

1. FIELD OFFICES AND SHEDS

1.1 Contractor's Office

- .1 Accommodation for the Contractor's office, plant, tools, equipment and materials (including fuel) shall be the responsibility of the Contractor. Such accommodation at the site shall be located after consultation with the City. The Contractor shall be responsible for the protection of its plant, tools, equipment and materials stored on site. Materials stored on the City's premises shall be neatly stacked and protected from the weather.
- .2 Provide and maintain in clean condition during entire progress of the Work, a suitable office adequately lighted, heated and ventilated, for own use.
- .3 Locate where directed by Contract Administrator in area shown on the site plan.
- .4 Provide within office space adequate first aid facilities as recommended by the Ministry of Labour and Worker's Compensation regulations.
- .5 The Contractor shall further confine their activities to the minimum area necessary for undertaking and completing the work. Material and equipment storage areas shall be at locations acceptable to the Contract Administrator.
- .6 The Contractor's construction activities shall not encroach or enter onto private property without written consent from the owner of the property concerned. The Contractor shall provide the Contract Administrator with a copy of the written agreement with the property owner.
- .7 Subcontractors are to provide their own offices as necessary, as directed by the Contract Administrator.

1.2 Laydown and Storage

- .1 All construction materials shall be stored at designated site laydown and storage areas. Stored combustible materials shall be separated by clear space to prevent fire spread and allow access for manual fire fighting equipment, including fire hoses, extinguishers, hydrants, etc.
- .2 Designated areas shall be used for storage of flammable and combustible liquids and gases, which shall be properly equipped for grounding and bonding when refueling vehicles and equipment. Spills shall be contained as required by Provincial regulations.
- .3 Pressurized dry chemical fire extinguishers of suitable capacity or equally effective extinguishers as per NFPA-10 shall be provided where:
 - .1 Flammable liquids are stored or handled.
 - .2 Temporary oil or gas fire equipment is used.
 - .3 Welding or flame cutting is performed.

1.3 Temporary Construction Materials

- .1 Tarpaulins and plastic coverings shall consist of fire retardant materials, which are UL or FM listed and/or approved, or which have passed the Large Scale Test specified in NFPA-701.

1.4 Contractor's Trailers

- .1 The Contractor shall provide construction power at 120/240 V, 1 \emptyset , and 600 V, 3 \emptyset to the service points designated at the work site. The Contractor shall also provide power to the Contractor's temporary site office trailers from existing non-essential power supply in the Deacon Station.
- .2 The Contractor shall, at its own cost, supply, install, maintain and move extensions to the above services as required during the construction period, subject to CSA Standard C22.1 latest edition and Manitoba Hydro Standards and approval.
- .3 The Contractor shall:
 - .1 Prevent hazardous accumulations of dust, fumes, mist, vapours, or gases in areas occupied during construction.
 - .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
 - .3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
 - .4 Ventilate storage spaces containing hazardous or volatile materials.
 - .5 Ventilate temporary sanitary facilities.
 - .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful elements.
- .4 Suitable fire control equipment shall be provided by the Contractor for protection of its facilities, the portion of the City's building under construction and materials and equipment at all work areas. All fire protection equipment and fuel storage shall meet the approval of the Contract Administrator. Storage of fuel will not be permitted in the vicinity of the Work.
- .5 Unless approved by the City, burning of any materials is **NOT** allowed at the site of the Work.
- .6 The Contractor shall be responsible for any damage resulting from fires caused by the Contractor or its employees and shall be solely responsible for all costs which may be incurred in extinguishing such fires.
- .7 The Contractor shall provide for all temporary communications, telephone service.

- .8 The Contractor can connect to Deacon Station hose bibs for domestic water supply. The Contractor is responsible to provide freeze protection for connections and hose bibs if water supply is required in cold weather conditions.
- .9 The Contractor shall, at its own cost, supply, install, maintain and move extensions to water services as required during the construction period, subject to the City's approval.

