



1 Cullinan Crescent • Civic Centre • Kimberley • 8301 • enquiries@whag.co.za • 053 8311724/5 • www.whag.co.za

RFP 03/2024
18 October 2024

REQUEST FOR PROPOSAL: REFURBISHMENT OF ARTIST FLAT

The William Humphreys Art Gallery (WHAG) based in Northern Cape is a schedule 3 public entity (not for profit) and public benefit organisation supported by the National Department of Sport, Arts and Culture. The William Humphreys Art Gallery provides for the aesthetic and cultural needs of the local community it serves as well as to the people of South Africa and the African continent.

WHAG invites proposals for the refurbishment of the William Humphreys Art Gallery's artist flat in full compliance with the Public Finance Management Act (PFMA) Act 1 of 1999 and related regulations.

For enquiries, bid specifications and mandatory documents to be completed contact **Tumelo Semosa** at 053 831 1724.

Mandatory briefing session shall be held under the following details:

Date: 01 November 2024
Time: 11:00am
Venue: William Humphreys Art Gallery's Auditorium
1 Cullinan Crescent
Civic Centre
Kimberley

Closing date for submission of proposals is 15 November 2024. Submit written quotations through via email to:

Tumelo Semosa
tumelo@whag.co.za

The William Humphrey Art Gallery reserves the right to not make any appointment in this regard.

TERMS OF REFERENCE FOR THE REFURBISHMENT OF ARTIST FLAT

Introduction:

The William Humphreys Art Gallery is seeking proposals from experienced and qualified contractors for the refurbishment of its Artist Flat.

Scope of Work:

1. The scope of work for this project includes, but is not limited to:
 - Providing of workshop area with workstations, screen printing workstation, wash troughs, Air Conditioning, Ventilation Extraction, Electrical Power Points with upgraded lighting fixtures.
 - Revitalised Kitchen
 - Revitalised Bathroom facilities
 - Chemical Storeroom
 - Revitalised Sleeping Quarters
 - Disabled access ramp with custom adapted entrance at workshop entrance
2. Procurement and installation of necessary furniture, fixtures, and equipment.
3. Project management and supervision of the works, including the coordination of all sub-contractors and suppliers.
4. Commissioning of the works and handover of the completed areas to the William Humphreys Art Gallery.

Compulsory Requirements

The following compulsory requirements must be provided:

1. Site Visit and Briefing:

It is mandatory for all interested parties to attend a compulsory site visit and briefing, which will be held at the William Humphreys Art Gallery on 01 November 2024 at 11:00am. This will provide an opportunity to view the flat and to ask any questions about the project.

2. Reference Letters:

The bidder must provide at least three (3) contactable reference letters in the refurbishment of similar projects. Reference letters must be on referring client's letterhead, signed, and dated. The reference letters must have contact details of the referring client.

3. CV and Qualifications:

The team leader must be in possession of a relevant qualification and CV with a minimum of three (3) years' experience in refurbishment of similar projects. CV and copy of qualifications must be submitted. The service provider should make clear the relevant skills, experience, and capacity of each member of the team. The team must have adequate experience in design and refurbishment of similar projects.

4. Project Plan and Methodology:

The bidder must provide a project plan and methodology clearly articulating the stages of the required services and period of delivery. The service provider must explain their understanding of the objectives of this exercise, approach, and the methodology for carrying out this exercise. The main activities of the exercise, their content and duration, phasing and interrelations,

milestones, and delivery dates of the reports. The proposed work plan should be consistent with the approach and methodology. The project plan should include the following:

- a) Proposed project management and supervision arrangements.
- b) Proposed timeline for completion of the works.
- c) Detailed design and technical proposal, which should include drawings, specifications, and total cost of the works, including a detailed breakdown of all costs.
- d) Proposed health and safety arrangements, including the provision of a detailed health and safety plan.
- e) Proposed environmental management arrangements, including the provision of a detailed environmental management plan.

5. Company Profile:

The bidder must provide a company profile indicating that the bidder has a minimum of three (3) years' experience in the refurbishment of similar projects.

Failure to provide the above-mentioned compulsory requirements will lead to proposals being disqualified and will not be evaluated further on Functionality and Preferential Evaluation.

Submission Requirements:

Proposals must be submitted in accordance with the following requirements:

1. Proposals must be submitted in hard copy and/or electronic format, to the addresses specified below:

William Humphreys Art Gallery

1 Cullinan Crescent

Civic Centre

Kimberley

8301

Attention: Tumelo Semosa

tumelo@whag.co.za

2. Proposals must be accompanied by a cover letter, which should provide a brief overview of the proposed solution and the contractor's experience and qualifications.

EVALUATION CRITERIA

Functionality Evaluation

Proposals will be evaluated based on the following criteria:

1. Experience and qualifications of the contractor and its key personnel.
2. Relevant experience in the refurbishment of similar projects.
3. Quality of the proposed plan, including the selection of materials, finishes, and furniture.

The functionality criteria and weightings that will be utilized to test the capability of service providers is set as follows:

CRITERION	DESCRIPTION	SCORE										
Contractor Experience	The bidder must provide at least three (3) contactable reference letters in the refurbishment of similar projects. Reference letters must be on referring client’s letterhead, signed, and dated. The reference letters must have contact details of the referring client. The bidder must provide a company profile indicating that the bidder has a minimum of three (3) years’ experience in the refurbishment of similar projects.	40										
Team Leader Experience	The team leader must be in possession of a relevant qualification and CV with a minimum of three (3) years’ experience in the refurbishment of similar projects. CV and copy of qualifications must be submitted.	20										
Team Experience	The service provider should make clear the relevant skills, experience, and capacity of each member of the team. The team must have adequate experience in refurbishment of similar projects. Scoring criteria: <table><thead><tr><th>Experience</th><th>Score</th></tr></thead><tbody><tr><td>No experience indicated or no CV’s attached</td><td>0</td></tr><tr><td>1 – 2 years’ experience</td><td>5</td></tr><tr><td>3 - 4 years’ experience</td><td>10</td></tr><tr><td>5 and above years’ experience</td><td>15</td></tr></tbody></table>	Experience	Score	No experience indicated or no CV’s attached	0	1 – 2 years’ experience	5	3 - 4 years’ experience	10	5 and above years’ experience	15	15
Experience	Score											
No experience indicated or no CV’s attached	0											
1 – 2 years’ experience	5											
3 - 4 years’ experience	10											
5 and above years’ experience	15											
Project Plan Quality	The bidder must provide a project plan and methodology clearly articulating the stages of the required services and period of delivery. The service provider must explain their understanding of the objectives of this exercise, approach, and the methodology for carrying out this exercise. The main activities of the exercise, their content and duration, phasing and interrelations, milestones, and delivery dates of the reports. The proposed work plan should be consistent with the approach and methodology. The project plan should include the following:	25										

	a) Proposed project management and supervision arrangements. b) Proposed timeline for completion of the works. c) Detailed design and technical proposal, which should include drawings, specifications, and total cost of the works, including a detailed breakdown of all costs. d) Proposed health and safety arrangements, including the provision of a detailed health and safety plan. e) Proposed environmental management arrangements, including the provision of a detailed environmental management plan. Failure to attach a project plan will lead to disqualification of proposal.									
	Scoring criteria: <table><tr><td>Quality</td><td>Score</td></tr><tr><td>Poor Project Plan</td><td>5</td></tr><tr><td>Fair Project Plan</td><td>10</td></tr><tr><td>Good Project Plan</td><td>20</td></tr><tr><td>Excellent Project Plan</td><td>25</td></tr></table>		Quality	Score	Poor Project Plan	5	Fair Project Plan	10	Good Project Plan	20
Quality	Score									
Poor Project Plan	5									
Fair Project Plan	10									
Good Project Plan	20									
Excellent Project Plan	25									
TOTAL:		100								

All Bidders who score less than 75 points on functionality evaluation will not be considered for further evaluation on Price and Preferential Points.

Preferential Evaluation

The following 80/20 criteria will be used for the evaluation of the proposals:

- a. **Pricing** 80 points
- b. **Preferential Points** 20 points

Preferential Points will be awarded as per below scoring:

CRITERION	POINTS	PROOF OF CLAIM
B-BBEE Status	4	Valid B-BBEE verification certificate or an affidavit confirming micro enterprise status
Businesses Based in the Northern Cape	4	Proof of Business Address not older than three months
Ownership by Youth	4	WHAG SBD 4 Form, Company Registration Documents, and Identity Documents of Shareholders
Ownership by Women	4	WHAG SBD 4 Form, Company Registration Documents, and Identity Documents of Shareholders
Ownership by People with Disabilities	4	WHAG SBD 4 Form, Company Registration Documents, and Identity Documents of Shareholders

B-BBEE Status Points will be awarded as per below:

B-BBEE STATUS	POINTS
Level 1	4
Level 2	3
Level 3	2
Level 4 and below	1
Non-compliant	0

Ownership Points for Youth, Women, and People with Disabilities will be awarded as per below:

OWNERSHIP	POINTS
Above 50%	4
Above 40%	3
Above 25%	2
Above 10%	1

MANDATORY INFORMATION TO BE SUBMITTED

The written application should be accompanied by the following minimum documentation:

- a. WHAG 07EC: Form of Offer and Acceptance
- b. WHAG SBD 4 Form – Bidder's Disclosure
- c. Bill of Quantities

*All current and potential creditors/contractors/consultants and other suppliers of goods and services to William Humphreys Art Gallery are required to **self-register** on the government Central Supplier Database. Please visit the CSD website www.csd.gov.za for further details.*

WHAG 07EC: FORM OF OFFER AND ACCEPTANCE

OFFER

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

WILLIAM HUMPHREYS ART GALLERY - REFURBISHMENT OF ARTIST FLAT

The Tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

Rand (in words):	
Rand in figures:	R

VAT IS TO BE INCLUDED EVEN IF THE TENDERER IS A NON-VAT VENDOR

Company or Close Corporation: And: Whose Registration Number is: And: Whose Income Tax Reference Number is:	OR	Natural Person or Partnership: Whose Identity Number(s) is/are: Whose Income Tax Reference Number is/are:
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AND WHO IS (if applicable):

Trading under the name and style of:

AND WHO IS:

Represented herein, and who is duly authorised to do so, by: Mr/Mrs/Ms: In his/her capacity as: 	Note: A Resolution / Power of Attorney, signed by all the Directors / Members / Partners of the Legal Entity must accompany this Offer, authorising the Representative to make this offer.
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This offer may be accepted by the Employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the tender data, whereupon the Tenderer becomes the party named as the Contractor in the conditions of contract identified in the contract data.

THIS OFFER IS MADE BY THE FOLLOWING LEGAL ENTITY: (cross out block which is not applicable)

SIGNED FOR THE TENDERER:

Name of representative	Signature	Date

WITNESSED BY:

Name of witness	Signature	Date

This Offer is in respect of: (Please indicate with an “X” in the appropriate block)

The official documents ☐

The official alternative ☐

Own alternative (only if documentation makes provision therefore) .. ☐

(N.B.: Separate Offer and Acceptance forms are to be completed for the main and for each alternative offer)

SECURITY OFFERED:

(a) the Tenderer accepts that in respect of contracts from R 500 000 and up to R 1 million, a surety of 2% of the contact value (excluding VAT) will be applicable and will be deducted by the Employer in terms of the applicable conditions of contract

(b) in respect of contracts above R 500 000, the Tenderer offers to provide security as indicated below:

- | | |
|--|--|
| (1) cash deposit of 10 % of the Contract Sum (excluding VAT) | Yes ☐ No ☐ |
| (2) variable construction guarantee of 10 % of the Contract Sum (excluding VAT) (DPW 10.3) | Yes ☐ No ☐ |
| (3) payment reduction of 10% of the value certified in the payment certificate (excluding VAT) | Yes ☐ No ☐ |
| (4) cash deposit of 5% of the contract sum (excluding. VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding. VAT) | Yes ☐ No ☐ |
| (5) fixed construction guarantee of 5% of the contract sum (excluding VAT) and a payment reduction of 5% of the value certified in the payment certificate (excluding VAT) | Yes ☐ No ☐ |

NB. Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 35 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

The Tenderer elects as its *domicilium citandi et executandi* in the Republic of South Africa, where any and all legal notices may be served, as (physical address):

.....
.....

Other Contact Details of the Tenderer are:

Telephone No.:	Cellular Phone No.:
Fax No.:	Other contact No.:
Postal address:	
Main or Principal Place of Business: E-mail Address:	
Registered Place of Business:	
Banker Branch	
Registration No of Tenderer at Department of Labour	
CIDB Registration Number: (Attached copy of certificate)	
CSD Number:..... SARS Pin.....	

ACCEPTANCE

By signing this part of this form of offer and acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the Tenderer's offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part 1 Agreement and contract data, (which includes this agreement)

Part 2 Pricing data

Part 3 Scope of work

Part 4 Site information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 4 above.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules as well as any changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless contained in this schedule.

The Tenderer shall within one week after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the Employer's agent (whose details are given in the contract data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect, if delivered by hand on the day of delivery, or if delivered by courier within two working days after submission by the Employer to the courier services for a door-to-door delivery to the Tenderer, provided that the Employer notifies the Tenderer of the tracking number within 24 hours of such submission, or if delivered by telefax, one working day after transmission, or if delivered by email, one working day after transmission.

For the Employer:

Name of signatory	Signature	Date

Name of Organisation:	WILLIAM HUMPHREYS ART GALLERY
Address of Organisation:	William Humphreys Art Gallery 1 Cullinan Crescent, Civic Centre Kimberley, 8301

Witnessed By:

Name of witness	Signature	Date

BIDDER'S DISCLOSURE**1. Purpose of the form**

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in the table below.

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the William Humphreys Art Gallery? **YES/NO**

2.2.1 If so, furnish particulars:

.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

¹ the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3.1 If so, furnish particulars:

.....

.....

3 Declaration of shareholding

3.1 Are any of the bidder's directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise, designated as youth, women, and/or people with disabilities? **YES/NO**

3.1.1 If so, furnish particulars of the names, individual identity numbers, sex, shareholding and, if applicable, disability of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in the table below.

