

C2.1 Pricing Instruction

PG-02.2 (EC): PRICING INSTRUCTIONS - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	INSTALLATION OF MODULAR LIBRARY AT MOSHANA VILLAGE		
Tender no:	PWR 51/21	Reference no:	

C2.1 Pricing Instructions

1. GENERAL

- (a) The Standard for Uniformity in Construction Procurement published in terms of the Construction Industry Development Board (CIDB) Act, 2000 (Act no. 38 of 2000), the Standardized Construction Procurement Documents for Engineering and Construction Works as issued by the CIDB and any other relevant documentation pertaining thereto must be studied and all principles in this regard must be applied to all procurement documentation, practices and procedures.
 - (b) The consultant(s)/project manager must acquaint themselves fully with all relevant matters pertaining to this section in order to enable prospective tenderers to price for all eventualities.
2. The following items must be included in the Pricing Instructions. Any additional items deemed necessary must be included herein.

(a) BILLS OF QUANTITIES / LUMP SUM DOCUMENT

The **bills of quantities / lump sum document** forms part of and must be read and priced in conjunction with all the other documents forming part of the **contract documents**, the Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings and all other relevant documentation.

(b) VALUE ADDED TAX

The **contract sum** must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the **bills of quantities / lump sum document** must however be net (exclusive of VAT) with VAT calculated and added to the total value thereof in the Final Summary.

(c) FIXED PRICE CONTRACT

Should the **bills of quantities / lump sum document** be a fixed price contract, the following clause must be inserted in the Pricing Instructions:

Tenderers are to take note that contract price adjustments are not applicable to this contract. Tenderers should therefore make provision in the **contract sum**, schedule of rates, etc., for possible price increases during the contract period, as no claims in this regard shall be entertained.

Part C3: Scope of work

C3: Scope of work

PG-01.2 (EC) SCOPE OF WORKS – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 4.1 of March 2005)

Project title:	<i>INSTALLATION OF MODULAR LIBRARY AT MOSHANA VILLAGE</i>		
Tender no:	<i>PWR 51/21</i>	Reference no:	

C3. Scope of Works

1. GENERAL

- (a) The Standard for Uniformity in Construction Procurement published in terms of the Construction Industry Development Board (CIDB) Act, 2000 (Act no. 38 of 2000), the Standardized Construction Procurement Documents for Engineering and Construction Works as issued by the CIDB and any other relevant documentation pertaining thereto must be studied and all principles in this regard must be applied to all procurement documentation, practices and procedures.
 - (b) The consultant(s)/project manager must acquaint themselves fully with all relevant matters pertaining to this section in order to enable prospective tenderers to price for all eventualities.
2. The following serves as a guideline only with regard to items to be included in the Scope of Work. Any additional items deemed necessary must be included herein.

(a) EXTENT OF THE WORKS

The scope of works includes Alteration, Earth works, Concrete, foundations, Reinforcement, Masonry, Plumbing and drainage, Installation of fence, Paving and Installation of modular library.

(b) ORDER OF THE WORKS

Any procedure affecting the sequence of construction or other activities must be described.

Contract details for the works in sections, if applicable, must be inserted in clause 42.2.8 of form DPW-04 (EC): Contract Data.

(c) BUILDINGS OCCUPIED

Any specific restrictions with regard to buildings in use must be described.

Specific requirements must be described in clause 12.1.6 of the Schedule of Variables, Section B, JBCC Preliminaries.

(d) ACCESS

Provide details of any special requirements/restrictions with regard to access.

DEPARTMENT OF PUBLIC WORKS

(hereinafter referred to as the Employer)

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

This Specification shall be used in conjunction with all other applicable safety specifications, legislation and regulations in force at the time of the contract. Where unique site specifications are in force, those site specifications shall take precedence over this Specification.

HEAD OFFICE
Private Bag X2037
Mmabatho
2735

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OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION**

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SECTION 1 : INTRODUCTION

1.1 Scope

This Specification details the health and safety requirement associated with the works.

1.2 Preamble

Every effort has been made to ensure that this Specification is accurate in all respects, however, should it contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time.

1.3 Purpose

The purpose of this Specification is to brief Contractors on the significant safety aspects of the project. It provides information and requirements on *inter alia* :

- a) safety considerations affecting the site and its environment;
- b) health and safety aspects of the associated structures and equipment;
- c) submissions on health and safety matters; and
- d) the contractor's health & safety plan.

1.4 Interpretations

Occupational Health and Safety Act, Act 85 of 1993 shall apply to this contract. The Construction Regulations promulgated on 18 July 2003 and incorporated into the said Act by Government Notice R 1010, published in Government Gazette 25207 apply to any person involved in construction work. These regulations are hereinafter referred to as "the Construction Regulations" and the said Act as "the Act".

Construction work is defined as any work in connection with :

- a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- b) the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or
- d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work.

