

Part 1 General

1.1 DEFINITIONS

- .1 The word “provide” means “supply and install”.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract comprises the renovation of two prefabricated buildings, and relocation /renovation of an existing garage on to an existing foundation. Project is located at 17 Harbour Lane in Gimli, MB; and further identified as Gimli Search and Rescue Renovation – MMP Project number 2016-39.
- .2 The work do be done by the Contractor under this Contract includes all superintendence, overhead, labour, materials, equipment, tools, supplies, insurance, and all things necessary for and incidental to the satisfactory performance and completion of all work as specified herein. All work to be done in accordance with details shown on the accompanying drawings and as specified herein.

1.3 CONTRACT METHOD

- .1 Construct Work under stipulated price contract.

1.4 MEASUREMENT FOR PAYMENT

- .1 General
 - .1 Provide advanced notice to Departmental Representative to permit required confirmation of measurements for payment.
 - .2 At least 14 days prior to submittal of first application for payment, provide Departmental Representative a cost breakdown, Progress Paymeng in detail as directed by Departmental Representative for parts of work aggregating total amount of Contract Price, to allow evaluation for payment. After approval, cost breakdown will be used as basis for progress payments.
- .2 Mobilization and Demobilization:
 - .1 Lump sum payment provided for all works required, including:
 - .1 Mobilize equipment, materials, tools, supplies, labour and supervisors.
 - .2 Insurance required for duration of construction.
 - .3 Fees, certificates, and work permits.
 - .4 Temporary construction facilities.
 - .5 Signage.
 - .6 Security work and storage areas.
 - .7 Vehicle and pedestrian protection.
 - .8 Daily site cleaning, and
 - .9 Demobilization of aforementioned items upon completion of project.

1.5 WORK SCHEDULE

- .1 Provide within 10 working days after contract award, a construction schedule indicating anticipated progress stages and final completion of work within time period indicated herein.
- .2 Work under this contract shall be **substantially completed by January 30th, 2018.**
- .3 Interim reviews of work progress based on work schedule will be conducted as determined by Departmental Representative. Contractor to update schedule in conjunction with Departmental Representative's review and approval.
- .4 Work under this Contract is to be performed in a timely manner. Commence planning and preparatory work immediately upon receipt of official notification of acceptance of Contract.
- .5 Before work is undertaken ensure all materials and trades required are available to complete the work with no delay.
- .6 Obtain Departmental Representative's approval prior to scheduling any weekend work.

1.6 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately following award of Contract, submit Workers' Compensation Board status.

1.7 FEES, PERMITS, AND CERTIFICATES

- .1 Provide authorities have jurisdiction with information requested. Pay fees and obtain certificates and work permits as required.
- .2 Provide certificates and permits when requested.

1.8 INTERPRETATION OF DOCUMENTS

- .1 Drawings and Specifications are to be read together. All work indicated on the Drawings or within the Specifications, whether reflected in both documents or not, is included in this Contract.
- .2 The sub-division of the Specification into sections, identified by title and number, is for convenience only and does not modify the singularity of the document, nor does it operate to make or imply that the Department Representative is an arbiter to establish the limits or extent of Contract between Contractor and Subcontractors or to determine the limits or extents of work that may be decided by trade unions or contractors' organizations. Extras to the Contract will not be considered based on the grounds of differences in interpretation of the Specification and/or Drawings as to which trade performs the work.
- .3 Do not scale off drawings.

1.9 CONTRACTOR USE OF PREMISES

- .1 Unrestricted use of site [until Substantial Performance].
- .2 Co-ordinate use of premises under direction of Departmental Representative.

- .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .4 Remove or alter existing work to prevent injury or damage to portions of existing work which remain.
- .5 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Departmental Representative.
- .6 At completion of operations condition of existing work: equal to or better than that which existed before new work started.

1.10 PRE-PURCHASED EQUIPMENT

- .1 Certain items of equipment have been pre-purchased. Refer to Appendix A.
- .2 Equipment specifications for pre-purchased items are included at end of project specification, in Appendix A.
- .3 Notify Departmental Representative in writing at least 14 calendar days in advance of date on which materials and equipment are required.
 - .1 Pick up materials and equipment no later than 30 calendar days after such date.
- .4 Receive equipment F.O.B. and store and process equipment until installation.