Full Name	Identity Number	Sex	Disability	Shareholding %

4 DECLARATION

I, the undersigned, (name) in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 4.1 I have read and I understand the contents of this disclosure;
- 4.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 4.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement, or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 4.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to

² Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

- 4.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 4.6 There have been no consultations, communications, agreements, or arrangements made by the bidder with any official of the William Humphreys Art Gallery in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 4.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2, 3 and 4 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

Signature

Date

Position

Name of Bidder

Project No: RFP 03/2024 (6247-03)



WILLIAM HUMPHREYS ART GALLERY

BILL OF QUANTITIES

FOR

REFURBISHMENT OF ARTIST FLAT

SECTION 2 BILL 1

**MVD Kalahari Consulting Engineers and
Town Planners**

**186 du Toitspan Road
Kimberley
8301**

DATE: October 2024

Item No	Quantity	Rate	Amount
<u>SECTION NUMBER 1BILL NUMBER 1</u> <u>PRELIMINARIES</u> <u>MEANING OF TERMS "TENDER/ TENDERER"</u> Any reference to the words "Tender" or "Tenderer" herein and/or in any other documentation shall be construed to have the same meaning as the words "Bid" or "Bidder" <u>PRELIMINARIES</u> The JBCC Preliminaries Code 2103, May 2005 edition for use with the JBCC Principal Building Agreement Edition 4.1 Code 2101, March 2005 is taken to be incorporated herein. The tenderer is deemed to have referred to these documents for the full intent and meaning of each clause. These clauses are referred to by number and heading only. Where standard clauses or options are not applicable to the contract such modifications or corrections as are necessary are given under each relevant clause. Where an item is not relevant to this specific contract such item is marked "N/A" signifying "Not Applicable" <u>PRICING OF PRELIMINARIES</u> Should Option A, as set out in clause B10.3.1 hereinafter be used for the adjustment of preliminaries then each item priced is to be allocated to one or more of the three categories Fixed, Value Related or Time Related and the respective amounts entered in the spaces provided under each item Items not priced in these Preliminaries shall be deemed to be included elsewhere in these Bills of Quantities <u>SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT</u> <u>DEFINITIONS</u>			
1	A1.0 DEFINITIONS AND INTERPRETATION Clause 1.0 Clause 1.1 Definition of "Commencement Date" is added:		
		Carried to Collection	R
Section No. 1 Bill No. 1 Preliminaries			

"**COMMENCEMENT DATE**" means the date that the **agreement**, made in terms of the Form of Offer and Acceptance, comes into effect

Clause 1.1 Definition of "**Construction Guarantee**" is amended by replacing it with the following:

"**CONSTRUCTION GUARANTEE**" means a guarantee at call obtained by the **contractor** from an institution approved by the **employer** in terms of the **employer's** construction guarantee form as selected in the **schedule**

Clause 1.1 Definition of "**Construction Period**" is amended by replacing it with the following:

"**CONSTRUCTION PERIOD**" means the period commencing on the **commencement date** and ending on the date of **practical completion**

Clause 1.1 Definition of "**Corrupt Practice**" is added:

"**CORRUPT PRACTICE**" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution

Clause 1.1 Definition of "**Fraudulent Practice**" is added:

"**FRAUDULENT PRACTICE**" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer and includes collusive practice among tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition

Clause 1.1 Definition of "**Interest**" is amended by replacing it with the following:

"**INTEREST**" means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999)

Clause 1.1 Definition of "**Principal Agent**" is amended by replacing it with the following:

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"**PRINCIPAL AGENT**" means the person or entity appointed by the **employer** and named in the **schedule**. In the event of a **principal agent** not being appointed, then all the duties and obligations of a **principal agent** as detailed in the **agreement** shall be fulfilled by a representative of the **employer** as named in the **schedule**

Clause 1.1 Definition of "**Security**" is amended by replacing it with the following:

"**SECURITY**" means the form of security provided by the **employer** or **contractor**, as stated in the **schedule**, from which the **contractor** or **employer** may recover expense or loss

Clause 1.6 is amended by replacing the words "prepaid registered post, telefax or e-mail" with "prepaid registered post or telefax"

Clause 1.6.4 is amended by replacing it with the following:

No clause

Fixed: _____ Value related: _____ Time related: _____

OBJECTIVE AND PREPARATION

2 **A2.0 OFFER, ACCEPTANCE AND PERFORMANCE**

Clause 2.0

Fixed: _____ Value related: _____ Time related: _____

Item

Item

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3	A3.0 DOCUMENTS Clause 3.0 Clause 3.2.1 is amended by replacing "14.1" with "14.0" Clause 3.7 is amended by the addition of the following: The contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the site, to which the employer, principal agent and agents shall have access at all times Clause 3.10 is amended by replacing the second reference to "principal agent" with the word "employer" Fixed: _____ Value related: _____ Time related: _____	Item		
4	A4.0 DESIGN RESPONSIBILITY Clause 4.0 Clause 4.3 is amended by replacing it with the following: No clause Fixed: _____ Value related: _____ Time related: _____	Item		
5	A5.0 EMPLOYER'S AGENTS Clause 5.0 Clause 5.1.2 is amended to include clauses 32.6.3, 34.3, 34.4 and 38.5.8 Fixed: _____ Value related: _____ Time related: _____	Item		
6	A6.0 SITE REPRESENTATIVE Clause 6.0 Fixed: _____ Value related: _____ Time related: _____	Item		
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7	A7.0 COMPLIANCE WITH REGULATIONS Clause 7.0 Note: A separate clause has been included in Section C : Specific Preliminaries of the bills of quantities / lump sum document for the contractor to have the opportunity to price for all the requirements of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification Fixed:_____Value related:_____Time related:_____	Item		
8	A8.0 WORKS RISK Clause 8.0 Fixed:_____Value related:_____Time related:_____	Item		
9	A9.0 INDEMNITIES Clause 9.0 Fixed:_____Value related:_____Time related:_____	Item		
10	A10.0 WORKS INSURANCES Clause 10.0 Clause 10.0 is amended by the addition of the following clauses: 10.5 Damage to the Works (a) Without in any way limiting the contractor's obligations in terms of the contract, the contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary			
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	Section No. 1 Bill No. 1 Preliminaries			

- (b) The **contractor** shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**
- (c) The **employer** shall carry the risk of damage to or destruction of the **works** and materials paid for by the **employer** that is the result of the excepted risks as set out in 10.6
- (d) Where the **employer** bears the risk in terms of this contract, the **contractor** shall, if requested to do so, reinstate any damage or destroyed portions of the **works** and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof

10.6 Injury to Persons or loss of or damage to Properties

- (a) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable
- (b) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable
- (c) The **contractor** shall, upon receiving a **contract instruction** from the **principal agent**, cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the **employer** shall be entitled to cause it to be made good and to recover the cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**

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- (d) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**
- (e) Where the execution of the **works** involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor** shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed
- (f) The **contractor** shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the **works**

10.7 High risk insurance

In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:

10.7.1 Damage to the works

The **contractor** shall, from the **commencement date** of the **works** until the date of the **certificate of practical completion** bear the full risk of and hereby indemnifies and holds harmless the **employer** against any damage to and/or destruction of the **works** consequent upon a catastrophic ground movement as mentioned above. The **contractor** shall take such precautions and security measures and other steps for the protection of the **works** as he may deem necessary

When so instructed to do so by the **principal agent**, the **contractor** shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**, at the **contractor's** own costs

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10.7.2 Injury to persons or loss of or damage to property

The **contractor** shall be liable for and hereby indemnifies and holds harmless the **employer** against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of, or caused by a catastrophic ground movement as mentioned above

The **contractor** shall be liable for and hereby indemnifies the **employer** against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract

10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty-one (21) **calendar days** of the **commencement date** but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so

10.7.4 The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor's** default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the **employer** and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole

Fixed: _____ Value related: _____ Time related: _____

Item

11 A11.0 LIABILITY INSURANCES

Clause 11.0

Fixed: _____ Value related: _____ Time related: _____

Item

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12	A12.0 EFFECTING INSURANCES Clause 12.0 Fixed: _____ Value related: _____ Time related: _____	Item	
13	A13.0 No clause	N/A	
14	A14.0 SECURITY Clause 14.0 Clauses 14.1 - 14.8 are amended by replacing them with the following: 14.1 In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT) 14.1.1 The payment reduction of the value certified in a payment certificate shall be <i>mutatis mutandi</i> in terms of 31.8(A) 14.1.2 The employer shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the employer complies with the provisions of 33.4 in which event the employer's entitlement shall take precedence over his obligations to refund the payment reduction security or portions thereof to the contractor 14.2 In respect of contracts with a contract sum above R1 million, the contractor shall have the right to select the security to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the schedule. Such security shall be provided to the employer within twenty-one (21) calendar days from commencement date. Should the contractor fail to select the security to be provided or should the contractor fail to provide the employer with the selected security within twenty-one (21) calendar days from commencement date, the security in terms of 14.7 shall be deemed to have been selected 14.3 Where security as a cash deposit of ten per cent (10%) of the contract sum (excluding VAT) has been selected:		
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14.3.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.3.2 Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to three per cent (3%) of the **contract value** (excluding VAT), and refund the balance to the **contractor**

14.3.3 Within twenty-one (21) **calendar days** of the date of **final completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to one per cent (1%) of the **contract value** (excluding VAT) and refund the balance to the **contractor**

14.3.4 On the date of payment of the amount in the final **payment certificate**, the **employer** shall refund the remainder of the cash deposit to the **contractor**

14.3.5 The **employer** shall be entitled to recover expense and loss from the cash deposit in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the cash deposit **security** or portions thereof to the **contractor**

14.3.6 The parties expressly agree that neither the **employer** nor the **contractor** shall be entitled to cede the rights to the deposit to any third party

14.4 Where **security** as a variable **construction guarantee** of ten percent (10%) of the **contract sum** (excluding VAT) has been selected:

14.4.1 The **contractor** shall furnish the **employer** with an acceptable variable **construction guarantee** equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.4.2 The variable **construction guarantee** shall reduce and expire in terms of the Variable **Construction Guarantee** form included in the invitation to tender

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14.4.3 The **employer** shall return the variable **construction guarantee** to the **contractor** within fourteen (14) **calendar days** of it expiring

14.4.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall issue a written demand in terms of the variable **construction guarantee**

14.5 Where **security** as a fixed **construction guarantee** of five per cent (5%) of the **contract sum** (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.5.1 The **contractor** shall furnish a fixed **construction guarantee** to the **employer** equal in value to five per cent (5%) of the **contract sum** (excluding VAT)

14.5.2 The fixed **construction guarantee** shall come into force on the date of issue and shall expire on the date of the last certificate of **practical completion**

14.5.3 The **employer** shall return the fixed **construction guarantee** to the **contractor** within fourteen (14) **calendar days** of it expiring

14.5.4 The payment reduction of the value certified in a **payment certificate** shall be in terms of 31.8 (A) and 34.8

14.5.5 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall be entitled to issue a written demand in terms of the fixed **construction guarantee** or may recover from the payment reduction or may do both

14.6 Where **security** as a cash deposit of five per cent (5%) of the **contract sum** (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.6.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to five per cent (5%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.6.2 Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall refund the cash deposit in total to the **contractor**

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14.6.3 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A)

14.6.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** may issue a written notice in terms of 33.4 or may recover from the payment reduction or may do both

14.7 Where **security** as a payment reduction of ten per cent (10%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.7.1 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(B)

14.7.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction or portions thereof to the **contractor**

14.8 Payments made by the guarantor to the **employer** in terms of the fixed or variable **construction guarantee** shall not prejudice the rights of the **employer** or **contractor** in terms of this **agreement**

14.9 Should the **contractor** fail to furnish the **security** in terms of 14.2, the **employer**, in his sole discretion and without notification to the **contractor**, is entitled to change the **contractor's** selected form of **security** to that of a ten per cent (10%) payment reduction of the value certified in the **payment certificate** (excluding VAT), whereafter 14.7 shall be applicable

Fixed:_____Value related:_____Time related:_____

Item

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EXECUTION

15 **A15.0 PREPARATION FOR AND EXECUTION OF
THE WORKS**

Clause 15.0

Clause 15.1.1 is amended by replacing it with:

No clause

Clause 15.1.2 is amended by replacing it with:

The **security** selected in terms of 14.0

Clause 15.1 is amended by the addition of the following
clause:

15.1.4 An acceptable health and safety plan, required in terms
of the Occupational Health and Safety Act, 1993 (Act 85 of
1993), within twenty-one (21) **calendar days** of
commencement date

Clause 15.2.1 is amended by replacing it with the following
clause:

Give the **contractor** possession of the **site** within ten (10)
working days of the **contractor** complying with the terms of
15.1.4

Fixed: _____ Value related: _____ Time
related: _____

Item

16 **A16.0 ACCESS TO THE WORKS**

Clause 16.0

Fixed: _____ Value related: _____ Time
related: _____

Item

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17	A17.0 CONTRACT INSTRUCTIONS Clause 17.0 Clause 17.1.11 is amended by deleting the words "and the appointment of nominated and selected subcontractors" Fixed:_____Value related:_____Time related:_____	Item		
18	A18.0 SETTING OUT OF THE WORKS Clause 18.0 Fixed:_____Value related:_____Time related:_____	Item		
19	A19.0 ASSIGNMENT Clause 19.0 Fixed:_____Value related:_____Time related:_____	Item		
20	A20.0 NOMINATED SUBCONTRACTORS Clause 20.0 Clause 20.1.3 is amended by replacing it with the following: No clause Note: See item B9.1 hereinafter for adjustment of attendance on nominated subcontractors executing work allowed for under provisional sums Fixed:_____Value related:_____Time related:_____	Item		
21	A21.0 SELECTED SUBCONTRACTORS Clause 21.0 Clause 21 is amended by replacing it with: No clause Fixed:_____Value related:_____Time related:_____	Item		
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22	A22.0 EMPLOYER'S DIRECT CONTRACTORS Clause 22.0 Fixed:_____Value related:_____Time related:_____	Item	
23	A23.0 CONTRACTOR'S DOMESTIC SUBCONTRACTORS Clause 23.0 Fixed:_____Value related:_____Time related:_____	Item	
	<u>COMPLETION</u>		
24	A24.0 PRACTICAL COMPLETION Clause 24.0 Fixed:_____Value related:_____Time related:_____	Item	
25	A25.0 WORKS COMPLETION Clause 25.0 Fixed:_____Value related:_____Time related:_____	Item	
26	A26.0 FINAL COMPLETION Clause 26.0 Clause 26.1.2 is amended by inserting "#" next to 26.1.2 Fixed:_____Value related:_____Time related:_____	Item	
27	A27.0 LATENT DEFECTS LIABILITY PERIOD Clause 27.0 Fixed:_____Value related:_____Time related:_____	Item	
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28	A28.0 SECTIONAL COMPLETION Clause 28.0 Fixed: _____ Value related: _____ Time related: _____	Item		
29	A29.0 REVISION OF DATE FOR PRACTICAL COMPLETION Clause 29.0 Clause 29.2.5 is amended by replacing it with: No clause Fixed: _____ Value related: _____ Time related: _____	Item		
30	A30.0 PENALTY FOR NON-COMPLETION Clause 30.0 Fixed: _____ Value related: _____ Time related: _____ <u>PAYMENT</u>	Item		
31	A31.0 INTERIM PAYMENT TO THE CONTRACTOR Clause 31.0 Clause 31.5.2 is amended by replacing "14.7.1" with "14.0" Clause 31.8 is amended by replacing it with the following two alternative clauses: Alternative A 31.8(A) Where a security is selected in terms of 14.1; 14.5 or 14.6, the value of the works in terms of 31.4.1 and materials and goods in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments: 31.8(A).1 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion			
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31.8(A).2 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(A).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(A).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

Alternative B

31.8(B) Where **security** as a payment reduction in terms of 14.7 has been selected, the value of the **works** in terms of 31.4.1 and **materials and goods** in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:

31.8(B).1 Ninety per cent (90%) of such value in interim **payment certificates** issued up to the date of **practical completion**

31.8(B).2 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(B).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(B).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

Clause 31.12 is amended by deleting the following:

