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## 11 ENGINEER'S SITE FACILITIES

### 11.1 GENERAL

#### 11.1.1 Scope

1 This Part specifies the requirements for the Engineer's temporary site facilities and includes site offices, utility connections, provision of equipment and supplies and attendance.

2 Related Sections and Parts are as follows

This Section

Part 10.....Occupational Health and Safety

Part 13.....Setting Out of the Works

### 11.2 ENGINEER'S SITE OFFICES

#### 11.2.1 General

1 The Contractor shall provide site offices the type and number as stated in the Project Documentation. The position of the site offices shall be to the approval of the Engineer.

2 Upon removal of the site offices, the area occupied or otherwise affected by them shall be reinstated to its original condition.

#### 11.2.2 Type 1 Offices

1 Unless described elsewhere in the Project Documentation the Contractor shall provide, maintain and remove on completion of the Works the Engineer's site offices described in this Clause.

2 The Contractor shall proceed with the provision of a site office for the exclusive use of the Engineer immediately following the award of the Contract and shall provide temporary alternative accommodation to the Engineer's approval until such time as the office is made available.

3 The office shall have a minimum area of 20 m<sup>2</sup> and shall comply with the following:

- (a) The structure shall be weatherproof.
- (b) The windows and doors shall be dust-proof and the windows shall be fitted with fly screens.
- (c) The office shall be air-conditioned to maintain a maximum steady dry bulb temperature of 25°C at a relative humidity of 50% under the expected climatic conditions expected at the Site.
- (d) Adequate effective lighting and power outlets shall be installed in accordance with the latest requirements of the Qatar General Electricity & Water Corporation.
- (e) The walls and ceilings shall be painted with emulsion paint.

4 The office shall be provided with the following furniture to the approval of the Engineer:

- (a) 1 No. kneehole pattern desk with a total of six lockable drawers, approximately 1500 x 800 x 760 mm in size.
- (b) 1 No. swivel chair with armrests.
- (c) 2 No. stacking or folding chairs.
- (d) 1 No. hanging file or plan chest suitable for AO size prints.
- (e) 1 No. wastepaper basket.

- (f) 1 No. two drawer filing cabinet.  
(g) 1 No. wall mounted pin board, 1000 x 2000 mm in size.
- 5 Sanitary and washing facilities shall be provided for the exclusive use of the Engineer and shall include a WC and a wash-hand basin an adequate supply of hot and cold water shall be provided at all times.
- 6 The Contractor shall insure the site offices against fire, burglary and other risks.
- 7 The Contractor shall keep on site at all times an adequate supply of clean, fresh, chilled drinking water for the consumption of the Engineer.
- 8 The Contractor shall maintain the offices in a clean and sanitary condition.
- 11.2.3 Type 2 Offices**
- 1 The Engineer's site offices described in this Clause shall be provided in lieu of Type 1 Offices only where it is a stated requirement of the Project Documentation.
- 2 The offices shall be portable units, mounted on skids or similar and where directed in the Project Documentation shall become the property of the Government on completion of the Contract. On completion of the Contract, the offices which are to become the property of the Government shall be repaired and redecorated to the satisfaction of the Engineer; they shall then delivered to a location designated by the Engineer within 50 km of the Site.
- 3 The buildings shall conform to the general configuration shown below. The number of each type of unit shall be as stated in the Project Documentation.



4 The Contractor shall proceed with the provision of the portable offices, which shall be for the exclusive use of the Engineer immediately following the award of the Contract and shall provide temporary alternative accommodation to the Engineer's approval until such time as the offices are made available.

5 The Contractor shall submit to the Engineer for approval a comprehensive specification and drawings showing the accommodation proposed complete with furnishings, equipment and fittings before placing any orders.

6 The units shall be mounted on adequate concrete foundations and shall be provided with concrete access steps where necessary.

7 The units may be constructed of composite timber framed panels with wood or metal cladding, any combination of these, or alternative forms or construction which comply with the following levels of performance:

Walls	Thermal conductance	-	0.60 w/m <sup>2</sup> °C
	Fire resistance	-	½ hour

Roof	Thermal conductance	-	0.60 m <sup>2</sup> °C
	Roof resistance	-	½ hour

8 Roof coverings shall be selected for durability, freedom from excessive maintenance, and the ability to withstand extreme exposure to sun, heat and humidity.

9 The units shall be finished internally and externally with low maintenance materials.

10 The offices shall be air-conditioned with wall mounted units to maintain each room at a maximum steady dry bulb temperature of 25°C at a relative humidity of 50% under the expected climatic conditions expected at the Site. Extract fans capable of 10 air changes per hour shall be provided in the kitchen and toilets.