1.11 OWNER FURNISHED ITEMS

- .1 Owner Responsibilities:
 - .1 Arrange for delivery of shop drawings, product data, samples, manufacturer's instructions, and certificates 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.
 - .5 Submit claims for transportation damage.
 - .6 Arrange for replacement of damaged, defective or missing items.
 - .7 Arrange for manufacturer's field services; arrange for and deliver manufacturer's warranties and bonds to Contractor.
- .2 Contractor Responsibilities:
 - .1 Designate submittals and delivery date for each product in progress schedule.
 - .2 Review shop drawings, product data, samples, and other submittals. Submit to Departmental Representative notification of observed discrepancies or problems anticipated due to non-conformance with Contract Documents.
 - .3 Receive and unload products at site.
 - .4 Inspect deliveries jointly with Owner; record shortages, and damaged or defective items.
 - .5 Handle products at site, including uncrating and storage.
 - .6 Protect products from damage, and from exposure to elements.
 - .7 Assemble, install, connect, adjust, and finish products.

- .8 Provide installation inspections required by public authorities.
- .9 Repair or replace items damaged by Contractor or subcontractor on site (under his control).
- .3 Schedule of Owner furnished items:
 - .1 See Appendix A.

1.12 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 72 hours' notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as directed by governing authorities with minimum disturbance to pedestrian, vehicular traffic and tenant operations.
- .3 Provide alternative routes for personnel, pedestrian and vehicular traffic.
- .4 Establish location and extent of service lines in area of work before starting Work. Notify Departmental Representative of findings.
- .5 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
- .6 Provide temporary services when directed by Departmental Representative to maintain critical building and tenant systems.
- .7 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
- .8 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .9 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction.
- .10 Record locations of maintained, re-routed and abandoned service lines.
- .11 Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

1.13 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each document as follows:
 - .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 Health and Safety Plan and Other Safety Related Documents.
- .11 Other documents as specified.

1.14 PROJECT MEETINGS

- .1 Departmental Representative will arrange project meetings and assume responsibility for setting times, recording of minutes, and distribution of minutes.

1.15 SITE INSPECTION

- .1 The submission of a tender is deemed to be a confirmation that the Tenderer has inspected the site and is fully conversant with the site and all conditions under which the work is to be carried out.

1.16 SECURING WORK AREA

- .1 Secure work areas in an approved manner. This includes fencing or barricades to prevent public access to areas of construction or areas where construction materials are stored.

1.17 CONSTRUCTION FACILITY

- .1 Provide heated, lighted, and ventilated office space of sufficient size to accommodate site meetings, and laydown table.
- .2 Provide sanitary facilities for workforce in accordance with OHSA.

1.18 CLEANING

- .1 Maintain work areas in tidy condition, free from accumulation of waste products and debris.
- .2 Remove waste material off site at regular intervals and dispose of appropriately. Obtain permits and pay fees as necessary.
- .3 Do not burn waste materials on site.
- .4 At Substantial Completion remove surplus products, tools, and equipment not required to complete remaining work.

1.19 CLOSEOUT

- .1 Refer to Section 01 78 00 – Closeout Submittals.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

Approved: 2009-12-31

Part 1 General

1.1 ADMINISTRATIVE

- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by submittal 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 co-ordinated 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 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 that field measurements and affected adjacent Work are co-ordinated.
- .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 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Manitoba of Canada.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow 10 working days for Departmental Representative's review of each submission.

- .5 Adjustments made on shop drawings 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 shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .7 Submissions include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
- .8 After Departmental Representative's review, distribute copies.
- .9 Submit electronic 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.
- .10 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
 - .2 Testing must have been within 3 years of date of contract award for project.
- .11 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.