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	Payment shall be subject to the employer giving the contractor a tax invoice for the amount due Fixed: _____ Value related: _____ Time related: _____	Item	
32	A32.0 ADJUSTMENT TO THE CONTRACT VALUE Clause 32.0 Clauses 32.5.1, 32.5.4 and 32.5.7 are amended by the addition of the following at the end of the sentence: "due to no fault of the contractor" Fixed: _____ Value related: _____ Time related: _____	Item	
33	A33.0 RECOVERY OF EXPENSE AND LOSS Clause 33.0 Fixed: _____ Value related: _____ Time related: _____	Item	
34	A34.0 FINAL ACCOUNT AND FINAL PAYMENT Clause 34.0 Clause 34.1 is amended by removing "#" next to 34.1 Clause 34.2 is amended by inserting "#" next to 34.2 Clause 34.8 is amended by deleting the words "where security as a fixed construction guarantee in terms of 14.4 has been selected or where payment reduction has been applied in terms of 14.7.1" Clause 34.13 is amended by replacing "seven (7) calendar days" with "twenty-one (21) calendar days" and deleting the words "subject to the employer giving the contractor a tax invoice for the amount due" Fixed: _____ Value related: _____ Time related: _____	Item	
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35	A35.0 PAYMENT TO OTHER PARTIES Clause 35.0 Fixed: _____ Value related: _____ Time related: _____ <u>CANCELLATION</u>	Item		
36	A36.0 CANCELLATION BY EMPLOYER - CONTRACTOR'S DEFAULT Clause 36.0 Clause 36.1 is amended by the addition of the following clauses: 36.1.3 refuses or neglects to comply strictly with any of the conditions of contract 36.1.4 estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa 36.1.5 in the judgement of the employer, has engaged in corrupt or fraudulent practices in competing for or in executing the contract Clause 36.3 is amended by removing the reference to "No clause" and replacing the words "principal agent" with "employer" Clause 36.0 is amended by the addition of the following clause: 36.7 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever Fixed: _____ Value related: _____ Time related: _____	Item		
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37	A37.0 CANCELLATION BY EMPLOYER - LOSS AND DAMAGE Clause 37.0 Clause 37.3.5 is amended by replacing "ninety (90)" with "one hundred and twenty (120)" Clause 37.0 is amended by the addition of the following clause: 37.5 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever Fixed: _____ Value related: _____ Time related: _____	Item		
38	A38.0 CANCELLATION BY CONTRACTOR - EMPLOYER'S DEFAULT Clause 38.0 Clause 38.5.4 is amended by replacing "ninety (90)" with "one hundred and twenty (120)" Clause 38.0 is amended by the addition of the following clause: 38.7 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever Fixed: _____ Value related: _____ Time related: _____	Item		
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39	A39.0 CANCELLATION - CESSATION OF THE WORKS Clause 39.0 Clause 39.3.5 is amended by the addition of the following at the end of the sentence: "within one hundred and twenty (120) working days of completion of such a report" Fixed:_____Value related:_____Time related:_____ <u>DISPUTE</u>	Item		
40	A40.0 DISPUTE SETTLEMENT Clause 40.0 Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years" Clause 40.6 is amended by removing the reference to: No clause Clause 40.7.1 is amended by replacing "(10)" with "(15)" and by the addition of the following: Whether or not mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and equally share the costs of the mediator and related costs Fixed:_____Value related:_____Time related:_____ <u>SUBSTITUTE PROVISIONS</u>	Item		
41	A41.0 STATE CLAUSES Clause 41.0 Fixed:_____Value related:_____Time related:_____	Item		
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SECTION B: JBCC PRELIMINARIES

B1.0 DEFINITIONS AND INTERPRETATION

B1.1 Definitions and interpretation

See also clause A1.0 of Section A for additional and/or amended definitions which shall apply equally to this Section

Fixed: _____ Value related: _____ Time related: _____

Item

B2.0 DOCUMENTS

B2.1 Checking of documents

Fixed: _____ Value related: _____ Time related: _____

Item

B2.2 Provisional bills of quantities

Fixed: _____ Value related: _____ Time related: _____

Item

B2.3 Availability of construction documentation

Fixed: _____ Value related: _____ Time related: _____

Item

B2.4 Interests of agents

Fixed: _____ Value related: _____ Time related: _____

Item

B2.5 Priced documents

Fixed: _____ Value related: _____ Time related: _____

Item

B2.6 Tender submission

Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Form of Offer and Acceptance WHAG-07(EC)"

Fixed: _____ Value related: _____ Time related: _____

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	B3.0 THE SITE		
49	B3.1 Defined works area Fixed: _____ Value related: _____ Time related: _____	Item	
50	B3.2 Geotechnical investigation Fixed: _____ Value related: _____ Time related: _____	Item	
51	B3.3 Inspection of the site Fixed: _____ Value related: _____ Time related: _____	Item	
52	B3.4 Existing premises occupied Fixed: _____ Value related: _____ Time related: _____	Item	
53	B3.5 Previous work - dimensional accuracy Fixed: _____ Value related: _____ Time related: _____	Item	
54	B3.6 Previous work - defects Fixed: _____ Value related: _____ Time related: _____	Item	
55	B3.7 Services - known Fixed: _____ Value related: _____ Time related: _____	Item	
56	B3.8 Services - unknown Fixed: _____ Value related: _____ Time related: _____	Item	
57	B3.9 Protection of trees Fixed: _____ Value related: _____ Time related: _____	Item	
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58	B3.10 Articles of value Fixed: _____ Value related: _____ Time related: _____	Item	
59	B3.11 Inspection of adjoining properties Fixed: _____ Value related: _____ Time related: _____	Item	
	<u>B4.0 MANAGEMENT OF CONTRACT</u>		
60	B4.1 Management of the works Fixed: _____ Value related: _____ Time related: _____	Item	
61	B4.2 Programme for the works Fixed: _____ Value related: _____ Time related: _____	Item	
62	B4.3 Progress meetings Fixed: _____ Value related: _____ Time related: _____	Item	
63	B4.4 Technical meetings Fixed: _____ Value related: _____ Time related: _____	Item	
64	B4.5 Labour and plant records Fixed: _____ Value related: _____ Time related: _____	Item	
	<u>B5.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURERS' INSTRUCTIONS</u>		
65	B5.1 Samples of materials Fixed: _____ Value related: _____ Time related: _____	Item	
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66	B5.2 Workmanship samples		
	Fixed: _____ Value related: _____ Time related: _____	Item	
67	B5.3 Shop drawings		
	Fixed: _____ Value related: _____ Time related: _____	Item	
68	B5.4 Compliance with manufacturers' instructions		
	Fixed: _____ Value related: _____ Time related: _____	Item	
	<u>B6.0 TEMPORARY WORKS AND PLANT</u>		
69	B6.1 Deposits and fees		
	Fixed: _____ Value related: _____ Time related: _____	Item	
70	B6.2 Enclosure of the works		
	Fixed: _____ Value related: _____ Time related: _____	Item	
71	B6.3 Advertising		
	Fixed: _____ Value related: _____ Time related: _____	Item	
72	B6.4 Plant, equipment, sheds and offices		
	Fixed: _____ Value related: _____ Time related: _____	Item	
73	B6.5 Main notice board		
	Fixed: _____ Value related: _____ Time related: _____	Item	
74	B6.6 Subcontractors' notice board		
	Fixed: _____ Value related: _____ Time related: _____	Item	
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<u>B7.0 TEMPORARY SERVICES</u>				
75	<i>B7.1 Location</i> Fixed: _____ Value related: _____ Time related: _____	Item		
76	<i>B7.2 Water</i> Fixed: _____ Value related: _____ Time related: _____	N/A		
77	<i>B7.3 Electricity</i> Fixed: _____ Value related: _____ Time related: _____	N/A		
78	<i>B7.4 Telecommunication facilities</i> Fixed: _____ Value related: _____ Time related: _____	Item		
79	<i>B7.5 Ablution facilities</i> Fixed: _____ Value related: _____ Time related: _____	N/A		
<u>B8.0 PRIME COST AMOUNTS</u>				
80	<i>B8.1 Responsibility for prime cost amounts</i> Fixed: _____ Value related: _____ Time related: _____	Item		
<u>B9.0 ATTENDANCE ON N/S SUBCONTRACTORS</u>				
81	<i>B9.1 General attendance</i> Fixed: _____ Value related: _____ Time related: _____	Item		
82	<i>B9.2 Special attendance</i> Fixed: _____ Value related: _____ Time related: _____	Item		
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83	B9.3 Commissioning - fuel, water and electricity Fixed: _____ Value related: _____ Time related: _____ <u>B10.0 FINANCIAL ASPECTS</u>	Item		
84	B10.1 Statutory taxes, duties and levies Fixed: _____ Value related: _____ Time related: _____	Item		
85	B10.2 Payment for preliminaries Fixed: _____ Value related: _____ Time related: _____	Item		
86	B10.3 Adjustment of preliminaries Clauses B10.3.1 and B10.3.2 are amended by replacing "within fifteen (15) working days of taking possession of the site" with "when submitting his priced bills of quantities / lump sum document" Fixed: _____ Value related: _____ Time related: _____	Item		
87	B10.4 Payment certificate cash flow Fixed: _____ Value related: _____ Time related: _____ <u>B11.0 GENERAL</u>	Item		
88	B11.1 Protection of the works Fixed: _____ Value related: _____ Time related: _____	Item		
89	B11.2 Protection / isolation of existing / sectionally occupied works Fixed: _____ Value related: _____ Time related: _____	Item		
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90	B11.3 Security of the works	Fixed: _____ Value related: _____ Time related: _____	Item		
91	B11.4 Notice before covering work	Fixed: _____ Value related: _____ Time related: _____	Item		
92	B11.5 Disturbance	Fixed: _____ Value related: _____ Time related: _____	Item		
93	B11.6 Environmental disturbance	Fixed: _____ Value related: _____ Time related: _____	Item		
94	B11.7 Works cleaning and clearing	Fixed: _____ Value related: _____ Time related: _____	Item		
95	B11.8 Vermin	Fixed: _____ Value related: _____ Time related: _____	Item		
96	B11.9 Overhand work	Fixed: _____ Value related: _____ Time related: _____	Item		
97	B11.10 Instruction manuals and guarantees	Fixed: _____ Value related: _____ Time related: _____	Item		
98	B11.11 As built information	Fixed: _____ Value related: _____ Time related: _____	Item		
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100	B11.12 Tenant installations Fixed: _____ Value related: _____ Time related: _____ B12.0 SCHEDULE OF VARIABLES	Item		
101	B12.1 Schedule of variables Fixed: _____ Value related: _____ Time related: _____ This schedule contains all variables referred to in this document and is divided into pre-tender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross-referenced to the applicable clause of the schedule. Key cross reference clauses are italicised in [] brackets 12.1 PRE-TENDER INFORMATION 12.1.1 Provisional bills of quantities [2.2] The quantities are provisional NO 12.1.2 Availability of construction documentation [2.3] <i>Construction documentation is complete</i> YES 12.1.3 Interests of agents [2.4] Details: 12.1.4 Defined works area [3.1] Details: 12.1.5 Geotechnical investigation [3.2] Details: N/A Carried to Collection Section No. 1 Bill No. 1 Preliminaries	Item		R

12.1.6	Existing premises occupied			
[3.4]	Specific requirements: Yes			
12.1.7	Previous work - dimensional accuracy			
[3.5]	Details: N/A			
12.1.8	Previous work - defects			
[3.6]	Details: N/A			
12.1.9	Services - known			
[3.7]	Details: Yes			
12.1.10	Protection of trees			
[3.9]	Specific requirements:			
12.1.11	Inspection of adjoining properties			
[3.11]	Specific requirements: N/A			
12.1.12	Enclosure of the works			
[6.2]	Specific requirements: Contractor to provide barricades for protection of works			
12.1.13	Offices			
[6.4.3]	Specific requirements: The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent , minimum size 4 x 3 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times			
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12.1.14 **Main notice board**
[6.5] Specific requirements:
The **contractor** shall provide, erect where directed, maintain and remove on completion of the **works** a notice board size 3 x 3m as type Drawing GEN 063, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms for SA. All wording shall be inscribed in dark green painted sans serif lettering

12.1.15 **Subcontractors' notice board**
[6.6] A notice board is required
YES
Specific requirements:

12.1.16 **Water**
[7.2] Option A (by **contractor**)
NO

Option B (by **employer** - free of charge)
Yes

Option C (by **employer** - metered)
No

12.1.17 **Electricity**
[7.3] Option A (by **contractor**)
NO

Option B (by **employer** - free of charge)
Yes

Option C (by **employer** - metered)
No

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12.1.18 Telecommunications [7.4] Telephone YES Facsimile NO E-mail YES 12.1.19 Ablution facilities [7.5] Option A (by contractor) No Option B (by employer) Yes 12.1.20 Protection of existing/sectionally occupied works [11.2] Protection is required YES 12.1.21 Special attendance [9.2] Subcontractor (1) details: Subcontractor (2) details: Subcontractor (3) details: Subcontractor (4) details: 12.1.22 Protection of the works [11.1] Specific requirements: Contractor to provide barricades for protection of works 12.1.23 Disturbance [11.5] Specific requirements: The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent	
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12.1.24 *Environmental disturbance*
[11.6] Specific requirements:

12.2 POST-TENDER INFORMATION

12.2.1 *Payment of preliminaries*
[10.2] Option A (prorated)
YES/NO

Option B (calculated)
YES/NO

12.2.2 *Adjustment of preliminaries*
[10.3] Option A (three categories)
YES/NO

Option B (detailed breakdown)
YES/NO

12.2.3 *Additional agreed preliminaries items*
Details:

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SECTION C: SPECIFIC PRELIMINARIES

Section C contains specific preliminary items which apply to this contract except where N/A (Not Applicable) appears against an item

102 **C1.0 CONTRACT DRAWINGS**

** Select relevant paragraph and delete whichever is not applicable depending on whether the contract is based on a **bills of quantities** or **lump sum document***

* A full set of drawings is issued with the tender documents indicating the full scope of the work to enable the tenderer to acquaint himself with the nature and extent of the **works** and the manner in which they are to be executed

Should any part of the drawings not be clearly understood by the tenderer he shall, before submitting his tender, obtain clarification in writing from the **principal agent**

Fixed: _____ Value related: _____ Time related: _____

C2.0 GENERAL PREAMBLES

103

The document "Specification of Materials and Methods to be used (PW371)" is obtainable on the Department's website (<http://www.publicworks.gov.za/> under "Consultants Guidelines"), and shall be read in conjunction with the **bills of quantities / lump sum document** and be referred to for the full descriptions of work to be done and materials to be used

Fixed: _____ Value related: _____ Time related: _____

Item

Item

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104	C3.0 TRADE NAMES Wherever a trade name for any product has been described in the bills of quantities / lump sum document, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for Fixed: _____ Value related: _____ Time related: _____	Item		
105	C4.0 IMPORTED MATERIALS AND EQUIPMENT Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment DPW-23(EC) to be completed by tenderer) Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable) Fixed: _____ Value related: _____ Time related: _____	N/A		
106	C5.0 VIEWING THE SITE IN SECURITY AREAS The site is a security area and the tenderer must arrange with the Director, William Humphreys Art Gallery or other responsible official to obtain permission to enter the site for tendering purposes Fixed: _____ Value related: _____ Time related: _____	Item		
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107	C6.0 COMMENCEMENT OF WORKS IN SECURITY AREAS As the works falls within a security area the contractor must give the Director or other responsible official notice before commencement of the works. Should the contractor fail to make such arrangements, admission to the site may be refused and any additional costs will be for the contractor's account Fixed: _____ Value related: _____ Time related: _____	Item	
108	C7.0 ENTRANCE PERMITS TO SECURITY AREAS As the works falls within a security area the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of William Humphreys Art Gallery or chief security officer Fixed: _____ Value related: _____ Time related: _____	Item	
109	C8.0 SECURITY CHECK OF PERSONNEL The principal agent may require the contractor to have his personnel and workmen, or a certain number of them, security classified In the event of the principal agent requesting the removal of a person or persons from the works for security reasons, the contractor shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the works and the site and/or to any document or information relating to the works Fixed: _____ Value related: _____ Time related: _____	Item	
Carried to Collection			R
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110	C9.0 PROHIBITION ON TAKING OF PHOTOGRAPHS It is prohibited to sketch or to take photographs of any site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking of photographs except when authorized thereto by or on behalf of the Director William Humphreys Art Gallery Fixed:_____Value related:_____Time related:_____ C10.0 HIV/AIDS AWARENESS It is required of the contractor to thoroughly study the HIV/AIDS Specification (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document. Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained The contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A 31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment C10.1 AWARENESS CHAMPION Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification Fixed:_____Value related:_____Time related:_____ Carried to Collection Section No. 1 Bill No. 1 Preliminaries	Item			
111		N/A			
				R	

