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A. SUMMARY OF WORK

1. DEFINITION

- 1.1 The City of Iqaluit is hereinafter and elsewhere in the Contract Documents referred to as the Owner. The contract documents may refer to “the Owner”, “the City of Iqaluit”, “the City” and “City”. All these have the same meaning as “the Owner”.
- 1.2 The contract documents may refer to “City Representative”, “Engineer”, “Consultant”, “Owners Agent” and “Contract Administrator”. All these have the same meaning as “City Representative”.
- 1.3 Where the word “provide” is used in any General Requirements sections or the Terms of Reference, it shall mean furnishing and incorporating a specified item, product, or material in the Works, including all necessary labour, materials, and equipment to perform the Work required, ready for use by the Owner.

2. GENERAL SUMMARY

- 2.1 Recognize that the Work under the Contract is to be performed in a facility, location, area that must be kept in continuous uninterrupted operation, or where municipal services must be maintained. Plan and schedule the Work consistent with specified operational constraints and with the objective of uninterrupted operation of the existing facility, structure, and/or service provided by the City.
- 2.2 Supervise, organize, coordinate and direct all construction operations described in the contract documents, regardless of the section in which the works are specified. The Contractor shall resolve conflicts arising between trades, sub-contractors, suppliers and/or other contractors working in the adjacent area.
- 2.3 Construct and test foundations, structures, pipelines, buildings, tanks, equipment and other facilities shown on the contract drawings and specified within the terms of reference.
- 2.4 Supply, install, calibrate and commission all mechanical, electrical, process, instrumentation and communication equipment shown on the contract drawings and specified within the terms of reference. Include operating assistance to the Owner as described.
- 2.5 In addition to constructing the works shown on the drawings and described within the terms of reference, design, construct, and maintain, unless otherwise specified on shown on the drawings or described in the terms of reference, all temporary works and facilities required for the construction of the works. Remove temporary works and facilities when construction is completed. Temporary works and facilities include, but are not limit to, the following:
 - .1 All security fencing whether permanent or temporary.
 - .2 Shoring and bracing systems for excavations whether part of all is left in place or not, shall be designed, approved and stamped by a Professional Engineer Licensed in Nunavut.

- .3 Construction access roads and related items.
 - .4 Excavation and/or dewatering systems.
 - .5 Formwork for concrete.
 - .6 Falsework and bracing for formwork or for other parts of the works while under construction.
 - .7 Bracing and shoring for partially completed steelwork, precast concrete, existing structures and pipelines, or other assembly.
 - .8 Scaffolding.
 - .9 Temporary bypass pumping systems to divert flows away from the work area so that services are uninterrupted, while ensuring the work can be performed safely.
 - .10 Protection for existing structures and facilities as necessary for the construction to proceed.
 - .11 Temporary power and/or utilities necessary to existing City buildings and/or facilities, in order to ensure services are not interrupted as a result of the work.
 - .12 Curtains to control the migration of dust during work inside existing buildings, structures, and rooms.
 - .13 Temporary barriers and enclosures.
 - .14 Temporary utilities (water, power, light, instrumentation, heating, ventilation services and sanitary facilities, etc.).
 - .15 Piping and equipment support.
 - .16 Snow removal around the job site.
 - .17 Temporary vehicular access and parking development, maintenance, and restoration.
 - .18 Regrading of gravel roads affected by construction works.
- 2.6 Contractor to be responsible for all means and methods required to execute the work, as described in the Terms of Reference.

3. WORK BY OTHERS

- 3.1 Coordinate work of other Contractors. Report promptly to City Representative, in writing, any defects which may interfere with proper execution of the Work for this contract.

4. CODES AND PERFORMANCE REQUIREMENTS

- 4.1 Perform work in accordance with National Building Code of Canada (NBC) and any other code of territorial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- 4.2 Meet or exceed the requirements of:
 - .1 Contract documents.
 - .2 General requirements and terms of reference.
 - .3 Addenda.
 - .4 Reviewed Shop Drawings.
 - .5 Field Instructions and Change Orders.
 - .6 Other modifications to Contract.
 - .7 Field test reports.
 - .8 Copy of approved work schedule.
 - .9 Manufacturer's installation and application instructions.

5. WORK COMPLIANCE

- 5.1 Provide all work during its progress and at its completion to the lines, levels, and grades shown.
- 5.2 Build all work in a thoroughly substantial and workmanlike manner, in accordance with the Contract Drawings, General Requirements, and Terms of Reference, subject to such modifications and additions as may be deemed necessary during its execution. In no case will any work in excess of the requirements of the Drawings, General Requirements or Terms of Reference be paid for, unless approved in writing by the City Representative.

6. ENGINEER DESIGN

- 6.1 Where general requirements or terms of reference require work to be designed by an engineer, engage a professional engineer licensed in the Territory of Nunavut within demonstrated experience to design such work.

7. DOCUMENTS REQUIRED

- 7.1 Maintain at job site, one copy each document as follows:
 - .1 Contract Documents
 - .2 Contract Drawings
 - .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 Works Schedule
- .10 Site Specific Health and Safety Plan and Other Safety Related Documents
- .11 Current as-built document of construction work in progress
- .12 Other documents as specified

8. SUBSTANTIAL COMPLETION

- 6.1 In addition to the requirements in the General Conditions and Supplementary General Conditions, Substantial Completion shall only be issued once the following requirements have been addressed to the satisfaction of the City Representative:
 - .1 Successful testing, start-up and commissioning of all equipment and/or systems specified in the Contract Documents.

END OF SECTION

B. CONTRACTORS USE OF PREMISES

1. DESCRIPTION

- 1.1 This Section specifies requirements for the Contractor's use of project site during the construction.

2. GENERAL

- 2.1 Normal working hours shall be Monday to Friday, 7:00am to 5:00pm, excluding statutory holidays. No work shall be permitted outside of these hours within the Contractor first obtaining written approval from the City Representative and Owner, five (5) working days in advance of the planned work.
- 2.2 The Contractor shall arrange with the City for easements for construction, storage and access to all the Works within the Owner's property line.
- 2.3 Do not enter upon or occupy with workers, tools or materials any land other than public streets, roadways, rights-of-way's or easements shown on the Contract Drawings except after written consent has been received from the property owner.
- 2.4 The Contractor shall obtain written approval from the City Representative for shutdown and tie-in work to existing facilities and structures. The City's staff will be responsible for operations of the existing facilities and structures during the construction period.
- 2.5 The Contractor shall obtain written approval from the City Representative for work that will be executed within a municipal right-of-way, and for partial or full closure of municipal roadways.
- 2.6 Do not impede normal operation of existing facilities and structures.
- 2.7 A temporary fence and access gate are to be erected to separate the work area from the plant operating area as specified herein and as directed by the City Representative.

3. STAGING AREA

- 3.1 The staging area will be identified on the contract drawings or provided by the City Representative at the pre-construction meeting.
- 3.2 Locate construction trailers, laydown areas, and temporary buildings under the direction of the City Representative.

4. WORK AREA

- 4.1 Contractor shall clearly delineate the entire perimeter of his working area with a sturdy metal fence of at least 1.8m height, with sufficient access gates, complete with signage identifying company name, site contact telephone number, and emergency contact information prior to commencement of any work.

- 4.2 All points of entry into the Contractor's working area, including stair and walkways, shall be similarly controlled by sturdy barriers and signage. Do not impede emergency egress from any area.
- 4.3 Confine operations within easements for construction, storage and access.
- 4.4 Install, secure and maintain fencing along working and storage areas, access routes and both sides of easements.
- 4.5 Do not enter upon or occupy any land with labour, tools or materials other than the easements for construction except after written consent has been received from property owner.
- 4.6 Do not encumber site with materials or equipment.
- 4.7 Where the work takes place in different areas of the facilities, structures, or work areas at different times of the contract, a 'rolling' definition of working area can be utilized.

5. STORAGE

- 5.1 Contractor shall provide suitable storage areas, as well as security if needed, for construction materials. Storage and security of construction materials will be the responsibility of the Contractor.
- 5.2 Contractor shall obtain permission from the City Representative before storing any materials in any new facility or work areas under construction.
- 5.3 Excess materials resulting from any or all excavations are the property of the Owner. Its disposal by the Contractor as part of the contract shall be as directed by the Owner unless the Owner waives this requirement. Under this circumstance, the contractor shall be responsible for the disposal of any or all of the excess materials.

6. ENTRY OF OWNER'S STAFF INTO CONTRACTOR'S WORKING LIMITS

- 6.1 The Owner may require access to the work site during the construction period for the purpose of maintaining normal operation of City infrastructure and services. Cooperate with the Owner in scheduling construction activities to facilitate the Owner's usage and to minimize conflict.
- 6.2 Maintain the entire works free of debris, snow and ice at all times, including access to all buildings, facilities and structures which continues to be operated and/or maintained by Owner's staff.
- 6.3 Prepare a written procedure regarding the entry of Owner's staff into the construction site and submit to the City Representative for review. The procedure must be communicated to all operating staff who may enter the construction site.
- 6.4 The existing facilities and/or structures operate 24 hours per day, 7 days per week. In the event of conflict between construction activities and general operations, operations shall



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PART VI – GENERAL REQUIREMENTS



have priority. Take every precaution to avoid interfering within routine operation and maintenance.

END OF SECTION

C. COORDINATION

1. CONSTRUCTION COORDINATION WITH CITY OPERATIONS STAFF

- 1.1 The existing facilities, structures and systems operate 24 hours a day, 7 days per week. In the event of a conflict between construction operations and routine City operations, City operations have priority. Take every precaution to avoid interfering with routine operation and maintenance activities. Reschedule construction activities, if required, without change to the contract price.
- 1.2 Coordinate activities on the site and in the existing buildings/ facilities/ structures with the City Representative.
- 1.3 Perform work continuously during critical shutdowns, connections and changeover, and as required to prevent interruption of City operations.
- 1.4 The Contractor must identify work activities that may impact the operation and maintenance activities of the City operations staff, in advance of the scheduled work, at least 5 business days prior to the work. The Contractor shall submit to the City Representative a detailed work plan listing work activities for the next 14 calendar days, detailing the works that will affect City operations staff.
- 1.5 Do not close lines, open or close valves, or take other action which would affect the operation of the existing systems, except as specifically required by the Contract Documents and only after the prior authorization of the City Representative has been obtained.
- 1.6 Coordinate the proposed work with the City Representative prior to process shutdowns. Under no circumstances stop the work at the end of a normal working day if such action may cause a cessation of any facility or structure operating process. In such cases, remain on site until the necessary work is complete.
- 1.7 Coordinate activities on the site and in the existing buildings/ facilities with the City Representative.
- 1.8 Perform work continuously during critical shutdown, connection and changeover, and as required to prevent interruption of the facility operation or City services.
- 1.9 Shutdown of existing facilities/ structures and tie-ins:
 - .1 When the Contractor requires a part of an existing facility, structure or process system shutdown for execution of construction activities, a formal shutdown request must be made in writing at least 14 calendar days in advance of the requested shutdown date. The shutdown request shall describe in detail the proposed method, and the procedures proposed to accomplish each portion of the Work that requires an interruption to the operation of the existing facility, structure or system. The Contractor shall not begin any such Work until it has received written acceptance of the methodology and approach from the City Representative. The Contractor shall include in its plan the specific number of

work hours to complete each facility interruption, along with measures to mitigate risk to the City.

- .2 The Contractor participating in the planning and execution of the shutdown shall coordinate with the City staff on the planning of the shutdown activity. The Contractor and City staff shall work together to establish a shutdown specific energy and equipment lockout strategy that is required for each shutdown of existing facilities, structures, and systems for all work that includes the Contractor's work to connect new systems to the existing facilities and structures. The operator is not obliged to provide the shutdown within the 14-day period if the effectiveness of the plant operations could be compromised. The operator will not unreasonably delay or refuse to make the plant processes or systems available for the Contractor's construction activities. A delay or refusal shall be based on the operator's opinion that the performance of the plant will be compromised.
- .3 At each location where tie-in is required, the Contractor shall provide a complete system of temporary works including bulkheads, pumps, power, equipment, and labour as necessary to maintain facility/ structure/ system operations, and to allow for construction of the new structures/ systems.
- .2 All temporary equipment, tools, materials, labour, and miscellaneous equipment must be scheduled and available at the Site in advance of any shutdowns. The Owner will not be responsible for delays or claims as a result of the Contractors lack of coordination.
- .3 The City reserves the right to cancel any scheduled shutdown if system or weather conditions dictate, at no additional cost to the City.
- .4 Prior to making major tie-ins to existing process units and structures, demonstrate that the equipment installed in all new structures is fully functional. Connections to existing works will not be permitted until all equipment in the new adjacent works operates to the satisfaction of the City Representative. No claim for delay will be entertained due to unsatisfactory operation of any equipment.
- .10 Operations provided by City staff:
 - .i Access to City facilities and structures.
 - .ii Opening and closing of existing valves and gates in existing buildings, structures, or systems.
 - .iii Isolation of existing process piping.
- .11 In the event any existing facility or structure is damaged, changes mode of operation or there is a risk of actual process upset due to the Contractor's work activity, the Contractor shall stop work immediately, contact the City Operations representative, report the incident to the City Representative, and make the Contractor's on-site resources available at the request and direction of the City Operations Representative at no extra cost to the project to mitigate any damage.

- .12 Contractor shall supply and maintain all appropriate and necessary equipment for confined space entry operations in accordance with applicable regulations.
- .13 The Contractor shall coordinate confined space entry operations where multiple parties are involved in accordance with the Nunavut Safety Act and Occupational Health and Safety Regulations.