- .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
- .2 Certificates must be dated after award of project contract complete with project name.
- .12 Submit electronic copies of manufacturer's instructions for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .13 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .14 Submit electronic copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .15 Delete information not applicable to project.
- .16 Supplement standard information to provide details applicable to project.
- .17 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.
- .18 The review of shop drawings by Public Works and Government Services Canada (PWGSC) is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that PWGSC 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 requirements of construction and Contract Documents.
 - .2 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 sub-trades.

1.3 SAMPLES

- .1 Submit for review samples in duplicate 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 PHOTOGRAPHIC DOCUMENTATION

- .1 Submit electronic copies of colour digital photography in jpg format, standard resolution monthly with progress statement.
- .2 Project identification: name and number of project and date of exposure indicated.
- .3 Number of viewpoints: 2 locations.
- .4 Frequency of photographic documentation: monthly.

1.5 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
- .2 Submit transcription of insurance immediately after award of Contract.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Approved: 2006-09-30

Part 1 General

1.1 REFERENCES

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2008, Stipulated Price Contract.

1.2 INSPECTION

- .1 Refer to CCDC 2, GC 2.3.

1.3 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. Contractor shall pay costs for retesting and re-inspection.

1.4 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.

1.5 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 orderly sequence to not cause delays 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.

1.6 REJECTED WORK

- .1 Refer to CCDC, GC 2.4.
- .2 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.

- .3 Make good other Contractor's work damaged by such removals or replacements promptly.
- .4 If in opinion of Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by .

1.7 REPORTS

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

1.8 EQUIPMENT AND SYSTEMS

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

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 ACTION AND INFORMATIONAL 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.
- .2 Keep excavations free of water while Work is in progress.
- .3 Provide for Engineer approval details of proposed dewatering methods, including dikes, well points, and sheet pile cut-offs.
- .4 Protect open excavations against flooding and damage due to surface run-off.
- .5 Dispose of water in manner not detrimental to public and private property, or portion of Work completed or under construction.

1.4 FILL TYPES AND COMPACTION

- .1 Use types of fill as indicated and specified below.

1.5 WATER SUPPLY

- .1 Provide continuous supply of potable water for construction use.
- .2 Arrange for connection with appropriate utility company and pay costs for installation, maintenance and removal.
- .3 Pay for utility charges at prevailing rates.

1.6 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 Permanent heating system of building, may be used when available. Be responsible for damage to heating system if use is permitted. Filters shall be replaced.
- .7 On completion of Work for which permanent heating system is used, 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 Maintain strict supervision of operation of temporary heating and ventilating equipment 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.
- .10 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

1.7 TEMPORARY POWER AND LIGHT

- .1 Provide and pay for temporary power during construction for temporary lighting and operating of power tools, to a maximum supply of 230 volts, 30 amps.
- .2 Arrange for connection with appropriate utility company. Pay costs for installation, maintenance and removal.
- .3 Temporary power for electric cranes and other equipment requiring in excess of above is responsibility of Departmental Representative.
- .4 Provide and maintain temporary lighting throughout project. Ensure level of illumination on all floors and stairs is not less than 162 lx.

1.8 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by 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

END OF SECTION

Approved: 2006-03-31

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-O121-M1978(R2003), Douglas Fir Plywood.
- .3 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 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

- .1 Erect temporary site enclosures 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 O121.
- .2 Apply plywood panels vertically flush and butt jointed.
- .3 Erect and maintain pedestrian walkways including roof and side covers, complete with signs and electrical lighting as required by law.
- .4 Paint public side of site enclosure in selected colours with one coat primer to CAN/CGSB 1.189 and one coat exterior paint to CGSB 1.59. Maintain public side of enclosure in clean condition.
- .5 Provide barriers around trees and plants designated to remain. Protect from damage by equipment and construction procedures.

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 as required.

1.6 DUST TIGHT SCREENS

- .1 Provide dust tight screens or 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.

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 PUBLIC TRAFFIC FLOW

- .1 Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect public.

1.9 FIRE ROUTES

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

1.10 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.

1.11 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 prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection.

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 Construction Documents Committee (CCDC)
 - .1 CCDC 2-2008, Stipulated Price Contract.