1.5 Toilets and Washrooms

- .1 Washroom facilities are not available in the Station for the Contractor's use. This is a drinking water facility; the City does not have full-time custodian, maintenance and cleaning of the facility.
- .2 The Contractor shall supply and maintain all necessary toilets and washrooms for its employees engaged in the Work. These toilets and washrooms shall comply with the requirements of The Public Health Act, R.S.M. 1987, c. P210.
- .3 The Contractor must provide for toilets and washrooms including sewage holding facilities and water storage. Sewage connections are not available.

1.6 Disposal of Waste Materials

- .1 Spoiled and/or waste materials shall not be dumped, under any circumstances, in any locations other than those approved by the local authorities. Any cost for permits and fees for disposing of waste materials shall be at the Contractor's expense.
- .2 Disposal of all excavated and waste materials shall be in accordance with the requirements of the appropriate provincial regulatory agencies.
- .3 When working anywhere within the Works the Contractor shall at the end of each working day remove his rubbish and leave the site in a clean and tidy state, to the satisfaction of the Contract Administrator. If this is not done, the City will clean the site and charge the Contractor.

1.7 Parking

- .1 The City will designate parking areas for the Contractor's vehicles. Parking for the Contractor is not allowed on the site within the fenced compound. Parking space is available on the south side of Deacon Access Road and possibly in the field to the south of the site. The parking shall be arranged and maintained so that it does not disrupt the station operation and access for the City's operations and maintenance staff.

1.8 Contractor's Site Storage for Equipment and Materials

- .1 The Contractor shall provide and maintain in a clean and orderly condition an adequately sized storage facility on site, which will provide weather-protected storage for all the tools, equipment and materials necessary for the undertaking and completion of the Work.
- .2 The storage facility shall be located where directed by the Contract Administrator in the area identified on the site plan.

- .3 The storage facility shall be temperature controlled to provide a minimum interior temperature of 10°C, and be large enough to provide access to equipment for periodic maintenance.
- .4 The compound shall have a hard base suitable for the storage of heavy equipment. Adequate temporary drainage shall be provided around the facility.
- .5 The storage of equipment and materials shall be limited to the storage facility only.
- .6 The responsibility for the security of the site storage and the condition of all the equipment and materials therein shall rest solely with the Contractor.
- .7 The Contractor will be responsible for removal of this facility prior to issuance of Total Performance.

1.9 Access To Site Office and Storage Facilities

- .1 The Contractor shall provide vehicular accesses to the site office and storage facilities from the existing access road. The access shall be suitable for use by heavy trucks and shall be kept in a clean serviceable condition and free of obstructions for as long as these offices and storage facilities are required for use.
- .2 The access roads, turnarounds, parking areas and storage areas, shall be left in a rut-free condition.
- .3 Any areas requiring clearing and grubbing for the access roads, turnarounds, parking and storage areas, and approaches to public roads shall be reviewed with the Contract Administrator prior to commencement of the Work.

2. UTILITIES

2.1 Sanitary Facilities

- .1 Provide sanitary facilities for workers in accordance with local health authorities. Maintain facilities in clean and tidy condition.

2.2 Water Supply

- .1 The City will permit the Contractor to tie into the existing hose bibs for potable water supplies for his own use. The Contractor will be responsible for maintaining all services and shall be responsible for protecting the hose bibs and all connections from freezing.

2.3 Heating and Hoarding

- .1 The Contractor shall:
 - .1 Provide all temporary heating required during construction period for storage facilities and concrete curing, including attendants, maintenance and fuel. The Contractor will

maintain temperatures of minimum 10°C in the temporary facilities, unless indicated otherwise in Specifications. Properly ventilate all heated areas.

- .2 Pay for all costs in maintaining and providing temporary heat to the temporary facilities.
- .3 Be responsible for any damages to the Work due to failure in providing adequate heat and protection during construction.