C10.2 AWARENESS WORKSHOPS Selection and appointment of a competent Service Provider approved by the principal agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification Fixed: _____ Value related: _____ Time related: _____ C10.3 POSTERS, BOOKLETS, VIDEOS, ETC. Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification Fixed: _____ Value related: _____ Time related: _____ C10.4 ACCESS TO CONDOMS Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification Fixed: _____ Value related: _____ Time related: _____ C10.5 MONITORING Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification Fixed: _____ Value related: _____ Time related: _____ Carried to Collection Section No. 1 Bill No. 1 Preliminaries	N/A N/A N/A N/A	R
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112	C11.0 OCCUPATIONAL HEALTH AND SAFETY ACT The contractor shall comply with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) It is required of the contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained Fixed: _____ Value related: _____ Time related: _____				
113	C11.1 NOTIFICATION OF CONSTRUCTION WORK (Construction Regulation 3) The Contractor shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 3. The Contractor shall submit the notification in writing, on the appropriate form, prior to commencement of work Fixed: _____ Value related: _____ Time related: _____				
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114	C11.2 HEALTH AND SAFETY PLAN (Construction Regulation 5.4) The Contractor shall provide and demonstrate to the Principal Agent a suitable and sufficiently documented health and safety plan based on the Act, Construction Regulations and the health and safety specification, which shall be applied from the date of commencement of and for the duration of the construction work. The Contractor shall ensure that a copy of the health and safety plan is available on request to an employee, inspector, sub contractor or principal agent all in terms of Regulation 5 Fixed: _____ Value related: _____ Time related: _____	Item		
115	C11.3 REGISTRATION WITH THE COMPENSATION FUND (Construction Regulation 5.3 f) The Contractor shall provide proof of his registration and good standing with the Compensation Fund or a licensed compensation insurer prior to the commencement of work Fixed: _____ Value related: _____ Time related: _____	Item		
116	C11.4 HEALTH AND SAFETY FILE (Construction Regulation 5.7) The Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the health and safety specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Principal Agent or Inspector upon request. Upon completion of the works, the Contractor shall hand over a consolidated health and safety file to the principal agent Fixed: _____ Value related: _____ Time related: _____	Item		
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117	C11.5 SUPERVISION OF CONSTRUCTION WORK (SAFETY OFFICER) (Construction Regulation 6) The Contractor shall appoint a full-time competent employee in writing as the construction supervisor, with the duty of supervising the construction work. The Contractor shall appoint a full-time or part-time construction safety officer in writing to assist in the control of all safety related aspects on the site. Such appointments are required to ensure that at all times the requirements of the Act and Construction Regulations are adhered to. Refer to Regulation 6 Fixed: _____ Value related: _____ Time related: _____	Item		
118	C11.6 RISK ASSESSMENT AND SAFETY POLICY (Construction Regulation 7) Before commencing work the Contractor shall cause a risk assessment to be performed by a competent person appointed in writing and the risk assessment 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 time carry out the works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. He shall take all precautions regarding training of employees in any hazards and the related work procedures, health and safety induction training of employees, visitors or any other persons entering the site and provide personal protective equipment to all employees and visitors to site which are necessary and adequate to eliminate any conditions which contribute to the risk of injury to persons or damage to property in terms of Regulation 7 Fixed: _____ Value related: _____ Time related: _____	Item		
119	C11.7 SIGNIFICANT HAZARDA IDENTIFICATION RISK ASSESSMENT PREPARED BY THE DESIGN CONSULTANTS The contractor shall allow for additional financial provision, if any, to take the necessary precautions regarding the significant hazards and risks identified and assessed by the design consultants Fixed: _____ Value related: _____ Time related: _____	Item		
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120	C11.8 ADDITIONAL FINANCIAL PROVISION The Contractor shall allow for additional financial provision, if any, to comply with the requirements of the Occupational Health and Safety Act (Act No 85 of 1993) and the Construction Regulations issued there under which have not been specifically elsewhere provided Fixed:_____Value related:_____Time related:_____	Item		
121	C11.9 FALL PROTECTION PLAN (Construction Regulation 8) The contractor shall, before commencing any construction work submit a fall protection plan identified all steps to be taken in order to ensure the continued adherence to the fall protection plan and shall include a risk assessment of all work carried out from an relevant position. The fall protection plan shall form part of the health and safety plan and file Fixed:_____Value related:_____Time related:_____	Item		
122	C11.10 PHYSICAL AND PSYCHOLOGICAL FITNESS (Construction Regulation 8.2(b)) The contractor and sub-contractors shall before commencing any construction work submit proof of his employees that shall carried out work from an elevated position their physical and psychological fitness. And shall be recorded in the health and safety file Fixed:_____Value related:_____Time related:_____	Item		
123	C11.11 CONSTRUCTION VEHICLES AND MOBILE PLANT (Construction Regulation 21) The contractor and sub-contractors shall ensure that all operated workers received training and been certified competent to operate such vehicle, and are physical and psychological fit to operate such construction vehicles and mobile plants. And shall be recorded in the health and safety file Fixed:_____Value related:_____Time related:_____	Item		
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124	C11.12 TRAINING (Construction Regulation 8 (c)) The contractor and sub-contractors shall, before commencing any construction work, submit his training program of all his employees. This program shall from part of the health and safety plan Fixed: _____ Value related: _____ Time related: _____	Item		
125	C11.13 DEMOLITION WORK (Construction Regulation 12) The contractor shall, before any demolition work shall carried out, submit all method of demolition to be used. This method shall form part of the health and safety plan and file. Fixed: _____ Value related: _____ Time related: _____	Item		
126	C11.14 REMOVAL AND DISPOSAL OF ASBESTOS MATERIAL (Asbestos Regulation) The principle contractor shall appoint a contractor that is registered with the Department of Labour as an AIA. The contractor must allow for; NOTIFICATION OF ASBESTOS PROCESSING PERSONAL PROTECTIVE EQUIPMENT PACKAGING AND TRANSPORT AND STORAGE TO DISPOSAL SITE DEMOLITION WORK OF SHEETS LABELLING AND INFORMATION Fixed: _____ Value related: _____ Time related: _____	N/A		
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		R	C
1001 LUMP SUM TENDER: This specification is for a lump sum contract for all work specified and can be changed by variation order to make payments for additional work not originally specified. The contractor must note that any additional work done without a written site instruction and variation order will under no circumstances be paid for. 1002 SPECIFICATION: This specification comprises of three sections: - Section 2 Bill No 1: Building Work Section 2 Bill No 2: Electrical Work Section 2 Bill No 3: Mechanical Work Section 2 Bill No 4: Civil Works (Site Works) NOTE: All measurements shall be taken on Site prior to ordering of materials or construction taking place. 1003 PREMISES IN OCCUPATION: The existing premises will be in occupation during the contract period. 1004 CONTRACT PERIOD: The contract period for the completion and delivery of all the work in this contract is 5 Months, commencing from the date of acceptance of acceptable Works Guarantee tender and shall include all statutory and building industry holidays. 1005 FIXED PRICE CONTRACTS: No contract price adjustments of whatever nature, except for reductions or increases in the Value-added Tax (VAT), shall be applicable to this contract. The tenderer shall make provision in his tender price for possible fluctuations in costs.	NOT TO BE PRICED		
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1100	RATE	TARRIF	
		R	C
<u>BRICKLAYER</u> 1101 BUILD UP OPENINGS Cut toothing's the full height of openings. Prepare for and build up openings of removed console air conditioners with brickwork and cement mortar to match existing. New plaster elsewhere measured is to finish flush with and match the existing internal surface. Workshop (Plaster one side, face brick one side) Square Meters: 2			
1102 REMOVE DOOR AND FRAME (IN TWO LEAVES): Carefully break outdoor and frame complete where shown or specified and remove from site, make good in all trades in preparation for new aluminium purpose made door and frame elsewhere measured. Workshop door size:1140mm x 2100mm No: 1			
1103 REPAIR CRACKS Plaster around all large cracks shall be hacked off for at least 200mm on either side of crack. Cracks are to be filled in with stiff 3:1 cement grouting solidly caulked in. Areas to be re-plastered shall be thoroughly cleaned, wetted, and re-plastered with cement plaster, finished off to a smooth and even surface and on the same plane as the existing plaster, with all joints between old and new plaster properly concealed. Lineal Meters: 10			
1200 1201 <u>CARPENTRY AND JOINERY</u> COUNTERS TOPS (WORKSHOP) 710mm HIGH FROM FLOOR LEVEL <u>Existing counters</u> Carefully remove existing counter within workshop area and remove from site. No: 1			
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	RATE	TARRIF	
		R	C
<u>New Counters</u> Construct in areas as indicated new counters with "Formica Moss Granite" 654 post-formed countertop. <u>Screen Printing Work Top</u> Construct in position as indicated on drawing, 32mm Dog Leg post-formed top 900mm to lengths indicated on drawing with rounded front edge. Form opening in post-formed top located under window to house double bowl sink. Tops to be fixed from bellow to cabinet legs (elsewhere measured). 1800 x 900mm Post form Dog Leg top: No: 1 <u>Display Counter and Work Top</u> Construct in position as indicated on drawing, 32mm post-formed top 900mm wide by 1800mm in length rounded front edge. Top to be fixed from bellow to cabinet legs (elsewhere measured). 2000 x 600mm Post form top: No: 1 3000 x 600mm Post form top: No: 1 1202 STORAGE CABINET DOORS <u>Interior type particle board with 0.55 mm melamine veneer of approved colour on both sides</u> <u>Chemical Storage Unit</u> Construct in two leaves, doors to size and quantity in Melamine wood '839 Cherry Royale' finishing, secured to storage unit with concealed hinges. Finish edges of doors with .035 Melamine edging. Door size: 2100 x 915 No: 2 1203 Kitchenette Remove existing steel cupboards and zinc unit and remove from site. Construct in position as indicated on drawing, Kitchenette layout with 600 x 32mm post-formed tops with rounded front edge with 22mm melamine side panels secured to wood carcass structure. Form opening in post-formed top to house double bowl sink. Contractor to provide design of Kitchenette to Client for approval. Design of Kitchenette to incorporate storage for groceries and cutlery (Storage Capacity also to be provided above work top area), storage capacity under zinc unit for cleaning materials and shelf unit for housing of Microwave Oven. Provisional Sum			
		50 000	00
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1204		R	C
PINNING BOARD (LARGE BOARD): Carefully remove existing pinning board, remove old, stained backing material, and replace with new to existing colour. Rooms: Workshop: Square Meters: 5			
1205			
ADJUSTABLE SHELVING IN WORKSHOP Provide and fix in position as indicated on drawings, 21mm thick block board shelves, finished on both sides and edges with approved veneer, fixed to adjustable steel standards of 2 Metre lengths each, securely fixed to walls at 250mm centres. Block Board shelves shall be fitted with support brackets compatible to slot into steel standards for adjustment of shelf heights. Standards (2m lengths each): No: 2 Shelves (inclusive of brackets): No: 6			
1206			
SKIRTINGS AND ANGLE MOULDS: 1207			
REPLACE QUADRANTS: Remove all rotted and damaged sections of quadrants. Provide and fix new quadrants to match existing. Fix new quadrants with approved panel pins at not exceeding 450mm centres. Workshop: Lineal Meters: 21m Kitchen: Lineal Meters: 14m Bathroom: Lineal Meters: 11m Passage: Lineal Meters: 11m Bedroom No 1: Lineal Meters: 13m Bedroom No 2: Lineal Meters: 16m Total Quantity Quadrants: Lineal Meters: 86			
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	RATE	TARRIF	
1400		R	C
<u>IRONMONGERY</u> 1401 DOORSTOPS: Provide and fix door stops as sample 150 to floors where specified, securely screwed to timber or fibre cement plugs. Rooms: Workshop: 2 Kitchen: 1 Bathroom: 1 Bedroom No 1: 1 Bedroom No 2: 1 Quantity: 6 1402 REPLACE MORTICE LOCKS: Remove existing defective door locks. Provide and fit new mortice locks according to the sizes and quantity levers as mentioned below, including furniture as required. Each lock is to be supplied with two keys. Fit and adjust striking plates. Rooms: Workshop: 1 Kitchen: 1 Bathroom: 1 Bedroom No 1: 1 Bedroom No 2: 1 Quantity: 5 1403 WORK TOP LEGS TO POST FORM TOPS Supply, install and secure to underside of post formed tops, "Builders Cabinet Leg Mat Black 710 x 80 x 710mm" at even spaces neatly secured with screws and fasteners.  Workshop: No: 10			
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	RATE	TARRIF	
1404		R	C
BLINDS AND CURTAIN TRACKS Approved flush mounted aluminium venetian blinds with 25mm slates colour: Silver with and including 25 x 25mm matching aluminium powder coated top and bottom tracks, stainless steel separator pins, cord lock and roller pins. 970 x 1490mm high including brackets, etc plugged: No: 5 Workshop: 2 Bedroom No 1: 1 Bedroom No 2: 2 970 x 905mm high including brackets, etc plugged: No: 2 Kitchen: 1 Bathroom: 1			
1500			
<u>METALWORK</u>			
1501			
REPLACE EXTERNAL STEEL DOORS (TWO LEAVES): Remove existing steel door and frame. Remove from site. Provide new single leave purposed made Aluminium door and door frame to size as indicated securely fixed within existing opening. Provide new Rim Lock and furniture and allow door to open and close freely. Doors to open inwards for disabled persons access from outside. (New Door inclusive of approved Safety Glass) 1140mm x 2100mm high Quantity: 1			
1502			
STEEL WINDOWS (REPAIRS): Adjust as required and refix all loose stays and catches. Workshop: 10 Kitchen: 3 Bathroom: 3 Bedroom No 1: 3 Bedroom No 2: 6 Total: No: 25			

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1503		R	C
REMOVE CURTAIN- AND HANGING RAILS: Remove existing curtain- and hanging rails in areas as indicated. Remove all securing screws and stop all holes with approved filler. Rooms: Bedroom No 1: 1 Bedroom No 2: 1 Total: No: 2			
1504			
SECURITY DOORS: Provide "Expander Slam Lock" or other approved security doors, with dead locks, size 1200mm x 2490mm high with frame, fixed to brick work or concrete. Rooms: Passage: Quantity: 1			
1505			
SPLASHBACKS: Fix in position above Screen Print Work Top and Zinc, 500mm high x 4 mm thick stainless-steel flashback to lengths of work tops. Quantity: 2			
1600			
<u>PLUMBING AND DRAINAGE</u>			
1601			
SANITARY PLUMBING <u>Sanitary Fittings</u> <u>Workshop</u> Supply and install within post-formed top, double bowl stainless steel sink "Vaal Tulip" or similar, including 20mm "Cobra Star" water mixer, waste outlet fitting with plug, chain and stay with and including chromium plated bottle trap. Double Bowl Sink Unit: No: 1 Water Mixer: No: 1 20mm new copper water piping for Cold water: Lineal Meters: 10 20mm new copper water piping for Hot water: Lineal Meters: 20 40mm waste outlet pipe inclusive of elbows (4): Lineal Meters: 10			

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	RATE	TARRIF	
		R	C
1659			
<u>PLASTERING</u>			
1663			
INTERNAL CEMENT PLASTER ON BRICKWORK:			
Render all internal wall surfaces, except where beams, lintols, glazed tile and face brick lintols occur with 4:1 cement plaster.			
Workshop: Square Meters: 8			
1700			
<u>PAINTING</u>			
1701			
<u>INTERNAL PAINTING</u>			
1702			
CONCRETE CEILINGS: (PREVIOUSLY PAINTED WITH ACRYLIC PAINT):			
Clean down, prepare for and apply two coats acrylic white paint to all ceilings:			
Rooms:			
Workshop: Square Meters: 28			
1703			
PAINT CEILINGS & CORNICE (REDECORATE WITH EMULSION PAINT):			
Strip off all flaked or otherwise defective paint film. Replace missing nails with new nails, and nail back all loose nails. Stop up holes and sand down to a smooth and even surface.			
Prepare for and paint one coat bonding liquid and two coats white emulsion paint to rooms as mentioned below:			
Rooms:			
Bathroom: Square Meters: 7 m ²			
Passage: Square Meters: 5 m ²			
Bedroom No 1: Square Meters: 10 m ²			
Bedroom No 2: Square Meters: 16 m ²			
Box Around AC Ducts: Square Meters: 10 m ²			
Square Meters: 38			
PAGE SUMMARY			