1.2 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2 Remove waste materials from site at daily 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 containers for collection of waste materials and debris.
- .6 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.
- .7 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .8 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .9 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .10 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 Refer to CCDC 2, GC 3.14.
- .2 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .3 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .4 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .5 Remove waste products and debris other than that caused by Owner or other Contractors.
- .6 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.

- .7 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .8 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.
- .9 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, ceilings and floors.
- .10 Clean lighting reflectors, lenses, and other lighting surfaces.
- .11 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .12 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .13 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .14 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .15 Remove dirt and other disfiguration from exterior surfaces.
- .16 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .17 Sweep and wash clean paved areas.
- .18 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
- .19 Clean roofs, downspouts, and drainage systems.
- .20 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.
- .21 Remove snow and ice from access to building.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Approved: 2009-06-30

Part 1 General

1.1 REFERENCES

- .1 Canadian Environmental Protection Act (CEPA)
 - .1 SOR/2008-197, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Two weeks prior to Substantial Performance of the Work, submit to the Department Representative, four final copies of operating and maintenance manuals in English.
- .3 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .4 Provide evidence, if requested, for type, source and quality of products supplied.

1.3 FORMAT

- .1 Organize data as 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.
 - .1 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.
 - .1 Bind in with text; fold larger drawings to size of text pages.
- .9 Provide 1:1 scaled CAD files in dwg format on CD.

1.4 CONTENTS - PROJECT RECORD DOCUMENTS

- .1 Table of Contents for Each Volume: provide title of project;
 - .1 Date of submission; names.
 - .2 Addresses, and telephone numbers of Consultant 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 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 and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data.
 - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.

1.5 AS -BUILT DOCUMENTS AND SAMPLES

- .1 Maintain, in addition to requirements in General Conditions, at site one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to 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.
 - .1 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.
 - .1 Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition.
 - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

1.6 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual, provided by Departmental Representative.
- .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress.
 - .1 Do not conceal Work until required information is recorded.

- .4 Contract Documents and shop drawings: 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.
- .5 Specifications: 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.
- .7 Provide digital photos, if requested, for site records.

1.7 EQUIPMENT AND SYSTEMS

- .1 For each item of equipment and each system include description of unit or system, and component parts.
 - .1 Give function, normal operation characteristics and limiting conditions.
 - .2 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
 - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
 - .2 Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.

- .11 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .14 Aboveground storage tank inspection documentation, registration, forms, decommissioning and removal in accordance with CEPA SOR/2008-197.
- .15 Additional requirements: as specified in individual specification sections.

1.8 MATERIALS AND FINISHES

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
 - .1 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.

1.9 MAINTENANCE MATERIALS

- .1 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 items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .2 Extra Stock 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 items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .3 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 items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.

1.10 DELIVERY, STORAGE AND HANDLING

- .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 for review by Departmental Representative.

1.11 WARRANTIES AND BONDS

- .1 Assemble information in binder, submit upon acceptance of work and organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .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 applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized.
 - .5 Co-execute submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
- .2 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
- .3 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
 - .2 Listing and status of delivery of Certificates of Warranty for extended warranty items.
 - .3 Provide list for each warranted equipment, item, feature of construction or system indicating:
 - .1 Name of item.
 - .2 Model and serial numbers.

- .3 Location where installed.
- .4 Name and phone numbers of manufacturers or suppliers.
- .5 Names, addresses and telephone numbers of sources of spare parts.
- .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
- .7 Cross-reference to warranty certificates as applicable.
- .8 Starting point and duration of warranty period.
- .9 Summary of maintenance procedures required to continue warranty in force.
- .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
- .11 Organization, names and phone numbers of persons to call for warranty service.
- .12 Typical response time and repair time expected for various warranted equipment.
- .4 Contractor's plans for attendance at 9 month post-construction warranty inspections.
- .5 Procedure and status of tagging of equipment covered by extended warranties.
- .6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .4 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .5 Written verification to follow oral instructions.
 - .1 Failure to respond will be cause for the Departmental Representative to proceed with action against Contractor.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION