



**DEPARTMENT OF NATIONAL DEFENCE
5 ENGINEER SERVICES SQUADRON
5 ENGINEER SERVICES UNIT
5 CDSB GAGETOWN**

SPECIFICATION

**STANDING OFFER AGREEMENT
INSTALL OR REPAIR CHAIN LINK FENCES AND GATES
BASE AND TRAINING AREA
01 MAY 2016 TO 31 MARCH 2018**



Designed by



Fire Inspector



Project O



Engineering O

PF No:
Job No: L-G2-9301/231

Date: 2015-12-21

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END OF SECTION

1.01 DESCRIPTION OF WORK

- .1 The work under this Standing Offer agreement comprises the furnishing of all labour, material, tools, equipment, transportation, supervision, expenses and profit required to install or repair chain link fences and gates as and when required at 5 CDSB Gagetown, Oromocto, NB, as directed by the Engineer and specified herein.

1.02 DURATION OF CONTRACT

- .1 This Standing Offer Agreement will extend from 01 May 2016 to 31 March 2018

1.03 DOCUMENTS REQUIRED

- .1 Maintain at the job site, one copy each of the following:
 - .1 Specifications;
 - .2 Addenda; and
 - .3 Dig Permit (from Engineer).
- .2 Training area pass for personnel and vehicles for work in Training Area issued by Range Control.

1.04 ENGINEER

- .1 The Engineer, as defined and stated in these specifications will be the Commanding Officer, 5 Engineer Services Unit or a designated representative. The address of the Engineer is
 - Contracts Office
 - 5 Engineer Services Unit
 - Building B18
 - 5 CDSB Gagetown
 - PO Box 17000 Stn Forces
 - Oromocto, NB E2V 4J5
 - Tel: (506) 422-2677
 - Fax: (506) 422-1248

1.05 CERTIFICATIONS AND REFERENCES

- .1 The below certifications are mandatory requirements. All certifications and references will be checked prior to award of contract.
 - .1 Contractor must be an established Fencing Contractor with a Minimum of 3 years of proven Commercial Fence Contract work.
 - .2 Contractor must be a member and in good standing of the CFIA, Canadian Fence Industry Association.
 - .3 Must be a member of the NBCSA, New Brunswick Construction Safety Association.
 - .4 Must be a member and in good standing with WorkSafeNB.
 - .5 All employees conducting work at any location described in this specification will hold a current Standard First Aid Certification.
 - .6 All employees conducting work at any location described in this specification will hold a current WHMIS Certification.

1.06 CONTRACTOR'S USE OF SITE

- .1 Access to the site of the work to be as directed by the Engineer.
- .2 Travel on the training area roads is dangerous and is prohibited without prior authority.
- .3 Entry and exit to the base is to be controlled by the Engineer. The Contractor is required to sign in prior to accessing the work site and sign out after leaving the worksite. Sign in/out sheet is available at front desk of the Contracts Office located on the second floor of Building B18.
- .4 All vehicles entering and exiting the Base are subject to search.
- .5 Movement around the site is subject to restrictions laid down by the Engineer.
- .6 Do not unreasonably encumber the site with materials or equipment.

1.07 DAMAGE TO FACILITIES

- .1 The Contractor will take all necessary precautions to protect and prevent damage to all property and installations. Damage caused by the Contractor will be made good at the contractors expense without undue delay, to the complete satisfaction of the Engineer.

1.08 CODES AND STANDARDS

- .1 Perform work in accordance with the National Building Code of Canada and Provincial Regulations, unless otherwise specified.
- .2 Work to meet or exceed requirements of standards, codes and referenced documents.

1.09 SETTING OUT OF WORK

- .1 Assume full responsibility for and execute complete layout of work.
- .2 Provide devices needed to lay out and construct work.
- .3 Supply stakes and other survey markers required for laying out work.

1.10 CUTTING, FITTING AND PATCHING

- .1 Execute cutting, fitting, and patching required to make work fit properly together.
- .2 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.

1.11 SANITARY IN FACILITIES

- .1 Provide sanitary facilities for work force accordance with governing regulations and ordinances.

1.12 CLEAN UP

- .1 On completion of all work, remove all surplus materials, plant, tools, equipment and debris, and leave the building and site in a clean and tidy condition to the complete satisfaction of the Engineer. The Contractor will not remove any salvageable material or equipment from the job site without prior approval from the Engineer.