SECTION 2 : GENERAL

2.1 Employer

- 2.1.1 The Employer will appoint the Contractor in writing for the execution of the works.
- 2.1.2 The Employer will take reasonable steps to ensure that the Contractor's health and safety plan is implemented and maintained. The steps taken will include periodic audits at intervals of at least once every month.
- 2.1.3 The Employer or his Agent will stop the Contractor from executing construction work should the Contractor at any stage in the execution of the works :
 - a) fail to implement or maintain his health and safety plan;
 - b) execute construction work which is not in accordance with his health and safety plan; or
 - c) act in any way which may pose a threat to the health and safety of persons.

2.2 Contractor

- 2.2.1 The Contractor shall accept the appointment under the terms and Conditions of Contract. The Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 3 of the Construction Regulations. Annexure B of this Specification contains a "Notification of Construction Work" form. The Contractor shall submit the notification in writing prior to commencement of work.
- 2.2.2 The Contractor shall ensure that he is fully conversant with the requirements of this Specification. The specification is not intended to supersede the Act nor the Construction Regulations. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by the Contractor in terms of this contract continue to be a legal requirement of the Contractor.
- 2.2.3 The Contractor shall provide and demonstrate to the Employer a suitable and sufficiently documented health and safety plan based on this Specification, the Act and the Construction Regulations, which shall be applied from the date of commencement of and for the duration of execution of the works.
- 2.2.4 The Contractor shall provide proof of his registration and good standing with the Compensation Fund or with a licensed compensation

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insurer prior to commencement with the works.

- 2.2.5 The Contractor shall, in submitting his tender, demonstrate that he has made provision for the cost of compliance with the specified health and safety requirements, the Act and Construction Regulations.
- 2.2.6 The Contractor shall consistently demonstrate his competence and adequacy of resources to perform the duties imposed on the Contractor in terms of this Specification, the Act and the Construction Regulations.
- 2.2.7 The Contractor shall ensure that a copy of his health and safety plan is available on request to the Employer, an Inspector, Employee or Sub-contractor.
- 2.2.8 The Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the provisions of this Specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Employer or Inspector upon request. Upon completion of the works, the Contractor shall hand over a consolidated health and safety file to the Employer.
- 2.2.9 The Contractor shall, throughout execution of the contract, ensure that all conditions imposed on his Sub-contractors in terms of the Act and the Construction Regulations are complied with as if they were the Contractor.

SECTION 3 : GENERAL REQUIREMENTS

3.1 Contractor's Construction Safety Officer

Before commencing work, the Contractor shall designate a competent Construction Safety Officer (CSO) who shall be acceptable to the Agent to represent and act for the Contractor.

The Contractor shall inform the Agent in writing of the name and address of the Contractor's CSO and of any subsequent changes in the name and address of the officer, together with the scope and limitations of the CSO's authority to act for the Contractor.

The Contractor's CSO shall make available to the Employer a telephone number at which the CSO can be contacted at any time in the event of an emergency involving any of the Contractor's employees, or other persons at the works.

3.2 Log books

The Contractor shall keep the following log books and shall make them available to the Agent on request:

- a) A record of the names and addresses of its employees who are registered as trained fire-fighting personnel and who are available on site for fire-fighting duties.
- b) A record of the weekly inspection of first aid boxes.
- c) A record of the weekly inspections of ladders
- d) A record of the weekly inspections of fire-fighting equipment.
- e) A record of the monthly inspections of welding machines.
- f) A record of the monthly inspections of oxy-acetylene equipment.
- g) A record of the weekly inspections of scaffolding structures.
- h) A record of the monthly inspections of builder's hoists.
- i) A record of the monthly inspections of mobile and tower cranes.
- j) A record of the monthly inspections of lifting gear.
- k) A record of the inspections of electrical equipment.
- l) A record of the monthly tests of earth leakage units.
- m) A record of the weekly inspections of plant for gauging and mixing of materials for concrete.

3.3 First aid

3.3.1 Safety notice board

The Contractor shall provide a safety notice board where safety notices, site regulations concerning safe working practices and information on the nearest first aid station, ambulance, doctor and telephone numbers of the CSO and other relevant persons can be

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conspicuously displayed to all its staff. The size of the notice board shall be at least 600mm x 800mm.

3.3.2 First aid equipment

The Contractor shall provide for its employees a stretcher for emergencies and an approved first aid box. The first aid box shall be checked weekly by a responsible person, who shall be appointed by the Contractor, and a record shall be kept of the contents. Any deficient medical supplies shall be promptly replenished by the Contractor.

First aid equipment must be stored in an appropriate place and container to prevent contamination.

3.3.3 Reporting of incidents and/or injuries

All incidents in respect of damage to works, property or machinery, or injury to persons, shall be reported by the Contractor's CSO or site representative to the Agent by the quickest means possible.

A mandatory incident report form, containing full details of the incident, shall be completed and submitted to the Agent within twenty four (24) hours of the occurrence of the incident.

The Agent shall have the right to make all or any enquiries as to the cause and result of any such incident. The Contractor shall provide the Agent with full facilities for carrying out such enquiries.

3.4 Risk assessment and safety policy

Before commencing work the Contractor shall cause a risk assessment to be performed by a competent person appointed in writing and this shall form part of the health and safety plan.