2. COORDINATION OF TRADES AND SUBCONTRACTORS

- 2.1 The Contractor shall ensure cooperation with and between the trades and Subcontractors to ensure that the Work is carried out expeditiously and in a satisfactory manner. The Contractor shall be responsible for all extra costs arising from failure to properly coordinate the Work with the work of others
- 2.2 Coordinate civil, structural, architectural, mechanical, electrical, and instrumentation and work for the equipment and systems being constructed. Planning and coordinate the work in a timely manner so that the work proceeds expeditiously.
- 2.3 Extras will not be considered, based on differences of interpretation of the terms of references, as to which trade shall supply and install certain items or materials. Such coordination is entirely the responsibility of the Contractor.

3. COOPERATION WITH OTHER CONTRACTORS

- 3.1 Other contracts may be awarded to construct adjacent work to which this contract work connects.
- 3.2 At the interference with other contracts, jointly plan and coordinate with other contractors the work so that the project:
 - .1 Will not be delayed.
 - .2 Will not be endangered in any way.
 - .3 Will be correctly connected.
 - .4 Will not cause the City to be designated as the “Prime Contractor” as set out in the Safety Act.
- 3.3 Where any equipment is supplied by the Owner, coordinate unloading, transfer, installation, testing and placing into operation.
- 3.4 Where other work is in progress within or adjacent to the limits of this Contract, cooperate and coordinate with other Contractor(s), Utility Companies and the City of Iqaluit, and allow reasonable, free access to their work at all times.
- 3.5 Cooperate and make suitable working arrangements with other Contractor(s).
- 3.6 Notify the City Representative in advance and obtain approval in writing from the City Representative for all arrangements made with other Contractor(s).

4. UTILITY NOTIFICATION AND COORDINATION

- 4.1 Coordinate the Work with various utilities within Project limits. The Contractor shall notify applicable utilities prior to commencing the Work. The Contractor shall also notify the applicable utilities if any damage occurs, or if conflicts or emergencies arise during the execution of the Work.
- 4.2 Should any piping, sewers, cables or similar services be encountered during performance of the work that are not known from the City or other utility companies records, the Contractor shall notify the City Representative and the appropriate utility agency and shall not proceed with their removal or cutting until direction has been provided.

5. WORKING WITHIN THE A CITY EASEMENT AND/OR RIGHT-OF-WAY

- 5.1 For construction work that will be taking place within a City easement and/or right-of-way, the Contractor must submit to the City Representative a completed City of Iqaluit Utility Permit application, along with all supplementary documents, for review and approval with the Department of Public Works and Engineering.
- 5.2 Supplementary documents shall include:
 - .1 Brief work plan methodology describing the work that will be taking place within the easement and/or right-of-way, the means of construction, temporary structures that will be used, the equipment that will be used.
 - .2 Schedule outlining duration of work, along with all phases and activities that will comprise the work.
 - .3 Traffic control plan (if applicable).
- 5.3 Utility permits must be submitted 20 business days in advance of the planned Work. The Contractor will not be granted an extension of time to the Contract, should they fail to submit a permit application within the timelines stipulated.
- 5.4 No work can proceed until approval has been provided in writing by the City Representative.
- 5.5 The Contractor must account for the time to review and approve permit applications within their construction schedule.
- 5.6 Pay relevant permit fees and charges.

6. PARTIAL OR FULL CLOSURE OF A MUNICIPAL ROADWAY

- 6.1 For construction work that will require a partial or full closure of a municipal roadway, the Contractor must submit to the City Representative a completed City of Iqaluit Road Closure Permit Application, along with all supplementary documents, for review and approval with the Department of Public Works and Engineering.

- 6.2 Supplementary documents shall include:
- .1 Brief work plan methodology describing the work that will be taking place within the easement and/or right-of-way, the means of construction, temporary structures that will be used, the equipment that will be used.
 - .2 Schedule outlining duration of work, along with all phases and activities that will comprise the work.
 - .3 Traffic control plan. Refer to Section E Special Project Procedures regarding traffic control plan requirements.
- 6.3 Road closure permits must be submitted 20 business days in advance of the planned Work. The Contractor will not be granted an extension of time to the Contract, should they fail to submit a permit application within the timelines stipulated.
- 6.4 No work can proceed until approval has been provided in writing by the City Representative.
- 6.5 The Contractor must account for the time to review and approve permit applications within their construction schedule.
- 6.6 Pay relevant permit fees and charges.

7. WATER AND SEWER CONNECTIONS/ DISCONNECTIONS

- 7.1 For tie-in to City water and/or sewer infrastructure, the Contractor must submit to the City Representative a completed City of Iqaluit Water & Sewer Connection/ Disconnection Permit Application, along with all supplementary documents, for review and approval with the Department of Public Works and Engineering.
- 7.2 Supplementary documents shall include:
- .1 Brief work plan methodology describing the work that will be taking place within the easement and/or right-of-way, the means of construction, temporary structures that will be used, the equipment that will be used.
 - .2 Schedule outlining duration of work, along with all phases and activities that will comprise the work, along with dates/ times when City operations support is required to shutdown/ isolation of City systems.
 - .3 Traffic control plan (if applicable). Refer to Section E Special Project Procedures regarding traffic control plan requirements.
 - .4 By-pass plan (if applicable). Refer to Section E Special Project Procedures regarding by-pass plan requirements.
- 7.3 Utility permits must be submitted 20 business days in advance of the planned Work. The Contractor will not be granted an extension of time to the Contract, should they fail to submit a permit application within the timelines stipulated.

- 7.4 No work can proceed until approval has been provided in writing by the City Representative.
- 7.5 The Contractor must account for the time to review and approve permit applications within their construction schedule.
- 7.6 Pay relevant permit fees and charges.

8. WORKING IN EXISTING BUILDINGS

- 8.1 Obtain permission in writing from the City Representative prior to commencing work within an existing City building and/or facility, at least 7 business day prior to the start of work. The Contractor is to notify the City Representative what work will be taking place within the existing building, along with the measures that will be taken in order to ensure separation of work from City operations. Refer to Section E Special Project Procedures work permits.
- 8.2 The Contractor shall be responsible for enforcement of fire protection methods and procedures and adherence to local fire regulations, including any applicable requirements of the Safety Act and Occupational Health and Safety Regulations during the execution of the Work.
- 8.3 The Contractor shall ensure that existing fire protection and alarm systems are not obstructed, shut-off or made inactive at any time for the duration of the Contract. The Contractor shall not use any fire hydrant, standpipe or hose system for other than fire protection purposes.

END OF SECTION

D. REGULATORY REQUIREMENTS

1. SUBMITTALS

- 1.1 Quality Control Submittals: Submit certificates from inspecting authorities for electrical work and pressure piping, etc.

2. APPLICABLE CODES

- 2.1 Comply with the latest edition of the following statutes and codes and all amendments thereto:

- .1 The Nunavut Building Code Act and Regulations.
- .2 National Building Code of Canada.
- .3 Safety Act and Occupational Health and Safety Regulations.
- .4 Nunavut Boilers and Pressure Vessel Act and Regulations.
- .5 Canadian Electrical Code.
- .6 Nunavut Electrical Protection Act.
- .7 Nunavut Gas Protection Act.
- .8 Codes and Standards of the National Fire Protection Association (NFPA).
- .9 Nunavut Environmental Protection Act.
- .10 Nunavut Waters and Nunavut Surface Rights Tribunal Act.
- .11 City of Iqaluit Municipal Design Guidelines.
- .12 City of Iqaluit By-Laws:
 - .i By-Law No. 200 Water & Sewer Services.
 - .ii By-Law No. 137 Highway Obstructions.
 - .iii By-Law No. 138 Highway Occupancy.
 - .iv By-Law No. 319 Highway Traffic.

- 2.2 The Contractor shall conform to and enforce strict compliance with the Safety Act and Occupational Health and Safety Regulations. For purposes of the Safety Act and Occupational Health and Safety Regulations, the Contractor will be designated the “Prime Contractor” and assumes the responsibilities of the “Prime Contractor” as set out in the Act and its regulations.

3. PERMITS, APPROVALS, AND LICENCES

- 3.1 Apply for, obtain, and pay for all permits, approvals, and licenses required for the project, including but not limited to:
- .1 Canadian Standards Association (CSA).
 - .2 Field certification of equipment.
 - .3 Electrical supply and inspection authorities including Government of Nunavut Electrical Safety authority. Contractor shall apply for permit, and review of installations.
 - .4 City of Iqaluit utility permits.
 - .5 City of Iqaluit road closure permits.
 - .6 City of Iqaluit water and sewer service connection/ disconnection permits.
 - .7 Government of Nunavut Building permits.
 - .8 Government of Nunavut Boiler and Pressure Vessel permits.
 - .9 Government of Nunavut Gas and Liquified Petroleum Gas permits.
 - .10 Other permits required for the work from governing federal, territorial and municipal authorities having jurisdiction.
- 3.2 Arrange for regular inspections and a final inspection with:
- .1 The territorial electrical safety inspector.
 - .2 The territorial building inspector.
- 3.3 Arrange for all other regular inspections and final inspections.
- 3.4 The Contractor shall be solely responsible, without limitations, for any delays arising from the Contractor's failure to plan for the required inspections and to ascertain the availability of the Permit/Approval/Licensing Inspectors to complete the required inspections for the Works under this Contract. The related costs and expenses incurred by the Contractor shall be borne by the Contractor, with no change in the Contract Price and/or Contract Time.

END OF SECTION

E. SPECIAL PROJECT PROCEDURES

1. UTILITIES

- 1.1 The Contractor's attention is drawn to the presence of utilities on and around this site. The locations of utilities as shown on the Contract Drawings are approximate only and are not guaranteed. The Contractor shall be responsible for obtaining a stake-out of the utility from the company involved. The Contractor shall co-ordinate his work with the Utility Company and the Owner of concerned, should there be any bracing, removal or relocation of the pole lines or underground utility required. There will be no additional payment to the Contractor for any delays due to the relocation of utilities.

2. LIMITS OF CONSTRUCTION

- 2.1 The Contractor shall note that all work is to be contained within the limits of construction as noted in the Contract Documents. Trespassing outside these limits is not allowed. These requirements will be strictly enforced.
- 2.2 The Contractor shall coordinate the use of premises for staging, construction, storage and access area under the direction of the City Representative.

3. WORK PERMITS

- 3.1 When working in existing City facilities, buildings, and structures, the Contractor is to abide by the Owner's Location Work Permit. Contractor's site representatives will be expected to attend an initial meeting to complete this Permit together with the Owner at minimum every 7 business days in advance or with every change in location or nature of the work, to review safe work procedures as it relates to work within the existing facility. No work will be allowed to take place in existing facilities until the Location Work Permit procedure is utilized.
- 3.2 Provide a detailed work plan and schedule outlining all proposed tasks and timing for the related work. Meet with the City Representative and Owner as may be required to clarify and coordinate activities and timing. The City will review the request and return with comments if any.

4. TRAFFIC CONTROL

- 4.1 The Contractor shall develop a site-specific Traffic Control Plan (TCP) as per the site condition and submit to the City Representative for review and approval. TCP must be submitted 7 business days prior to start of construction work.
- 4.2 Contractor shall follow all standards traffic control procedures in accordance with the requirements of the Safety Act and Occupational Health and Safety Regulations.
- 4.3 Comply with requirements relevant City of Iqaluit By-Laws with respect to road obstructions and occupancy.
- 4.4 When working on travelled ways:

- .1 Place equipment in position which presents minimum interference and hazard to travelling public.
- .2 Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
- .3 Do not leave equipment on travelled way overnight.
- 4.5 Do not close any lanes or roads without approval of City Representative via a Road Closure permit. Before re-routing traffic erect suitable signs and devices approved by City Representative.
- 4.6 Keep travelled ways graded, free of pot-holes and of sufficient width for required number of lanes of traffic.
- 4.7 Keep travelled ways free of snow:
 - .1 Pile snow in designated location(s).
 - .2 Do not pile snow on construction site or on adjacent property.
- 4.8 As indicated, provide graveled detours or temporary roads to facilitate passage of traffic around restricted construction area:
 - .1 Do grading for detour in accordance with City Representative's written approval.
- 4.9 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, unless other means of road access exist that meet approval of City Representative.
- 4.10 Provide and maintain signs, flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
- 4.11 Supply and erect signs, delineators, barricades (concrete jersey barriers) and miscellaneous warning devices as required by the City of Iqaluit.
- 4.12 Place signs and other devices in locations approved by City Representative.
- 4.13 Meet with City Representative prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of City Representative.
- 4.14 Continually maintain traffic control devices in use by:
 - .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
 - .2 Removing or covering signs which do not apply to conditions existing from day to day.

- 4.15 Provide competent flag persons and properly equipped as Directed by City Representative.
 - .1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled roadway.
 - .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, and traffic signal system is not in use.
 - .3 When workmen or equipment are employed on travelled way over brow of hills, high snowbanks, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
 - .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
 - .5 For emergency protection when other traffic control devices are not readily available.
 - .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
 - .7 At each end of restricted sections as directed by City Representative.
 - .8 Delays to public traffic due to contractor's operators: maximum 15 minutes.
- 4.16 Where roadway, carrying two-way traffic, is restricted to one lane, for 24 hours each day, provide portable traffic signal system. Adjust, as necessary, and regularly maintain system during period of restriction. Signal system to meet requirements of Part IV of Manual of Uniform Traffic Control Devices for Streets and Highways.
- 4.17 Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken as specified and approved by City Representative to protect and control public traffic.
- 4.18 Maintain existing conditions for traffic crossing right-of-way.
 - .1 Maintain existing conditions for traffic crossing right-of-way except when required for construction.
 - .2 Delays to public traffic: maximum 15 minutes.