2.4 Power and Light

- .1 The Contractor shall:
 - .1 Provide temporary power and light for own use. Install in accordance with regulations of governing authorities.
 - .2 Provide and pay for all temporary power required during construction period for temporary lighting and the operations.
 - .3 Wiring for temporary lighting is to be entirely separate from temporary power installation except for a common supply connection at either an electrical service or distribution centre.
- .2 The City will:
 - .1 Allow the Contractor to use 120 V power outlets within the station at no cost.

2.5 Telephone

- .1 The Contractor shall:
 - .1 Provide and pay for temporary telephones necessary for own use. The City may provide access and pay for a separate phone line (no long distance calls) for use by the Contractor.

2.6 Use of Existing Station Crane

- .1 The existing station has two cranes:
 - .1 Station Crane: Maximum capacity: 12.7 tonnes
 - .2 Garage Crane: Maximum capacity: 12.7 tonnes
- .2 The Contractor shall notify the City prior to any use of these cranes to handle equipment inside the station. The Contractor shall ensure that the crane capacities are not exceeded.
- .3 The Contractor is to take full responsibility for the use of these cranes including maintenance if necessary. No additional compensation will be considered because of delays caused by any problems arising from the use of these cranes.

- .4 The Contractor is to repair any damage to the crane caused by his forces or any sub-contractor in his employ.

2.7 Use of Permanent Water Supply, Heat, Power Light and Telephone

- .1 The Contractor shall not make use of permanent water supply, heat, power, lighting or telephone inside the existing station building without obtaining permission from the Contract Administrator or City.

2.8 Fueled Welding Machines and Air Compressors

- .1 Fueled welding machines and air compressors required for performance of the Work are to be the responsibility of the respective users. Locate outside of building.

2.9 Gas Welding Apparatus

- .1 The City will allow the Contractor to use the existing welding connections in the Station. Any additional gas welding apparatus required for the performance of the Work is the responsibility of the Contractor.

3. BARRIERS

3.1 Guard Rails and Barricades

- .1 Provide guard railings and barricades, around all openings, open shafts, open stairwells. Construct as recommended by local governing authorities.

4. CONSTRUCTION AIDS

4.1 Scaffolding

- .1 Provide and maintain adequate scaffolding as required. Scaffolding is to be rigid, secure and constructed to ensure adequate safety for workers. Erect without damage to the building or finishes.

4.2 Ladders, Stairs

- .1 Provide and maintain adequate temporary ladders and stairs required for construction.
- .2 Secure to structure.
- .3 Ladders and stairs are to comply with all requirements of safety authority.
- .4 Provide temporary wood treads on steel pan stairs for use prior to placement of permanent treads.

4.3 Explosive Actuated Fastening Tools

- .1 Provide for the use of explosive actuated fastening tools when required. When using, conform to the requirements of CSA Z166 - "Explosive Actuated Fastening Tools" and local governing authorities.

5. ROADS

5.1 Access To Site

- .1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as required for access to and on site. Conform to requirements of local governing authorities when required and when necessary make arrangements with adjacent property owners. Locate these traffic facilities where they are least disruptive to normal street traffic.

5.2 Temporary Vehicular and Pedestrian Access

- .1 Maintain existing vehicular and pedestrian accesses properly at all times during the construction period.
- .2 The Contractor shall confine his equipment, storage of materials, and operations of his workmen to minimize site damage. The Contractor shall be responsible to restore all areas damaged or affected by construction to equal or better conditions which existed prior to construction, unless designated otherwise.

6. TRAFFIC CONTROL

6.1 Public Traffic Flow

- .1 Provide and maintain flagpersons, traffic signals, barricades and flares/lights/lanterns as required to direct the flow of equipment used in performance of the Work and to protect public traffic. Make arrangements with local governing authorities when these facilities will disrupt the normal flow of public traffic.

7. PROTECTION OF WORK AND PROPERTY

7.1 Protection for Off-Site and Public Property

- .1 Protect adjacent private and public property from damage during the performance of the Work.
- .2 Be responsible for all damages incurred due to improper protection.