A copy of the risk assessment shall be available on site at all times for inspection.

The Contractor shall at all times carry out the works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property.

The Contractor shall take all precautions, which are necessary and adequate to eliminate any conditions which contribute to the risk of injury to persons or damage to property.

The Contractor shall continually inspect all work, materials and equipment to discover and determine any such conditions and shall be solely responsible for the discovery, determination and elimination of such conditions.

During the period of this contract, the Contractor shall be responsible for the safe storage of all materials and equipment required for execution of the

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contract, and for disposal of all non-usable waste material in an orderly manner.

All materials, whether stored on the construction site or within the Contractor's designated area, shall be stored neatly and safely to prevent possible injury to any personnel. The material shall be stored to facilitate safe access to, and removal of the material from the storage area.

Any flammable material, such as paint, diesel fuel and oil, shall be stored in lockable non-combustible structures, which shall be clearly marked to indicate the hazardous nature of the materials stored within. The flammable materials stores shall be located in safe areas away from hazardous surroundings and adequate and suitable fire-fighting equipment shall be provided within easy reach of the materials stores.

3.5 Danger areas

All danger areas shall be demarcated by the contractor with appropriate tape and hazard notices to prevent unauthorized persons entering the danger area. Danger areas should include at least, *inter alia*, cranes, lifts and hoists in operation.

3.6 Hazard notices

The Contractor shall display hazard notices in all areas identified in the risk assessment as potentially hazardous.

3.7 Personal protective clothing

The Contractor shall provide the necessary personal protective clothing for his employees in hazardous areas, appropriate to the nature of the hazard identified in the risk assessment.

3.7.1 Hard hats

All employees of the Contractor shall wear hard hats in areas where appropriate hazard notices are displayed. The Agent shall have the right to ban certain colours if they are similar to the employer's identifying colours. Hard hats shall not be painted or otherwise defaced.

3.7.2 Eye protection

Suitable eye protection shall be worn in areas where appropriate hazard notices are displayed, or when grinding, chipping, breaking, drilling, any welding, blowtorch handling, cutting with oxyacetylene equipment of similar activities are taking place.

3.7.3 Hearing protection

Suitable hearing protection shall be worn in areas where appropriate hazard notices are displayed.

3.7.4 Foot wear

All employees of the Contractor shall wear undamaged, laced-up safety boots or safety shoes, suitable for the intended purpose, in prescribed areas where appropriate hazard notices are displayed.

3.7.5 Gloves

All employees of the Contractor shall wear suitable protective gloves in areas where appropriate hazard notices are displayed or when handling hot or hazardous materials or chemicals.

3.7.6 Clothing

All employees of the Contractor shall wear suitable protective clothing when working in proximity of machinery, power tools, hazardous materials or chemicals.

3.8 Road Traffic Ordinance/Transportation Act

The Contractor shall ensure that drivers of motor vehicles are in possession of a driver's licence, valid for the class of vehicle which they are required to drive, and shall produce the licence on request.

The Contractor shall not permit any driver to be in control of a vehicle at the works while under the influence of alcohol or drugs.

All vehicles of the Contractor shall display a name board bearing the Contractor's name. Hired vehicles shall bear an identifying sticker.

3.9 Overhead power lines

Regulations of the Electricity Supply Authority in connection with prohibition of operations in the vicinity of overhead power lines shall be observed by the contractor at all times.

3.10 Machine guarding

All power tools and machinery driven by belts, gears, ropes, chains, couplings and similar drives shall be adequately guarded. The Contractor shall prohibit the use of any equipment with a damaged, missing or inadequate guard.

3.11 Concrete mixing equipment

No Contractor shall use or cause to be used any plant for the storage, gauging and mixing of materials for concrete unless:

- a) The aggregates of different nominal size are separately stored in such a way that segregation, intermixing of different materials and contamination by foreign matter is prevented.
- b) The storage area shall be protected from unauthorized entry by an adequate barrier. A safe and tidy approach shall be maintained to the aggregate storage area.
- c) The Contractor shall appoint operators skilled in the operation of the plant.
- d) On a weekly basis, the plant shall be inspected by a competent person. The inspections shall include a check of the calibration of all the measuring devices and shall be recorded in a logbook, which shall be made available to the Agent on request.

3.12 Ladders

Every ladder shall be :

- a) Of good construction, sound material and adequate strength and suitable to the purpose for which it is used (e.g. electricians shall use suitable insulated ladders).
- b) Fitted with non-skid devices at the bottom of the stiles or with hooks or similar devices at the tops of the stiles.

Except for extension ladders, no ladder shall be used which is longer than 4,5m and no ladder shall have its reach extended by tying together two or more ladders.

All ladders shall be inspected weekly and a log shall be kept of the inspections.

3.13 Scaffold framework

Scaffold standards shall be firmly supported and secured against displacement and shall be kept vertical.

No Contractor shall use, or cause to be used, any scaffold unless it is inspected by a competent person at least once a week and after inclement weather.

SECTION 4 : SPECIAL REQUIREMENTS

4.1 Excavation/shoring

The Contractor shall ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing.

