existing source.
- .2 Provide temporary connections and run all temporary piping or hoses to job locations requiring water service. Disconnect and remove upon completion of Work.

**1.5 TEMPORARY HEATING AND VENTILATION**

- .1 Provide temporary heating required during construction period, including attendance, maintenance and fuel.
- .2 Construction heaters used inside building must be vented to outside or be non-flameless type. Solid fuel salamanders are not permitted.
- .3 Provide temporary heat and ventilation in enclosed areas as required to:
  - .1 Facilitate progress of Work.
  - .2 Protect Work and products against dampness and cold.
  - .3 Prevent moisture condensation on surfaces.
  - .4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
  - .5 Provide adequate ventilation to meet health regulations for safe working environment.
- .4 Maintain temperatures of minimum 10 degrees C in areas where construction is in progress.
- .5 Ventilating:
  - .1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction.
  - .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
  - .3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
  - .4 Ventilate storage spaces containing hazardous or volatile materials.
  - .5 Ventilate temporary sanitary facilities.



- .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.
- .6 The permanent heating system of the building, or portions thereof, may be used when available provided that required start-up and commissioning procedures are completed only upon written approval of the Departmental Representative. Be responsible for damage thereto. Use of the permanent heating system, prior to Substantial Performance will not impact on the warranty obligation as noted in the specifications.
- .7 Restore to new condition, any portion of the permanent heating system used during construction, prior to the date of Substantial Performance of the Work, and as specified in Division 23. Replace all filters.
- .8 Ensure Date of Substantial Performance and Warranties for heating system do not commence until entire system is in as near original condition as possible and is certified by Departmental Representative.
- .9 Pay costs for maintaining temporary heat, when using permanent heating system Departmental Representative will pay utility charges when temporary heat source is existing building equipment.
- .10 Maintain strict supervision of operation of temporary heating and ventilating equipment to to:
  - .1 Conform with applicable codes and standards.
  - .2 Enforce safe practices.
  - .3 Prevent abuse of services.
  - .4 Prevent damage to finishes.
  - .5 Vent direct-fired combustion units to outside.
- .11 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

**1.6 TEMPORARY POWER AND LIGHT**

- .1 The Departmental Representative will provide and pay for temporary power required during construction from a designated existing source for temporary lighting and operating power tools, to a maximum of 230 volts 30 amps, in accordance with governing regulations and ordinances.
- .2 The Departmental Representative is not responsible for interruptions to temporary power which may occur.
- .3 Provide all connections and power cords, from the designated existing source.
- .4 Temporary power shall not be used for welding. Use self-generator units for all welding power.
- .5 If Departmental Representative supplied power is insufficient, provide and pay for temporary power required during construction for temporary lighting and operating power tools, in accordance with governing regulations and ordinances.
- .6 Provide centrally located power panels for the use of all Subcontractors. Subcontractors shall provide their own extension cables c/w suitable fittings.
- .7 Provide and be responsible for necessary switching, fusing, wiring and connections in accordance with the Canadian Electrical Code.
- .8 Temporary power for electric cranes [where applicable] and other equipment requiring a supply in excess of capacities available, is the responsibility of the Contractor.

- .9 Provide and maintain temporary lighting throughout the project. Provide a level of illumination on all floors and stairs of not less than 15 foot candles. Provide higher levels of illumination where required by specific sections of the specifications, to control quality of workmanship.
- .10 When work is performed at night or where daylight is obscured, provide artificial light sufficient to perform work properly and to permit thorough inspection.
- .11 Permanent electrical power and lighting system may be used for construction requirements provided no damage occurs or guarantees affected. Obtain Departmental Representative's approval before using permanent electrical power and lighting system. Pay all costs for use of permanent electrical power and lighting system during construction, until Substantial Performance of the Work. Burnt out lamps shall be replaced with new lamps, prior to acceptance for substantial performance.

**1.7 TEMPORARY COMMUNICATION FACILITIES**

- .1 Provide and pay for temporary telephone, fax and data hook up, lines, and equipment necessary for own use and use of Departmental Representative.
- .2 Cellular telephones are not permitted on site.

**1.8 FIRE PROTECTION**

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on site.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCES**

- .1 Canadian General Standards Board [CGSB]
  - .1 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.
  - .2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
- .2 Canadian Standards Association [CSA International]
  - .1 CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
  - .2 CSA-0121-M1978[R2003], Douglas Fir Plywood.
  - .3 CAN/CSA-S269.2-M1987[R2003], Access Scaffolding for Construction Purposes.
  - .4 CAN/CSA-Z321-96[R2001], Signs and Symbols for the Occupational Environment.

**1.2 SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

**1.3 INSTALLATION AND REMOVAL**

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Remove from site all such work after use.

**1.4 SCAFFOLDING**

- .1 Scaffolding in accordance with CAN/CSA-S269.2.
- .2 Provide and maintain scaffolding, ramps, ladders, platforms and temporary stairs.

**1.5 HOISTING**

- .1 Provide, operate and maintain hoists and cranes required for moving of workers, materials and equipment.
- .2 Hoists and cranes shall be operated by qualified operator.

**1.6 SITE STORAGE/LOADING**

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with a weight or force that will endanger the Work.

**1.7 CONSTRUCTION PARKING**

- .1 Parking will be permitted on site in an area as directed by the Departmental Representative provided it does not disrupt performance of Work.
- .2 Provide and maintain adequate access to project site.

- .3 Build and maintain temporary roads where indicated or directed by Departmental Representative and provide snow removal during period of Work.
- .4 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads.

**1.8 SECURITY**

- .1 Refer to Section 01 35 13 - Security Requirements.

**1.9 OFFICES**

- .1 Provide office heated to 22 °C, lighted 750 lx and ventilated, of sufficient size to accommodate site meetings and furnished with drawing laydown table.
- .2 Provide a clearly marked and fully stocked first-aid case in a readily available location.
- .3 Subcontractors may provide their own offices as necessary.
- .4 Locate offices where directed by the Departmental Representative.

**1.10 EQUIPMENT, TOOL AND MATERIAL STORAGE**

- .1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.

**1.11 SANITARY FACILITIES**

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
- .3 When permanent water and drain connections are completed, provide temporary water closets and urinals complete with temporary enclosures, inside building. Permanent facilities may be used on approval of Departmental Representative.

**1.12 CONSTRUCTION SIGNAGE**

- .1 No signs or advertisements, other than warning signs, are permitted on site.
- .2 Signs and notices for safety and instruction shall be in both official languages Graphic symbols shall conform to CAN3-Z321.
- .3 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by Departmental Representative.

**1.13 PROTECTION AND MAINTENANCE OF TRAFFIC**

- .1 Provide access and temporary relocated roads as necessary to maintain traffic.

- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by Departmental Representative.
- .3 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs
- .4 Protect travelling public from damage to person and property.
- .5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.
- .7 Construct access and haul roads necessary.
- .8 Haul roads: constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided.
- .9 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .10 Dust control: adequate to ensure safe operation at all times.
- .11 Location, grade, width, and alignment of construction and hauling roads: subject to approval by Departmental Representative.
- .12 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.
- .13 Provide snow removal during period of Work.
- .14 Remove, upon completion of work, haul roads designated by Departmental Representative.

**1.14 CLEAN-UP**

- .1 Remove construction debris, waste materials, packaging material from work site daily.
- .2 Clean dirt or mud tracked onto paved or surfaced roadways.
- .3 Store materials resulting from demolition activities that are salvageable.
- .4 Stack stored new or salvaged material not in construction facilities.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3**            Execution

**3.1**                **NOT USED**

    .1                Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCES**

- .1 Canadian General Standards Board [CGSB]
  - .1 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
  - .2 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.
- .2 Canadian Standards Association [CSA International]
  - .1 CSA-0121-M1978[R2003], Douglas Fir Plywood.

**1.2 INSTALLATION AND REMOVAL**

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

**1.3 HOARDING/VISUAL BARRIER**

- .1 Erect temporary visual barrier using 38 x 89 mm construction grade lumber framing at 600 mm centres and 1200 x 2400 x 13 mm exterior grade fir plywood to CSA 0121.
- .2 Apply plywood panels vertically flush and butt jointed.
- .3 Paint both sides of barrier in selected colours with one coat primer to CGSB 1.189M and one coat exterior paint to CGSB 1.59. Maintain in clean condition.

**1.4 GUARD RAILS AND BARRICADES**

- .1 Provide secure, rigid guard rails and barricades around deep excavations, open shafts, open stair wells, open edges of floors and roofs.
- .2 Provide as required by governing authorities.