1.13 HOURS OF WORK

- .1 The Contractor will comply with the normal hours of work in effect at the Base during the period of this contract. On site negotiations between the contractor and the Engineer may extend the hours of work to take advantage of weather conditions, or for other reasons such as to ensure compound security, as approved in writing by the Engineer.

1.14 WORK REQUISITION

- .1 The work to be performed shall be requisitioned on Form CF - 942, Call Up Against A Standing Offer, when ordered by the Engineer as follows:
 - .1 The Contractor will provide service during and after regular working hours including Saturdays, Sundays and Holidays;
 - .2 The Contractor will provide, in writing, to the Engineer the telephone number or location at which they or their representative may be contacted at all times;
 - .3 The Contractor, on receipt of an Acceptance of Tender will be advised by the Engineer in writing, the names of the persons authorized to request service. Work undertaken at the request of others will be entirely at the Contractor's risk with regard to payment;
 - .4 The Contractor will not refuse any call for service requested by the Engineer and will respond within 48 hours on normal service calls and 4 hours on emergency calls;
 - .5 The Contractor will inform the Engineer 24 hours in advance of arrival on site for scheduled work for an approximate time period.
 - .6 When service is required, the Engineer will notify the Contractor and detail the job. The CF 942 will detail the work to be done and will be signed by an authorized person;
 - .7 The Contractor will report to the Engineer prior to starting work and upon completion of work on a daily basis; and
 - .8 The Contractor will proceed to the location of the job and carry out the work continuously until completed. Upon completion of the work detailed on Form CF - 942 the Contractor will report to the Engineer and have the company work ticket initialed indicating the work has been satisfactorily completed. The date and hours worked for each job will be shown on the company work ticket. The Contractor will retain one copy of Form CF - 942. The contractor will submit the original and one copy of all invoices pertaining to work under this contract to the Engineer upon completion of the work. Call Up Form CF - 942 and copies of company work ticket initialed by Engineer to be attached to submitted invoices.
 - .9 Invoices must be submitted to Engineer **within 14 days of completion of work.**

1.15 QUANTITIES AND BASIS OF PAYMENT

- .1 The work under this agreement will be paid on a unit price basis. The Contractor will accept the payment as full consideration for everything furnished and done by them in respect of the work.
- .2 The Contractor will submit the prices in accordance with the specification. Such prices will include the Contractor's cost for tools, labour, materials, equipment, transportation, (travel time to and from the contractors base of operation will be included in the rates provided), supervision, expenses, and profit based on a standard 8 foot high chain link fence.
- .3 Rate per hour for personnel on site and working during and after regular working hours including Saturdays, Sundays and Holidays for installation and repair service to include all expenses:
 - .1 Price for linear foot of eight foot (8') high fence between the terminal posts; complete with 3 strand barb wire; **Estimated Quantity: 12,000 Linear Foot**
 - .2 Price for Terminal post, price to include fittings, bracing and concrete; **Estimated Quantity: 120**
 - .3 Price for Corner post, price to include fittings, bracing and concrete; **Estimated Quantity: 300**
 - .4 Price for Gate post, price to include fittings, bracing and concrete; **Estimated Quantity: 20**
 - .5 Price for Cantilever gate per linear foot of opening, price will include all materials for installation; **Estimated Quantity: 240 Linear Foot**
 - .6 Price for a Swing Gate per linear foot of opening, price will include all materials for installation; **Estimated Quantity: 120 Linear Foot**
 - .7 Price for linear foot of six foot (6') high fence between the terminal posts; complete with 3 strand barb wire; **Estimated Quantity: 12,000 Linear Foot**
 - .8 Price for Terminal post, price to include fittings, bracings and concrete; **Estimated Quantity: 120**
 - .9 Price for Corner post, price to include fittings, bracing and concrete; **Estimated Quantity: 300**
 - .10 Price for Gate post, price to include fittings, bracing and concrete; **Estimated Quantity: 20**
 - .11 Price for Cantilever gate per linear foot of opening, price will include all materials for installation; **Estimated Quantity 240 Linear Foot**
 - .12 Price for a Swing Gate per linear foot of opening, price will include all materials for installation; **Estimated Quantity; 120 Linear Foot**
 - .13 Hourly Rate for Foreman; **Estimated Quantity: 200 hrs**
 - .14 Hourly Rate for Installer/labourer; **Estimated Quantity: 400 Hrs**
 - .15 Rate per hour for Auger Truck (Pressure Digger) complete with operator; as per section 32 31 13, para 1.6; **Estimated Quantity: 100 hrs**
 - .16 Rate per hour for Air compressor, rock drill and Post pounder; **Estimated Quantity: 100 hrs**
 - .17 Rate per hour for Trac Skid Steer complete with all attachments for fence installation; **Estimated Quantity: 100 hrs**
 - .18 Other Materials not listed above will be invoiced at contractors cost, supported by invoices plus a percentage mark-up, (estimated wholesale cost of materials = \$150,000.00).