5. WORK IN HAZARDOUS AREAS

- 5.1 Before commencing the day's work and while working in areas that may contain an explosive, toxic or oxygen deficient atmosphere, test for explosive, toxic gases, and oxygen deficiencies. If a hazardous condition is found, make the work area safe before commencing or continuing work.

- .1 Provide and maintain a suitable detection meter. Use this meter continuously. Calibrate the meter to sound an alarm at a preset warning level.
- .2 Recalibrate the meter at times recommended by the manufacturer.
- 5.2 Smoking is not permitted in the hazardous areas and other areas designated by the City. The Contractor shall post “No Smoking” signs as required.
- 5.3 Use non-sparking tools in areas where an explosive atmosphere may exist.
- 5.4 Perform work in hazardous locations in accordance with the requirements of the Safety Act and Occupational Health and Safety Regulations.
- 5.5 It is the Contractor’s responsibility (as Prime Contractor) to establish the classification of the work areas for the purpose of this contract.
- 5.6 Work Procedures for Hazardous Locations:
 - .1 Contractor is a Prime Contractor on this project and is responsible for site safety.
 - .2 Construction activities that occur in hazardous locations require continuous combustible gas monitoring by the Contractor when the potential for a hazardous atmosphere exists.
- 5.7 Metering for Toxic, Combustible Gas, H₂S and Oxygen Deficiency:
 - .1 Utilize a suitable portable gas detection meter to continuously monitor for toxic gases, combustible gases, hydrogen sulfide and oxygen deficiency in the surrounding atmosphere. Set meter to sound alarm at a preset warning level. The Contractor shall demonstrate to the City Representative that the meter has recently been calibrated by a certified technician and is adequately functional for the intended purpose.
- 5.8 Meter Operator:
 - .1 When the potential for a hazardous atmosphere exists have a competent worker operate and read the portable meter continuously while construction activities occur in the designated hazardous locations. This meter operator is not permitted to assist in the construction activity in any way. Locate meter operator in the immediate vicinity of construction activity. If work in two or more different hazardous locations is required at the same time, provide the additional meter operator and meter.
- 5.9 Logbook:
 - .1 Maintain a logbook with:
 - .i Date.

- .ii Name of meter operator.
- .iii Explosive gas and oxygen deficiency readings every ½ hour.
- .2 Construction activity type:
 - .i Location of construction activity.
 - .ii Submit logbook to the City Representative when construction is complete.

5.10 Firefighting Equipment:

- .1 Provide and maintain suitable firefighting equipment when working in the designated hazardous locations. Train personnel in the use of firefighting equipment.

6. WORK IN CONFINED SPACES

6.1 For the purposes of this Contract, the following areas in existing operating process areas are identified as confined space locations:

- .1 Access vaults (AV's).
- .2 Manholes (MH's).
- .3 Tanks, vessels, and sumps

6.2 All work and entry into the identified Confined Spaces is to be done in accordance with the Nunavut Safety Act, R.S.N.W.T. 1988,c.S-1 – 2016, and the Nunavut Occupational Health and Safety Regulations, R-003-2016 – 2016.

6.3 The Contractor is responsible for all duties to ensure the work performed in the confined spaces is carried out in accordance with the Nunavut Safety Act, R.S.N.W.T. 1988,c.S-1 – 2016, and the Nunavut Occupational Health and Safety Regulations, R-003-2016 – 2016. The Contractor is responsible for all actions to ensure the duties imposed on employers by the Nunavut Safety Act, R.S.N.W.T. 1988,c.S-1 – 2016, and the Nunavut Occupational Health and Safety Regulations, R-003-2016 – 2016 are performed to protect the health and safety of all workers working in the confined spaces. For all confined space entries, involving workers from any employer, the Contractor is responsible for all coordination for work activities, confined space assessment, development of entry plans, permitting, supply of equipment for atmospheric testing and monitoring, ventilation, access and egress, entry, monitoring, control, rescue planning, and the initiation and implementation of rescue procedures in accordance with the Regulations.

6.4 The Contractor shall maintain all appropriate documentation required under the Regulation and provide daily copies to the City Representative.

- 6.5 The Contractor shall supply all required safety, monitoring, control and personal protective equipment required for confined space entry operation, including, but not limited to entry and rescue equipment, atmosphere monitors (see Section 5) and breathing apparatus/ respiratory protection.
- 6.6 The Contractor shall ensure that all workers entering or interacting with the identified confined spaces are appropriately trained and that proof of training is provided upon request.

7. STORAGE AND PROTECTION OF MATERIALS AND EQUIPMENT

- 7.1 Protect materials and equipment after unloading, from weather, dust, dirt and moisture, both before and after erection and placing. Observe manufacturer's written instructions for temporary storage.
- 7.2 Maintain equipment in good condition, as per manufacturer's instructions.
- 7.3 Provide manufacturer's written instructions for the storing of equipment during the construction period, well in advance of equipment delivery.
- 7.4 Store specialty items to ensure protection from damage to materials or finish.
- 7.5 Store materials subject to water absorption off the ground. Protect materials from other damage due to environmental conditions using waterproof covers.
- 7.6 As work proceeds and upon completion, promptly clean up and remove from site surplus materials resulting from foregoing work.

8. DISPOSAL OF MATERIAL OFF-SITE

- 7.1 Material designated to be removed from the site must be promptly removed.
- 7.2 Make necessary arrangements for environmentally safe transportation and ultimate disposal in compliance with all applicable Regulations and Guidelines at no cost to the City, unless noted otherwise.
- 7.3 Carry out additional chemical analysis of site materials suspected to be contaminated and determine applicable Regulations and Guidelines as may be required to determine the environmental quality of materials encountered and to determine suitable means for transportation and ultimate disposal. Notify the City Representative of concerns and provide copy of test results. Payment for haulage and disposal fees for contaminated excavated material will be considered Extra Work to this Contract as required.
- 7.4 Removal all waste material to the City's West 40 Landfill. Contractor will be responsible for all costs associated with loading, transportation and haulage, and tipping fees from the project site to the landfill.

9. ENVIRONMENTAL CONSIDERATIONS DURING CONSTRUCTION

9.1 Equipment Fueling:

- .1 Designate an area within the working limits, a minimum of 30 meters away from open water courses, to be used exclusively for fueling construction equipment.
- .2 Submit for review a plan for the interception and rapid clean-up of fuel spills should they occur.
- .3 Maintain the apparatus for cleaning up fuel spills on site.

9.2 Cleaning Equipment:

- .1 Keep construction equipment clean so that no debris is deposited on the City roadways.
- .2 Contain construction debris in a designated area within the working limits.
- .3 Dispose of debris off-site.

9.3 Noise Control:

- .1 Use only vehicles and equipment equipped with effective muffling devices. Provide noise barriers on stationary engines and compressors. Provide noise barriers on stationary engines and compressors.
- .2 Comply with City of Iqaluit Noise By-Law.
- .3 Consider noise attenuation measures in the approach and submissions for noise generating activities.

9.4 Dust Control:

- .1 Use water, or other methods to control dust as directed by the City Representative. Do not use chemical means of dust control without prior written approval from the City Representative. The use of petroleum products will not be allowed at any time.
- .2 Submit dust control plan detailing proposed methods to control dust on site for the review and acceptance by the City Representative.

10. PROTECTION OF EXISTING STRUCTURES AND PROPERTY

10.1 The Contractor will be held fully responsible by the City for any damage to utilities, properties, buildings, homes or structures adjacent to or in the general area of the work, through settlement of ground, vibration or shock resulting from any cause relating to the work carried out under this Contract. Make good and repair such damage at own expense.

10.2 Refer to Section N – Preservation and Protection.

11. EROSION AND SEDIMENT CONTROL

- 11.1 Prepare and implement a separate detailed erosion and sediment control plan for the duration of the work.
- 11.2 Correct all erosion control deficiencies noted by the City Representative. Maintain appropriate measures in place until the construction is fully completed.
- 11.3 Cooperate with the City Representative and the Owner for periodic inspections (during and after construction).

12. DAMAGE BY VEHICLES AND OTHER EQUIPMENT

- 12.1 If at any time, in the opinion of the City Representative, damage is being or is likely to be done to any road, highway, improvements or property therein, other than such portions as are part of the work, by the Contractor's vehicles or other equipment whether licensed or unlicensed, the Contractor shall, on the direction of the City Representative and at the Contractor's own expense, make changes in or substitutions for such vehicles or other equipment or shall alter loadings or shall in some manner remove the cause.

13. PROPERTY OWNER'S LETTER OF RELEASE

- 13.1 The Contractor will be required, when instructed by the City Representative, to provide a letter from the Owner and/or Owners of property adjacent to the work or on which the work was constructed, clearly stating that the reinstatement work carried out by the Contractor has been completed satisfactorily.
- 13.2 This letter of release will only be required where damage has been caused to private property or where work takes place on private property or easement.

14. UTILITY OWNER'S LETTER OF RELEASE

- 14.1 The Contractor will be required, when instructed by the City Representative, to provide a letter from the owners of utilities stating that all services damaged during construction of the work have been satisfactorily repaired.

15. INCLEMENT WEATHER

- 15.1 Make adequate protection and take all necessary precautions at times of inclement weather.
- 15.2 Inclement weather or extra work caused by such weather will not be accepted as reason for additional payment or an extension to the time of completion.

16. SNOW PLOWING



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- 16.1 The Contractor shall be responsible for snow and ice removal in the designated construction area and related access roads for each group of primary clarifiers as well as Contractor's staging and storage area at its own cost.
- 16.2 Snow plowing shall be under the direction of the City Representative and shall not block any municipal roadways, easements, access roads or driveways for the general public or City operating staff to access.
- 16.3 Snow is to be disposed of at the designated snow disposal area, as directed by the City Representative.

END OF SECTION

F. CONSTRUCTION SEQUENCING

1. GENERAL

- 1.1 The Work is to be completed in the time stated in the Form of Tender. In this regard, the Contractor is responsible for scheduling the sequencing of work.
- 1.2 This Section includes mandatory construction sequencing constraints and a suggested general sequence of construction that will satisfy the mandatory constraints required in the execution of the Work.
- 1.3 The Contractor shall plan to perform the work activities in such a sequence that does not necessitate the removal from service any essential part or component of the existing works without first having a temporary facility to enable continuous normal operation of the existing water pollution control plant and process or has fully commissioned new facilities that are capable of operating in place of the part or component of the existing works that the Contractor must demolish and/or modify.
- 1.4 The Contractor's sequencing of work shall consider the submission of technical submittals and shop drawings for review and approval, prior to the commencement of work in the field.
- 1.5 The Contractor's schedule shall incorporate a logical sequence of construction activities, such that the work be completed in a manner that is safe, efficient, and interruption free as per the time stated in the Form of Tender.

2. COORDINATION

- 2.1 It is noted that the proposed works must be constructed so as not to interfere with or cause any un-scheduled interruption of operation of existing City process systems and services.
- 2.2 Coordinate the requirements of this Section with the other requirements of the Contract Documents.
- 2.3 Refer to Section C for other coordination requirements.

3. SERVICES PROVIDED BY THE CONTRACTOR

- 3.1 The Contractor shall coordinate the construction activities with the City Representative in advance as per Section C.
- 3.2 The Contractor shall provide the required temporary construction, drainage, grading, sedimentation and erosion control measures for the construction area.
- 3.3 The Contractor shall provide the necessary temporary power, pumping facilities, ventilation equipment, pipes, valves, fittings, diversions, temporary bulkheads, or any other equipment and systems, as required during construction.

4. SERVICES PROVIDED BY THE CITY

- 4.1 The City will undertake all necessary isolations and shut-downs of operating equipment and systems.
- 4.2 The City will provide access to existing City buildings, facilities, and structures.

5. SEQUENCE OF CONSTRUCTION

- 5.1 Prior to mobilization, the Contractor will be required to adhere to the following sequencing requirements:
 - .1 Submit technical submittals to the City Representative for review and approval. Technical submittals will consist of the following:
 - .i Contractor Site-Specific Health and Safety Plan.
 - .ii Contractor trade certificates and training records.
 - .iii Construction schedule.
 - .iv Traffic Control Plan (if applicable).
 - .v Erosion and Sediment Control Plan (if applicable).
 - .vi Quality Assurance and Quality Control Plan.
 - .2 Obtain confirmation from the City Representative that the technical submittals presented above have been approved.
- 5.2 The City Representative may choose to delay mobilization activities, at no additional cost or impact to the project schedule, should the specified technical submittals not be submitted and approved prior to the start of mobilization activities.
- 5.3 Prior to initiating construction activities in the field, the Contractor will be required to adhere to the following sequencing requirements:
 - .1 Submit relevant shop drawings to the City Representative for review and approval prior to commencing the installations in the field.
 - .2 Obtain confirmation from the City Representative that the shop drawing(s) have been approved.
 - .3 Commence relevant installations related to approved shop drawings in the field.
- 5.4 The City Representative may choose to reject the installations in the field, at no additional cost or impact to the project schedule, if the relevant shop drawings are not approved prior to installation in the field.

- 5.5 The City Representative will be provided five (5) business days to review relevant technical submittals and shop drawings. The City assumes only one (1) round of reviews for technical submittals and shop drawings. The Contractor will not be granted an extension of time or a change to the contract price, should the Contractor not address all review comments from the first submission, and require a subsequent review of a second or further resubmission(s).
- 5.6 Prior to backfilling an excavated trench where new civil installations or repairs have taken place, allow for the inspection of the works by the City Representative. Should the Contractor backfill the site, while failing to present the works and provide indication to the City Representative that the works are ready for an inspection, the Contractor will be required to re-excavate the site in order to allow for an inspection of the works to take place at no change to the contract price and no extension to the contract schedule.