The face of an excavation shall not be undercut.

All excavations, irrespective of depth, shall be adequately screened off with barrier tape or some other suitable means of warning persons of a hazardous area. Where the depth of the excavation exceeds 2 m, a wooden or steel barrier shall also be erected around the excavation, particularly at the end of the working shift and at the start of weekends and holidays to prevent persons from falling into the excavations.

No construction materials shall be allowed to fall into an excavation. A safe and tidy approach shall be maintained around all excavations.

Adequate shoring, according to the recommendations of SABS 1200, Section D, 1988, shall be provided in the excavation by the Contractor when necessary. The shoring shall be approved by the Agent before excavation work continues.

4.2 Formwork and support work

The Contractor shall ensure that :

- a) All formwork and support work operations are carried out under the supervision of a competent person who has been appointed by the Contractor in writing for that purpose.
- b) All formwork and support work structures are adequately designed, erected, supported, braced and maintained so that they will be capable of supporting all anticipated vertical and lateral loads that may be applied to them and also that no loads are imposed onto the structure that the structure is not designed to withstand.
- c) The foundation conditions are and remain suitable to withstand the load caused by the formwork and support work structure and any imposed loads such that the formwork and support work structure are stable.
- d) All formwork and support work structures are inspected by a competent person, who has been appointed by the Contractor in writing for that purpose, immediately before, during and after, the placement of concrete of any other imposed load and thereafter on a daily basis until the formwork and support work structure has been removed and the results have been recorded in a register and made available on the site of the works.
- e) Upon casting concrete, the support work or formwork structure should be left in place until the concrete has acquired sufficient strength to

support safely, not only its own load, but also any imposed loads, and not removed until authorization has been given by the competent person contemplated in sub-paragraph (a).

4.3 Prevention of uncontrolled collapse

The contractor shall ensure that :

- a) All reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying of construction work.
- b) No structure or part of a structure is loaded in a manner that would render it unsafe.

4.4 Safe working loads

The Contractor shall ensure that :

- a) The safe working loads of hoists, load- bearing beams and cranes are prominently displayed at all times.
- b) The safe working loads are not exceeded under any circumstances.
- c) All lifting gear is marked with a unique identity number and recorded in a register.

4.5 Electrical equipment and procedures used by the contractor

All electrical equipment shall be regularly inspected by a qualified electrician, who shall be appointed by the Contractor, and the inspections shall be logged. The frequency of inspections shall be determined by the Agent. A record of the inspections shall be kept and shall be made available to the Agent on request.

The Contractor shall ensure that all his electrical equipment conforms to operational and safety requirements.

All earth leakage units shall be tested at intervals of not more than one month and signed for by a qualified electrician.

4.6 Commissioning safety precautions

The Contractor shall ensure that wherever repairs, adjustments or any other work are undertaken on any plant or machinery, the power supply is switched off, disconnected or the plant/ machinery disengaged until the work or repairs have been completed.

4.7 Toxic materials

The Contractor shall exercise all necessary care in the handling of toxic compounds and shall be able to identify the major chemical components in the event of medical treatment being required.

4.8 Hazardous chemicals and materials

The Contractor shall provide suitable adequate protective equipment when working in an area where hazardous chemicals and materials are being used.

The Contractor shall ensure that its employees have familiarized themselves with the hazardous material data sheets applicable to the specific site as well as the location of the fire fighting equipment, safety showers/ baths and other washing facilities, prior to the commencement of work.

4.9 Indemnity of the employer and his agents

Annexure A to this Specification contains a "Mandatory Form of Authority and Agreement in terms of Section 37 (2) of the Occupational Health and Safety Act, No. 85 of 1993" which agreement shall be entire into and duly signed by both the Employer and Contractor prior to commencement with work. A copy of the signed agreement shall be included in the Contractor's health and safety plan.

Any acceptance, approval, check, certificate, consent, examination, inspection, instruction, notice, observation, proposal, request, test or similar act by either the Employer or any of his Agents including lack of disapproval shall not relieve the Contractor from any responsibility he has under the Act and the Construction Regulations, including responsibility for errors, omissions, discrepancies and non-compliance.

SECTION 5 : SPECIFIC REQUIREMENTS

5.1 Design

5.1.1 Significant hazards identified by the design consultants

No significant hazards could be identified which have not been considered in the detailed design. However, hazards must be anticipated that are due to and arising from shoddy and careless workmanship and unconventional construction methods used by semi-qualified and un-qualified craftsmen during skills transfer.

Work sequences are a logical progression of the construction of a building under consideration of the tender documentation, National Building Regulations, the Occupational Health and Safety Specification, other specifications and manufacturers' instructions.

Annexure C to this Specification contains the design consultant's risk assessment.

5.1.2 Principles of the design

The philosophy applied in design development and detail design was to provide details and finishes which are robust, practical, safe, cost effective and most suitable for the application in their respective locations. The modes of construction are assumed to be conventional.

No major temporary works are anticipated to be required other than those that are expected to be necessary for site establishment, support and securing of structures and finishes during their erection and installation, for excavations and the erection and maintenance of scaffolding and working platforms.