- .4 Time charged and contract price of materials (if any) used may be verified by Government Audit before or after payment is made under the terms of this contract.
- .5 The above quantities may increase or decrease and are to be used by the contractor as a guide. The quantities are not guaranteed and the Contractor will have no claim for loss of anticipated profits as a result of these estimated quantities.

1.16 WORKMANSHIP

- .1 Workmanship will be of a uniformly high standard and in accordance with generally accepted trade practice.

1.17 CONTRACTOR PASSES

- .1 All Contractor employees will carry an authorized Contractor pass on their persons when employed on DND property. Such passes will be produced when requested by the Military Police, Commissionaires, Security Guards and persons in authority.
- .2 The Contractor will complete an application form for contractor passes for each individual. The Contractor will accompany the employee to the Military Police Identification Section building F-19 for the issuance of pass.
- .3 A photocopy of passes is to be provided to the Engineer.
- .4 The Contractor will ensure Contractor passes are recovered from employees who cease to be employed on DND property. Such passes shall be returned to the Military Police Identification Section by the Contractor.

1.18 SECURITY CLEARANCES

- .1 The Contractor shall maintain an up to date roster of all employees involved in the contract including managers, supervisors and labourers. This roster will be made available to the Engineer upon demand.
- .2 The Contractor shall provide proof of the information contained within the roster to the Engineer upon demand. The Engineer reserves the right to have removed from the site those personnel who do not meet security requirements, as laid down by the Military Police Section.

END OF SECTION

1.01 REFERENCES

- .1 Canada Labour Code, Part II, Canada Occupational Safety and Health Regulations.
- .2 Province of New Brunswick Occupational Health and Safety Act, 1991.

1.02 REGULATORY REQUIREMENTS

- .1 Do work in accordance with the safety measures of the Canada Labour Code Part II, the New Brunswick Occupational Health and Safety Act and WorkSafeNB provided that in any case of conflict or discrepancy the more stringent requirements shall apply.

1.03 RESPONSIBILITY

- .1 Contractor is responsible for the health and safety of all persons on site. Contractor is also responsible for the protection of property, persons and the environment on or adjacent to the site in so far as the work may affect these.
- .2 Contractor and all contractor's employees are to comply with all safety requirements specified in the Contract Documents as well as all applicable federal, provincial and local statutes, regulations, ordinances and with Contractor's site-specific Health and Safety Plan.
- .3 It is the Contractor's responsibility to ensure that all their employees are provided all Personal Protective Equipment (PPE) necessary to perform all work. Hard hats, ear defenders, highly visible safety vests, work boots and safety glasses are to be worn at all times.

1.04 UNFORESEEN HAZARDS

- .1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of work, the Contractor must have procedures in place to facilitate the Employee's Right to Refuse Work in accordance with Acts and Regulations of New Brunswick. The Contractor is to advise the Engineer verbally and in writing of any employee who exercises this right.

1.05 CORRECTION OF NON-COMPLIANCE

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

1.06 WORK STOPPAGE

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

1.07 SAFETY MEASURES

- .1 Observe and enforce safety regulations required by Canada Labour Code, N.B. Regulation 91 - 191, WorkSafeNB; Municipal Statutes; Authorities and CE Branch Safety Policy.
- .2 In event of conflict between any provisions of above authorities the most stringent provision governs.
- .3 Contractor shall ensure employees follow applicable regulations and wear CSA class 1 protective footwear, ear defenders, CSA approved eye protection, shirts and long pants at all times while installing and repairing chain link fences.
- .4 Personnel working in, on and around moving equipment shall wear highly visible clothing.
- .5 The contractor shall ensure that employees have sufficient Personal Protective Equipment to guard them from all hazards to which they may be exposed.