Project No: RFP-03/2024 – (6247-03)

CARRIED FORWARD: R_____

Project No: RFP-03/2024 – (6247-03)

CARRIED FORWARD: R _____

	RATE	TARRIF	
1704		R	C
PAINT EXISTING WALLS: The existing painted walls are to be sanded down and thoroughly cleaned. All cracks or other defects to be properly filled with an approved filler and sanded down to a smooth and even surface flush with surrounding surfaces and all bare patches to be treated with one coat of approved sealer. Paint walls with two coats finishing as indicated below: 32mm Meranti separation to be secured to wall at point of colour separation for floor and dado level. Workshop: 2 metres from floor level: "Dulux Mediterranean Blue BB15". Square Meters: 46 Dado level: "Dulux Luxurious Silk – "Moon Grey" Square Meters: 35 Rooms: Dulux Luxurious Silk – "Moon Grey" Kitchen: Square Meters: 23 m² Bathroom: Square Meters: 22 m² Passage: Square Meters: 25 m² Bedroom No 1: Square Meters: 27 m² Bedroom No 2: Square Meters: 40 m² Square Meters: 171			
PAGE SUMMARY			

CARRIED FORWARD: R

21

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CARRIED FORWARD: R _____

	RATE	TARRIF	
		R	C
1918			
GLAZING			
1921			
POLISHED LAMINATED SAFETY GLASS:			
Provide 6 mm thick laminated safety glass cut to size having edges rounded and polished and fitted on Screen Printing countertop in workshop.			
Artist Workshop: No: 1			
1929			
MIRRORS:			
Remove existing mirror and store for reuse.			
Refix existing mirror in position as shown, mirror to be secured in position with new countersunk screws, screwed to plugs in wall with 38 mm long screws, fitted with domed chromium-plated cups.			
Provide at each fixing point a felt washer between wall and mirror.			
Rooms:			
Bedroom No 2: No: 1			
1800			
<u>SITE WORK</u>			
1801			
DISABLED ACCESS RAMP:			
Refer to Section No 2 Bill No 4 for details for construction of the disabled ramp.			
END OF SPECIFICATION			
PAGE SUMMARY			
TOTAL CARRIED TO SUMMARY: BUILDING WORKS – SECTION 2 BILL 1			

Project No: RFP-03/2024 – (6247-03)

CARRIED FORWARD: R _____

1900

SUMMARY

a. Amount for Preliminaries Section 1 Bill 1	R _____
b. Amount for Building Works Section 2 Bill 1	R _____
c. Amount for Electrical Works Section 2 Bill 2	R _____
d. Amount for Mechanical Works Section 2 Bill 3	R _____
e. Amount for Civil Works (Site Works) Section 2 Bill 4	R _____
f. Less amount for old material (Air Conditioners	R _____ 5000.00
Sub-total	R _____
Add: Value-added Tax (VAT: 15%)	R _____
Total carried forward to "Form of Offer and Acceptance". Form: WHAG-07EC	R _____

Project No: RFP 03/2024 (6247-03)



WILLIAM HUMPHREYS ART GALLERY

BILL OF QUANTITIES

FOR

REFURBISHMENT OF ARTIST FLAT

SECTION 2 BILL 2

ELECTRICAL BOQ

**MVD Kalahari Consulting Engineers and
Town Planners**

**186 du Toitspan Road
Kimberley
8301**

DATE: October 2024

William Humphreys Art Gallery-Refurbishment Artist Flat: 6247-03

Project No: RFP 03/2024 (6247-03)

SECTION 2 BILL NO 2

ELECTRICAL INSTALLATION

COMPREHENSIVE CONTRACT

Project No: RFP 03/2024 (6247-03)

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(COMPREHENSIVE SERVICE)

STANDARD CONDITIONS IN RESPECT OF ELECTRICAL INSTALLATIONS

1. **PRELIMINARIES**

These standard conditions shall be read in conjunction with the Preliminaries JBCC 2015 EDITION 6.2 which is used with the Bills of Quantities and should there be any discrepancy between these standard conditions and the Preliminaries, the former shall take preference.

2. **INSPECTIONS**

Where locally manufactured plant or materials are offered, the Representative/Agent reserves the right to inspect such plant or materials during manufacture and to reject such items as do not conform with the requirements.

3. **VARIATIONS**

The price and/or rates in the Contract shall be regarded as Schedule Rates for the purposes of clause 32 of the Conditions of Contract (JBCC 2005 EDITION 4.1)

Variations shall be dealt with in the following manner: -

- 3.1. Written Order shall be issued based on a price agreed upon by the Contractor and the Representative/ Agent.
- 3.2. If a price for a Written Order cannot be agreed upon by the said parties, the price is determined by the Representative/Agent based on the value of the items of work which are included in the Contract, and the Contractor then must act in accordance with the Written Order. If such price is not acceptable to the Contractor, he shall within 21 days of receipt of the Written Order, submit full particulars of his price to the Representative/Agent for reconsideration, and the work shall proceed, notwithstanding any objection to a price.

4. **TESTS**

After completion the Works and before first delivery is taken, full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the whole of the Works will be inspected, and the Contractor shall make good, to the satisfaction of the Representative/Agent, any deficiencies that may arise.

The contractor shall provide all instruments and equipment required for testing. Any water, power and fuel required for the commissioning and testing of installations on their completion will be provided by and at the expense of the End User.

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5. MAINTENANCE OF INSTALLATIONS

With effect from the date of the First Delivery Certificate the Contractor shall at his own expense undertake the regular servicing of the installation during the maintenance period and shall make all adjustments necessary for the correct operation thereof.

If during the said period the installation is not in working order for any reason for which the Contractor can be held responsible, or if the installation develops defects, he shall immediately upon being notified thereof take steps to remedy the defects or faults or to make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installation otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Representative/Agent or the End User, at his own expense replace the whole installation or such parts thereof as the Representative/Agent or the End User may deem necessary with apparatus specified by the Representative/Agent or the End User.

6. COMPLIANCE WITH REGULATIONS

Where applicable, installation shall in all respects comply with -

- (a) the latest issue of SABS 0142: "Code of Practice for the Wiring of Premises";
- (b) the Occupational Health and Safety Act, 1993 (Act 85/1993).
- (c) the municipal bylaws and any special requirements of the local supply authority.
- (d) the local fire regulations; and
- (e) the National Building Regulations and Building Standards Act 1977 (Act 103 of 1977) as amended.

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SPECIFICATION FOR ELECTRICAL WORK

PART 1

GENERAL

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SPECIFICATION FOR ELECTRICAL WORK

PART 1

GENERAL

1. **NOTICES AND FEES**

The contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority.

On production of the official account, only the net amount of the fee charged by the Supply Authority for connection of the installation to the supply mains, will be refunded to the contractor by the Department.

2. **SCHEDULE OF FITTINGS**

In all instances where schedule of light, socket outlet and power points are attached or included on the drawings, these schedules are to be regarded as forming part of the specification.

3. **QUALITY OF MATERIALS**

Only materials of first-class quality shall be used, and all materials shall be subject to the approval of the Department. Departmental specifications for various materials to be used on this contract are attached to and form part of this specification.

Wherever applicable the material is to comply with the relevant South African Bureau of Standards specifications, or to British Standard Specifications, where no SABS Specifications exist.

Materials wherever possible, must be of South African manufacture.

4. **CONDUIT AND ACCESSORIES**

The type of conduit and accessories required for the service, *ie* whether the conduit and accessories shall be of the screwed type, plain-end type or of the non-metallic type and whether metallic conduit shall be black enamelled or galvanised, is specified in Part 2 of this specification. Unless other methods of installation are specified for certain circuits, the installation shall be in conduit throughout. No open wiring in roof spaces or elsewhere will be permitted.

The conduit and conduit accessories shall comply fully with the applicable SABS specifications as set out below and the conduit shall bear the mark of approval of the South African Bureau of Standards.

- (a) Screwed metallic conduit and accessories: SABS 162
- (b) Plain-end metallic conduit and accessories: SABS 1065 Parts 1 and 2
- (c) Non-metallic conduit and accessories: SABS 950

All conduit fittings except couplings, shall be of the inspection type. Where cast metal conduit accessories are used, these shall be of malleable iron. Zinc base fittings will not be allowed.

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Bushes used for metallic conduit shall be brass and shall be provided in addition to locknuts at all points where the conduit terminates at switchboards, switchboxes, draw-boxes, etcetera.

Draw-boxes are to be provided in accordance with the "Wiring Code" and wherever necessary to facilitate easy wiring.

For light and socket outlet circuits, the conduit used shall have an external diameter of 20 mm. In all other instances the sizes of conduit shall be in accordance with the "Wiring Code" for the specified number and size of conductors, unless otherwise directed in part 2 of this specification or indicated on the drawings.

Only one manufacture of conduit and conduit accessories will be permitted throughout the installation.

Running joints in screwed conduit are to be avoided as far as possible and all conduit systems shall be set or bend to the required angles. The use of normal bends must be kept to a minimum with exception of larger diameter conduits where the use of such bends is essential.

All metallic conduits shall be manufactured of mild steel with a minimum thickness of 1.2 mm for plain-end conduit and 1.6 mm in respect of screwed conduit.

NOTE

Under no circumstances will conduit having a wall thickness of less than 1.6 mm be allowed in screeding laid on top of concrete slabs.

Bending and setting of conduits must be done with special bending apparatus manufactured for the purpose and which are obtainable from the manufacturers of the conduit systems.

Damage to conduit resulting from the use of incorrect bending apparatus or methods applied must on indication by the Representative/Agent, be completely removed and rectified and any wiring already drawn into such damaged conduits must be completely renewed at the contractor's expense.

Conduit and conduit accessories used for flame-proof or explosion proof installations and for the suspension of luminaires as well as all load bearing conduit shall in all instances be of the metallic screwed type.

All conduit and accessories used in areas within 50km of the coast shall be galvanised to SABS 763.

Tenderers must ensure that general approval of the proposed conduit system to be used is obtained from the local electricity supply authority prior to the submission of their tender. Under no circumstances will consideration be given by the Representative/Agent to any claim submitted by the contractor, which may result from a lack of knowledge in regard to the supply authority's requirements.

5. **CONDUIT IN ROOF SPACES**

Conduit in roof spaces shall be installed parallel or at right angles to the roof members and shall be secured at intervals not exceeding 1.5 metre by means of saddles screwed to the roof timbers.

Nail or crampets will not be allowed.

Where non-metallic conduit has been specified for a particular service, the conduit shall be supported and fixed with saddles with a maximum spacing of 450 mm throughout the installation. The contractor shall supply and install all additional supporting timbers in the roof space as required.

Under flat roofs, in false ceilings or where there is less than 0.9 metre of clearance, or should the ceilings be insulated with glass wool or other insulating material, the conduit shall be installed in such a manner as to allow for all wiring to be executed from below the ceilings.

Conduit runs from distribution boards shall, where possible terminate in fabricated sheet steel draw-boxes installed directly above or in close proximity to the boards.

6. **SURFACE MOUNTED CONDUIT**

Wherever possible, the conduit installation is to be concealed in the building work; however, where unavoidable or otherwise specified under Part 2 of the specification, conduit installed on the surface must be plumbed or levelled and only straight lengths shall be used.

The use of inspection bends is to be avoided and instead the conduit shall be set uniformly, and inspection coupling used where necessary.

No threads will be permitted to show when the conduit installation is complete, except where running couplings have been employed.

Running couplings are only to be used where unavoidable and shall be fitted with a sliced couplings as a locknut.

Conduit is to be run on approved spaced saddles rigidly secured to the walls. Alternatively, fittings, tees, boxes, couplings etcetera, are to be cut into the surface to allow the conduit to fit flush against the surface. Conduit is to be bedded into any wall irregularities to avoid gaps between the surface and the conduit.

Crossing of conduits is to be avoided, however, should it be necessary purpose-made metal boxes are to be provided at the junction. The finish of the boxes and positioning shall be keeping with the general layout.

Where several conduits are installed side by side, they shall be evenly spaced and grouped under one purpose-made saddle.

Distribution boards, draw-boxes, industrial switches, and socket outlets etcetera shall be neatly recessed into the surface to avoid double sets.

In situations where there are no ceilings the conduits are to be run along the wall plates and tie beams.

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In buildings where building operations are to be carried out, all surface conduits will be painted by the building contractor.

In all other instances the electrical contractor shall allow for painting of surface conduit with two coats of good quality enamel paint and the colour shall match the surrounding building finish.

Only approved plugging materials such as aluminium inserts, fibre plugs, plastic plugs, etcetera, and round-head screws shall be used for fixing saddles, switches, socket outlets, etcetera, to walls, wood plugs and the plugging in joints in brick walls are not acceptable.

7. **CONDUIT IN CONCRETE SLABS**

In order not to delay building operations the contractor must ensure that all conduits and other electrical equipment which are to be cast in the concrete columns and slabs are installed in good time.

The contractor shall always have a representative in attendance when the casting of concrete takes place.

Draw-boxes, expansion joint boxes and round conduit boxes are to be provided where necessary. Sharp bends of any nature will not be allowed in concrete slabs.

Draw and/or inspection boxes shall be grouped under one common cover plate and must preferably be installed in passages or male toilets.

All boxes, etcetera, are to be securely fixed to the shuttering to prevent displacement when concrete is cast. The conduit shall be supported and secured at regular intervals and installed as close as possible to the neutral axis of concrete slabs and/or beams.

Before any concrete slabs are cast, all conduit droppers to switchboards shall be neatly spaced and rigidly fixed.

8. **FLEXIBLE CONNECTIONS FOR CONNECTING UP OF STOVES, MACHINES, ETCETERA**

Flexible tubing connections shall be of galvanised steel construction, and in damp situations of the plastic sheathed galvanised steel type. Other types may only be used subject to the prior approval of the End User site electrical representative.

Connectors for coupling onto the flexible tubing shall be of the gland or screw-in types, manufactured of either brass or cadmium or zinc plated mild steel, and the connectors after having been fixed onto the tubing, shall be durable and mechanically sound.

NOTE

Aluminium and zinc alloy connectors will not be acceptable.

9. **WIRING**

Except where otherwise specified in Part 2 off the specification, wiring shall be carried out in conduit throughout. Only one circuit per conduit will be permitted.

No wiring shall be drawn into conduit until the conduit installation has been completed and all conduit ends provided with bushes. All conduit to be clear of moisture and debris before wiring is commenced.

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Unless otherwise specified in Part 2 of this specification or indicated on the service drawings, the wiring of the installation shall be carried out in accordance with the "Wiring Code". Further to the requirements concerning the installation of earth conductors to certain light points as set out in the "Wiring Code", it is a specific requirement of this document that where plain-end metallic conduit or non-metallic conduit has been used, earth conductors must be provided and drawn into the conduit with the main conductors to all points, including all luminaires and switches throughout the installation.

Wiring for lighting circuits is to be carried out with 1.5 mm² conductors and a 1.5 mm² earth conductor. For socket outlet circuits the wiring shall comprise 4 mm² conductors and a 2.5 mm² earth conductor. In certain instances, as will be directed in Part 2 of this specification, the sizes of the conductors may be increased for specified circuits. Sizes of conductors to be drawn into conduits in all other instances, such as feeders to distribution boards, power points etcetera, shall be as specified elsewhere in this specification or indicated on the drawings. Sizes of conductors not specified must be determined in accordance with the "Wiring Code".