Details and finishes have been designed , apart from some floor and wall finishes that must be applied by Specialist Contractors, that require conventional skills and which can be transferred on site during the construction process.

5.2 Security

Annexure C to this Specification contains the security engineer's risk assessment.

5.3 *Nature of the works*

Any specific requirements regarding the nature of the works not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

5.4 Existing environment

5.4.1 Surrounding roads and properties

Any specific requirements regarding the surrounding roads and properties not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

5.4.2 Existing services

Any specific requirements regarding existing services not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

For example :

- a) Drawings giving indicative information about existing services on and around the site.*
- b) Underground lighting cables and fittings, power cables, communications cables, drainage catch pits, gullies and pipes.*
- c) Live electricity, water, Telkom and specialist communications networks on pavements and which must be continuously maintained throughout the works.*
- d) Sewers for foul and surface water present on the pavements and any special arrangements for protection against contamination of drains and water courses.*
- e) Contractors must recognise that all services on the site must be expected to be 'live' and potentially critical to the safe functioning of the works. Precautions for any work on or near them should be identified, planned, approved and taken accordingly.*
- f) In the event that previously unidentified services are discovered Contractors shall immediately refer details of location, suspected condition and status to the Agent and await instruction. On no account must any services be interfered with without specific instruction and authority.*

5.4.3 Existing traffic systems and access

Any specific requirements regarding existing traffic systems and access not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

For example :

- a) Access to all works areas shall follow agreed routes and shall be adhered to at all times.*
- b) The Contractor must be kept advised of all proposed movements and ascertain the extent to which traffic/site effects are relevant and will be expected to plan accordingly.*

5.4.4 Adjoining structures

Any specific requirements regarding adjoining structures not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

5.4.5 Ground conditions

Any specific requirements regarding ground conditions not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

For example :

- a) Site investigations reports.*
- b) Geotechnical site assessment report.*
- c) Unusual conditions.*

5.4.6 Topographical surveys

Any specific requirements regarding topographical matters not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

5.4.7 Related restrictions affecting health and safety

Any specific requirements regarding related restrictions affecting health and safety not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

For example :

- a) Working hours.*
- b) No existing health and safety files.*

5.5 Control of pollution

Any specific requirements regarding control of pollution not covered elsewhere in the tender documentation should be inserted under this heading by the on-site consultants.

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OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION**

SECTION 6 : ANNEXURE A

PRO-FORMA AGREEMENT IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY ACT 1993 – SECTION 37 (2)

NEW CONSTRUCTION SAFETY REGULATIONS

The above-mentioned regulations were promulgated in the Govt. Gazette on Friday, 18 July 2003 under the Occupational Health & Safety Act (85 of 1993) and are now in force.

The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act 1993 (Act 85 of 1993, hereinafter referred to as the Act), that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:

- a) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all the relevant provisions of the Act and the regulations promulgated in terms of the Act, and the Employer's Health and Safety Specifications included in the contract documents.
- b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations and the Employer's Health and Safety Specifications included in the contract documents will be complied with in all respects.
- c) In relation to any work or activity performed by the Contractor, his workmen or any other person for whose acts or omissions the Contractor is responsible in terms of the contract, the Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from itself being obliged to comply with any of the aforesaid duties, obligations and prohibitions.
- d) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the Contractor has complied with his undertakings as set out more fully in paragraphs (a) and (b) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the contractor, or to inspect any appropriate records held by the Contractor.
- e) The Contractor shall be obliged to report forthwith in writing to the Agent full details of any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this contract.
- f) The Contractor shall forward all "safety meeting" minutes to the Agent.

For the Employer :	_____	Date :	_____
Witnesses : 1)	_____	2)	_____
For the Contractor :	_____	Date :	_____
Witnesses : 1)	_____	2)	_____

SECTION 6 : ANNEXURE B

NOTIFICATION OF CONSTRUCTION WORK
(Regulation 3 of the Construction Regulations, 2003)

1. CONTRACTOR

1.1 Name and postal address of Contractor :

1.2 Name and telephone number of Contractor's contact person :

1.3 Contractor's compensation registration number :

1.4 Name and telephone number of Contractor's Construction Supervisor :

1.5 Physical address of the construction site or site office :

1.5 Estimated number of persons on the construction site :

1.6 Estimated number of Subcontractors on the construction site
accountable to the Contractor :

2. EMPLOYER

2.1 Name and postal address of Employer :

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2.2 Name and telephone number of Employer's Principal Agent :

3. DESIGN CONSULTANTS

3.1 Name and postal address of design consultants :

3.1.1 Construction project managers :

3.1.2 Architects :

3.1.3 Structural engineer :

3.1.4 Electrical engineer :

3.1.5 Mechanical engineer :

3.1.6 Civil engineer :

3.1.7 Security engineer :

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3.1.8 Other (if any) :

3.2 Name and telephone number of design consultant's contact person :

3.2.1 Construction project managers :

3.2.2 Architects :

3.2.3 Structural engineer :

3.2.4 Electrical engineer :

3.2.5 Mechanical engineer :

3.2.6 Civil engineer :

3.2.7 Security engineer :

3.2.8 Other (if any) :

4. THE WORKS

Nature of the works :

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Commencement date :

Completion date :

Contractor : _____ Date : _____

Employer : _____ Date : _____

THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.