1.08 WHMIS

- .1 Comply with regulations regarding Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of Material Safety Data Sheets acceptable to Human Resources Skills Development Canada and Health Canada.

END OF SECTION

1.01 FIRE SAFETY PLAN

- .1 Contractors and their personnel will be familiar with this section as well as The National Fire Code of Canada, latest edition and applicable building fire orders which are posted in all DND buildings.

1.02 FIRE DEPARTMENT BRIEFING

- .1 The Engineer shall coordinate arrangements for the Contractor to be briefed on Fire Safety at their pre-work conference by the Fire Chief before any work is commenced.

1.03 REPORTING FIRES

- .1 Know the location of nearest fire alarm box and telephone, including the emergency phone number.
- .2 Report immediately all fire incidents to the Fire Department as follows:
 - .1 Activate the nearest internal fire alarm pull station; or
 - .2 Telephone: 911; and
 - .3 Depart building to a safe area for that building.
- .3 If in the training area you must also call Range Control 422-2482.
- .4 When reporting a fire by telephone, give the location of the fire, name or number of building and be prepared to verify the location.

1.04 INTERIOR AND EXTERIOR FIRE PROTECTION AND ALARM SYSTEMS

- .1 Fire protection and alarm systems shall not be:
 - .1 Obstructed.
 - .2 Shut-off.
 - .3 Left inactive at the end of a working day or shift without notification and authorization from the Fire Chief or his representative.
- .2 Fire hydrants, standpipes and hose systems shall not be used for other than firefighting purposes unless authorized by the Fire Chief.

1.05 FIRE EXTINGUISHERS

- .1 The Contractor shall supply fire extinguishers, as scaled by the Fire Chief, necessary to protect, in an emergency, the work in progress and the contractors physical plant on site.

1.06 BLOCKAGE OF ROADWAYS

- .1 The Fire Chief shall be advised of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by the Fire Chief, erecting of barricades and the digging of trenches.

1.07 SMOKING PRECAUTIONS

- .1 Although smoking is not permitted in hazardous areas, care must still be exercised in the use of smoking materials in non-restricted areas. Smoking

is not permitted in DND buildings.

1.08 RUBBISH AND TO WASTE MATERIALS

- .1 Rubbish and waste materials are to be kept a minimum.
- .2 The burning of rubbish is prohibited unless approved by the Fire Chief.
- .3 Removal:
 - .1 All rubbish, greasy or oily rages or materials subject to spontaneous combustion shall be removed from the work site at the end of the work day or shift or as directed.
- .4 Storage:
 - .1 Extreme care is required where it is necessary to store oily waste in work areas to ensure maximum possible cleanliness and safety.

1.09 FLAMMABLE LIQUIDS

- .1 The handling, storage and use of flammable liquids are to be governed by the current National Fire Code of Canada.
- .2 Flammable liquids such as gasoline, kerosene, naphtha may be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing the Underwriter's Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable liquids exceeding 45 litres for work purposes, requires the permission of the Fire Chief.
- .3 Transfer of flammable liquids is prohibited within buildings.
- .4 Transfer of flammable liquids shall not be carried out in the vicinity of open flame or any type of heat-producing devices.
- .5 Flammable liquids having a flash point below 38°C such as naphtha or gasoline shall not be used as solvents or cleaning agents.
- .6 Flammable waste liquids, for disposal, shall be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and the Fire Department is to be notified when disposal is required.

1.10 . HAZARDOUS SUBSTANCES

- .1 If the work entails the use of any toxic or hazardous materials, chemicals and/or explosives, or otherwise creates a hazard to life, safety or health, work shall be in accordance with the National Fire Code of Canada.
- .2 The Fire Chief is to be advised, and a "Hot Work" permit issued in all cases involving welding, burning or the use of blow torches and salamanders, in buildings or facilities. special precautions are necessary to safeguard life and property from damage by fire or explosives.
- .3 Wherever work is being carried out in dangerous or hazardous areas involving the use of heat, fire watchers, equipped with sufficient fire extinguishers shall be provided. The determination of dangerous or hazardous areas along with the level of precaution necessary for fire Watch shall be at the

discretion of the Fire Chief. Contractors are responsible for providing fire watch service for their work on a scale established and in conjunction with the Fire Chief at the pre-work conference.