END OF SECTION

G. PAYMENT PROCEDURES

1. TERMS OF PAYMENT

- 1.1 Make applications for payment on account as provided in Agreement as Work progresses.
- 1.2 Applications for payment will be made monthly.
- 1.3 The date for Contractors submission of monthly application for payment shall be on the last business day of the month.
- 1.4 The Contractor shall be reimbursed on a monthly basis in accordance with the instructions provided in the Bid Form.
- 1.5 For administrative purposes, the monthly application for payment shall be in the form of a progress payment and must indicate:
 - .1 Contract/ Project Title.
 - .2 City of Iqaluit Service Contract number.
 - .3 Progress payment number.
 - .4 Date progress payment issued.
 - .5 Period progress payment covers.
- 1.6 The Contractor is to provide all relevant back-up material to validate the work that is being claimed in the monthly progress payment. This includes, but is not limited to, daily timesheets for labour and equipment, material costs, back-up invoices, etc. For work completed on a time and materials basis where daily timesheets are produced, the Contractor must present timesheets to the City Representative at the end of each workday for review and approval.
- 1.7 The City shall reimburse Contractors for mark-ups from sub-contractors and/ or suppliers for parts, materials, and labour up to a maximum of 15%. Back-up invoices from sub-contractors and/ or suppliers/ vendors must be submitted as part of monthly application for payment. Monthly progress claims will be returned if back-up invoices are not provided.
- 1.8 No payment will be made for the cost of work incurred to remedy errors or omissions for which the Contractor is responsible.
- 1.9 Additional work that has been completed outside the scope of services identified in the contract, without written approval from the City Representative via the change order process, will not be paid. Contemplated changes must be presented to the City Representative for review. Should the contemplated change be endorsed, it will be presented to the City for approval via a change order. Once approved, the Contractor may proceed with the work in the field. Failure to comply with this requirement may result in no payment.

- 1.10 All progress payment claims are to be submitted to the City Representative; they are not to be submitted to the City's Finance Department.
- 1.11 The City will pay all invoices on a Net 30 basis, meaning payments will be made by the City within Thirty (30) calendar days of receipt and acceptance of the invoice, or the receipt and acceptance of the goods or services, whichever is later.

2. SCHEDULE OF VALUES

- 2.1 Make schedule of values out in such form and supported by such evidence as City Representative may reasonably direct and when accepted by City Representative, be used as basis for applications for payment.
- 2.2 Include statement based on schedule of values with each application for payment. Schedule of values to follow Terms of Reference sections outline.
- 2.3 Support claims for products delivered to Place of Work by not yet incorporated into Work by such evidence as City Representative may reasonably require establishing value and delivery of products.

3. APPLICATION FOR PAYMENT

- 3.1 Each month prepare a draft application for payment in the form of a progress payment claim for review and acceptance by the City Representative before submitting the monthly application for signature and payment.
- 3.2 Application for payment must show a schedule of values, for each item of approved breakdown of Contract Price established in the Contract, the following:
 - .1 Percentage and value of Work completed to date.
 - .2 Percentage and value of Work previously approved for payment.
 - .3 Percentage and value claimed this payment period.
 - .4 Percentage and value of Work remaining to be completed.
 - .5 Include separate line items for each approved Change Order executed, along with the information requested in 3.2(1), 3.2(2), 3.2(3), and 3.2(4).
- 3.3 Application for payment must include timesheets, back-up invoices from sub-contractors and/ or suppliers/ vendors, whichever applies. Where mark-ups apply per the Contract, ensure they are clearly shown.
- 3.4 Include an updated cash flow expenditure forecast with the application for payment.
- 3.5 Submit application for payment to the City Representative on the last business day of each month.

- 3.6 To assist the Contractor with preparation of application for payment, the City Representative is available to meet with the Contractor on an agreed date each month, on or prior to last day of month, to review progress of Work.
- 3.7 The Contractor and City Representative shall agree on quantity of Work performed and due for payment. Once quantity has been agreed upon, Contractor shall submit the final application for payment along with a corresponding invoice for the amount being claimed.
- 3.8 The following shall be included for the first application for payment:
 - .1 Approved monthly progress claim.
 - .2 Coinciding invoice.
 - .3 A copy of Workers Safety Compensation Board Certificate of Clearance.
 - .4 Updated construction schedule.
 - .5 Updated cash flow projection.
- 3.9 The following shall be included for the second application for payment and onwards:
 - .1 Approved monthly progress claim.
 - .2 Coinciding invoice.
 - .3 A copy of Workers Safety Compensation Board Certificate of Clearance.
 - .4 Statutory Declaration certifying that payment has actually been made in full to all subcontractors, suppliers, workmen, and others for labour, materials, and services required by Contract up to and including latest progress payment.
 - .5 Updated construction schedule.
 - .6 Updated cash flow projection.
- 3.10 The City shall not release monies for Payment Certificates until the Contractor has provided all of the supporting documentation, as specified herein.
- 3.11 Deviations from the above specified requirements or incomplete submissions shall require resubmission of the application for payment.

4. NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

- 4.1 Payment will not be made for the following:
 - .1 Loading, hauling, and disposing of rejected material.
 - .2 Quantities of material wasted or disposed of in a manner not called for under Contract Documents.



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- .3 Rejected loads of material, including material rejected after it has been placed by reason of failure of Contractor to conform to provisions of Contract Documents.
- .4 Material not unloaded from transporting vehicle.
- .5 Defective Work not accepted by Owner.
- .6 Material remaining on hand after completion of Work.

END OF SECTION

H. PROJECT MEETINGS

1. GENERAL

- 1.1 The City Representative will schedule the project meetings throughout progress of the Work.
- 1.2 The City Representative will prepare meeting agenda with regular participant input and distribute the written notice of each meeting, preside at meetings, record minutes to include significant proceedings and decisions, and reproduce and distribute copies of minutes within five (5) business days after each meeting to participants and parties affected by meeting decisions.
- 1.3 Representatives of Contractor, Subcontractor and suppliers attending meetings shall be qualified and authorized to act on behalf of the party each represents.

2. PRECONSTRUCTION MEETING

- 2.1 After award of Contract, the City Representative will request a meeting of parties in contract to discuss and resolve administrative, health and safety procedures and responsibilities.
- 2.2 Preconstruction meeting will be held via teleconference. Teleconference instructions will be provided by the City Representative.
- 2.3 Preconstruction meeting agenda may include the following, as a minimum:
 - .1 Introductions.
 - .2 Project Initiation.
 - .i Service Contract Review.
 - .ii Securities/ Bonds.
 - .iii Insurance.
 - .iv WSCC Certificate of Clearance.
 - .3 Safety.
 - .i Site Safety Requirements.
 - .ii WSCC “New Operations & High Hazard Work” Notice.
 - .iii Joint Health and Safety Committee or Occupational Health and Safety Representative.
 - .iv Site Audits, Inspections and Incident Reporting.
 - v. Training, Qualifications and Trade Certificates.

- .4 Project Execution Requirements.
 - .i Summary of Work.
 - .ii Working Hours, Working Days
 - .iii Construction Sequencing/ Coordination.
 - .iv Contractor's Use of Premises.
 - .v Authorities Having Jurisdiction (GN/ Federal permits and inspections).
 - .vi Special Project Procedures (Work Permits, Traffic Control, etc.).
 - .vii Project Meetings.
 - .viii Submittals and Shop Drawings.
 - .ix Payment Procedures.
 - .x Change Orders.
 - .xi Quality Control.
 - .xii Closeout Requirements.
- .5 Project Schedule.
 - .i Schedule Submission.
 - .ii Key Milestone Dates.
 - .iii Substantial Completion Submission Requirements.
 - .iv Warranty (if applicable).
- .6 Communication Structure
 - .i Stakeholder Representation.
 - .ii Communication Flow.
 - .iii Communication of Changes in Scope, Schedule or Cost.
 - .iv Site Communication Memos – RFI's, SI's, CCN's.
- .7 Document Control
- .8 Other Business and Questions.

2.4 Attendees will include:

- .1 Owner's representatives.
- .2 City Representative.
- .3 Contractor's project manager.
- .4 Contractor's resident site superintendent.
- .5 Contractor's quality control representative.
- .6 Others as appropriate.

3. PROGRESS MEETINGS

- 3.1 City Representative will schedule regular progress meetings at site, conducted bi-weekly to review the Work progress, progress schedule, shop drawings and technical submittal schedule, application for payment, contract modifications, and other matters needing discussion and resolution.
- 3.2 Progress meetings will be held via teleconference. Teleconference instructions will be provided by the City Representative.
- 3.3 Project progress review meeting agenda may include the following, as a minimum:
 - .1 Introductions.
 - .i Confirm Acceptance of Previous Meeting Minutes.
 - .2 Safety.
 - .i Safety Share.
 - .ii Site Safety Audits, Inspections and Incident Reporting.
 - .3 Submittals and Shop Drawings.
 - .i Status of Technical Submittal Submissions/ Reviews.
 - .ii Status of Shop Drawing Submissions/ Reviews.
 - .4 Site Communications.
 - .i Request for Information (RFI) – Status Update/ Outstanding Items.
 - .ii Site Instructions (SI) – Status Update/ Outstanding Items.
 - .iii Contemplated Change Notices (CCN) – Status Update/ Outstanding Items.
 - .5 Financial.

- .i Progress Claims – Status Update/ Outstanding Items.
- .ii Change Orders – Status Update/ Outstanding Items.
- .iii Service Contract Financial Review.
- .6 Work Progress.
 - .i Work Completed (Since Last Meeting).
 - .ii Work Planned (Three-Week Look-ahead/ Schedule) Review.
 - .iii Issues/ Concerns/ Risks and Mitigation Measures.
 - .iv City/ Engineer Coordination Requirements.
- .7 Quality Control.
 - .i Contractor Activities.
 - .ii Status of Permitting and Inspections.
- .8 Other Business and Questions.
- 3.4 Attendees will include:
 - .1 Owner’s representative.
 - .2 City representative.
 - .3 Contractor’s project manager.
 - .4 Contractor’s site superintendent.
 - .5 Others as appropriate.

4. OTHER MEETINGS

- 4.1 In accordance with Contract Documents and as may be required by the Owner and/or City Representative.
- 4.2 Brief meetings attended by the Contractor’s key personnel, the City Representative and as required, the Owner’s representative, may be coordinated in order to help assist with other project related discussions such as isolation requirements, critical path tasks, schedule, quality, commissioning, claims, deficiencies, etc. in order to help with the progress of the work. The Contractor is to accommodate other meetings at no additional cost to the contract.
- 4.3 Meetings will be held via teleconference. Teleconference instructions will be provided by the City Representative.



CONSTRUCTION SERVICES
PART VI – GENERAL REQUIREMENTS



END OF SECTION

I. CONSTRUCTION PROGRESS SCHEDULE

1. CONTRACTOR'S RESPONSIBILITIES

- 1.1 Prepare and submit to the City Representative a Construction Progress Schedule including a comprehensive work breakdown schedule complete with sequencing or implementation of each work tasks and work packages within five (5) business days of award of Contract. The schedule must reflect working days/ hours as per the contract. The schedule must show the following as a minimum:
- .1 Mobilization and other preliminary activities such as installation of site fencing, trailer, signage, traffic control measures, etc.
 - .2 Submission of shop drawings, technical submittals, product data, material lists and samples.
 - .3 Delivery of any critical equipment and/or materials that will be key to the Works.
 - .4 Submission of key requests to the City such as isolation requests and City permit applications.
 - .5 Isolation and/or shutdown of City processes or systems by City Operations personnel, implementation of temporary by-pass systems, etc.
 - .6 Commencement and completion of work of each section of the terms of reference for each of the contract components as required y and described in the plans and terms and reference.
 - .7 Critical hold points which require the inspection and/or witness of the works by the City Representative, as described in the contract documents.
 - .8 Testing activities, commissioning, start-up and operating of the new equipment and/or systems.
 - .9 Substantial performance and final completion dates within time period required by the Contract Documents.
 - .10 Demobilization
- 1.2 Schedule shall represent a practical plan to complete the work within the Contract period and shall convey the plan to execute the work. Schedules as developed shall show the sequence and interdependencies of activities required for complete performance of the work.
- 1.3 Use extra forces and equipment, or revise method of operation when progress of work is not sufficient to meet Project Schedule.
- 1.4 Reviews of work progress based on Construction Schedule, will be conducted by the City Representative and schedule updated by Contractor in conjunction with and subject to approval of the City Representative.

- 1.4 Construction schedule shall be updated monthly with the payment schedule for the duration of the Contract.
- 1.5 Failure to include any element of work required for performance of the Contract or failure to properly sequence the work shall not excuse the Contractor from completing all work within the Contract Time.
- 1.6 All schedule submittals, excluding monthly progress reports, are subject to approval by the City Representative. The City Representative retains the right to withhold appropriate monies (up to the full value of the current progress payment) from progress payments until the Contractor submits an acceptable construction progress schedule. Update schedule updates acceptable to the City Representative.
- 1.7 Certify in writing and have signed by major subcontractors that the construction progress schedule have been discussed in detail with all major subcontractors and major suppliers as it relates to their respective work and submit a copy of the certificate to the City Representative.
- 1.8 All schedules shall be developed utilizing industry standard “best practices” including, but not limited to:
 - .1 No open-ended activities.
 - .2 No use of constraints other than those defined in the Contract Documents without the prior approval of the City Representative.
 - .3 No negative leads or lags.
 - .4 No excessive leads or lags without prior justification and approval from the City Representative.
 - .5 For individual schedule construction activities, do not exceed 14 calendar days in duration without prior approval of the City Representative. Subdivide activities exceeding 14 calendar days in duration to an appropriate level.
 - .6 Sufficiently describe schedule activities to include what is to be accomplished in each work area. Express activity durations in whole days. Clearly define work that is to be performed by subcontractors.
 - .7 Create the schedule in conformance with the work-hours, constraints, and Activity Code Structure, set forth in these Contract Documents.
 - .8 Activity Code Structure
 - .i Each activity shall be identified with codes including as a minimum:
 - .a The party responsible for performing the work.
 - .b Where work is to be subcontracted, the subcontractor to be responsible for performing the work.