**1.5 WEATHER ENCLOSURES**

- .1 Provide weather tight closures to unfinished door and window openings, tops of shafts and other openings in floors and roofs.
- .2 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work for temporary heat.
- .3 Design enclosures to withstand wind pressure and snow loading.

**1.6 DUST TIGHT SCREENS**

- .1 Provide dust tight screens or insulated partitions to localize dust generating activities, and for protection of workers, finished areas of Work and public.
- .2 Maintain and relocate protection until such work is complete.

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**1.7 ACCESS TO SITE**

- .1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.

**1.8 FIRE ROUTES**

- .1 Maintain access to property including overhead clearances for use by emergency response vehicles.

**1.9 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY**

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

**1.10 PROTECTION OF BUILDING FINISHES**

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Confirm with Departmental Representative locations and installation schedule 3 days prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection.

**1.11 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**



**Part 1 General**

**1.1 REFERENCES**

- .1 Within text of each specifications section, reference may be made to reference standards.
- .2 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .3 If there is question as to whether any product or system is in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .4 Cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .5 Conform to latest date of issue of referenced standards in effect on date of submission of Bids, except where specific date or issue is specifically noted.

**1.2 QUALITY**

- .1 Products, materials, equipment and articles [referred to as products throughout specifications] incorporated in Work shall be new, not damaged or defective, and of best quality [compatible with specifications] for purpose intended, except where salvaged existing products are specifically noted. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Examine existing materials designated for reuse in this Contract. If materials designated for reuse are unfit or damaged, replace with new material.
- .4 Should any dispute arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

**1.3 AVAILABILITY**

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify Departmental Representative of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.

- .2 In event of failure to notify Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.
- .3 Within 10 days of written request by Departmental Representative, submit following information for materials and equipment proposed for supply:
  - .1 name and address of manufacturer,
  - .2 trade name, model and catalogue number,
  - .3 performance, descriptive and test data,
  - .4 manufacturer's installation or application instructions,
  - .5 evidence of arrangements to procure.

#### **1.4 STORAGE, HANDLING AND PROTECTION**

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, lumber and steel on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

#### **1.5 TRANSPORTATION**

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Departmental Representative will be paid for by Departmental Representative. Unload, handle and store such products.

#### **1.6 MANUFACTURER'S INSTRUCTIONS**

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.

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- .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative may establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

**1.7 QUALITY OF WORK**

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

**1.8 CO-ORDINATION**

- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

**1.9 CONCEALMENT**

- .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
- .2 Before installation, inform Departmental Representative if there is interference. Install as directed by Departmental Representative.

**1.10 REMEDIAL WORK**

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

**1.11 LOCATION OF FIXTURES**

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform Departmental Representative of conflicting installation. Install as directed.

**1.12 FASTENINGS**

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.

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- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

**1.13 FASTENINGS - EQUIPMENT**

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

**1.14 PROTECTION OF WORK IN PROGRESS**

- .1 Prevent overloading of any part of building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of Departmental Representative.

**1.15 EXISTING UTILITIES**

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or adjacent building occupants.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

□

END OF SECTION

**Part 1            General**

**1.1                REFERENCES**

- .1            Departmental Representative's identification of existing survey control points and property limits.

**1.2                QUALIFICATIONS OF SURVEYOR**

- .1            Qualified registered land surveyor, licensed to practice in Place of Work, acceptable to Departmental Representative.

**1.3                SURVEY REFERENCE POINTS**

- .1            Existing base horizontal and vertical control points are designated on drawings.
- .2            Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
- .3            Make no changes or relocations without prior written notice to Departmental Representative.
- .4            Report to Departmental Representative when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- .5            Require surveyor to replace control points in accordance with original survey control.

**1.4                SURVEY REQUIREMENTS**

- .1            Establish permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
- .2            Establish lines and levels, locate and lay out, by instrumentation.
- .3            Stake for grading, fill and topsoil placement.
- .4            Stake slopes.
- .5            Establish pipe invert elevations.
- .6            Stake batter boards for foundations.
- .7            Establish foundation, column locations and floor elevations.
- .8            Establish lines and levels for mechanical and electrical work.

**1.5                EXISTING SERVICES**

- .1            Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.
- .2            Remove abandoned service lines within 2 m of structures. Cap or otherwise seal lines at cut-off points as directed by Departmental Representative.