The loop-in system shall be followed throughout, and no joints of any description will be permitted.

The wiring shall be done in PVC insulated 600/1000 V grade cable to SABS 150.

Where cable ends connect onto switches, luminaires etcetera, the end strands must be neatly and tightly twisted together and firmly secured. Cutting away of wire strands of any cable will not be allowed.

10. **SWITCHES AND SOCKET OUTLETS**

All switches and switch-socket outlet combination units shall conform to the Department Quality Specifications, which form part of this specification.

No other than 16A 3-pin sockets are to be used unless other special purpose types are distinctly specified or shown on the drawings.

All light switches shall be installed at 1.4 metre above finished floor level and all socket outlets as directed in the Schedule of Fittings which forms part of this specification or alternatively the height of socket outlets may be indicated on the drawings.

11. **SWITCHGEAR**

Switchgear, which includes circuit breakers, ironclad switches, interlocked switch-socket outlet units, contactors, time switches, etcetera, is to be in accordance with the Departmental Quality Specifications which form part of this specification and shall be equal and similar in quality to such brands as may be specified.

For uniform appearance of switchboards, only one approved make of each of the different classes of switchgear mentioned in the Quality Specifications shall be used throughout the installations.

12. **SWITCHBOARDS**

All boards shall be in accordance with the types as specified, be constructed according to the detail or type drawings, and must be approved by the Engineer before installation.

In all instances where provision is to be made on boards for the supply authority's main switch and/or metering equipment the contractor must ensure that all requirements of the authorities concerned in this respect are met.

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Any construction or standard type board proposed as an alternative to that specified, must have the prior approval of the Department.

All busbars, wiring, terminals, etcetera, are to be adequately insulated and all wiring is to enter the switchgear from the back of the board. The switchgear shall be mounted within the boards to give a flush front panel. Cable and boxes and other ancillary equipment must be provided where required.

Clearly engraved labels are to be mounted on or below every switch. The wording of the labels in both official languages is to be according to the layout drawings or as directed by the Department's representative and must be confirmed on site. Flush mounted boards to be installed with the top of the board 2.0 metre above the finished floor level.

13. **WORKMANSHIP AND STAFF**

Except in the case of electrical installations supplied by a single-phase electricity supply at the point of supply, an accredited person shall exercise general control over all electrical installation work being carried out.

The workmanship shall be of the highest grade and to the satisfaction of the Representative/Agent.

All inferior work shall, on indication by the Representative/Agent, immediately be removed and rectified by and at the expense of the electrical contractor.

14. **CERTIFICATE OF COMPLIANCE**

On completion of the service, a certificate of compliance must be issued to the Department's representative/agent in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

15. **EARTHING OF INSTALLATION**

The type of main Earthing must be as required by the supply authority if other than the Departments, and in any event as directed by the Representative/Agent, who may require additional Earthing to meet test standards.

Where required an earth mat shall be provided, the minimum size, unless otherwise specified, being 1.0 metre x 1.0 metre and consisting of 4 mm diameter hard-drawn bare copper wires at 250 mm centres, brazed at all intersections.

Alternatively, or additionally earth rods or trench earths may be required as specified or directed by the authorised Representative/Agent.

Installations shall be effectively earthed in accordance with the "Wiring Code" and to the requirements of the supply authority. All earth conductors shall be stranded copper with or without green PVC insulation.

Connection from the main earth bar on the main board must be made to the cold water main, the incoming service earth conductor, if any and the earth mat or other local electrode by means of 12 mm x 1.60 mm solid copper strapping or 16 mm² stranded (not solid) bare copper wire or such conductors as the Representative/Agent may direct. Main earth copper strapping where installed below 3m from ground level, must be run in 20 mm diameter conduit securely fixed to the walls.

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All other hot and cold-water pipes shall be connected with 12 mm x 0.8 mm perforated or solid copper strapping (not conductors) to the nearest switchboard. The strapping shall be fixed to the pipe work with brass nuts and bolts and against walls with brass screws at 150 mm centres. In all cases where metal water pipes, down pipes, flues, etcetera, are positioned within 1.6 metre of switchboards an earth connection consisting of copper strapping shall be installed between the pipe work and the board. In vertical building ducts accommodating both metal water pipes and electrical cables, all the pipes shall be earthed at each distribution board.

Roofs

Where service connections consist of overhead conductors, all metal parts of roofs, gutters and down pipes shall be earthed. One bare 10 mm² copper conductor shall be installed over the full length of the ceiling void, fixed to the top purlin and connected to the main earth conductor and each switchboard. The roof and gutters shall be connected at 15 metre intervals to this conductor by means of 12 mm x 0.8 mm copper strapping (not conductors) and galvanised bolts and nuts. Self-tapping screws are not acceptable. Where service connections consist of underground supplies, the above requirements are not applicable.

Sub-Distribution Boards

A separate earth connection shall be supplied between the earth busbar in each sub-distribution board and the earth busbar in the Main Switchboard. These connections shall consist of bare or insulated stranded copper conductors installed along the same routes as the supply cables or in the same conduit as the supply conductors. Alternatively armoured cables with earth continuity conductors included in the armouring may be utilised where specified or approved.

Sub-circuits

The earth conductors of all sub-circuits shall be connected to the earth busbar in the supply board in accordance with SABS 0142.

Ring Mains

Common earth conductors may be used where various circuits are installed in the same wireway in accordance with SABS 0142. In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wireway, alternatively the size of the conductor shall be as directed by the Engineer.

Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered. The common earth shall not be broken.

Non-metallic Conduit

Where non-metallic conduit is specified or allowed, the installation shall comply with the Department's standard quality specification for "conduit and conduit accessories". Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaires, etcetera. The securing of earth conductors by means of self-threading screws will not be permitted.

Flexible Conduit

An earth conductor shall be installed in all non-metal flexible conduit. This earth conductor shall not be installed externally to the flexible conduit but within the conduit with the other conductors. The earth conductor shall be connected to the earth terminals at both ends of the circuit.

Connection

Under no circumstances shall any connection points, bolts, screws, etcetera, used for Earthing be utilised for any other purpose. It will be the responsibility of the Contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided. Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

16. MOUNTING AND POSITIONING OF LUMINAIRES

The electrical contractor is to note that in the case of board and acoustic tile ceilings, ie as opposed to concrete slabs, close co-operation with the building contractor is necessary to ensure that as far as possible the luminaires are symmetrically positioned with regard to the ceiling pattern.

The lay-out of the luminaires as indicated on the drawings must be adhered to as far as possible and must be confirmed with the Representative/Agent.

Fluorescent luminaires installed against concrete ceilings shall be screwed to the outlet boxes and in addition 2 x 6 mm expansion or other approved type fixing bolts are to be provided. The bolts are to be $\frac{3}{4}$ of the length of the luminaires apart.

Fluorescent luminaires to be mounted on board ceilings shall be secured by means of two 40 mm x No 10 round head screws and washers. The luminaires shall also be bonded to the circuit conduit by means of locknuts and brass bushes. The fixing screws are to be placed $\frac{3}{4}$ of the length of the fitting apart.

Earth conductors must be drawn in with the circuit wiring and connected to the Earthing terminal of all fluorescent luminaires as well as other luminaires exposed to the weather in accordance with the "Wiring Code".

Incandescent luminaires are to be screwed directly to outlet boxes in concrete slabs. Against board ceilings the luminaires shall be secured to the bracing or joists by means of two 40 mm x No 8 round head screws.

17. DELAY

If the electrical contractor's work should cause any delay to the building operations, he will be held responsible for any claims arising out of such delay.

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SPECIFICATION FOR ELECTRICAL WORK

PART 2

INSTALLATION DETAILS

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SPECIFICATION OF ELECTRICAL WORK

PART 2

INSTALLATION DETAILS

1. **CONTRACT WORK**

The installation shall be carried out entirely by the Sub-Contractor's own staff and shall not in any way be sub-let.

2. **VALUE ADDED TAX (VAT)**

The total tender price must exclude VAT. All rates, provisional sums, etcetera in the bills of quantities must be net (excluding VAT).

3. **CONTRACT PRICE ADJUSTMENT PROVISIONS**

The contract sum shall be fixed and not subject to any contract price adjustment.

4. **INFORMATION**

The tenderer's attention is drawn to the fact that if the information schedules in this specification are not completed, his tender may be disqualified.

5. **CABLE SLEEVE PIPES**

Where cables cross under roadways, other services and where cables enter buildings, the cables shall be installed in asbestos-cement pipes or earthenware pipes.

Galvanised metallic sleeves up to and including 50mm shall be supplied and installed by the Electrical Contractor. The Building Contractor will be responsible for the supply and installation of all sleeves with a diameter in excess of 50mm Ø as well as manholes where applicable, as indicated on the site plan.

The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.

6. **NOTICES**

The Contractor shall issue all notices and make the necessary arrangements with Supply Authorities, the Postmaster-General, SA Transport Services, Provincial or National Road authorities and other Authorities as may be required with respect to the installation.

The Contractor will be held responsible for damage to any existing services brought to his attention by the relevant authorities and will be responsible for the cost of repairs.

7. **ELECTRICAL EQUIPMENT**

All equipment and fittings supplied must be in accordance with the quality specification (Part 3), suitable for the relevant supply voltage, and frequency and must be approved by the Representative/Agent.

8. **DRAWINGS**

The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

9. **BALANCING OF LOAD**

The Electrical Contractor is required to balance the load as equally as possible over the multiphase supply.

10. **WORK SEQUENCE**

The sequence, in which the work must be carried out, must be established in consultation with the Department's representative.

11. **SUPERVISION**

The work shall at all times, for the duration of the contract be carried out under the supervision of a skilled and competent representative of the contractor, who will be able and authorised to receive and carry out instructions on behalf of the contractor. A sufficient number of workmen shall be always employed to ensure satisfactory progress of the work.

12. **SUPPLY OF MATERIAL**

The Representative/Agent reserves the right to supply any item of material or equipment required for this service.

The contractor shall take delivery and install such material or equipment.

13. **SERVICE CONDITIONS**

All plant shall be designed for the climatic conditions appertaining to the service.

14. **SWITCHES AND SOCKET OUTLETS**

The installation of switches and socket outlets must conform to clause 10 of Part 1 of this specification.

15. **LIGHT FITTINGS AND LAMPS**

The installation and mounting of luminaires must conform with clause 16 of Part 1 of this specification.

All fittings to be supplied by the electrical contractor shall have the approval of the Representative/Agent. Incandescent lamps shall bear the approved mark of the SABS and shall have the British light centre length.

The light fittings must be of the type specified in Schedule of Light Fittings.

16. **EARTHING AND BONDING**

The Contractor will be responsible for all Earthing and bonding of the building and installation; the Earthing and bonding is to be carried out strictly as described under clause 15 of Part 1 of this specification and to the satisfaction of the Representative/Agent.

17. **MAINTENANCE OF ELECTRICAL SUPPLY**

All interruptions of the electrical supply that may be necessary for the execution of the work will be subject to prior arrangement between the Contractor, the User Department, and the Representative/Agent.

18. **EXTENT OF WORK**

The work covered by this contract comprises the complete electrical installation, in working order, as shown on the drawings and as per this specification, including the supply and installation of all fittings and also the installation of such equipment supplied by the User Department.

19. **CONDUIT AND WIRING**

Conduit and conduit accessories shall be black enamelled/galvanised screwed conduit or black enamelled/galvanised plain end conduit in accordance with SABS 162, 763 and 1007 respectively. All conduit, regardless of the system employed, shall be installed strictly as described in the applicable paragraphs of clauses 4 to 8 of Part 1 of the specification. Wiring of the installation shall be carried out as directed in clause 9 of Part 1 of this specification.

NOTE:

Where plain end conduit is offered all switches and light fittings must be supplied with a permanent earth terminal for the connection of the earth wire.

Lugs held by switch fixing screws or self-tapping screws will not be acceptable.

20. **TEST**

Notwithstanding clause 1 Part 1 the contractor will be required to sign an indemnity form, upon completion of the service, before first delivery will be granted.

In addition, all earth leakage relays shall be tested in accordance with the "CODE OF PRACTICE" using approved Earth Leakage testing equipment.

21. **SITE INSPECTION**

Tenderers are advised to visit the site and thoroughly associate themselves with the nature and extent of the work to be done, and to make allowance for items obviously intended and necessary for the proper technical completion of the work although not specifically specified. Claims on the ground of want knowledge will not be entertained.

22. **PREMISES IN OCCUPATION**

Should the premises be occupied during the contract, the contractor shall make every endeavour to cause as little discomfort or inconvenience as possible. He shall further ensure that the occupants are notified timeously regarding any disruption, and that sufficient power points and or lights are in working order to enable the occupants to proceed in an as normal manner as possible.

23. **MAKING GOOD**

The successful tenderer will be responsible for making good in all trades of any damage to buildings, ceilings, walls, or other services, which he or his employees may have incurred during construction of the work.

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The contractor will be responsible for keeping the site clean and tidy and shall remove all litter and rubbish resulting from the construction of electrical works.

24. **REDUNDANT MATERIAL**

All redundant material removed by the electrical contractor during the execution of this contract, shall become his property and he will remove it from site.

25. **GENERAL SCOPE OF WORK**

The contractor shall attend to the following existing light switches, socket outlets, light fittings, equipment in distribution boards, power skirting and replace with or install new as indicated:

 EXISTING LIGHT FITTINGS

All existing light fittings shall be removed and replaced with new as per configuration later specified.

 POWER SKIRTING:

All existing power skirting shall be neatly removed and new four (4) and two (2) compartmented power skirting inclusive of clip-on cover plate, bends and end caps shall be installed in positions as indicated, neatly secured to walls.

 DISTRIBUTION BOARDS:

Disconnect and remove all existing Circuit Breakers and circuit breaker frame. Disconnect and remove existing D/B 1 Architrave from D/B tray. Supply and install new Semi-Recessed D/B frame to size and measurements elsewhere measured and secure to existing D/B tray. Within wall aperture, carefully core drill openings for insertion of 20mmØ PVC connector conduits between new power skirting and D/B tray for new conductors for socket outlets PP7 to PP15.

 AIR CONDITIONING:

Existing AC/PP1 and AC/PP2 isolating switches to be removed, connect to existing conductors, new conductors and take through wall and draw through 20mmØ metal conduit and terminate in isolator switches housed within 100 x 100 x 50 mm York draw box, complete with cover plate and fixing screws. Install cover plate on redundant AC/PP1 and AC/PP2 draw boxes.

 NEW LIGHT FITTINGS

The light fittings shall be equal to those described below, and in the attached specification, and are subject to the approval. Any fittings which do not comply with the standards shall be removed and replaced at the contractor's expense.

1) Artist Workshop

Synerji LED Fitting 1500mm Double Narrow Body
SKU: LIG018 luminaire.

2) Bathroom

Synerji LED Fitting 1500mm Double Narrow Body
SKU: LIG018 luminaire.

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3) Passages

Wall mounted Bright Star WB167/1 Satin Chrome Wall Light.

4) Kitchen

Synerji LED Fitting 1500mm Double Narrow Body
SKU: LIG018 luminaire.

5) Bedroom No 1

Synerji LED Fitting 1500mm Double Narrow Body
SKU: LIG018 luminaire.

6) Bedroom No 2

Ceiling mounted Bright Star CH252/5 Satin Chrome Chandelier.

NOTE: TWO (2) REPLACEMENT LUMINAIRE TUBES WILL BE SUPPLIED WITH EACH FITTING.

 ELECTRICAL CONDUCTORS

Supply and install within new Power Skirting, electrical conductors for new 16Amp 3 pin switched socket outlets and 13Amp 3 pin red dedicated switched socket outlets as indicated connected at both ends.