2. CONSTRUCTION SEQUENCING

- 2.1 Contractor is instructed to perform this work without disrupting current operating facilities, structures, and/or City services when applicable.
- 2.2 Contractor to prepare schedule and duration of all anticipated by-passes or shutdown of any existing facility. Schedule to be reviewed by the Owner for approval. Furthermore, the Contractor shall provide notice as described in Section C - Coordination to the Owner for each and every scheduled by-pass, tie-in to and shutdown of existing facilities, structures, processes, or systems. Required notice plus the Owner's approval are required for all non-scheduled by-passes, tie-in to and shutdowns.
- 2.3 Any and all un-scheduled shutdown is the responsibility of the Contractor. Thus, all or any additional labour, testing, material and equipment required by the Owner to correct or assist in coordination and correction of deficiencies as a result of an un-scheduled shut down is at the Contractor's costs.

3. MONTHLY CONSTRUCTION SCHEDULE UPDATE

- 3.1 Submit once per month, a monthly construction progress schedule update showing the progress of the work to date. The updated progress schedule must be submitted with the monthly progress payment application.
- 3.2 Include with the update an electronic back-up of the native schedule file.
- 3.3 Payment will not be made without an approved construction progress schedule, and monthly construction progress schedule update.
- 3.4 The monthly construction progress schedule update shall have a data date as of the last day of the corresponding month (i.e. for schedules submitted at the beginning of February the data date shall be January 31).
- 3.5 Incorporate actual progress, start dates, completion dates, and progress up to the data date in the schedule update. All changes and revision made in the monthly construction progress schedule update shall be addressed in the narrative accompanying the submittal.
- 3.6 Change Orders will be addressed in accordance with the General Conditions and incorporated into the Contract construction progress schedule as individual schedule activities.
- 3.7 Payment will not be made without current approved monthly construction progress schedule update.
- 3.8 Any changes made to the schedule shall also include changes to the cost loading/ expenditure forecast. All the remaining activities to be completed shall equate to the remaining cost of the Work. Any addition or deletions to activities to the schedule will require subsequent revisions to ensure that the schedule continues to correlate to the current Schedule of Values.

- 3.9 If according to the current updated Contract construction progress schedule, the work is fourteen or more days behind the Contract completion date, or the schedule contains fourteen or more days of negative float, considering all granted time extensions, submit, prior to the next progress payment, a revised recovery schedule, showing a work plan to complete the work within the original schedule period. Include with the submittal a detailed narrative describing the means and methods proposed to achieve the work in the time period. The City Representative may withhold approximate progress payments until a revised schedule, acceptable to the City Representative, is submitted by the Contractor at no additional expense to the Owner.

4. RE-BASELINE CONTRACT CONSTRUCTION PROGRESS SCHEDULE

- 4.1 If, in the opinion of and at the request of the City Representative, the work has significantly fallen behind and/or the nature or plan of the work has changed from that which was originally portrayed in the Contract construction progress schedule, a Re-Baselined construction progress schedule shall be submitted that portrays the plan to complete the remaining Contract Work.
- 4.2 The Re-Baselined construction progress Contract Schedule shall be cost-loaded and be the basis for all subsequent monthly construction progress schedule updates.

5. THREE-WEEK LOOK-AHEAD

- 5.1 Submit a Gantt chart format depicting the intended work activities for the upcoming three-week period plus one-week retrospective look on a weekly basis.
- 5.2 All activities in the Three-Week Look-Ahead Schedule must correlate to an activity in the current monthly construction progress schedule update either as a one-to-one match, or as a subset of activities whose cumulative duration correlate to an activity in the monthly construction progress schedule update.
- 5.3 Note and explain in writing all deviations, including but not limited to sequences of work, timing, and durations or activities, from the Contract construction progress schedule or monthly construction progress schedule updates. These deviations must be addressed in the following monthly construction progress schedule update.
- 5.4 Portray all activities clearly and legibly on the schedule and include logical activity numbers.
- 5.5 Submit the schedule at the bi-weekly construction progress meeting.

6. MONTHLY EXPENDITURE/ CASH FLOW FORECAST

- 6.1 Submit on a monthly basis, an update to the monthly expenditure/ cash flow forecast. The cash flow forecast is to be submitted as part of the Contractors monthly progress payment application.
- 6.2 The Monthly Expenditure/ Cash Flow Forecast shall be presented in a manner that best illustrates how the Contractor intends to invoice, on a monthly basis, based on the Contractor understanding of the Work, methodologies to be used, and the Contract construction progress schedule.

7. REVIEW, UPDATE AND REVISIONS

- 7.1 Allow for the City Representative review and comments according to the following schedule from the date of receipt.
- .1 Draft Contract construction progress Schedule: 7 calendar days
 - .2 Contract construction progress Schedule: 4 calendar days
 - .3 Monthly construction progress schedule Updates: 4 calendar days
 - .4 Three-Week Look-Ahead Schedule: 2 calendar days
- 10.2 Make all corrections to the schedule requested by the City Representative and resubmit the schedule for approval if requested. If the Contractor does not agree with the City Representative's comments, provide written notice of disagreement within five (5) business days from the receipt of City Representative comments for the Preliminary 60-day, Contract Construction Progress Schedule, Monthly Construction Progress Schedule Updates, and Three-Week Look-ahead Schedules. City Representative's comments for which the Contractor disagrees shall be resolved in a meeting held for that purpose, if necessary.

8. REQUESTS FOR TIME EXTENSIONS

- 8.1 Be responsible for submitting a written request for all extensions of Contract Time in accordance with the General Conditions. Requests not submitted in writing, without the required documentation and not submitted in a time consistent with the General Conditions will not be considered.
- 8.2 Include in the request documentation and written justification for the extension of time, supporting evidence and specific references to the schedule.
- 8.3 Also include with request an analysis of a calendar time-scaled Construction Progress Schedule and reports depicting the time impact basis of the request with the affected areas prominently highlighted. Use only the most current accepted schedule at the time the impact occurred when determining time extension request.
- 8.4 If the City Representative finds that the Contractor is entitled to an extension of time of any completion date under the provisions of the Contract, the City Representative's determination of the total number of days extension will be based upon the current analysis of the Contract Construction Progress Schedule and upon data relevant to the extension. Extensions of time for performance under all of the provisions of the Contract will be granted only to the extent that equitable time adjustments for the activity or activities affected exceed the total float along the paths involved of the accepted and current Contract Construction Progress Schedule.

END OF SECTION

J. SUBMITTAL PROCEDURES

1. SUMMARY

- 1.1 This section defines the submittals to the Owner, or their designate, necessary before, during and after construction, which include as a minimum:
- .1 Site-Specific Health and Safety Plan.
 - .2 Construction Progress Schedule.
 - .3 Shop Drawings for permanent and temporary works.
 - .4 Product data and samples.
 - .5 QA/QC tests and reports.
 - .6 Concrete mix design.
 - .7 Erosion and Sediment Control Plan.
 - .8 Selective Demolition Plan and Schedule.
 - .9 Guaranties and Warranties.
 - .10 Traffic Control Plan.
 - .11 Temporary works plans (i.e. By-Pass Plan, Servicing Plan, Water Management Plan, Shoring/ Bracing Plan, Critical Lift Plan, etc.).
- 1.2 For submittals facsimile transmissions will not be acceptable.
- 1.3 Do not proceed with work until the City Representative reviews relevant submissions.
- 1.4 Refer to individual sections for other submission requirements.

2. ADMINISTRATIVE

- 2.1 Submit to the City Representative a list of all submittals and shop drawings for review within seven (7) business days of the Award of the Contract. Submit within reasonable promptness and in orderly sequence so as not to 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.
- 2.2 Work affected by submittals shall not proceed until review is complete.
- 2.3 Present shop drawings, technical submittals, product data and reports in SI Metric units.
- 2.4 Present shop drawings, technical submittals, product data and reports in the English language.

- 2.5 Where items or information is not produced SI Metric units, converted values are acceptable.
- 2.6 Review submittals prior to submission to City 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.
- 2.7 Notify the City Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- 2.8 Verify that field measurements and affected adjacent work are coordinated.
- 2.9 Contractor's responsibility for errors and omissions in submission is not relieved by City Representative's review of submittals.
- 2.10 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by the City Representative's review.
- 2.11 Keep one reviewed copy of each submission on site for reference during the construction.
- 2.12 Refer to other individual sections for specific requirements on shop drawings submission.

3. PROCEDURES

- 3.1 Direct all submittals to the City Representative.
- 3.2 Unless indicated otherwise, submit one (1) electronic copy of all submittals.
- 3.3 Electronic Submittals:
 - .1 Each electronic submittal shall be searchable in Adobe Acrobat Portable Document Format (PDF).
 - .2 Electronic submittal that contains more than 10 pages in PDF format shall contain internal book marking from an index page to major sections of the document.
 - .3 PDF files shall be set to open "Bookmarks and Page" view.
 - .4 Include a copy of the Transmittal of Contractor's Submittal form with each electronic submittal.
 - .5 Submit new electronic files for each resubmittal.
 - .6 Detailed procedures for handling electronic submittals will be discussed at the preconstruction meeting.
 - .7 Submittals without electronic copies will be rejected by the City Representative.

3.4 List of Submittals:

- .1 Within seven (7) working days of Contract Award, submit a complete list of anticipated submittals and shop drawings, as per the requirements of the contract.
- .2 For each section of the general requirements and terms of reference, the Contractor shall provide a table listing all the submittals anticipated for that section of the Contract. The table shall include the following information:
 - .i General Requirements or Terms of Reference Section.
 - .ii Total number of submittals for this Section.
 - .iii Shop drawings associated with each submittal.
 - .iv Revision and status for each submittal.

3.5 Transmittal of Submittal:

- .1 Accompany each submittal with a transmittal letter, containing:
 - .i Project title and number.
 - .ii Date of submittal.
 - .iii Names of Contractor, Subcontractor or Supplier, and manufacturer as appropriate.
 - .iv Numbering and Tracking System:
 - .a Sequentially number each submittal.
 - .b Resubmission of submittal shall have original number with sequential alphabetic suffix.
 - .v Name, tag No. and quantity of equipment/ system included in each submittal.
 - .vi General Requirement and Terms of Reference Section and paragraph to which submittal applies.
 - .vii Deviation or variation from Contract Documents.
 - .viii Contractor's stamp, signature and statement to certify that the submittal has been reviewed, checked, and approved for compliance with Contract Documents.
 - .ix Include the Contractor's written response to each of the City Representative's review comments with resubmission of submittals stamped "Revise and Resubmit".

.x Other pertinent data.

3.6 Processing Time:

- .1 Time for review shall commence on City Representative's receipt of submittal.
- .2 The City Representative will act upon the Contractor's submittal and transmit response to Contractor not later than five (5) working days after receipt, unless otherwise specified.
- .3 Resubmittals will be same review time unless otherwise specified.
- .4 No claims will be allowed that arise because of delays in re-submissions and review of shop drawings.

3.7 Resubmittals:

- .1 Clearly identify each correction or change made and include revision date.
- .2 Provide clear response to each itemized comment by the City Representative on the submittal, whether or not action has been taken, and description of action.
- .3 No adjustment of Contract Times or Price will be allowed due to delays in progress of Work caused by rejection and subsequent resubmittals.
- .4 The Contractor is noted that the first two submission of each submittal (original submittal and subsequent resubmittal) will be reviewed at no charge to the Contractor. Any cost for processing/ reviewing submittals which have been reviewed two times or more will be deducted from the contract amount owed to the Contractor.

3.8 Incomplete Submittals:

- .1 The City Representative will return entire submittal for the Contractor's revision if preliminary review deems it incomplete.
- .2 When any of the following are missing, submittal will be deemed incomplete:
 - .i Transmittal of Contractor's submittal, completed and signed.
 - .ii Insufficient number of copies.
 - .iii All requested information is not provided.
 - .iv Submittals missing Professional Engineer's seal and signature, where it is required.

END OF SECTION

K. HEALTH AND SAFETY REQUIREMENTS

1. REFERENCES

- 1.1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- 1.2 Nunavut Safety Act, R.S.N.W.T. 1988, c-S-1 most recently amended and in force June 19, 2016.
- 1.3 Nunavut Occupational Health and Safety Regulations, R-003-2016, most recently amended and in force June 19, 2016.