7.2 Fire Protection

- .1 Provide and maintain adequate temporary fire protection equipment during performance of the Work as required by insurance companies having jurisdiction.

- .2 Provide minimum one fire extinguisher in each equipment and tool shed, temporary office, material storage shed workshop.
- .3 Where subjected to low temperatures, extinguishers are to be anti-freeze type. In proximity to gas, oil, grease or paint storage locations they are to be #10 - carbon dioxide type. Extinguishers for all other locations are to be soda-acid type. All extinguishers are to be minimum 10 litre capacity and be ULC labelled.
- .4 Handle gasoline and like combustible materials with good, safe practice.
- .5 Remove combustible debris from site daily.

7.3 Protection of Building Finishes and Equipment

- .1 Provide adequate protection for finished and partially finished building finishes and existing equipment and services during the performance of the Work. Provide necessary screens, covers, hoardings, etc. as required. Be responsible for all damages incurred due to improper or lack of protection.
- .2 The Contractor shall use methods of construction on concrete work, that will not generate dust.
- .3 The Contractor shall protect existing mechanical and electrical equipment from damage.
- .4 Maintain and protect existing services in operation during the course of the Work. Repair services damaged at no cost to the City.
- .5 If service interruptions are necessary, such interruptions shall be made only at times approved by the City.
- .6 Advise the Contract Administrator of any necessary service relocations not identified by the Contract documents.

7.4 Snow Removal

- .1 Remove snow and ice from access roads, parking areas, office and storage areas, including Deacon Access Road for Contractor's parking.
- .2 Remove snow and ice from building surfaces as necessary for construction.
- .3 The City shall be responsible for snow removal and maintaining the access road to, and the parking and storage areas within the Contractor's Site Laydown area. The Contractor shall be responsible for repairing any damage to the access road to, and the parking and storage areas within, the Contractor's Site Laydown area directly attributable to their operation.
- .4 Except where noted otherwise, the Contractor shall be responsible for snow removal and maintaining the access roads, turnarounds, parking areas and storage areas during the course of the Work to facilitate safe access to the work areas.

8. ACCESS TO SITE AND BUILDING

8.1 Site

- .1 Access to the Site will be available from the existing roadways. The locations for vehicular accesses from these roadways are generally as shown on the Drawings.
- .2 It will be the Contractor's responsibility to check that these accesses are in suitable condition before any plant, equipment or materials are dispatched to site.
- .3 Access on the site is restricted by existing buried and surface utilities and structures. Contractor to confirm location of all potential obstructions and to review routing of construction vehicles with the Contract Administrator.
- .4 The site is a fenced compound with a gate that is locked at all times. The Contractor is responsible for ensuring the gate remains locked at all times. The frequency of access may require the gate to be unlocked for a period of time. The Contractor is responsible for providing full-time manned security at the gate at any time the gate is unlocked.
- .5 Gate entry protocol:
 - .1 Stop at gate and contact McPhillips Control Center by phone.
 - .2 After receiving acknowledgement unlock gate and enter.
 - .3 Lock gate.
- .6 The Contractor is to maintain access at all times for City personnel or the Contract Administrator.

8.2 Building

- .1 The Deacon Booster Pumping Station is normally unmanned during the operation period. For security reasons, access to the inside of the building is limited to the City's employees and other authorized personnel.
- .2 Security must be maintained and doors and gates are to be locked even when the building is occupied. The City reserves the right to hire security personnel at the Contractor's cost to ensure that doors and gates are kept locked if the Contractor fails to comply. All Contractor's employees must sign in and sign out when entering and leaving work site.
- .3 The keys to the station building and gate shall be kept by the Contract Administrator. It is intended that only three (3) keys for the building and three (3) keys for the gate will be issued to the Contractor for his use, including his major subcontractors. These keys shall not be duplicated. The Contractor shall submit the names of the personnel who will be responsible for the safe-keeping and use of these keys. Only responsible representatives from the Contractor shall be nominated. These keys shall be returned to the Contract Administrator when the Substantial Performance is achieved. If any key is lost, or not returned, the Contractor will be charged \$500 for each key lost, or not returned. The

Contractor shall coordinate with the Contract Administrator regarding the procedures for obtaining access to the inside of the building for undertaking the installation work.