11 The installation and testing of wiring and electrical equipment in the units shall be in accordance with the latest requirements of the Qatar General Electricity & Water Corporation.

12 Each office shall be provided with the following furniture to the approval of the Engineer:

- (a) 1 No. kneehole pattern desk with a total of six lockable drawers and approximately 1500 x 800 x 760 mm in size.
- (b) 1 No. swivel chair with armrests.
- (c) No. stacking or folding chairs.
- (d) 1 No. hanging file or plan chest suitable for AO size prints.
- (e) 1 No. wastepaper basket.
- (f) 1 No. two drawer filing cabinet.
- (g) 1 No. wall mounted pin board, 1000 x 2000 mm in size.

13 Each toilet shall be provided with the following sanitary fittings to the approval of the Engineer and an adequate supply of hot and cold water at all times:

- (a) 1 No. low level WC suite.
- (b) 1 No. Wash-hand basin.
- (c) 1 No. shower tray, mixer fittings, rose and shower curtain.
- (d) 1 No. toilet roll holder, towel rail, soap dish and mirror.
- (e) a suitable number of cups, saucers and drinking glasses.

- 14 The samples and meeting room shall be provided with the following furniture to the approval of the Engineer:
- (a) 2 No. tables, each approximately 1200 x 2000 mm in size.
  - (b) No. folding or stacking chairs.
  - (c) 1 No. wall mounted blackboard, 1000 x 2000 mm in size.
  - (d) 1 No. wall mounted pin board, 1000 x 3000 mm in size.
  - (e) 1 No. shelf unit for approved samples with 5 tiers of shelves 400 mm wide x 2400 mm long overall.
- 15 All furniture and equipment shall remain the property of the Contractor and shall be removed following completion of the Works unless otherwise noted in the Project Documentation.
- 16 The Kitchen shall be provided with the following equipment to the approval of the Engineer
- (a) 1 No. stainless steel single bowl single drainer sink with hot and cold water and cupboards underneath
  - (b) 1 No. floor mounted two door cupboards to match sink.
  - (c) Cabinets and shelves to match sink, as required.
  - (d) 2 ring cooker and microwave.
  - (e) 1 No. Refrigerator/Freezer with a capacity no less than 500 litres.
  - (f) 1 No. three pint kettle and sufficient crockery and cutlery.
  - (g) A suitable number of mugs, cups, saucers and drinking glasses.
  - (h) Table coasters for use on desk tops.
  - (i) Hand towels and drying up cloths, laundered regularly.
  - (j) Dishwashing facilities, clothes, sponges and washing up liquid, all replaceable.
  - (k) Cleaning brushes, mop, bucket and floor clothes.
- 17 The Contractor shall insure the site offices against fire, burglary and other risks.
- 18 The Contractor shall keep on site at all times an adequate supply of clean, fresh, chilled drinking water for the consumption of the Engineer.
- 19 The Contractor shall maintain the Offices in a clean and sanitary condition.
- 20 Each type of unit shall be provided with fire extinguishers and water cooler.

#### **11.2.4 Car Parking Facilities**

- 1 Parking areas shall be paved or have a finished surface as approved by the Engineer and shall be covered with a suitable canopy to provide shading.
- 2 The number of shaded car parking spaces required shall be 2 No. for Type 1 Offices and 6 No. for Type 2 Offices unless otherwise stated in the Project Documentation.

### **11.3 UTILITY CONNECTIONS**

#### **11.3.1 General**

- 1 The Contractor shall make all arrangements and pay all charges in connection with the installation, maintenance, operation and removal of the service utilities described in this Clause.

#### **11.3.2 Electricity**

- 1 The Contractor shall arrange for the provision of an uninterrupted electrical power supply to the Engineer's offices during all working hours and any at other time as requested by the Engineer for the duration of the Contract.

#### **11.3.3 Water**

- 1 The Contractor shall arranged for the provision of an uninterrupted water supply to the Engineer's offices during all working hours and at any other time as requested by the Engineer for the duration of the Contract.
- 2 The Contractor shall provide inline filters on all water supplies into Employer and Engineer's site Facilities. The Contractor shall maintain these at regular intervals as per manufacturer instruction throughout the duration of the Work order.

#### **11.3.4 Telephone**

- 1 The Contractor shall arrange for the provision of two (2) land lines for the sole use of the Engineer for Type 1 Offices and three (3) land lines for the sole use of the Engineer for Type 2 Offices.
- 2 The Contractor may recover the net cost of international calls made by the Engineer.