SCHEDULE OF LIGHT FITTINGS

TYPE	DESCRIPTION	LAMPS	
A	Ceiling mounted 2 x Synerji LED Fitting 1500mm Double Narrow Body. (Herholdts Lighting) SKU: LIG018	2 x Cool White LED tubes	
B	Ceiling mounted Bright Star CH252/5 Satin Chrome Chandelier.	5 x 40-Watt SES Globes	
C	Wall mounted Bright Star WB167/1 Satin Chrome Wall Light	1 x 40-Watt SES Globe	

26. DETAIL SCOPE OF WORKS 'ELECTRICAL':

26.1 General Electrical Work

- 1) Disconnect and remove existing light fittings and remove from site.
- 2) From existing AC/PP1 & 2 in Artist Workshop, within metal conduit, supply and install new Electrical Conductors to terminate in new isolators for high level Split Unit Air Conditioners. Inclusive with new circuit breakers to size and quantity elsewhere measured. Existing AC/PP1 and AC/PP2 to be removed, connect to existing conductors, new conductors and take through wall and draw through 20mmØ metal conduit and terminate in isolator switches housed within 100 x 100 x 50 mm York isolator box, complete with cover plate. Install cover plate on redundant AC/PP1 and AC/PP2 isolator openings.
- 3) In positions as indicate, supply, and install 100mm x 50mm One (1) Compartmented Powder Coated (Colour Dove Grey) power skirting secured to brick walls with approved fasteners for wall applications.
- 4) Supply and install within new power skirting, electrical conductors from D/B1 to size and quantities elsewhere specified and terminate in 13 Amp dedicated and 16Amp normal switched socket outlets to quantities elsewhere measured.
- 5) Supply and install within new power skirting, electrical conductors from PPI to size and quantities elsewhere specified and terminate in 13Amp red dedicated and 16Amp normal switched socket outlets to quantities elsewhere measured.
- 6) Supply and install in position as indicated, new Synerji LED Fitting 1500mm Double Narrow Body Open Channel fluorescent light fittings elsewhere measured.
- 7) Supply and install within new power skirting, electrical conductors from PP 1 to size and quantities elsewhere specified and terminate in 13 Amp dedicated and 16Amp normal switched socket outlets to quantities elsewhere measured.
- 8) Supply and install in passage as indicated, new wall mounted decorative light fittings.
- 9) Supply and install in Artist Workshop as indicated, new Synerji LED Fitting 5Ft Double Narrow Body Open Channel fluorescent light fittings elsewhere measured.
- 10) Supply and install in Kitchen as indicated, new 1500mm Open Channel Double Tube LED energy saving fluorescent light fittings elsewhere measured.
- 11) Supply and install in Bathroom as indicated, Synerji LED Fitting 1500mm Double Narrow Body Open Channel fluorescent light fittings elsewhere measured.
- 12) Supply and install in Bedroom No 1 as indicated, new Synerji LED Fitting 5Ft Double Narrow Body Open Channel fluorescent light fittings elsewhere measured.
- 13) Supply and install in Bedroom No 2 as indicated, new ceiling mounted decorative chandelier light fittings elsewhere measured.
- 14) Supply and install 20mmØ metal conduit securely fixed to outer brick walls with approved fasteners for wall applications for Air Conditioner Isolators.
- 15) Supply and install in positions as indicated, new surface mounted waterproof isolator boxes for Air Conditioners elsewhere measured.

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- 16) Supply and install cover plates to all discontinued light, and power outlets.
- 17) Supply and install in positions as indicated within bathroom, new surface mounted waterproof York isolator box for washing machine elsewhere measured. Connect new socket outlet "Back-to-Back" from existing PP2 in Kitchen.
- 18) Testing of complete electrical circuits from D/B1 and issue of Electrical Compliance Certificate.
- 19) From existing D/B No 1, disconnect and remove all existing Circuit Breakers and circuit breaker frame. Disconnect and remove existing D/B 1 Architrave from D/B tray. Supply and install new Semi-Recessed BB frame to size and measurements elsewhere measured and secure to existing D/B tray. Within wall aperture, carefully core drill openings for insertion of 20mmØ PVC connector conduits between new power skirting and D/B tray for new conductors for socket outlets PP7 to PP15.

26.2 **Schedule of cables for Air Conditioning**

FROM	TO	CABLE SIZE
AC/PP1	AC/PP3	4 mm ² Red & Black Conductors, 2.5mm ² earth wire, drawn within 20mmØ metal conduit
AC/PP2	AC/PP4	
Distribution board D/B1	PP7 to PP15	4 mm ² Red & Black Conductors, 2.5mm ² earth wire, drawn within power skirting. Run in Power skirting (PP7 to PP15).
PP1	PP16 to PP 22	4 mm ² Red & Black Conductors, 2.5mm ² earth wire, drawn within power skirting. Run in Power skirting (PP16 to PP22).

26.3 **Scheduling of Power Points for Air Conditioning**

POWER POINT	DESCRIPTION
AC/PP3 and AC/PP4	60 Amp. Single phase Double pole switch disconnecter, installed on outer wall near each console unit, housed within 100 x 100 x 50 mm York isolator box, complete with cover plate and fixing screws. The circuits must be protected by means of a 30 A 5 kA single phase Single pole circuit breaker, mounted in the distribution board D/B1.

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SPECIFICATION FOR ELECTRICAL INSTALLATION

PART 3

BILL OF QUANTITIES, VARIATIONS AND SUMMARY

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SPECIFICATION FOR ELECTRICAL INSTALLATION

PART 3

BILL OF QUANTITIES, VARIATIONS AND SUMMARY

GENERAL NOTES

1. This Bill of Quantities forms part of and must be read in conjunction with the specification.
2. No alteration, erasure or addition is to be made in the text of the Bill of Quantities. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Bill of Quantities will be adhered to.
3. **MVD Kalahari Consulting Engineers and Town Planners** will check the completed Bill of Quantities and reserves the right to adjust any individual price and to rectify any discrepancy whilst the total tender price as quoted remains unaltered.
4. The quantities given in the Bill for cable, cable markers, earth wire laid with cable, overhead conductors, overhead earth wire and excavations cannot be regarded as exact and are subject to measurement on site after completion of the service and adjustments will be made according to the unit rates given in the Bill.

All other quantities will not be measured on site.

In the event of discrepancies between the drawings, specifications and Bill of Quantities the **MVD Kalahari Consulting Engineers and Town Planners** shall decide whether the work as executed shall be re-measured on site or whether re-measurement shall be affected from the working drawings only.

NOTE:

Checking of Cable and Conductor Lengths

Notwithstanding the fact that the lengths of cables and conductors as given in the Bills of Quantities have been measured from scaled drawings, the contractor shall check such lengths of cable after the completion of the service. Any allowance for off-cuts shall be made in the unit rates. The final measurements shall be based on the nett route length of the cables and overhead lines concerned.

5. Where alternative prices for gear of different manufacture are quoted the lowest alternative price for gear to specification must be quoted against the relevant item in the Bill of Quantities. The remaining alternative prices must be furnished separately.
6. The unit prices quoted in the Bill of Quantities must include for such small installation material as are required for the complete installation in accordance with the specification.
7. Unit prices **must** be quoted for **all** items listed in the Bill of Quantities, even if the quantity listed is zero.

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ELECTRICAL INSTALLATION: WHAG ARTIST FLAT

Item	Description	Unit	Qty	Unit Price	Total Price
1.	CONDUIT				
1.1	Supply and install on outer walls as indicated, 20mm Ø steel conduit for new AC/PP3 and AC/PP4 conductors. Secure conduit to outer walls with spacer saddles each secured to walls at 200mm centres.				
1.1.1	20mmØ steel conduit inclusive of spacer saddles Supply	m	20		
	Install	m	20		
2.	EXTENSION BOX (BATHROOM)				
2.1	Supply and installation 16A 3-pin single socket outlet, complete with 100 x 100 x 50 mm York draw box, complete with cover plate and fixing screws.				
2.1.1	16 A 3 pin socket outlet Supply	each	1		
	Install	each	1		
2.1.2	100 x 100 x 50 mm York Box Supply	each	1		
	Install	each	1		
3.	SWITCH SOCKETS FOR POWER SKIRTING INSTALLATION				
3.1	Supply and installation of sockets installed in power skirting complete with fixing screws and cover plates.				
3.1.1	16A 3-pin single switch socket with cover plate				
	<u>Workshop</u> Supply	each	8		
	Install		8		
	<u>Bedroom No 2</u> Supply		4		
	Install		4		
3.1.2	13A 3-pin dedicated (Red) switch socket with cover plate.				
	<u>Workshop</u> Supply	each	1		
	Install		1		
	<u>Bedroom No 2</u> Supply		2		
	Install		2		
PAGE SUMMARY					

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BROUGHT FORWARD					
Item	Description	Unit	Qty	Unit Price	Total Price
4.	ISOLATING SWITCHES FOR SURFACE/FLUSH INSTALLATION				
4.1	Supply and installation of vandal resistant, weather-, dust- and vapour proof isolating switches for single phase power points for Air Conditioners complete with fixing screws and cover plates installed within power skirting.				
4.1.1	60A double pole isolating switch	each	2		
	Supply				
	Install	each	2		
4.1.2	Weatherproof 'York Isolating Box'	each	2		
	Supply				
	Install	each	2		
5.	CONDUCTORS				
5.1	PVC insulated stranded copper conductors for electrical circuits installed in power skirting, grouped, and connected to equipment. (All wasted cut-offs must be included in the tender price.)				
5.1.1	4 mm ² Red	m	150		
	Supply				
	Install	m	150		
	4 mm ² Black	m	150		
	Supply				
	Install	m	150		
5.2	Bare stranded copper earth wire for all electrical circuits installed in conduit, power skirting, etcetera, grouped and connected to the equipment. (All wasted cut-offs must be included in the tender price)				
5.2.1	2.5 mm ²	m	150		
	Supply				
	Install	m	150		
PAGE SUMMARY					

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BROUGHT FORWARD					
6.	DISTRIBUTION BOARDS				
6.1	D/B1 Removal of and Installation of all new MCB components and switchgear as listed below: 1 x 60 A 2 P Main MCB 1 x 63 A 2 P Earth Leakage MCB 1 x 40 A 2 P Geyser MCB 4 x 30 A 1 P MCB (Air Conditioners) 3 x 20 A 1 P MCB (Plug Circuits) 2 x 10 A 1 P MCB (Light Circuits) (Please include for all internal wiring, connections, mounting of equipment, labels, legend cards and commissioning) Removal of D/B1 architrave and installation of new 24 Way Semi-Recessed D/B board (Please include for all internal wiring, connections, mounting of equipment, labels, legend cards and commissioning)	each	1 1 1 4 3 2		
		each	1		
7.	LIGHT FITTINGS				
7.1	Supply and installation of the following light fittings including lamps, wiring, connections, and earthing.				
7.1.1	Type A Supply Install	each each	7 7		
7.1.2	Type B Supply Install	each each	1 1		
7.1.3	Type C Supply Install	each each	2 2		
8.	POWER SKIRTING				
8.1	Supply and installation of 1 Compartment power skirting in areas as indicated, inclusive of bends, end caps and clip on covers. Supply Install	m m	40 40		
9.	ELECTRICAL COMPLIANCE CERTIFICATE				
9.1	Test complete installation for compliance with ECB and issue of required Electrical Compliance Certificate				
9.1.1	COC	each	1		
PAGE SUMMARY					
CARRIED FORWARD TO SUMMARY					

8. **PRICE SCHEDULE FOR VARIATIONS**
(Prices must *exclude VAT*)

When the tender is submitted the amounts to be added to or deducted from the contract amount, according to whether the under mentioned is extra to, or omitted from the contract, must be given in this schedule.

The price schedule for variations shall be checked by the engineer who shall be at liberty to call for such adjustments of individual prices as he considers necessary based on the average ruling prices as determined by him for similar work in the industry in the area in which the work is situated. The method by which the average ruling prices are determined by him for similar work in the industry in the area in which the work is situated. The method by which the average ruling prices are determined shall be in the sole discretion of the engineer. Tenderers are to note that for the purpose of preparing variation orders the term 'Price Schedule for Variations' shall be deemed to be synonymous with the 'Schedule of Quantities'.

ITEM No	DESCRIPTION OF MATERIAL OF FIXTURE	MATERIAL ONLY	INSTALLATION ONLY
1.	PVC conduit supplied and installed within walls per metre run; (a) 20 mm diameter (b) 25 mm diameter	R R	R R
2.	PVC conduit supplied and installed into dry wall per metre run; (a) 20 mm diameter (b) 25 mm diameter	R R	R R
3.	PVC single core 600/1000 Volt grade cable supplied and drawn into conduit and measured from point to point. Price per metre run including wastage; (a) 1.5 mm ² (b) 2.5 mm ² (c) 4 mm ² (d) 6 mm ²	R R R R	R R R R
4.	Bare copper stranded earth conductor supplied and drawn into conduit with other conductors and measured from point to point. Price per metre run including wastage; (a) 2.5 mm ² (b) 4 mm ²	R R	R R
5.	Switch box supplied and built into building work including conduit termination comprising two locknuts: (a) 100 mm x 100 mm x 50 mm box unit one conduit termination.	R	R
6.	Flush switch and socket outlet combination supplied, installed, and connected up in flush box as per 5(a) above and fitted with cover plate; (a) 16A single (b) 16A double	R R	R R

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7.	Flush switch supplied, installed, and connected in flush boxes (a) Single lever 16 A (b) Two-lever 16 A (c) Three-lever 16 A	R R R	R R R
8.	Circuit breakers supplied, installed, and connected in all distribution boards: (a) 5 A to 60 A 5 kA 1P (b) 5 A to 60 A 5 kA 2P (c) 10 A to 100 A 5 kA 3P	R R R	R R R
9.	Circuit breaker type disconnecter supplied, installed, and connected in distribution boards; (a) 30A 2P (b) 60A 2P	R R	R R
10.	Switch disconnector supplied, installed, and connected in flush or extension box; (a) 30A 2P (b) 60A 2P	R R	R R
11.	Earth leakage unit supplied, installed, and connected in distribution board; (a) 60A 2P	R	R
12.	Luminaires complete with lamps, supplied, and mounted against wood board, ceiling, or wall; Type A: Type B Type C	R R R	R R R
13.	Supply and install PVC cable; (a) 50 mm ² x 4-core (b) 35 mm ² x 4-core (c) 25 mm ² x 4-core (d) 16 mm ² x 4-core (e) 10 mm ² x 3-core (f) 6 mm ² x 3-core (g) 4 mm ² x 3-core	R R R R R R	R R R R R R

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9. **SUMMARY-SECTION 2 BILL NO 2 (Vat Excluded)**

(1) Summary of Bills of Quantities

[i] Electrical: R_____

Total R_____

(2) Saving offered by Tenderer in respect of equipment he retains after replacement with new, excluding VAT..... R N/A

(3) Total price for complete electrical installation in working order, excluding VAT, in accordance with the specification and drawings, and carried over to PART A of the tender document **including Main Contractors mark up**.R_____

(4) **NOTE: Tenderers are to note that the total tender price (which excludes VAT) must be carried over to the final summary in part B, and all fixed amounts shown in the price schedule must be included therein. No adjustments will be made for any failure by Tenderers to include the fixed amounts in the Total Tender Price for electrical installation.**

Total Tender Price (in words): _____

NAME OF ELECTRICAL SUB-CONTRACTOR: _____

ADDRESS: _____

TELEPHONE NUMBER: (_____) _____

TELEFAX NUMBER: (_____) _____

CELLULAR PHONE _____

SUB-CONTRACTOR'S REGISTRATION NUMBER AT THE ELECTRICAL CONTRACTING BOARD OF SA

NOTE: The electrical installation forms an integral part of this contract, and no other electrical sub-contractor may be appointed at any time in place of the sub-contractor whose name has been given above without prior written approval from the **MVD Kalahari Consulting Engineers and Town Planners**.