- .4 The Contractor shall be required to submit to the Contract Administrator the names of all persons the Contractor wishes to have on the site. The Contract Administrator may reject anyone without explanation.
- .5 The Contractor shall appoint one of his employees as the person responsible for the work and security of the pumping station. This person shall be on site during all of the work of his forces and shall be responsible for coordinating all power interruptions or other work affecting the station. This co-ordination shall be in writing and shall have agreement between the City's operation and maintenance personnel, the Contract Administrator and the Contractor. No work shall take place until the agreement is reached on the security of the station.

9. ACCESS TO WORK

- .1 Normal working hours for City staff working inside the building shall be the period between 7:30 a.m. and 3:30 p.m., Monday to Friday, except holidays.
- .2 The Contract Administrator shall be informed at least 24 hours in advance where the Contractor intends to carry out work outside Normal Working Hours and no such work shall be done without the Contract Administrator's approval except when the work is unavoidable or absolutely necessary for:
 - .1 Preventing injury to any person or saving the life of any person; or
 - .2 Preventing damage to property where the circumstances placing the property in danger could not reasonably have been foreseen and where the immediate carrying out of such work is necessary in order to prevent damage to that property; in which case the Contractor shall immediately advise the Contract Administrator in writing that such work outside the Normal Working Hours is necessary and of the reasons for this. He shall also state the nature and extent of work to be carried out.
- .3 The Contractor is to co-ordinate activities with City personnel and any other contractors that may be working concurrently in the pumping station.
- .4 The Contractor shall observe all rules and regulations established by the City for the safe operation of the station when working in or moving about any part of the station.

10. SECURITY

10.1 Site Lighting

- .1 Existing site lighting is provided off the existing surge tank, Contractor to provide additional lighting if required. Provide and pay for temporary site lighting as required for night time hours. Install lamps in suitable locations to obtain unobstructed light over all work areas.

- .2 Perform daily inspection of site lighting and replace burned out and missing lamps. Relocate promptly any lights that become obstructed by new work.

11. ENVIRONMENTAL CONTROLS

11.1 Noise Control

- .1 Abide by all local ordinances. Adjust hours of operation accordingly.

11.2 Dust Control

- .1 Initiate dust control measures to eliminate dust generation inside the building and minimize dust generation outside the building. The Contractor shall erect a hoarding and seal the area of work from the rest of the building and shall install a separate ventilation system to create a negative air pressure in the work area during construction to prevent dust from escaping outside the enclosure.
- .2 For work within the pumping station, temporary enclosures shall be provided to cover activities that will generate dusts, e.g., concrete cutting. All the existing equipment in the pumping station contains sensitive instrumentation and shall be protected from airborne dusts. Supply and install filters for all existing electrical motors during any demolition activity. Remove filters after final clean-up. If the Contract Administrator considers that the dust control measures are not adequate, he will suspend the work activity that is being undertaken by the Contractor and the Contractor shall not be allowed to resume until corrective measures, to the satisfaction of the Contract Administrator, have been implemented. All of these costs shall be borne by the Contractor.

12. PROJECT IDENTIFICATION

12.1 Warnings and Traffic Signs

- .1 When work is performed within public areas, provide and erect adequate warning signage as necessary to give proper warning. Place sign sufficiently in advance to enable public to respond to directions.
- .2 Warning and traffic signs shall be illuminating type, visible to public and traffic during day and night time hours.
- .3 Provide and maintain signs and other devices required to indicate construction activities or other temporary or unusual conditions resulting from project work.

END OF SECTION