ALL CONTRACTORS THAT QUALIFY TO NOTIFY MUST TO SO EVEN IF ANOTHER CONTRACTOR ON THE SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

SECTION 6 : ANNEXURE C

DESIGN CONSULTANTS' RISK ASSESSMENT

6.1 Architects

The design development, detail design and specifications of materials to be used as described on the drawings and in the schedules are conventional designs and finishes which, if applied to manufacturers' specifications, conform to the Construction Regulations.

The top of certain gable walls are approximately 10m high above ground level and polycarbonate sheeting is used in certain roof areas which cannot carry traffic. Special precautions are therefore required.

Safety valves in the hot water reticulation (if electrical water heaters are to be installed) require regular inspections as recommended by the manufacturers.

6.2 Structural engineers

The design loads of slabs, etc are indicated on the drawings.

6.3 Electrical engineers

The electrical installations are complicated and it is recommended that a Master Installation Electrician be on site at all times to monitor the safety and quality of work and the installations have to be regularly tested for earthing.

Some equipment such as transformers, 11kV switchgear, generator sets and mini-substations weigh more than 1000 kilograms. The diesel generators make a loud noise when running and the substation contains flammable oils.

Some light fittings are approximately 8m high above ground floor level and certain cables may be heavy and difficult to install.

6.4 Mechanical engineers

Steam pipe reticulation across the site are approximately 2,4m high above ground floor level and could interfere with overhead power systems. No underground mechanical services are being installed.

Noise can be a hazard when the boilers are being commissioned. Water treatment chemicals can be hazardous and should be handled by specialists with the correct equipment and clothing.

Erection of the chimneys are a specialist function which will require motorised crainage. Guard rails are to be incorporated in all boiler platforms and plant room cat ladders. The boiler room roof structure has to accommodate the hoisting and support of heavy piping (200kg/m run). Roof ventilators and fans

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on numerous buildings will require roof access for installation and service-roof to accommodate mass of workmen. Hitching points for static lines to be provided and access routes have to be indicated. Erection of piping between supports have to be sequenced to prevent collapse.

Sufficient protection against falling from heights while servicing high level roof fans and smoke ventilators has to be provided.

Sufficient protection and ventilation when working in tanks and storage calorifiers and protection against dust when testing the dust extraction plant have to be provided. Girt collectors on boilers have to be commissioned before start up to prevent atmospheric contamination. Nitrates rather than dichromates have to be used as anti oxidants.

Strict procedures have to be followed when working with and decommissioning of pressure vessels and boilers and all work has to be tested by certified inspectors. Statutory inspections of boilers and pressure vessels have to be scheduled and strictly observed.

6.5 Civil engineers

To be inserted under this heading (if any).

6.6 Security engineers

The perimeter fence is manufactured from bezenol treated high tensile steel. This is a toxic substance. If the outer perimeter fence wire cut-offs are used for example barbecues, the meat will be toxic and people will require hospital treatment in such cases. The outer perimeter fence manufacturing materials is extremely heavy. The installers should be cautioned to work carefully during the installation of the fence structure to avoid injury to personnel. The inner fence energizers could provide electric shock if the fence is short circuited during or after commissioning thereof.

The pneumatic doors are heavy and could cause injury to a person if he/she is in the way of a closing door, prior final commissioning. Pneumatic vessels are heavy and of high pressure. Great care must therefore be taken during the installation and commissioning of this equipment. A person could also be injured if he/she put his/her hand or other body or clothing part in a turning compressor flywheel.

The uninterrupted power supply (UPS) is equipped with batteries. Although the modern UPS's are equipped with sealed batteries, great care must be given to avoid installing the unit in a sealed room without suitable ventilation as a result of gas poisoning and overheating of the UPS.

Full schematic diagrams are included as part of the design to avoid any confusion during the tender or the installation period of the contract. The contractor must ensure at all times that the schedules are adhered to as specified in the schematic and the design specification.

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During the maintenance period of the installation, the Contractor as well as the Employer must take note of the NOSA requirements regarding the servicing of pneumatic vessels at three and five year intervals. Furthermore the Employer must take note of the regular servicing of pneumatic equipment as well as all C.C.T.V. equipment on a three monthly interval.

ON-SITE CONSULTANTS' RISK ASSESSMENT

Specific risk assessment of the on-site consultants not covered elsewhere in this Specification (or other documentation) should be inserted in this Annexure.