#### **11.3.5 Internet**

- 1 .The Contractor shall arrange for the provision of a dedicated and uninterrupted internet access to the Engineer's offices during all working hours and at any other time as requested by the Engineer for the duration of the Contract. The internet connection should be provided with a bandwidth running at a minimum of 1 mbps upload capacity.

### **11.4 PROVISION OF EQUIPMENT AND SUPPLIES**

#### **11.4.1 General**

- 1 The following items of equipment, supplies and associated level of service shall all be provided unless detailed elsewhere in the Contract Documentation.

#### **11.4.2 Computers and Scanners/Printers**

- 1 The Contractor shall provide new network/internet capable computers and scanners/printers for the sole use of the Engineer. The number of computers and scanners/printers required and their performance specification shall be as detailed in the Project Documentation. The Contractor shall also supply and install any computer software as detailed in the Project Documentation.
- 2 The Contractor shall maintain the computers and scanners/printer for the duration of the Contract and provide all consumables necessary for its operation.
- 3 The Contractor shall be responsible for installing legal copies of operating system and software, trouble shooting, supplying of required consumables and maintenance of the system.
- 4 Operating system and software requirements shall be as specified by the Engineer, with the following as a minimum:
  - (a) Latest version of Microsoft Windows Operating System
  - (b) Latest version of Microsoft Office
- 5 All software must be of latest version and Arabic enabled, to the approval of the Engineer.

- 6 The Contractor shall ensure that all computers and scanners/printers provided for the Engineers use are networked within the Engineers facilities to the satisfaction of the Engineer.
  - 7 The Contactor shall provide new desktop computers and laptops as shown in the Schedule of Rates minimum 20-inch Flat Panel VGA/analogue colour monitors for use by the Engineer.
  - 8 The Desktop and laptop computers shall comply with the following:
    - (a) Intel Core 2 Duo Processor (1.86GHz,1066MHz,2MB cache)
    - (b) 1000GB(7200rpm)Serial ATA Hard Drive
    - (c) 56k Modem
    - (d) 32X DVD+/-RW Drive
    - (e) Wireless network adaptor (Wi-Fi)
    - (f) Wireless Keyboard & Mouse
    - (g) Card Reader
  - 9 The Desktop and laptop computers shall comply with the following: New licensed copies of MS Windows, MS Office Professional, MS Project and AUTOCAD, Primavera P6 and Primavera Contract Manager (PCM) SOFTWARE SHALL BE PROVIDED.
  - 10 Colour printer shall be of the laser type suitable for A3 size paper and having scanning and copying facilities built in. It shall be quiet in operation (Hewlett Packard Desk Jet (latest model) or similar).
  - 11 The Computer equipment shall be returned to the Contractor at the end of Maintenance Period. The Contractor shall be responsible for supply of all necessary cartridges and paper and for maintenance of the equipment by the manufacture's agent throughout the period of the Work order.
  - 12 The Contractor shall provide all necessary voltage stabilization equipment to ensure trouble-free operation of the computer equipment.
  - 13 All computers and printers shall be networked.
- 11.4.3 Photocopier**
- 1 The Contractor shall provide a new photocopier for the sole use of the Engineer. The performance specification for the photocopier shall be as detailed in the Project Documentation.
  - 2 The Contractor shall maintain the photocopier for the duration of the Contract and provide all consumables necessary for its operation.
  - 3 Contractors shall provide a new floor standing, stationary platen, and plain paper colour photocopier for use and approved by the Engineer.
  - 4 The photocopier shall be provided with an automatic document feeder capable of copying both sides.
  - 5 The Range of copy sizes of the photocopier shall be from A3 size (297x420mm) to A4 size (210x297mm), portrait and landscape. Three paper storage trays shall be provided.
  - 6 The photocopier shall be capable of reducing/enlarging originals by 50% to 200% in 1% increments.
  - 7 The photocopier shall have an A4 size rotating paper cassette and automatic paper size/zoom ratio selection.

- 8 Throughput shall be not less than 40 A4 copies per minute.
- 9 The photocopier shall be able to scan and email documents.
- 10 The photocopier shall be returned to the contractor at the end of period of Maintenance. The contractor shall be responsible for supplying the necessary paper and maintenance of the equipment by the manufacturer's agent throughout the work order.