2. GENERAL REQUIREMENTS

- 2.1 The Contractor shall hold the responsibility of *Prime Contractor*, as described in the Nunavut Safety Act, and shall be solely responsible for construction safety, ensuring compliance to the Safety Act and Regulations.
- 2.2 Perform site specific safety hazardous assessment related to project.
- 2.3 Develop written site-specific Health and Safety Plan based on hazard assessment prior to commencing any site Work and continue to implement, maintain, and enforce plan until final demobilization from site.
- 2.4 The Contractor shall file a *New Operations & High Hazard Work* notice for the Works with the Workers' Safety and Compensation Commission (WSCC) prior to commencement of Work. Submit relevant documents to City Representative, providing indication that notice has been submitted. The Contractor will not be allowed to commence construction activities until notice has been filed and acknowledged by WSCC. Failure to submit a notice and provide record of such communication to the City Representative prior to the start of Works will not be considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed. The *New Operations & High Hazard Work* notice must be posted at the construction site as per requirements of the Safety Act.
- 2.5 Meet or exceed the latest revision of all Local, Federal, Territorial laws, regulations, standards, and industry best practices relating to health and safety.
- 2.6 Be solely responsible for safety of the Work under this Contract and for complying with and ensuring that every person on the Site complies with the requirements contained within the Contract Documents and regulatory requirements.
- 2.7 Perform the Work, or ensure that it is performed, in a manner to avoid risk of injury, security or damage to persons or property, adjacent property, or environment.
- 2.8 Provide safe access, egress, and equipment in accordance with Occupational Health and Safety Regulations for entry into all areas by the employees, subcontractors, City, and Consultant. Where hazardous areas or confined space entry exists, implement procedures defined by the latest revision of the applicable Occupational Health and Safety Regulations or the Electrical Code.

- 2.9 Prior to the commencement of the Work, review and become fully familiarized with all Local, Territorial, and Federal regulatory requirements and the following documentation:
- i. Nunavut’s Safety Act and applicable regulations.
 - ii. Nunavut’s Workers’ Compensation Act and applicable regulations.
 - iii. Nunavut’s Environmental Protection Act and application regulations.
 - iv. Canadian Electrical Code.
 - v. Contract Documents.
- 2.10 The Contractor shall be solely responsible for construction safety for this Contract and for complying with and ensuring that every person on the Site complies with the measures and requirements contained in:
- i. Nunavut’s Safety Act and applicable regulations.
 - ii. Nunavut’s Workers’ Compensation Act and applicable regulations.
 - iii. Nunavut’s Environmental Protection Act and application regulations.
 - iv. Canadian Electrical Code.
 - v. Contract Documents.
- 2.11 In event of a conflict between any provisions of the above authorities, the most stringent provision shall govern.
- 2.12 Provide and maintain first aid, hygiene, washrooms, potable water, and fire protection equipment at the Site in accordance with the applicable regulatory requirements. The Contractor shall designate trained employees to be in charge of first aid on the Site.
- 2.13 Establish, maintain, and mark clear routes, paths and points for routine and emergency exit to, from and within the Site for personnel and vehicles.
- 2.14 The Contractor shall erect signs relating to safety on the Site, and signs or notices required by the applicable territorial and local regulations or by the Contract Documents.
- 2.15 Erect signage acceptable to the City at all entry points to the Site to advise personnel entering the Site of the requirements respecting the use and wearing of personal protective equipment. And the Contractor shall ensure compliance with these requirements.
- 2.16 Erect signage acceptable to the City at all entry points to the Site to advise the employees, Subcontractors and other individuals entering the Site that:
- i. All personnel and employees on the Site are required to comply with safety policies, procedures and instructions of the Contractor.

- ii. That any personnel failing to adhere to the safety policies, procedures and instructions of the Contractor may be removed from the Site and denied further access.

- 2.17 The Contractor shall post warning signs at hazardous areas or where hazardous materials are stored and install protective barriers. The Contractor shall instruct personnel of proper safety procedures.

- 2.18 The Contractor shall identify all areas which are considered to be hazardous locations and comply with requirements of the Government of Nunavut Labour Standards Office.

- 2.19 Smoking is not permitted in hazardous areas or other areas as designated by the City. The Contractor shall post “No Smoking” signs as required.

- 2.20 The Contractor shall inspect the physical condition of the workplace at least weekly, or as often as required by territorial health and safety regulatory requirements, in order to ensure that the Work is performed safely and that the Site is maintained in accordance with the territorial regulatory requirements and the Contract Documents. The Contractor shall prepare and maintain a documented record of each inspection describing the scope of inspection and findings. Copies of all safety inspections shall be kept on Site and available for review by the City Representative.

- 2.21 Safety equipment such as gas detection equipment for explosive or toxic gases or oxygen deficiency, fall protection devices, etc., shall be made available by the Contractor to the City Representative for the access to the site when required. The Contractor shall be responsible for the coordination of the multiple-party access to the hazardous and confined space on the Site.

- 2.22 Ensure adequate coordination and communication between all parties on site in regard to safety.

- 2.23 In addition to Occupation Health and Safety Act and applicable Regulations reporting requirements, report all incidents, near misses, spills, environmental damage, and property damage to the City Representative immediately within four (4) hours of the event. An incident investigation must be conducted, and a copy of the complete report provided to the City Representative within 24 hours.

- 2.24 Ensure that all employees and subcontractors are competent, as prescribed by the applicable legislation, in performing the Work and have been trained on the Contractor’s Site-Specific Health and Safety Plan and COVID-19 Mitigation Plan prior to starting Work on the Contract. The Contractor shall make available all training records for the City Representative’s review.

- 2.25 The Contractor shall ensure all workers that perform work be certified under the Trades and Qualifications and Apprenticeship Act for their specific work activity. No worker shall perform a type of work unless he/ she is certified to do so.

- 2.26 The Contractor shall appoint a competent person, as defined by the Safety Act, as a supervisor.

- 2.27 The Contractor shall appoint a Joint Health and Safety Committee or Occupational Health and Safety Representative, as defined by the Safety Act, for the project.
- 2.28 The supervisor shall supervise the work at all times either personally or by having an identified assistant do so personally. The assistant must comply with all the same requirements that the supervisor is held to.
- 2.29 The supervisor shall inspect the work site and equipment associated with the project at least once a week. A copy of the inspection report must be provided to the City Representative.
- 2.30 The Contractor shall remove waste material and debris from the work site(s) to a disposal area at least once a day or more frequently if necessary, to prevent the creation of a hazardous condition.
- 2.31 The Contractor shall ensure that a First Aid kit is provided and maintained on site at all times, in accordance with relevant health and safety regulations.
- 2.32 The Contractor shall ensure that fire-extinguishing equipment is provided and maintained on site at all times, in accordance with relevant health and safety regulations.
- 2.33 The Contractor shall ensure that all vehicles, machinery, tools and equipment used on the work site are operated and maintained in accordance with relevant health and safety regulations.
- 2.34 The Contractor will be required to conduct weekly safety audits, in order to ensure compliance to the Site-Specific Health and Safety Plan. Safety Audit reports are to be submitted to the City Representative on a weekly basis.
- 2.35 City Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
- 2.36 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Territory having jurisdiction, and in consultation with City Representative.

3. SUBMITTALS

- 3.1 Make submittals in accordance with Section J – Submittal Procedures.
- 3.2 The Contractor shall submit a Site-Specific Health and Safety Plan within seven (7) business days after the Award of the Contract, to address the requirements of the above referenced regulations and contract documents.
- 3.3 A Site-Specific Health and Safety Plan must be in place prior to the start of construction activities. If a Site-Specific Health and Safety Plan has not been submitted prior to the start of the Works, the City Representative may issue a stop work order, until one is presented which meets the requirements of the regulations and contract documents. Failure to submit a Site-Specific Health and Safety Plan within the required timelines, which meets the requirements of the contract, will not be sufficient reason for an

extension of Contract Time or additional compensation, and no claim for extension or additional costs by reason of such default will be allowed.

3.4 The Contractor shall provide a health and safety plan which as a minimum will include:

.1 A Site-Specific Health and Safety Management Plan, includes:

.i Introduction, roles and responsibilities for:

.a Site Supervisor

.b Project Manager

.c Site Safety Coordinator

.d Site Workers

.e Occupational Health and Safety Representative

.f Joint Health and Safety Committee

.ii Contractor Project/ Contract Organizational Chart

.iii Training and certification of workers.

.iv Orientation for new works or visitors to site.

.v Project hazard assessment and safety procedures.

.vi Safety meetings format and schedule.

.vii Site safety audits, inspections, and incident reporting.

.viii Workplace hazardous materials information.

.ix Tagging and lock out procedures.

.x Confined space entry procedure.

.xi Work on or near live apparatus.

.xii Hot works procedures.

.xiii Posting of information.

.xiv Housekeeping.

.2 A Hazardous Identification Plan, includes primary environmental hazards, personal conduct and hygiene, potential hazards which include:

.i Survey work in traffic.

- .ii Physical.
- .iii Working at heights.
- .iv Fire and explosion.
- .v Confined space entry.
- .vi Cranes, hoists, and rigging.
- .vii Crane suspended personnel platforms.
- .viii Biological.
- .ix Stress and fatigue.
- .x Noise.
- .xi Cold Weather.
- .xi Wildlife
- .xii Personal security.
- .xiii Adverse weather conditions.
- .xiv Other site activities.
- .3 A Personal Protective Equipment Inventory, which includes:
 - .i Requirements for all site personnel.
 - .ii Selection, maintenance and continual assessment.
- .4 An Emergency Preparedness and Response Plan, which addresses:
 - .i First aid.
 - .ii Fire protection.
 - .iii Critical injury.
 - .iv Accident or incident.
- .5 A COVID-19 Mitigation Plan, which addresses:
 - .i Isolation and quarantine.
 - .ii Social distancing.
 - .iii Hand washing and hygiene.

.iv Masks.

.6 The plan shall be reviewed by all works prior to the start of work. The Contractor must obtain sign-off from all workers providing acknowledgement that the plan has been reviewed.

.7 The plan shall be posted in a visible location on the work site prior to the commencement of any work.

4. CHEMICALS

4.1 The Contractor must provide a list of all chemicals to be used on site and a copy of the Material Safety Data Sheet (MSDS) for each chemical to the City Representative prior to being brought onto the job site.

4.2 The Contractor must ensure each chemical container brought on site is clearly labelled with the identity of the chemical, information for the safe handling of the chemical and the location of the MSDS.

4.3 The Contractor must ensure adequate measures are taken to control the distribution, within the application area or throughout the building, of fumes/ vapours before applying flammable, noxious or volatile materials.

4.4 The Contractor may be required to schedule the application of hazardous materials which might affect the well-being of any workers or disrupt work of other contractors and cannot be adequately controlled to prevent such occurrences to evening or weekend periods.

4.5 The Contractor must ensure workers wear the required personal protective equipment (respiratory protection, protective clothing, hand protection, eye/face protection, etc.) when working with chemicals.

4.6 The Contractor must ensure the safe use and disposal of all chemicals that they are using. No chemicals and/or chemical waste product shall be disposed of on site without prior approval of City Representative.

4.7 The Contractor may not store chemicals and compressed gas cylinders on site without approval of the City Representative. If approved, the contractor must ensure incompatible chemicals are stored separately.

5. DESIGNATED SUBSTANCES / HAZARDOUS WASTE

5.1 The Contractor shall provide a work plan for the removal of designated substances, in accordance with all applicable legislation, for review and approval to the City Representative.

5.2 The Contractor shall provide evidence of competency with regards to the Environmental Protection Act and its regulations, a copy of safe handling work plan prior to commencing with work in the area.

- 5.3 The Contractor shall register the project as a waste generator site, if not already registered, for the waste that will be generated as a result of the work activities related to the project.
- 5.4 The Contractor shall ensure and provide evidence that all hazardous wastes removed from the sites sent to a licensed waste disposal site by a licensed carrier and advise the responsible individual when necessary testing is to be carried out.
- 5.5 The Contractor shall retain copies of all hazardous waste manifests on file.
- 5.6 The Contractor shall inspect the project daily to monitor compliance with designated substances and hazardous waste regulations.
- 5.7 The Contractor shall provide access to the responsible individual for review of all inspection reports.

6. FALL PROTECTION

- 6.1 The Contractor shall comply with the requirements of Sections 57 to 59 of R.R.N.W.T. 1990, c.S-1.
- 6.2 The Contractor shall provide, upon request, proof of worker training in the use of their fall protection systems.
- 6.3 The Contractor shall be responsible for supplying and maintaining all equipment needed to perform this role.

7. CONFINED SPACE ENTRY

- 7.1 The Contractor shall comply with the requirements of Section 36 to 37 of R.R.N.W.T. 1990, c.S-1.

8. LADDERS

- 8.1 The Contractor shall comply with the requirements of Sections 246 to 259 of R.R.N.W.T. 1990, c.S-1.
- 8.2 The Contractor shall be responsible for supplying and maintaining all equipment needed to perform this role.

9. WELDING/ CUTTING

- 9.1 The Contractor shall comply with the requirements of Sections 154 to 167 of R.R.N.W.T. 1990, c.S-1.
- 9.2 The Contractor shall be responsible for supplying and maintaining all equipment needed to perform this role.

10. SCAFFOLDING

- 10.1 The Contractor shall comply with the requirements of Sections 260 to 327 of R.R.N.W.T. 1990, c.S-1.
- 10.2 The Contractor shall design, erect, inspect, maintain and use scaffolding equipment materials, and components in accordance with CAN/CSA-S269.2-M87 (Access Scaffolding for Construction Purposes).
- 10.3 The Contractor shall be responsible for supply and maintaining all equipment needed to perform this role.

11. MOBILE EQUIPMENT

- 11.1 The Contractor shall comply with the requirements of Sections 200 to 242 of R.R.N.W.T. 1990, c.S-1.
- 11.2 The Contractor shall be responsible for supplying and maintaining all equipment needed to perform this role.