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**1.6 LOCATION OF EQUIPMENT AND FIXTURES**

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Departmental Representative of impending installation and obtain approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

**1.7 RECORDS**

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.

**1.8 SUBMITTALS**

- .1 Submit name and address of Surveyor to Departmental Representative.
- .2 On request of Departmental Representative, submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying and noting those elevations and locations of completed Work that conform and do not conform with Contract Documents.

**1.9 SUBSURFACE CONDITIONS**

- .1 Promptly notify Departmental Representative in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should Departmental Representative determine that conditions do differ materially, instructions will be issued for changes in Work as provided in Changes and Change Orders.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3**            Execution

**3.1**                **NOT USED**

    .1              Not Used.

**END OF SECTION**



**Part 1            General**

- .1 Individual product Sections: cutting and patching incidental to work of section. Advance notification to other sections required.

**1.2                SUBMITTALS**

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit written request in advance of cutting or alteration which affects:
  - .1 Structural integrity of any element of Project.
  - .2 Integrity of weather-exposed or moisture-resistant elements.
  - .3 Efficiency, maintenance, or safety of any operational element.
  - .4 Visual qualities of sight-exposed elements.
  - .5 Work of Departmental Representative or separate contractor.
- .3 Include in request:
  - .1 Identification of Project.
  - .2 Location and description of affected Work.
  - .3 Statement on necessity for cutting or alteration.
  - .4 Description of proposed Work, and products to be used.
  - .5 Alternatives to cutting and patching.
  - .6 Effect on Work of Departmental Representative or separate contractor.
  - .7 Written permission of affected separate contractor.
  - .8 Date and time work will be executed.

**1.3                MATERIALS**

- .1 Required for original installation.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00 - Submittal Procedures.

**1.4                PREPARATION**

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering, inspect conditions affecting performance of Work.
- .3 Beginning of cutting or patching means acceptance of existing conditions.
- .4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.
- .5 Provide protection from elements for areas which may be exposed by uncovering work; maintain excavations free of water.

□

**1.5 EXECUTION**

- .1 Execute cutting, fitting, and patching including excavation and fill, to complete Work.
- .2 Fit several parts together, to integrate with other Work.
- .3 Uncover Work to install ill-timed Work.
- .4 Remove and replace defective and non-conforming Work.
- .5 Remove samples of installed Work for testing.
- .6 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.
- .7 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .8 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .9 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .10 Restore work with new products in accordance with requirements of Contract Documents.
- .11 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .12 At penetration of fire rated wall, ceiling, or floor construction, completely seal voids with fire-stopping material, full thickness of the construction element.
- .13 Refinish surfaces to match adjacent finishes: For continuous surfaces refinish to nearest intersection; for an assembly, refinish entire unit.
- .14 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

**1.6 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3**            Execution

**3.1**                **NOT USED**

    .1                Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                DEFINITIONS**

- .1        Materials Source Separation Program [MSSP]: consists of series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
- .2        Recyclable: ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse.
- .3        Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
- .4        Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- .5        Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
  - .1        Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
  - .2        Returning reusable items including pallets or unused products to vendors.
- .6        Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
- .7        Separate Condition: refers to waste sorted into individual types.
- .8        Source Separation: acts of keeping different types of waste materials separate beginning from first time they became waste.

**1.2                DOCUMENTS**

- .1        Maintain at job site, one copy of following documents:
  - .1        Material Source Separation Plan.

**1.3                SUBMITTALS**

- .1        Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Prepare and submit following prior to project start-up:
  - .1        Submit 2 copies of Materials Source Separation Program [MSSP] description.

**1.4                MATERIALS SOURCE SEPARATION PROGRAM [MSSP]**

- .1        Prepare MSSP and have ready for use prior to project start-up.
- .2        Implement MSSP for waste generated on project in compliance with approved methods and as reviewed by Departmental Representative.

- .3 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and recyclable materials.
- .4 Provide containers to deposit reusable and recyclable materials.
- .5 Locate containers in locations, to facilitate deposit of materials without hindering daily operations.
- .6 Locate separated materials in areas which minimize material damage.
- .7 Collect, handle, store on-site, and transport off-site, salvaged materials in separate condition.
  - .1 Transport to approved and authorized recycling facility.
- .8 Collect, handle, store on-site, and transport off-site, salvaged materials in combined condition.
  - .1 Ship materials to site operating under Certificate of Approval.
  - .2 Materials must be immediately separated into required categories for reuse or recycling.

**1.5 WASTE PROCESSING SITES**

- .1 Province of: Québec.
  - .1 Name: Écocentre Neuville.
  - .2 Telephone: 418-873-1260.
  - .3 Fax: 418-873-1290

**1.6 STORAGE, HANDLING AND PROTECTION**

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Protect, stockpile, store and catalogue salvaged items.
- .4 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
- .5 Protect surface drainage, mechanical and electrical from damage and blockage.
- .6 Separate and store materials produced during dismantling of structures in designated areas.
- .7 Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated facilities.
  - .1 On-site source separation is recommended.
  - .2 Remove co-mingled materials to off-site processing facility for separation.
  - .3 Provide waybills for separated materials.

**1.7 DISPOSAL OF WASTES**

- .1 Do not bury rubbish or waste materials.
- .2 Do not dispose of waste into waterways, storm, or sanitary sewers.

- .3 Remove materials from deconstruction as deconstruction/disassembly Work progresses.
- .4 Prepare project summary to verify destination and quantities on a material-by-material basis as identified in pre-demolition material audit.

**1.8 USE OF SITE AND FACILITIES**

- .1 Execute work with least possible interference or disturbance to normal use of premises.
- .2 Provide temporary security measures approved by Departmental Representative.

**1.9 SCHEDULING**

- .1 Co-ordinate Work with other activities at site to ensure timely and orderly progress of Work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 APPLICATION**

- .1 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

**3.2 CLEANING**

- .1 Remove tools and waste materials on completion of Work, and leave work area in clean and orderly condition.
- .2 Clean-up work area as work progresses.
- .3 Source separate materials to be reused/recycled into specified sort areas.

**3.3 DIVERSION OF MATERIALS**

- .1 The diversion of waste materials from landfills is highly encouraged. Separate, recyclable and reusable materials where possible.
- .2 On-site sale of salvaged, recovered, reusable, or recyclable materials is not permitted.

**3.4 CANADIAN GOVERNMENTAL DEPARTMENTS CHIEF RESPONSIBILITY FOR THE ENVIRONMENT**

.1 Schedule E - Government Chief Responsibility for the Environment:

Province	Address	General Inquires	Fax
Québec_Ministère de l'environnement et de la Faune	150, boul. René- Lévesque Est, Québec Qc G1R 4Y1	Conseil de la conservation et de l'environnement, 800, Place d'Youville, 19 <sup>e</sup> étage Québec Qc G1R 3P4	418-643-3818

**END OF SECTION**

**Part 1            General**

**1.1                INSPECTION AND DECLARATION**

- .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
  - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
  - .2 Request Departmental Representative's Inspection.
- .2 Departmental Representative's Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
  - .1 Work has been completed and inspected for compliance with Contract Documents.
  - .2 Defects have been corrected and deficiencies have been completed.
  - .3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
  - .4 Certificates required by Boiler Inspection Branch, Fire Commissioner and Utility companies have been submitted.
  - .5 Operation of systems have been demonstrated to Owner's personnel.
  - .6 Work is complete and ready for Final Inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative and Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

**1.2                CLEANING**

- .1 In accordance with Section 01 74 11 - Cleaning.
- .2 Remove waste and surplus materials, rubbish and construction facilities from the site in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

**Part 2            Products**

**2.1                NOT USED**

- .1 Not Used.

**Part 3            Execution**

**3.1                NOT USED**

- .1 Not Used.

**END OF SECTION**

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**Part 1            General**

**1.1                SUBMITTALS**

- .1        Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Prepare instructions and data using personnel experienced in maintenance and operation of described products.
- .3        Copy will be returned after final inspection, with Departmental Representative's comments.
- .4        Revise content of documents as required prior to final submittal.
- .5        Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, four [4] final copies of operating and maintenance manuals in English.
- .6        Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
- .7        If requested, furnish evidence as to type, source and quality of products provided.
- .8        Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
- .9        Pay costs of transportation.

**1.2                FORMAT**

- .1        Organize data in the form of an instructional manual.
- .2        Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3        When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.
- .4        Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5        Arrange content by systems, under Section numbers and sequence of Table of Contents.
- .6        Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7        Text: Manufacturer's printed data, or typewritten data.
- .8        Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .9        Provide 1:1 scaled CAD files in dxf format on CD.

**1.3 CONTENTS - EACH VOLUME**

- .1 Table of Contents: provide title of project;
  - .1 date of submission; names,
  - .2 addresses, and telephone numbers of Departmental Representative and Contractor with name of responsible parties;
  - .3 schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
  - .1 list names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to clearly identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment
- .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.
- .6 Training: Refer to Section 01 79 00 - Demonstration and Training.

**1.4 AS-BUILTS AND SAMPLES**

- .1 In addition to requirements in General Conditions, maintain at the site for Departmental Representative one record copy of:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Change Orders and other modifications to the Contract.
  - .5 Reviewed shop drawings, product data, and samples.
  - .6 Field test records.
  - .7 Inspection certificates.
  - .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

**1.5 RECORDING ACTUAL SITE CONDITIONS**

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual, provided by Departmental Representative.
- .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
  - .1 Measured depths of elements of foundation in relation to finish first floor datum.
  - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
  - .4 Field changes of dimension and detail.
  - .5 Changes made by change orders.
  - .6 Details not on original Contract Drawings.
  - .7 References to related shop drawings and modifications.
- .5 Specifications: legibly mark each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
  - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.

**1.6 FINAL SURVEY**

- .1 Submit final site survey certificate in accordance with Section 01 71 00 – Examination and Preparation, certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.

**1.7 MATERIALS AND FINISHES**

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional Requirements: as specified in individual specifications sections.

**1.8 SPARE PARTS**

- .1 Provide spare parts, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to site; place and store.
- .4 Receive and catalogue all items. Submit inventory listing to Departmental Representative. Include approved listings in Maintenance Manual.
- .5 Obtain receipt for delivered products and submit prior to final payment.

**1.9 MAINTENANCE MATERIALS**

- .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to site; place and store.
- .4 Receive and catalogue all items. Submit inventory listing to Departmental Representative. Include approved listings in Maintenance Manual.
- .5 Obtain receipt for delivered products and submit prior to final payment.

**1.10 SPECIAL TOOLS**

- .1 Provide special tools, in quantities specified in individual specification section.
- .2 Provide items with tags identifying their associated function and equipment.
- .3 Deliver to site; place and store.
- .4 Receive and catalogue all items. Submit inventory listing to Departmental Representative. Include approved listings in Maintenance Manual.

**1.11 STORAGE, HANDLING AND PROTECTION**

- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.

**1.12 WARRANTIES AND BONDS**

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.

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- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- .4 Except for items put into use with Departmental Representative's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.
- .5 Verify that documents are in proper form, contain full information, and are notarized.
- .6 Co-execute submittals when required.
- .7 Retain warranties and bonds until time specified for submittal.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 SCOPE OF WORK**

- .1 This section covers the performance of ancillary work, the description of which cannot be integrated into another section because of the very nature of such work. In general, the execution of these works is the direct responsibility of the general contractor.
- .2 This section also covers, in addition to the work not specifically described in this section, the work shown in the drawings.

**1.2 CHARPENTERY**

- .1 This section also covers, in addition to the work not specifically described in this section, the work shown in Fur, shims, nailing strip, false-frame bottoms, cleats and candlestick, members, nailing bottoms for roof edges and joists.
  - .1 S2S finish elements are acceptable for all structure. Wood of size: classification "light [light] frame, standard category".
  - .2 Accessories:
    - .1 Nails, plugs and jumpers: in accordance with CSA B111 standard.
    - .2 Bolts : 12.5 mm in diameter, unless otherwise specified, with nuts and washers
  - .3 Installation:
    - .1 Proceed according to the requirements of the NBC.
    - .2 Install the necessary furring and shims to separate from the wall and support the required siding and other structures.

**1.3 SPRAYED INSULATION ON SITE**

- .1 Insulation: a rigid urethane foam component for insulating steel door frames.
  - .1 Used a product such as the existing one or compatible with the insulation and membranes in place.
  - .2 Follow all manufacturer's recommendations for installation and provide applicable warranties.

**1.4 SPRAYED POLYURETHANE FOAM INSULATION**

- .1 Insulation: sprayed polyurethane foam, in accordance with CAN/ULC-S705.1 standard.
  - .1 Used a product such as the existing one or compatible with the insulation and membranes in place.
  - .2 Follow all manufacturer's recommendations for installation and provide applicable warranties.

**1.5 AIR / VAPOUR BARRIER**

- .1 Sheet waterproofing: high-density polyethylene film, coated with a layer of bituminous adhesive, with a total nominal thickness of 1 mm.
  - .1 Used a product such as the existing one or compatible with the insulation and membranes in place.
  - .2 Follow all manufacturer's recommendations for installation and provide applicable warranties.

**1.6 SECURITY SEALANT**

- .1 Type of sheet sealant: Two-component, solvent-free, mildew-resistant, high-strength, fire retardant, elastic epoxy sealant with not less than 5% movement capability; complies with ASTM D695. Color harmonized with the adjacent substrate or as chosen by the Ministerial Representative.
  - .1 Used a product such as the existing one or compatible with the insulation and elements in place.
  - .2 Follow all manufacturer's recommendations for installation and provide applicable warranties.

**1.7 MASONRY**

- .1 Bricks:
  - .1 Store salvaged bricks, clean them, store them in a dry and temperate place.
  - .2 Reinstall as per drawings according to applicable standards.
- .2 Mortar for exterior masonry structures above ground level
  - .1 Mortar used for load-bearing walls: type S, prepared according to dose-based specifications. Mortar used for non-load-bearing walls: type N, prepared according to dose-based specifications.
    - .1 Used a product such as the existing one or compatible with the elements in place.
    - .2 Follow all manufacturer's recommendations for installation and provide applicable warranties.

**END OF SECTION**

**Part 1 General**

**1.1 EXPLANATION**

- .1 Perform work of this section under one Subcontractor who will be held responsible for supply and installation of all work of this section and co-ordination of all other work specified under Related Sections as required for completion of work.

**1.2 REFERENCES**

- .1 American Society for Testing and Materials International, [ASTM].
  - .1 ASTM A53/A53M-02, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
  - .2 ASTM A90/A90M-01, Standard Test Method for Weight of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
  - .3 A653/A653M-03, Standard Specification for Steel Sheet, Zinc-Coated [Galvanized] or Zinc-Iron Alloy-Coated [Galvannealed] by the Hot-Dip Process.
  - .4 ASTM C618-03, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.
- .2 Department of Justice Canada [Jus]
  - .1 Canadian Environmental Protection Act [CEPA], 1999, c. 33.
  - .2 Transportation of Dangerous Goods Act [TDGA], 1992, c. 34.
- .3 Canadian General Standards Board [CGSB].
  - .1 CAN/CGSB-138.1-96, Fabric for Chain Link Fence.
  - .2 CAN/CGSB-138.2-96, Steel Framework for Chain Link Fence.
  - .3 CAN/CGSB-138.3-96, Installation of Chain Link Fence.
  - .4 CAN/CGSB-138.4-96, Gates for Chain Link Fence.
  - .5 CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating.
- .4 Canadian Standards Association [CSA International].
  - .1 CAN/CSA-A23.1/A23.2-00[August 2001], Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.
  - .2 CAN/CSA-G164-M92[R2003], Hot Dip Galvanizing of Irregularly Shaped Articles.

**1.3 SUBMITTALS**

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures].
- .2 Drawings to indicate all pertinent dimensions, connections, details, materials, finishes and all other information required to completely describe the chain link fence installation to this project.
- .3 Shop Drawings to indicate:
  - .1 Each type of swing gate and sliding gate, reinforcements, anchor locations, exposed fasteners and finishes.



- .2 Preparations for hardware.
- .3 Preparations for alarm monitoring and for door control system.
- .4 Schedule identifying each unit, with door marks and numbers relating to numbering on drawings and in door schedule.

**1.4 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard and packaging material for recycling in accordance with Waste Management Plan.
- .4 Divert unused metal materials from landfill to metal recycling facility approved by Departmental Representative.
- .5 Fold up metal banding, flatten and place in designated area for recycling.