#### **11.4.4 Measuring and Recording Equipment**

- 1 The Contractor shall provide measuring and recording equipment for the sole use of the Engineer. The following items, which shall be to the approval of the Engineer, shall be provided for the duration of the Contract:
- (a) 1 No. Electronic Distance Measurement (EDM) station.
  - (b) 1 No. 1" Total Station theodolite (or equivalent) including all necessary tripods, prisms etc.
  - (c) 1 No. Automatic engineer's level including tripod.
  - (d) 1 No. Metric levelling staff.
  - (e) 1 No. Calibrated steel survey band 50m long.
  - (f) 2 No. 30m nylon tapes.
  - (g) 2 No. 25 m metal tapes.
  - (h) 4 No. 5m pocket tapes.
  - (i) 6 No. Ranging rods.
  - (j) 1 No. Mason's Spirit level.
  - (k) 1 No. Bitmac thermometer.
  - (l) 1 No. digital camera.
  - (m) Level and field books as required.
- 2 Other equipment such as pegs, tools, etc, which are necessary for the checking of the Works shall be provided as requested by the Engineer.
- 3 The Contractor shall maintain and replace as necessary the equipment for the duration of the Contract. Surveying instruments shall be new or in as good as new condition, of an approved make with a current certificate of adjustment.

#### **11.4.5 Stationary Supplies**

- 1 The Contractor shall supply stationary for the Engineer for the duration of the Contract. Stationary items shall include, but not necessarily be limited to, the following:
- (a) Files and file dividers (A4 and A3 size).
  - (b) Paper (A4 and A3 size).
  - (c) Writing pens, marker pens, highlighter pens (various colours).
  - (d) Pencils (various colours).
  - (e) Pencil sharpeners.
  - (f) Erasers.
  - (g) Staplers and staples.
  - (h) Hole punches.
  - (i) Paper clips and bulldog clips.

#### **11.4.6 Safety Equipment and Clothing**

- 1      The Contractor shall supply safety equipment and clothing for the Engineer and his staff. Safety equipment and clothing shall include, but not necessarily be limited to, the following:
  - (a) Safety helmets, boots, gloves, High visibility vests, safety glasses (Clear and tinted)
  - (b) Safety belts and harnesses.
  - (c) Boiler suits.
  - (d) Any other PPE identified by the Contractors job hazard analysis or risk assessment process
- 2      The Contractor shall also supply gas detection equipment and breathing apparatus in accordance with the relevant provisions of Part 10 of this Section, Occupational Health and Safety.

#### **11.4.7 Telephones and Facsimile Machines**

- 1      For Type 1 Offices, the Contractor shall supply and install a telephone and facsimile machine. The telephone and facsimile machine should conform to the relevant provisions of any Telecom Provider standard or requirement.
- 2      For Type 2 Offices, the Contractor shall supply and install a telephone in each office and the meeting room. Each telephone shall be connected to a private address box exchange (PABX) system. The Contractor shall also supply and install a facsimile machine. The telephones, PABX system and facsimile shall conform to the relevant provisions of any Telecom Provider standard or requirement.
- 3      The Contractor shall provide a new A4 size plain paper desktop facsimile machine complying with the following:
  - (a) 2 Line x 24 character LCD Display
  - (b) ITU compatible
  - (c) Resolution horizontal scanning 8 pixel/mm
  - (d) Vertical scanning Standard 3.85 lines/mm
  - (e) Fine 7.7 lines/mm
  - (f) 150 sheet paper tray (80g/m<sup>2</sup>)
- 4      The facsimile machine shall be returned to the contractor at the end of maintenance period. The Contractor shall be responsible for supply of all necessary toner or ink cartridges and plain white paper and for maintenance of the equipment by the manufacturers' s agent throughout the Work order.
- 5      The Contractor shall provide six digital cameras and one digital video camera for the exclusive use of the Engineer or his designated representative and supply software, batteries, cables and USB flash drives or external hard drives as required. The Digital camera shall have a minimum specification of 35-105 zoom, with a minimum of 16.0 megapixels for prints up to 20" x 30", 8GB internal memory and video/audio facility. The cameras shall be returned to the contractor at the end of the contract period

### **11.5 ATTENDANCE**

#### **11.5.1 Assistance to the Engineer**

- 1      The Contractor shall provide every assistance to the Engineer in carrying out his duties.
- 2      The Contractor shall provide for the use of the Engineer's Representative and his staff, any chainman/assistants to carry out any duties whatsoever, as required by the Engineer's Representative.

**11.5.2 Contract Administration**

- 1      The Contractor shall provide secretaries, cleaners and tea persons for the exclusive use of the Engineer for the duration of the Contract.

END OF PART

ARAB ENGINEERING BUREAU