- .4 Where flammable liquids, such as lacquers or urethanes are to be used, proper ventilation shall be assured and all sources of ignition are to be eliminated. The Fire Chief is to be informed prior to and at the cessation of such work.

1.11 . QUESTIONS AND/OR CLARIFICATION

- .1 Any questions or clarification on Fire Safety in addition to the above requirements shall be directed to and cleared through the Fire Chief.

1.12 FIRE INSPECTION

- .1 Fire Chief shall be allowed unrestricted access to work site.
- .2 The Contractor shall co-operate with the Fire Chief during routine inspections of the work site.
- .3 The Contractor shall immediately remedy all unsafe fire situations identified by the Fire Chief.

END OF SECTION

- 1.1 General .1 Contractors will take all reasonable steps to ensure that they and their employees have complied with all pertinent legislation and have protected the environment.
- 1.2 Disposal of Wastes .1 Do not bury rubbish or waste on site. All wastes must be disposed of in designated containers.
- .2 All potential hazardous wastes must be disposed of in a proper manner.
- 1.3 Spill Protection .1 The Contractor must have adequate clean up materials for any potential hazardous materials used in the completion of the work (ie. fuels, oils, lubricants, etc).
- .2 In the event of a spill the Contractor will immediately take corrective action to clean up the material.
- .3 In the event of a spill of over one litre of a hazardous material, the Contractor will immediately inform proper authorities at the 5 CDSB Gagetown firehall, Tel 1-506-422-2106 and take necessary remedial action.

END OF SECTION

1.01 GENERAL

- .1 Use new material unless otherwise specified.
- .2 Use products of one manufacturer for material of same type or classification unless otherwise specified.
- .3 Provide material and equipment of specified design and quality, conforming to published ratings for which replacement parts are readily available.

1.02 MANUFACTURERS INSTRUCTIONS

- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
- .2 Notify Engineer in writing of any conflict between these specifications and manufacturers instructions. Engineer will designate which document is to be followed.

1.03 FASTENINGS GENERAL

- .1 Provide metal fastenings and accessories in same texture, colour and finish as base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing exterior work.
- .2 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage.
- .3 Fastenings which cause spalling or cracking are not acceptable.

1.04 DELIVERY AND STORAGE

- .1 Deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.
- .2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
- .3 Store material and equipment in accordance with suppliers instructions.
- .4 Damaged surfaces or any damaged material will be replaced at the contractor's expense.

1.05 ACCEPTABILITY OF MATERIAL

- .1 Requests for "acceptance" of materials in addition to those presently established as "acceptable" by Contract documents shall be submitted in writing. The request must be supported with sufficient product information to enable the engineer to make an assessment.

1.06 AUGER TRUCK

- .1 Auger truck means, special multipurpose vehicle-mounted machines, commonly

known as digger-derricks. These machines are primarily designed to accommodate components which dig holes, set poles, and position materials and apparatus. Digger derrick trucks designed, built and maintained in accordance with ANSI/ASSE A10.31 standards for "Construction and Demolition Operations - Safety Requirements, Definitions and Specifications for Digger Derricks.

- .1 Auger truck (Derrick-Digger) will be complete with sufficient tools and equipment for the safe operation and installation of Chain Link Fence.
- .2 Hydraulic operated auger, with sufficient auger bits to drill holes.
- .3 Truck to be fitted with stabilizer legs

1.07 SKID STEER

- .1 Skid Steer will be trac type. Skid steer will be complete with attachments for fence installation.

END OF SECTION

1.01 WORK INCLUDED

- .1 Install or repair chain link fencing and roller and swing gates as requested on Call Up Form CF - 942.

1.02 REFERENCE STANDARDS

- .1 Unless otherwise specified, install chain link fence in accordance with:
 - .1 N/CGSB-138.1-96, Fabric for Chain link Fence;
 - .2 N/CGSB-138.2-96, Steel Framework for Chain Link Fence;
 - .3 N/CGSB-138.3-96, Installation of Chain Link Fence; and
 - .4 N/CGSB-138.4-96, Gates for Chain Link Fence.
- .2 Unless otherwise specified, galvanizing in accordance with:
 - .1 TM A90/A90M-01, Standard Test Method for Weight (Mass) of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings;
 - .2 TM A 121-99, Standard Specification for Zinc-coated (Galvanized) Steel Barbed Wire; and
 - .3 N/CSA-G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
- .3 Concrete Materials and Methods of Concrete Construction in accordance with CAN/CSA-A23.1-04/A23.2-04 unless otherwise specified.