**1.5 QUALITY ASSURANCE**

- .1 Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.
- .4 Manufacturer's factory representative must be present to sign off and verify the detention door and hardware system during the final commissioning process.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Concrete mixes and materials: in accordance with CSA-A23.1.
  - .1 Nominal coarse aggregate size: 20-5.
  - .2 Compressive strength: 20 MPa minimum at 28 days.
  - .3 Additives: fly ash to ASTM C618.
  - .4 20 Mpa, 50 to 80 mm slump, 6% air entrainment.
- .2 Chain-link fence fabric: to CAN/CGSB-138.1.
  - .1 Type 1, Class A, heavy style 50.8 mm diamond mesh, interwoven 4.8 mm [6 Gauge] wire diameter with twisted tight selvage at top and bottom.
  - .2 Height of fabric: as indicated.

- .3 Posts, braces and rails: to CAN/CGSB-138.2, galvanized steel pipe. Dimensions as indicated.
- .4 Steel Sections: to CSA G40.21 of type W- weld able steel. Minimum yield strength of 350 Mpa for Hollow Structural Sections and 300 Mpa for Rolled Sections and Plates,
- .5 Welding Materials: to CSA W59.
- .6 Galvanize: hot dip galvanize to a minimum rate of 600 g/m<sup>2</sup>, to CAN/CSA-G164, after fabrication.
- .7 Fasteners: stainless steel torx with pin security fasteners.

## 2.2 STEEL DETENTION SWING GATES

- .1 Fabricate as detailed and in accordance with reviewed shop drawings using limited fasteners. Weld all connections.
- .2 Construct frame using steel hollow structural steel sections, steel shapes, steel plates, and bar material.
- .3 Perimeter frame to be hollow structural steel sections of sizes detailed/indicated.
- .4 Detention swing gates to be fabricated using a perimeter frame of hollow structural steel sections. Intermediate horizontal support of hollow structural steel section at mid height of door. Mesh Wire by Section 32 31 13. Mesh Wire to be mechanically fastened with spanner screws spaced 200 mm centre to centre to HSS mid-rail with a continuous 25 x 6 mm steel pressure bar. Continuous 20 x 6 mm tension bar to be provided around the perimeter of Mesh Wire and welded to the HSS members 20 x 6 mm steel bars welded to the tension bars and to the HSS members.
- .5 Corners of frame and gate to be mitred and welded in accordance with CSA W59 using welders holding current certification under CSA W47.1. Continuous deep-penetration arc weld at all joints.
- .6 Prepare for hardware. Provide all holes and reinforcements required for proper attachment and operation of hardware, in accordance with hardware manufacturers' recommendations.
- .7 Prepare for alarm monitoring and for door control system. Provide all boxes and conduit required to accommodate wiring inside swing gates and frames. Exposed conduits and wiring will not be accepted.
- .8 Limit clearance at front edge between swinging gate when closed and adjacent frame to 5 mm maximum.
- .9 Remove welding slag and spatter. Grind smooth all edges and welds.
- .10 Remove all rust, scale, oil and other foreign substances by wire brush, sand blasting or any other means which provides clean steel surfaces ready to receive galvanized finish.
- .11 Galvanize after fabrication.

## 2.2 FINISHES

- .1 Galvanizing:
  - .1 For chain link fabric: to CAN/CGSB-138.1 Grade 2 610 g/m<sup>2</sup> minimum.

- .2 For pipe: 550 g/m<sup>2</sup> minimum to ASTM A90.
- .3 For other fittings: to CAN/CSA-G164.

**Part 3 Execution**

**3.1 GRADING**

- .1 Remove debris and correct ground undulations along fence line to obtain smooth uniform gradient between posts.

**3.2 INSTALLATION**

- .1 The Detention Equipment Contractor shall be responsible for the building-in, bracing and welding of exterior swing gates to locations indicated on drawings. Below grade work and concrete base supplied and installed by others.
- .2 Install detention swing gates in accordance with reviewed shop drawings.
- .3 Install swing gates plumb, level, square and true to line of building.
- .4 Install hardware in accordance with templates and hardware manufacturers' directions.
- .5 Co-operate with detention hardware engineering supervisor as required to ensure proper hardware installation, adjustment and hardware operation.

**3.3 TOUCH UP**

- .1 Touch up field welds with rust inhibiting zinc paint.
- .2 Clean damaged surfaces with wire brush removing loose and cracked coatings. Pre-treat damaged surfaces according to manufacturers' instructions for zinc-rich paint.

**3.4 CLEANING**

- .1 Clean and trim areas disturbed by operations. Dispose of surplus material as directed by Departmental Representative.

**END OF SECTION**