12. CONSTRUCTION TOWERS AND HOISTS

- 12.1 The Contractor shall comply with the requirements of Sections 433 to 464 of R.R.N.W.T. 1990, c.S-1.
- 12.2 The Contractor shall provide, upon request, proof of worker training in the safe operation of the crane or similar hoisting device.
- 12.3 The Contractor shall make available all logbooks, inspection records and tests for cranes of similar hoisting devices, upon request.
- 12.4 The Contractor shall be responsible for supplying and maintaining all equipment needed to perform this role.

13. EXCAVATING AND TRENCHING

- 13.1 The Contractor shall ensure no person enters and excavation unless another worker is working above ground close to the excavation or to the means of access to it.
- 13.2 The Contractor shall arrange the locating of buried services prior to commencing an excavation.
- 13.3 The Contractor shall comply with the requirements of Sections 396 to 432 of R.R.N.W.T. 1990, c.S-1.

14. UNFORESEEN HAZARDS

- 14.1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, and follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Territory having jurisdiction. Advise City Representative verbally and in writing.

15. CORRECTION OF NON-COMPLIANCE



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- 15.1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by City Representative.
- 15.2 Provide City Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- 15.3 City Representative may stop Work if non-compliance of health and safety regulations is not corrected. Delays due to a stop work caused by non-compliance of health and safety regulations will not be considered sufficient reason for an extension of Contract Time and/or Price, and no claim for extension by reason of such default will be allowed.

END OF SECTION

L. QUALITY CONTROL

1. CONTRACTOR'S RESPONSIBILITY

- 1.1 The Contractor is to implement their own field quality control system that will include, but is not limited to, the following activities:
- .1 Shop drawings, technical submittals, product data and sample reviews.
 - .2 Compaction of backfill and granular base courses.
 - .3 Concrete testing, aggregate testing and cement testing for both cast-in-place concrete, and precast concrete items.
 - .4 Concrete mix design.
 - .5 Welding of structural steel and pipe joints.
 - .6 Pressure testing of pipes.
 - .7 Torque of high-strength bolts.
 - .8 Load tests of structural items.
 - .9 Subgrade examination for load bearing capability if required.
 - .10 Instrumentation calibration and testing.
 - .11 Performance testing of equipment.
- 1.2 The Contractor is responsible to coordinate and execute the necessary quality control systems, as per the instructions stipulated in the contract documents, in order to validate that the work meets the requirements of the contract documents.
- 1.3 The Contractor is responsible for providing results obtained from the inspection of testing of works as per the relevant field quality control systems, in order to validate compliance with the instructions provided in the contract documents.
- 1.4 Failure to submit relevant inspection and testing results to validate work conformance to the contract documents may render the work non-conforming and may require the Contractor to reperform the work. Delays and additional costs due to rework and re-performance of tests will not be considered sufficient reason for an extension of Contract Time and/or Price, and no claim for extension by reason of such default will be allowed.

2. SUBMITTALS

- 2.1 Make submittals in accordance with Section J – Submittal Procedures.
- 2.2 The Contractor shall submit a Quality Assurance & Quality Control Plan within ten (10) business days after the Award of the Contract.

- 2.3 A Quality Assurance & Quality Control Plan must be in place prior to the start of construction activities in order to ensure that necessary quality control systems are in place for the works. The Quality Assurance & Quality Control Plan must be reviewed by all Contractor workers in the field.
- 2.4 The Quality Assurance & Quality Control Plan Inspection must include the following sections at a minimum:
 - .1 Introduction and project description.
 - .2 Contractor key personnel
 - .3 Roles and responsibilities of Contractor, City Representative, and Owner.
 - .4 Submittals (shop drawings, technical submittals, product data, etc.).
 - .i Submittal schedule.
 - .ii Process, review and acceptance.
 - .5 Quality control systems.
 - .6 Inspection and verification requirements.
 - .7 Acceptance criteria.
 - .8 Sample inspection and test forms.
 - .9 Construction deficiencies.
 - .10 Documentation process.
- 2.5 The Contractor shall include relevant inspection and testing milestones within the Construction Progress Schedule. Relevant milestones must also be captured in the Contractor's Three-Week Look-Ahead Schedule.

3. INSPECTION

- 3.1 Allow City 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.
- 3.2 Give timely notice requesting inspection if Work is designated for special test, inspections or approvals by City Representative instructions, or law of Place of Work.
- 3.3 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.
- 3.4 City 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 Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Owner shall pay cost of examination and replacement.

4. INDEPENDENT INSPECTION AGENCIES

- 4.1 Unless indicated otherwise, independent Inspection/ Testing Agencies may be engaged by City Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Owner.
- 4.2 Employment of inspection/ testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- 4.3 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 City Representative at no cost to Owner. Pay costs for retesting and reinspection.

5. ACCESS TO WORK

- 5.1 Allow inspection/ testing agencies access to Work, off site manufacturing and fabrication plants.
- 5.2 Cooperate to provide reasonable facilities for such access.

6. PROCEDURES

- 6.1 Notify appropriate agency and City Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- 6.2 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.
- 6.3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

7. REJECTED WORK

- 7.1 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 City Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- 7.2 Make good other Contractor's work damaged by such removals or replacements promptly.
- 7.3 If in opinion of City 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 City Representative.

8. REPORTS

- 8.1 Submit of inspection and test reports to City Representative.
- 8.2 Provide copies to Subcontractor of work being inspected or tested.

9. SPECIAL INSTRUCTIONS

- 9.1 Compaction Testing:
 - .1 Complete compaction tests as per the requirement of the Contract Documents, when performing trenching, bedding and backfilling work.
 - .2 All material testing (backfill densities and concrete testing) shall be performed by an accredited agency and certified by a Professional Engineer. All test results shall be submitted to the City Representative with a report indicating any deficiencies and remediation.
- 9.2 Pressure Tests:
 - .1 Complete pressure tests for new pipeline installations to verify installation meets required design and operating scenarios.
 - .2 Visual inspections of all lines are required prior to Substantial Certificate of Completion. Any deflections, sags obstructions and other defects affecting the performance of the line shall be corrected and the line re-inspected prior to Substantial Certificate of Completion.

END OF SECTION

M. TEMPORARY UTILITIES

1. INSTALLATION AND REMOVAL

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

2. DEWATERING

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

3. WATER SUPPLY

- 3.1 Provide continuous supply of potable water for construction use.
- 3.2 Arrange for supply and appropriate utility company and pay all costs for installation, maintenance and removal.
- 3.3 Pay for utility charges at prevailing rates.

4. TEMPORARY HEATING AND VENTILATION

- 4.1 Provide temporary heating required during construction period, including attendance, maintenance and fuel.
- 4.2 Construction heaters used inside building must be vented to outside or be non-flameless type. Solid fuel salamanders are not permitted.
- 4.3 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.
- 4.4 Provide adequate ventilation to meet health regulations for safe working environment.
- 4.5 Ventilating:
 - .1 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
 - .2 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.

- .3 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction.
- .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.
- 4.7 Permanent heating system of building, may be used when available. Be responsible for damage to heating system if use is permitted.
- 4.8 On completion of Work for which permanent heating system is used, replace filters, seals, etc. to ensure system is 'like-new' at substantial completion.
- 4.9 Pay costs for maintaining temporary heat, when using permanent heating system.
- 4.10 Maintain strict supervision of operation of temporary heating and ventilating equipment and be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

5. TEMPORARY POWER AND LIGHT

- 5.1 Pay for temporary power during construction for temporary lighting and operating of power tools.
- 5.2 Arrange for connection with appropriate utility company. Pay all costs for installation, maintenance and removal.
- 5.3 Temporary power for electric cranes and other equipment requiring in excess of above is responsibility of Contractor.
- 5.4 Provide and maintain temporary lighting throughout project. Ensure level of illumination on all floors and stairs is not less than 162 lx.
- 5.5 Connect to power supply in accordance with Canadian Electrical Code and provide meters and switching.
- 5.6 Electrical power and lighting systems installed under this Contract may be used for construction requirements only with prior approval of City Representative provided that guarantees are not affected. Make good damage to electrical system caused by use under this Contract. Replace lamps which have been used for more than 3 months.

6. TEMPORARY COMMUNICATION FACILITIES

- 6.1 Provide and pay for cell phone usage for own use. Provide and pay for connection to Internet for own use.

7. FIRE PROTECTION



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- 7.1 Provide and maintain temporary fire protection equipment during performance of Work required by governing codes, regulations and bylaws.
- 7.2 Burning rubbish and construction waste materials is not permitted on site.

END OF SECTION

N. PRESERVATION AND PROTECTION

1. DESCRIPTION

- 1.1 This Section specifies requirements for preservation and protection of existing and new utilities, services, buildings and structures.

2. GENERAL

- 2.1 Comply with all requirements and regulations of the City of Iqaluit and Utility Companies, especially those pertaining to protective work, inspection and safety.

3. MAINTENANCE AND PROTECTION OF EXISTING UTILITIES, SERVICE, STRUCTURES AND PROPERTIES

- 3.1 The Contractor will be held fully responsible by the Owner for any damage to utilities, services, properties, buildings, or structures adjacent to or in the general area of the work, through settlement of ground, vibration or shock resulting from any cause relating to the work carried out under this Contract. Make good and repair all such damage at own expense.
- 3.2 The Contractor shall supply and install the shoring, bracing and support system at his own judgment and at his own cost to protect the existing utilities, services, buildings and structures from damage for the duration of the construction. The cost for this item shall be included in the tender price and the contractor shall not make any claim against the Owner for extra work on this item.
- 3.3 Confirm all underground services to locate, stake and clearly mark in the field all services which are located on or near the line of the proposed work.
- 3.4 Sustain in their places and protect from direct or indirect injury, all water and gas mains, sewers and drains, conduits, cables, service pipes, poles, sidewalks, curbs, embankments, structures, equipment and other property in the vicinity of the work.
- 3.5 Sustain and support structures that are uncovered, weakened, endangered or threatened.
- 3.6 Notify the City Representative immediately (and follow up in writing) if and when any damage to such facilities occur during the planned execution of work. Provide all necessary written documentation such as incident reports, accident reports, investigative reports and preventative measures to be implemented within 48 hours of any incident taking place, in a format that clearly identifies details such as the report author, his/her role in the project, the company the author represents, date, signature, etc., all on Company letterhead.
- 3.7 Repair immediately all items that are damaged during construction, at no cost to the Owner.
- 3.8 Immediately report all damages occurred on the plant's property, existing services and structure during construction to the City Representative.

- 3.9 Prevent dust and dirt from entering existing buildings or areas where equipment is stored or is operating.
- 3.10 Prevent dust, water or other deleterious substances from entering areas with existing electrical, heating, ventilating, pumping and other equipment. The Contractor will be held responsible for any damage caused by work carried out under this Contract.
- 3.11 Where existing wall sections are removed or where pipes are installed through existing walls or where any dust-generating operation is necessary, provide a suitable temporary wall or enclosure suitably reinforced and sealed to prevent dust or water entering the area. When work is completed, remove temporary dust control device and thoroughly clean all areas affected by the work.
- 3.12 Control groundwater level to prevent damage to any pipe or structure due to water pressure during and after construction and until the completed works are accepted.
- 3.13 Control vibration levels to prevent damage to concrete work during construction, existing structures, equipment, and utilities. Control use of vibration producing construction techniques or equipment.

4. PROTECTION, SOUNDNESS AND REPAIR OF NEW CONSTRUCTION

- 4.1 Protect all newly constructed work from damage. Prevent heavy loading of newly constructed work and repair all damage. Construct all works watertight and correct all imperfect work.
- 4.2 If, in the final inspection, any deficiencies are found, repair or replace the defective work. Be responsible for satisfactory maintenance and repair of all work undertaken for the specified guaranteed maintenance period. Protect and store all equipment supplied under this Contract.

5. PROTECTION AGAINST FREEZING

- 5.1 Furnish all necessary temporary hoarding, heating equipment and fuel for heated workspaces where required, in order to ensure installation of equipment and materials are performed per the specifications and guidelines of manufacturer.

6. SURVEY MONUMENTS

- 6.1 Maintain survey monuments, iron bars, round iron pipes and stakes for marking property boundaries and locations.
- 6.2 Where monuments, pipes or stakes are located on the line of the trench or within the limits of the work, the Contractor shall report to the City Representative.
- 6.3 Do not remove survey monuments without receiving prior approval. Pay for or replace monuments which were removed without approval.

END OF SECTION

O. MATERIALS AND EQUIPMENT

1. GENERAL

- 1.1 Provide all materials and equipment new. Reconditioned equipment is not acceptable.
- 1.2 Co-operate with other trades prior to installation of work under the contract. Should the Contractor fail to do so, such works, if required, shall be removed, relocated and/or modified as directed by the City Representative, without additional cost to the Owner.
- 1.3 Should the Contractor fail to correspond with requests, or should they misdirect other trades, such corrections and/or additional work, as directed by the City Representative shall be at the Contractor's expense.
- 1.4 Work shall be performed in accordance with the Safety Act and Regulations.

2. SUBMITTALS

- 2.1 Make submittals in accordance with Section J – Submittal Procedures.
- 2.2 Submit shop drawings and product data sheets, as described in the Contract Documents, for all civil, structural, architectural, building mechanical, process mechanical, electrical, instrumentation and communication installations.

3. EQUIPMENT DELIVERY AND INSPECTION

- 3.1 Deliver products in accordance with accepted current progress schedule and coordinate to avoid conflict with the Work and conditions at site. Coordinate the delivery of materials and equipment in advance of the work in order to ensure there are no impacts to downstream installation activities.
- 3.2 Deliver products in undamaged condition, in manufacturer's original container or packaging, with identifying labels intact and legible. Include on label, date of manufacture and shelf life, where applicable.
- 3.3 Unload products in accordance with manufacturer's instructions for unloading or as specified. Record receipt of products delivered to the site. Inspect for completeness and evidence of damage during shipment.
- 3.4 Remove damaged products from site and expedite delivery of identical new undamaged products, and remedy incomplete or lost products to provide that specified, so as not to delay progress of the Work.