The following notes serve as a guide :

1. *Relative to Regulation 9 (2) "Structures" the on-site consultants (architects, structural engineers, electrical engineers, mechanical engineers, civil engineers and security engineers) are required to :*
 - 1.1 *Provide the Employer with all relevant information that may affect the pricing of the works.*
 - 1.2 *Inform the Contractor of any dangers or hazards and provide information for the safe construction of the design.*
 - 1.3 *Include a geo-science technical report, the design loading of the structure and the methods and sequence of construction in a report made available to the Contractor.*
 - 1.4 *Modify the design or make use of substitute materials where the design necessitates the use of dangerous structural or other procedures, or materials hazardous to health and safety.*
 - 1.5 *Consider health and safety during maintenance subsequent to the completion of the project.*
 - 1.6 *Conduct inspections to ensure conformance of construction to design.*
 - 1.7 *Conduct a final inspection and issue a completion certificate.*
 - 1.8 *Take cognisance of ergonomic design principles in order to minimize ergonomic related hazards in all phases of the life cycle of a structure.*
2. *The on-site consultants should note the following :*
 - 2.1 *Designers influence health and safety directly through general design, choice of structural frame, details, method of fixing and specification of materials and finishes.*
 - 3.3 *Designers influence health and safety indirectly through selection of procurement system, preparation of contract documentation, decision regarding project duration, prequalification of Contractors on health and safety and status of design upon commencement of construction.*
 - 3.4 *Health and safety should be considered throughout all stages of design.*
 - 3.5 *Reference should be made to health and safety during pre-tender, pre-contract and contract phases of construction, and during commissioning and maintenance phases of projects (and recycling and deconstruction).*

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3.6 *Designers are liable for the impact of design on construction health and safety.*

3. *Specific risk assessment of the on-site consultants should, inter alia, address the following :*

3.1 *Site layout*

3.1.1 *Location of structures*

3.1.2 *Traffic system*

3.1.3 *Overhead power lines, electrical cables and other services in ground, etc*

3.2 *Groundwork*

3.2.1 *Excavation depths*

3.2.2 *Collapse*

3.2.3 *Hazardous substances*

3.2.4 *Noise and vibration*

3.3 *Erecting structures*

3.3.1 *Falls from height*

a) *Floor to ceiling heights*

b) *Wall heights*

c) *Roof pitch*

d) *Oversailing sections*

e) *Incorporate guardrails into the design*

f) *Design steelwork to accommodate static lines*

3.3.2 *Collapse*

a) *Provide sufficient information to enable Contractors to develop a safe sequence*

3.3.3 *Fire*

3.4 *Cladding and brickwork*

3.4.1 *Falls from height*

3.4.2 *Noise and vibration*

3.4.3 *Falling objects*

3.4.4 *Manual handling*

3.4.5 *Fire*

3.5 *Installation and maintenance of services*

3.5.1 *Falls from height*

3.5.2 *Tripping*

3.5.3 *Manual handling*

3.6 *Finishes*

- 3.6.1 *Natural in lieu of paint*
- 3.6.2 *Water in lieu of solvent*
- 3.6.3 *Off-site production*
- 3.6.4 *Dust control*
- 3.6.5 *Use of hazardous substances in confined spaces*
- 3.6.6 *Atmospheric contamination*
- 3.6.7 *Appropriate tolerances*

3.7 *Refurbishment and repair*

- 3.7.1 *Collapse*
 - a) *Specify sequence of removal of structural members*

- 3.7.2 *Fire*

3.8 *Roof work maintenance*

- 3.8.1 *Falls from height*

3.9 *Cleaning and maintenance*

- 3.9.1 *Falls from height*
 - a) *Platforms*
 - b) *Permanent walkways*
 - c) *Anchors for safety lanyards*

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PART B : RETURNABLE SCHEDULES

OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993 – SECTION 37[2])

A special additional clause has been included in the Specific Preliminaries section of these Bills of Quantities (Clause C11 of Section 1 : Preliminaries (Section C)) for Tenderers to have the opportunity to provide financially for the requirements of the above mentioned Act as clarified in the Occupational Health and Safety Specification.

The following items serves as a breakdown of the expected cost items for the requirements of the Act and have to be duly completed and returned with the tender form (refer to the Occupational Health and Safety Specification for detail of clauses as listed).

BREAKDOWN OF THE EXPECTED COST ITEMS – REFER TO CLAUSE C11 OF SECTION 1 : SPECIFIC PRELIMINARIES (SECTION C)

		ITEM	AMOUNT (R-C)
1.	Notification of construction work as Clause 2.2.1		
	F: V: T:	Item	R
2.	Requirements regarding the health and safety plan as Clause 2.2.3		
	F: V: T:	Item	R
3.	Proof of registration with the Compensation Fund as Clause 2.2.4		
	F: V: T:	Item	R
4.	Requirements regarding the resources to perform duties as Clause 2.2.6		
	F: V: T:	Item	R
5.	Copies of health and safety plan as Clause 2.2.7		
	F: V: T:	Item	R
6.	Requirements regarding the health and safety file as Clause 2.2.8		
	F: V: T:	Item	R
7.	Conditions imposed on Subcontractors as Clause 2.2.9		
	F: V: T:	Item	R
8.	Contractor's Construction Safety Officer as Clause 3.1		
	F: V: T:	Item	R
9.	Requirements regarding log books as Clause 3.2		
	F: V: T:	Item	R