1.03 MATERIALS

- .1 Concrete: concrete mix designed to produce 32 MPa minimum compressive strength at 28 days and containing 20 mm maximum size coarse aggregate, with water/cement ratio for Class C2 exposure and 40 mm slump at time and point of deposit, 5 to 8% air entrainment, minimum cement content 324 kg /m³.
- .2 Chain link fence fabric, post and rails to match existing unless otherwise specified by the Engineer.
- .3 All fencing materials to be equivalent match or be approved alternative to the existing.

1.04 FINISHES

- .1 Galvanizing:
 - .1 For chain link fabric to CAN/CGSB-138.1 Grade 2;
 - .2 For pipe: 600 g/m² minimum to ASTM A90;
 - .3 For barbed wire: to ASTM A121, Class 2; and
 - .4 For other fittings: to CAN/CSA-G164.

1.05 DEMOLITION

- .1 Remove, dispose of and replace damaged fence, posts, rails, fittings, angle barb arms, gate and footings as required and approved by the Engineer.

1.06 GRADING

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

of fence and ground surface neither less than 40 mm nor more than 75 mm.

1.07 INSTALLATION/ REPAIR OF FENCE

- .1 Erect fence along lines as directed by Engineer and in accordance with CAN/CGSB-138.3.
- .2 Excavate line post holes 250 mm (10 in.) diameter to 1200 mm (4 ft.) depth and end/standard gate posts 350 mm (14 in.) diameter to 1371 mm (4.5 ft.) depth by methods approved by Engineer.
- .3 Space line posts 3 m apart, measured parallel to ground surface.
- .4 Space straining posts at equal intervals not exceeding 150 m if distance between end or corner posts on straight continuous lengths of fence over reasonably smooth grade is greater than 150 m.
- .5 Install additional straining posts at sharp changes in grade and where directed by Engineer.
- .6 Install corner post where change in alignment exceeds 10°.
- .7 Install end posts at end of fence and at buildings. Install gate or roller posts on both sides of gate opening.
- .8 Pour concrete to earth in mechanically augered holes with smooth cylindrical sides or use sonotubes if required for soil conditions. Embed posts into concrete to minimum 0.76m (2.5 ft.) depth for line posts and minimum 1.07m (3.5 ft.) depth for terminal or standard gate posts. Extend concrete 25 mm above ground level and slope to drain away from posts. Brace to hold posts in plumb position and true to alignment and elevation until concrete has set.
- .9 In very poor and wet soil conditions drive posts into ground 1371 mm (4.5 ft.) with no concrete foundation.
- .10 Install brace between end and gate posts and nearest line post, placed in centre of panel and parallel to ground surface. Install braces on both sides of corner and straining posts in similar manner.
- .11 Install overhang tops and caps.
- .12 Install top rail between posts and fasten securely to posts and secure waterproof caps
- .13 Install bottom tension wire, stretch tightly and fasten securely to end, corner, gate and straining posts with turnbuckles and tension bar bands.
- .14 Lay out fence fabric. Stretch tightly to tension recommended by manufacturer and fasten to end, corner, gate and straining posts with tension bar secured to post with tension bar bands spaced at 300 mm intervals. Knuckled selvedge at bottom. Twisted (barbed) selvedge at top.
- .15 Secure fabric to top rails, line posts and bottom tension wire with tie wires at 450 mm intervals. Give tie wires minimum two twists.
- .16 Install barbed wire strands and clip securely to lugs of each bracket.

1.08 INSTALLATION AND FABRICATION OF GATES

- .1 Install gates as directed by Engineer.
- .2 Set swing gate bottom 75 to 125 mm (3 to 5 in.) above ground surface.
- .3 Set roller gate bottom approximately 200 mm (8 in.) above ground surface.
- .4 All new gates will be fabricated off site before arriving on site. No fabrication of new gates on site will be acceptable. Only minor on site repairs for existing gates are acceptable.

1.09 TOUCH-UP

- .1 Repair damaged galvanized surfaces. Clean damaged surfaces with wire brush removing loose and cracked coatings. Apply two coats of organic zinc-rich paint to damaged areas. Pre-treat damaged surfaces according to manufacturer's instructions for zinc-rich paint.

END OF SECTION