4. HANDLING, STORAGE, AND PROTECTION

- 4.1 Handle and store products in accordance with manufacturer's written instructions and in a manner to prevent damage. Provide manufacturer's recommended maintenance during storage, installation, and until products are accepted for use by Owner.
- 4.2 Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified

conditions, and free from damage or deterioration. Keep running account of products in storage to facilitate inspection and to estimate progress payments for products delivered, but not installed in the Work.

- 4.3 Store electrical, instrumentation, and control products, and equipment with bearings in weather-tight structures as per manufacturer's instructions. Protect electrical, instrumentation, and control products, and insulation against moisture, water, and dust damage. Connect and operate continuously all space heaters furnished in electrical equipment.
- 4.4 Store fabricated products above ground on blocking or skids and prevent soiling or staining. Store loose granular materials in well-drained area on solid surface to prevent mixing with foreign matter. Cover products that are subject to deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.
- 4.5 Store finished products that are ready for installation in dry and well-ventilated areas. Do not subject to extreme changes in temperature or humidity.
- 4.6 Hazardous Materials: Prevent contamination of personnel, storage building, and site. Meet requirements of product specification, codes, and manufacturer's instructions.

END OF SECTION

P. CONSTRUCTION FACILITIES

1. MOBILIZATION

- 1.1 Mobilization shall include, but not be limited to, the following items:
- .1 Obtaining required permits.
 - .2 Filing necessary notices with WSCC.
 - .3 Moving in the Contractor's field offices and equipment required within the first month after issuance of the Commence Work Order.
 - .4 Providing temporary construction fencing to prevent unauthorized access to the work area before starting construction on site.
 - .5 Providing temporary construction roads and signage if required.
 - .6 Providing temporary construction power, wiring, and lighting facilities.
 - .7 Providing onsite communication facilities, including telephones and internet services.
 - .8 Providing onsite sanitary facilities and potable water facilities as specified and as required by Laws and Regulations, and governing agencies.
 - .9 Arranging for and erection of Contractor's work and storage yard including temporary fencing.
 - .10 Posting required notices and establishing safety programs and procedures.
 - .11 Coordinate safety programs and procedures with the Owner.
 - .12 Having Contractor's superintendent at site full time.
 - .13 Removing debris and trash, etc. as needed for Contractor to gain access to do his Work.
- 1.2 Use area designated for Contractor's temporary facilities as shown in the Contract Documents.

2. INSTALLATION AND REMOVAL

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

3. SCAFFOLDING

- 3.1 Provide and maintain scaffolding, ramps, ladders, platforms and temporary stairs.

4. HOISTING

- 4.1 Provide, operate and maintain hoists cranes required for moving of materials and equipment. Make financial arrangements with Subcontractors for use thereof.
- 4.2 Hoists cranes shall be operated by qualified operator.

5. STAGING AREA

- 5.1 The staging area (the Contractor's laydown area) as shown within the contractor documents.

6. SITE STORAGE/ LOADING

- 6.1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- 6.2 Do not load or permit to load any part of Work with a weight or force that will endanger the Work.
- 6.3 Ensure that any aerosol or gas products are stored according to manufacturer's written instructions in a securely locked facility.

7. CONSTRUCTION PARKING

- 7.1 Parking will be permitted on site provided it does not disrupt performance of Work or interfere with access, egress and parking for neighboring sites, or local traffic.
- 7.2 Provide and maintain adequate access to project site.
- 7.3 Build and maintain temporary roads where indicated or required and provide snow removal during period of Work.

8. SECURITY

- 8.1 Provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays.

9. OFFICES

- 9.1 Provide office heated to 22°C, lighted 750 lx and ventilated, of sufficient size to accommodate site office, eating area for workers, and furnished with drawings laydown table. Furnish site trailer as required.
- 9.2 Provide a clearly marked and fully stocked first-aid case in a readily available location.
- 9.3 Subcontractors may provide their own offices as necessary. Direct location of these offices to be approved by the City Representative.

10. EQUIPMENT, TOOL AND MATERIALS STORAGE

- 10.1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- 10.2 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.
- 10.3 Stored materials and debris on site must be secured and contained within the construction site, so not to disturb the general public.

11. SANITARY FACILITIES

- 11.1 Provide lockable sanitary facilities for work force in accordance with governing regulations and ordinances.
- 11.2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.

12. CONSTRUCTION SIGNAGE

- 12.1 Provide and erect, within 5 working days prior to construction mobilization, a project sign in a location designated by the City Representative.
- 12.2 Provide a construction sign 1220 x 2440mm, of plywood construction painted with exhibit lettering produced by a professional sign painter. Details of sign message to be provided to City Representative for review/ approval prior to fabrication. Wording shall in in Inuktitut, English and French official languages.
- 12.3 Provide site sign temporary mounting comprising foundation, framing, and supports.
- 12.4 Direct requests for approval to erect a Contractor signboard to City Representative. For consideration general appearance of Contractor signboard must conform to project identification site sign. Wording shall in in Inuktitut, English and French official languages.
- 12.5 Signs and notices for safety and instruction shall be in all Nunavut official languages graphic symbols.
- 12.6 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 City Representative.

13. CLEAN-UP

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

END OF SECTION

Q. TEMPORARY BARRIERS AND ENCLOSURES

1. INSTALLATION AND REMOVAL

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

2. GUARD RAILS AND BARRICADES

- 2.1 Provide secure, rigid guard rails and barricades around deep excavations, open shafts, open stair wells, open edges of floors and roofs.
- 2.2 Provide concrete jersey barriers for use as barricades around deep excavation sites, and as a means to separate vehicular traffic.
- 2.2 Provide as required by governing authorities.

3. WEATHER ENCLOSURES

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

4. DUST TIGHT SCREENS

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

5. ACCESS TO SITE

- 5.1 Provide and maintain access roads, crossings, ramps and construction access routes as may be required for access to Work.
- 5.2 Provide temporary fencing around perimeter of Work site, in order to delineate construction site from the public.

6. PUBLIC TRAFFIC FLOW

- 6.1 Provide and maintain competent signal flag operators, barricades and lights as required to perform Work and protect the public.
- 6.2 Refer to Section E – Special Project Procedures (Traffic Control).

7. FIRE ROUTES



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

8. PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

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

9. PROTECTION OF BUILDING FINISHES

- 9.1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- 9.2 Provide necessary screens, covers, and hoardings.
- 9.3 Be responsible for damage incurred due to lack of or improper protection.

END OF SECTION

R. CLOSEOUT PROCEDURES

1. SECTION INCLUDES

- 1.1 Administrative procedures preceding preliminary and final inspections of Work.

2. INSPECTION AND DECLARATION

- 2.1 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.
- i. Notify City Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - ii. Request City Representative's Inspection.
- 2.2 City Representative's Inspection: City Representative and Contractor will perform inspection of work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.
- 2.3 Completion: submit written certificate that following have been performed:
- i. Work has been completed and inspected for compliance with Contract Documents.
 - ii. Defects have been corrected and deficiencies have been completed.
 - iii. Equipment and systems have been tested, adjusted and are fully operational.
 - iv. Certificates required by other Regulatory Agencies have been submitted.
 - v. Operation of systems have been demonstrated to Owner's personnel.
 - vi. Work is complete and ready for final inspection.
- 2.4 Final Inspection: when items noted above are completed, request final inspection of Work by Owner, City Representative, and Contractor. If Work is deemed incomplete, complete outstanding items and request reinspection.
- 2.5 Declaration of Substantial Performance: when Owner and City Representative consider deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for certificate of Substantial Performance. No later than 21 calendar days after receipt of application, City Representative will review Work to verify validity of application, and no later than 7 calendar days after completing review, will notify Contractor if Work or designated portion of Work is substantially performed.
- 2.6 Commencement of Lien and Warranty Periods: date of Owner's acceptance of submitted declaration of Substantial Performance shall be date for commencement for warranty



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period and commencement of lien period unless required otherwise by lien statute of Place of Work.

- 2.7 Final Payment: when Owner and City Representative consider final deficiencies and defects have been corrected and it appears requirements of Contract have been totally performed, make application for final payment. If Work is deemed incomplete by Owner and City Representative, complete outstanding items and request reinspection. City Representative will, no later than 21 calendar days after receipt of an application for final payment, review Work to verify validity of application. City Representative will give notification that application is valid or give reasons why it is not valid, no later than 7 calendar days after reviewing Work
- 2.8 Payment of Holdback: after issuance of certificate of Substantial Performance of Work, submit an application for payment of holdback amount in accordance with terms of payment.

END OF SECTION

S. CLOSEOUT SUBMITTALS

1. SECTION INCLUDES

- 1.1 As-built, samples, and terms of reference.
- 1.2 Equipment and systems.
- 1.3 Product data, materials and finishes, and related information.
- 1.4 Operations and maintenance data.
- 1.5 Spare parts, special tools and maintenance materials.
- 1.6 Warranties and bonds.
- 1.7 Final site survey.

2. SUBMISSION

- 2.1 Make submittals in accordance with Section J – Submittal Procedures.
- 2.2 Prepare inspections and data using personnel experience in maintenance and operation of described products.
- 2.3 Copy will be returned after final inspection, with City Representative's comments.
- 2.4 Revise content of documents as required prior to final submittal.
- 2.5 Provide evidence as to type, source and quality of products provided as part of the Work.
- 2.6 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
- 2.7 Pay costs of transportation.

3. AS-BUILTS AND SAMPLES

- 3.1 In addition to requirements in General Conditions, maintain at the site on record copy of:
 - i. Contract Drawings.
 - ii. Terms of Reference.
 - iii. Addenda.
 - iv. Change Orders and other modifications to Contract.
 - v. Reviewed shop drawings, product data, and samples.
 - vi. Field test reports.

- vii. Inspection certificates.
- viii. Manufacturer's certificates.
- 3.2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- 3.3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.
- 3.4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- 3.5 Keep record documents and samples available for inspection by City Representative.
- 4. RECORDING ACTUAL SITE CONDITIONS**
 - 4.1 Record information on set of blue line opaque drawings.
 - 4.2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
 - 4.3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
 - 4.4 Contract Drawings and shop drawings: legibly mark each item to record actual construction.
- 5. EQUIPMENT AND SYSTEMS**
 - 5.1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
 - 5.2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
 - 5.3 Include installed colour coded wiring diagrams.
 - 5.4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
 - 5.5 Maintenance Requirements: include routine procedures and guide for troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
 - 5.6 Providing servicing and lubrication schedule, and list of lubricants required.
 - 5.7 Include manufacturer's printed operation and maintenance instructions.

- 5.8 Include sequence of operation by controls manufacturer.
- 5.9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- 5.10 Provide installed control diagrams by controls manufacturer.
- 5.11 Provide Contractor's coordination drawings, with installed colour coded piping drawings.
- 5.12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagram.
- 5.13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- 5.14 Include test and balancing reports as specified in Section J – Quality Control.
- 5.15 Additional requirements: as specified in individual terms of reference sections.

6. MATERIALS AND FINISHES

- 6.1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering products.
- 6.2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- 6.3 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.
- 6.4 Additional Requirements: as specified in individual terms of reference sections.

7. SPARE PARTS

- 7.1 Provide spare parts, in quantities specified in individual terms of reference sections.
- 7.2 Provide items of same manufacturer and quality as items in Work.
- 7.3 Deliver to site; place and store in location designated by City Representative.
- 7.4 Receive and catalogue all items. Submit inventory listing to City Representative. Include approved listings in Maintenance Manual.
- 7.5 Obtain receipt for delivered products and submit prior to final payment.

8. MAINTENANCE MATERIALS

- 8.1 Provide maintenance and extra materials, in quantities specified in individual terms of reference sections.

- 8.2 Provide items of same manufacturer and quality as items in Work.
- 8.3 Deliver to site; place and store in location designated by City Representative.
- 8.4 Receive and catalogue all items. Submit inventory listing to City Representative. Include approved listings in Maintenance Manual.
- 8.5 Obtain receipt for delivered products and submit prior to final payment.

9. STORAGE, HANDLING AND PROTECTION

- 9.1 Store spare parts, maintenance materials, and special tools in manger to prevent damage or deterioration.
- 9.2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- 9.3 Store components subject to damage from weather in weatherproof enclosures.
- 9.4 Store paints and freezable materials in a heated and ventilated room.
- 9.5 Remove and replace damaged products at own expense and to satisfaction of City Representative.

10. PRE-WARRANTY CONFERENCE

- 10.1 Meet with City Representative, to develop understanding of requirements of this section. Schedule meeting prior to contract completion, and at time designated by City Representative.
- 10.2 City Representative will establish communication procedures for:
 - i. Notification of construction warranty defects.
 - ii. Determine priorities for type of defect.
 - iii. Determine reasonable time for response.
- 10.3 Provide name, telephone number and address of licensed and bonded company that is authorized to initiate and pursue construction warranty work action.
- 10.4 Ensure contact is located within local service area and warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

11. WARRANTIES AND BONDS

- 11.1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- 11.2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.



CONSTRUCTION SERVICES
PART VI – GENERAL REQUIREMENTS



- 11.3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten (10) working days after completion of the applicable item of work.
- 11.4 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.
- 11.5 Verify that documents are in proper form, contain full information, and are notarized.
- 11.6 Co-execute submittals when required.
- 11.7 Retain warranties and bonds until time specified for submittal.

END OF SECTION