		ITEM	AMOUNT (R-C)
10.	Requirements regarding first aid as Clause 3.3		
	F: V: T:	Item	R
11.	Requirements regarding risk assessment and safety policy as Clause 3.4		
	F: V: T:	Item	R
12.	Requirements regarding danger areas as Clause 3.5		
	F: V: T:	Item	R
13.	Hazard notices as Clause 3.6		
	F: V: T:	Item	R
14.	Requirements regarding personal protective clothing as Clause 3.7		
	F: V: T:	Item	R
15.	Requirements regarding the Road Traffic Ordinance/Transportation Act as Clause 3.8		
	F: V: T:	Item	R
16.	Requirements regarding overhead power lines as Clause 3.9		
	F: V: T:	Item	R
17.	Requirements regarding machine guarding as Clause 3.10		
	F: V: T:	Item	R
18.	Requirements regarding concrete mixing equipment as Clause 3.11		
	F: V: T:	Item	R
19.	Requirements regarding ladders as Clause 3.12		
	F: V: T:	Item	R
20.	Requirements regarding scaffold framework as Clause 3.13		
	F: V: T:	Item	R

		ITEM	AMOUNT (R-C)	
21.	Requirements regarding excavation/shoring as Clause 4.1			
	F: V: T:	Item	R	
22.	Requirements regarding formwork and support work as Clause 4.2			
	F: V: T:	Item	R	
23.	Prevention of uncontrolled collapse as Clause 4.3			
	F: V: T:	Item	R	
24.	Requirements regarding safe working loads as Clause 4.4			
	F: V: T:	Item	R	
25.	Requirements regarding electrical equipment and procedures used by the Contractor as Clause 4.5			
	F: V: T:	Item	R	
26.	Commissioning safety precautions as Clause 4.6			
	F: V: T:	Item	R	
27.	Handling of toxic materials as Clause 4.7			
	F: V: T:	Item	R	
28.	Requirements regarding hazardous chemicals and materials as Clause 4.8			
	F: V: T:	Item	R	
29.	Indemnity of the Employer and his Agents as Clause 4.9			
	F: V: T:	Item	R	
30.	Specific requirements regarding significant hazards identified by the design consultants as Clause 5.1.1			
	F: V: T:	Item	R	
31.	Specific requirements regarding principles of design as Clause 5.1.2			
	F: V: T:	Item	R	
32.	<i>Specific requirements regarding nature of the works as Clause 5.3</i>			
	F: V: T:	Item	R	N/A ??

		ITEM	AMOUNT (R-C)		
33.	Specific requirements regarding surrounding roads and properties as Clause 5.4.1				
	F: V: T:	Item	R	N/A ??	
34.	Specific requirements regarding existing services as Clause 5.4.2				
	F: V: T:	Item	R	N/A ??	
35.	Specific requirements regarding existing traffic systems and access as Clause 5.4.3				
	F: V: T:	Item	R	N/A ??	
36.	Specific requirements regarding adjoining structures as Clause 5.4.4				
	F: V: T:	Item	R	N/A ??	
37.	Specific requirements regarding ground conditions as Clause 5.4.5				
	F: V: T:	Item	R	N/A ??	
38.	Specific requirements regarding topographical surveys as Clause 5.4.6				
	F: V: T:	Item	R	N/A ??	
39.	Specific requirements regarding related restrictions affecting health and safety as Clause 5.4.7				
	F: V: T:	Item	R	N/A ??	
40.	Specific requirements regarding control of pollution as Clause 5.5				
	F: V: T:	Item	R	N/A??	
41.	Requirements regarding architects' risk assessment as Clause 6.1				
	F: V: T:	Item	R		
42.	Requirements regarding structural engineers' risk assessment as Clause 6.2				
	F: V: T:	Item	R		
43.	Requirements regarding electrical engineers' risk assessment as Clause 6.3				
	F: V: T:	Item	R		

Part C4: Site Information

C4 Site Information

PG-03.2 (EC) SITE INFORMATION – JBCC 2000 PRINCIPAL BUILDING AGREEMENT (edition 4.1 of March 2005)

Project title:	<i>INSTALLATION OF MODULAR LIBRARY AT MOSHANA VILLAGE</i>		
Tender no:	<i>PWR 51/21</i>	Reference no:	

C4 Site Information

1. GENERAL

- (a) The Standard for Uniformity in Construction Procurement published in terms of the Construction Industry Development Board (CIDB) Act, 2000 (Act no. 38 of 2000), the Standardized Construction Procurement Documents for Engineering and Construction Works as issued by the CIDB and any other relevant documentation pertaining thereto must be studied and all principles in this regard must be applied to all procurement documentation, practices and procedures.
- (b) The consultant(s)/project manager must acquaint themselves fully with all relevant matters pertaining to this section in order to enable prospective tenderers to price for all eventualities.
2. Nature of ground, surface conditions, water table as visible in test holes and other indisputable facts that may affect construction must be described.
3. Specific requirements must be described in clause 12.1 of the Schedule of Variables, Section B, JBCC Preliminaries
4. The site is in Moshana Village near to Tribal Office