The aforementioned particulars and conditions shall be considered an integral part of the tender and be subject to the conditions as set out in form **JBCC 2005, Edition 4.1, Contract Data**.

NAME OF TENDERER: _____

ADDRESS: _____

Date

Signature of Tenderer

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FORMATION SCHEDULE

PART 4

MATERIAL OFFERED ON THE SERVICE

The successful tenderer must complete the following schedules and submit them within 21 days of the acceptance of the tender. The schedules will be scrutinised and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

NB: Only one manufacturer's name to be inserted for each item.

Item	Material	Make or Trade Name	Country of Origin
1.	Distribution boards		
2.	Circuit breaker 1P, 2P, 3P		
3.	Circuit breaker type disconnecter		
4.	Switch disconnecter		
5.	Contactors 1P, 2P, 3P, 4P		
6.	Earth leakage relay units 1 phase/3 phase		
7.	Daylight sensitive switches		
8.	Time switches		
9.	Conduit		
10.	Conduit boxes		
11.	Watertight switches		
12.	16A flush switches 1, 2, or 3 way		
13.	16A flush socket outlets		
14.	16A flush "duo" socket outlets		
15.	Watertight socket outlets		
16.	Type A Light fittings		
17.	Type B Light fitting		
18.	Type C Light fitting		
19.	13A flush dedicated socket outlets		
20.	Power Skirting		
21.	York boxes		



WILLIAM HUMPHREYS ART GALLERY

BILL OF QUANTITIES

FOR

REFURBISHMENT OF ARTIST FLAT

SECTION 2 BILL 3

MECHANICAL

**MVD Kalahari Consulting Engineers and
Town Planners**

**186 du Toitspan Road
Kimberley
8301**

DATE: October 2024

SECTION 2 BILL NO 3

AIR CONDITIONING

SUPPLEMENTARY TECHNICAL SPECIFICATION

COMPREHENSIVE CONTRACT

1. GENERAL

The project and standard drawings form part of the project specification and shall be read in conjunction with the project specification.

Conflicts, errors, or discrepancies found in this specification or drawings shall be brought to the Project Manager's attention for resolution.

Any deviations from the specifications, drawings and/or equipment specified shall be listed together with the *alternatives* offered and shall be submitted as part of the tender. If no deviations are listed, it will be assumed that the Tenderer complies with all the relevant technical parts of this specification.

All installations shall be complete in all respects and the Contractor shall allow for the completion and successful operation of the complete installation, irrespective of whether every separate item is specified or not.

2. CONDITIONS OF CONTRACT

The mechanical installation forms part of a larger building work project and shall be carried out in terms of the Conditions of Contract as stated in the Main Contract.

It is essential that the mechanical contractor work in close collaboration with the Main Contractor to ensure that where his services run in proximity with other services, there are no clashes. The mechanical contractor shall, in each case, provide the Main Contractor with all necessary information, dimensions, materials, etc., as called for in the specification, in good time.

Failure to comply with the above may mean that corrective measures will have to be taken to correctly position the equipment. Any abortive work resulting will be entirely to the mechanical contractor's account.

The mechanical contractor is to make allowance in his tender price for coordinating with the Main Contractor and to fully comply with the Conditions of Contract.

3. **SITE AND SITE INSPECTION**

The site is situated **William Humphreys Art Gallery, 1 Cullinan Crescent, Kimberley.**

Tenderers are advised to visit the site and acquaint themselves with the nature and extent of the work involved before submitting their tenders.

A compulsory site meeting date to be confirmed.

4. **COMPLETION DATE**

The Contractor will be required to keep up with the set dates as per appointment program as per the main contractor agreement and to complete the mechanical installation concurrently with the main project completion.

5. **NEATNESS, FINISHING AND TIDYING**

In view of the intense concentration of construction activities likely to be experienced during the contract period, progressive and systematic finishing and tidying will form an essential part of this contract. On no account must spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate in such a manner as to unnecessarily impede the activities of other and in the event of this occurring, the Employer shall have the right to withhold payment for as long as may be necessary in respect of the relevant works in the area(s) concerned without prejudicing the rights of others to institute claims against the Contractor on the ground of unnecessary obstruction. Finishing and tidying must be done on a daily basis and not simply be left to the end of the contract. All finishing and tidying shall be carried out to the best advantage of the project as a whole.

All piping, sub-assemblies and fittings shall be delivered to site in a clean degreased condition with end caps in place and properly packaged to avoid contamination.

While the installation is in progress, open pipe ends shall be kept closed until the joint is made. All temporary dead ends shall be properly sealed by flattening and soldering.

In view of the intense concentration of construction activities likely to be experienced during the contract period, progressive and systematic finishing and tidying will form an essential part of this contract. On no account must spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate in such a manner as to unnecessarily impede the activities of other. In the event of this occurring, the Employer shall have the right to withhold payment for as long as may be necessary in respect of the relevant works in the area(s) concerned without prejudicing the rights of others to institute claims against the contractor on the ground of unnecessary obstruction.

Finishing and tidying must be done on a daily basis and not simply be left to the end of the contract. All finishing and tidying shall be carried out to the best advantage of the project as a whole.

6. SCAFFOLDING AND PLANT

All plant required for the execution of the contract shall be supplied by the Contractor under this contract.

The Contractor shall provide his own scaffolding. For installation purposes the Tenderer shall allow for his own lifting equipment, cranes etc. which may be necessary to complete the installation as none of these facilities will be available on site.

7. SUPERVISORY STAFF AND IDENTIFICATION

At all times while on the premises, all artisans and labour members of the mechanical contractors and subcontractor's staff will wear clothing adequately marked with the relevant contractor's name. The work shall be done by, or at times be under the personal supervision of a qualified artisan (or qualified technician) in the respective trade.

For the full duration of this Contract the Sub-Contractor shall employ at least one good and competent Supervisor careful and skilled in all aspects of the trades and skills required by this Contract. This supervisor shall be on site whenever work associated with this contract is being carried out and shall at all times be available to attend to queries by the Principal Contractor or Project Manager.

The Supervisor shall be the contractor's authorised representative for the project on site and shall be available to attend progress meetings when called upon to do so by the Principal Contractor, Project Manager or Architect, whether or not these take place prior to work actually starting on site. The supervisor shall be empowered to make all decisions necessary for the execution of the contract.

The supervisor shall not be transferred from his position unless on the express instructions of the Project Manager.

The sub-contractor shall at all times have on site copies of all relevant drawings as well as a copy of the specification and a unpriced BOQ. The sub-contractor shall institute the necessary procedures to ensure the drawings on site are the latest drawings and that all superseded drawings are removed from site.

8. QUALITY OF MATERIALS AND WORKMANSHIP

All materials shall be new, undamaged, and free from rust or other defects. Only material of the best quality, which has been approved by the Project Manager, shall be used.

The Contractor shall, upon the request of the Project Manager, furnish him with documentary proof to his satisfaction that the material is of the quality specified. Samples of materials for testing, if required, shall be supplied by the Contractor, free of charge.

Where applicable, all material shall be in accordance with the relevant standard specifications of the South African Bureau of Standards and the British Standard Specifications.

The installation shall be carried out according to the latest modern Project Engineering practices. The Project manager reserves the right to reject any work or part thereof that, according to his judgement, does not meet the highest standards of material and workmanship and to enforce replacement of the work at the expense of the Contractor.

As far as possible only material of South African origin shall be used.

9. RATING OF EQUIPMENT

All equipment shall be selected to be operated well within the manufacturer's ratings. Equipment offered for use beyond these limits will not be considered.

The contractor shall supply a schedule of ALL the equipment offered by him detailing the make, model, size/capacity/rating, electrical requirements, and material of construction where applicable to the Project Manager for approval before his installation commences or equipment is ordered. Any deviations from the specification shall be clearly highlighted.

10. SPACE REQUIREMENTS AND ACCESS

Tenderers shall ensure that the equipment offered by them can be installed in the available space as shown on the drawings. Should it be found at a later stage that the equipment offered does not fit, all costs arising from the rectification of this problem shall be for the Contractor's account.

The equipment shall be installed in such a manner that complete access is provided for operating and maintenance purposes.

Tenderers shall also ensure that the equipment offered by them will pass through available building openings. Large equipment shall be made up in sections and each section shall be small enough for access through doors and other building openings. All additional costs involved for the modification of equipment or to change the make of equipment in order to allow access shall be for the account of the Contractor.

11. **REGULATIONS AND STANDARDS**

The work shall comply with all the requirements of all relevant standards and codes published by the South African Bureau of Standards.

Where South African Standards are not available, the relevant British or American standards shall be complied with and the tenderer shall specifically state in his tender on which standards his tender is based, should he deviate in any way from the requirements of this specification.

The latest issues of the following Standards and Codes of Practice shall, amongst others, be applicable and the work shall be performed and completed in accordance with these.

- A. SANS 10400: The application of the National Building Regulations.
- B. SANS 1125: Room air conditioners and heat pumps
- C. SANS 10147: Code of Practice for Refrigeration systems, including plants associated with air conditioning systems
- D. SANS 60335-2-40: Household and similar electrical appliances – Safety. Part 2 – 40: Particular requirements for electrical heat pumps, air conditioners and dehumidifiers
- E. SANS 10142-1-2003: The wiring of premises Part 1: Low-voltage installations
- F. SABS 1453: Copper tubes for medical gas and vacuum services
- G. SANS 1424-1987: Filters for use in air-conditioning and general ventilation
- H. SANS 1238:2005: Air-conditioning ductwork
- I. SANS 10173:2003: The installation, testing and balancing of air- conditioning ductwork
- J. SANS 60335-2-80: Household and similar electrical appliances – Safety Part 2-80: Particular requirements for fans
- K. SANS 10108: The classification of hazardous locations and the selection of apparatus for use in such locations
- L. SANS 10147: Refrigerating systems including plants associated with air-conditioning systems
- M. The Occupational Health and Safety Act, Act No. 85 of 1993
- N. Mine and Industrial Regulations, Government notices
- O. Local Municipal Regulations and Ordinances
- P. Fire Department Regulations
- Q. All special conditions, specifications or codes of practice specified hereinafter.

All losses, costs, or expenditures, which may arise as a result of negligence to comply with any regulation applicable to this service as specified above, shall be for the account of the Contractor. Where trade names and references to catalogues are found in the specification, the intention is to set a particular standard of equipment. Where "other approved" equipment is specified, the Tenderer shall obtain written approval from the Project Manager before he may deviate from the specified equipment. This approval must be obtained at tender stage.

The Contractor shall work strictly according to this specification and shall ensure that only the best quality material is used, and that the installation is handed over as a complete working system.

12. **DRAWINGS**

The dimensions and positions of equipment shown on the Project Manager's drawings are schematic and for tender purposes only. The drawings are not suitable for manufacturing purposes. The responsibility for dimensional and layout accuracy remains with the Contractor. The exact positions will be pointed out on site where necessary.

The following drawings shall be submitted by the Contractor to the Project Manager for approval, within four (4) weeks of acceptance of the tender:

- A. Builder's work drawings
All building requirements are to be indicated on these drawings to meet the dimensional requirements of the equipment and materials to be installed by the Contractor.
- B. Mechanical drawings
These are workshop and equipment layout drawings required for the manufacture and installation of equipment, showing detailed dimensions.
- C. Electrical drawings
These include switchboard layouts, circuit diagrams, interconnection diagrams, and cable and equipment schedules.

Any work done by the Contractor without an approved drawing shall be at the Contractor's own risk, and any changes required to conform with the contract documents or co-ordinate his work with other trades, shall be for the account of the Contractor.

The approval of drawings by the Project Manager shall not relieve the Contractor of his responsibilities to carry out the work in terms of the contract documents.

The mechanical and electrical drawings shall be updated during the contract period and shall be included in the operation manual at the end of the contract period as "as built" drawings.

On completion of the installation but before the plant is handed over, the Contractor shall provide a complete set of drawings (soft copies as well) showing the completed installation including wiring.

In addition to the drawings listed above the Contractor shall provide all drawings necessary for the execution of the Contract and shall submit such general and detailed drawings of the plant and apparatus as the Project Manager may require approving construction of the plant.

Details and drawings of all major items of equipment made by the Contractor or his suppliers shall be submitted for approval without specific request from the Project Manager.

All required drawings shall be submitted to an agreed programme to suit the construction of the plant.

All drawings shall be clearly numbered or marked with the equipment item numbers, area references, etc.

13. OPERATION MANUALS AND MAINTENANCE INSTRUCTIONS

The Contractor shall submit three (3) copies of operation and maintenance manuals to the Project Manager.

Manuals shall consist of:

- A. Comprehensive literature of the different components of the installation.
- B. Paper prints of all approved drawings and diagrams where applicable.
- C. Start-up and shutdown procedures.
- D. Commissioning data of all equipment in tabulated form.
- E. Prescriptions for routine tests, which shall be performed by the user together with the time when such tests shall be, performed (e.g. pressure tests).
- F. Schedule of apparatus and equipment complete with model numbers, optional extras, modifications, electrical requirements, etc.
- G. Detailed daily, weekly, monthly, quarterly, bi-annual or annual preventative maintenance procedures where applicable.
- H. Manufacturer's catalogues.
- I. List of spares for all equipment.
- J. Suppliers telephone numbers and addresses.
- K. Wiring diagrams.
- L. Test certificates.

The operation manuals shall be sturdily bound in a strong hard cover. Material in the manual shall be clear, legible and well-arranged and provided with an index.

The above manuals shall be available three weeks before first handover / practical completion of the installation and no handover shall be considered without these manuals.

14. MAINTENANCE AND GUARANTEE

All equipment supplied and work done as part of this contract shall be maintained and guaranteed for a period of one year from date of practical completion.

The Contractor is responsible for all material and labour during this period.

The Contractor shall visit the installation uninterrupted and do the scheduled maintenance as prescribed in the operating instructions. On completion of the monthly visit a full report shall be prepared and submitted to the Project Manager within seven (7) days from the visit.

In case of a breakdown, the Contractor shall react within reasonable time and repair the installation to the satisfaction of the Project Manager. Should the Contractor, in the discretion of the Project Manager, not react within reasonable time, the Project Manager shall commission another Contractor and the cost thereof shall be recovered from the defaulting Contractor.

15. PAYMENT CLAIMS

In addition to the conditions of contract, the Contractor shall attach to his application for payment an explanation of material cost and labour cost. The following information is required with respect to material and labour:

- A. Estimated percentage delivered/completed at date of the previous claim.
- B. Estimated percentage delivered/completed at date of current claim.
- C. Total cost claimed at date of previous claim.

16. PAINTING

Where applicable the following painting specifications shall apply:

Iron and steel surfaces shall be properly cleaned by removing all dirt, oil, scale and rust by brushing and sanding until a clean shiny surface is obtained. Hereafter a metal primer shall be applied.

Galvanized surfaces shall be cleaned with a galvanizing cleaning agent and then washed with clean water to remove the factory applied protection against white rust. Hereafter a calcium plumbate primer shall be applied, followed by an undercoat between 24 and 72 hours after application of the primer.

Other surfaces shall be cleaned by removing all dirt and a primer as specified by the paint supplier for the particular surface shall be applied.

The primer coat shall be followed by a matt undercoat and a final topcoat of high gloss enamel of an approved colour. Each layer of paint shall be clearly distinguishable from each other by means of different colours and each layer shall be properly sanded before the following coat is applied.

All paint shall at least be of SABS quality for industrial use and shall be approved by the Project Manager. Equipment shall be painted according to the National Colour Standards, SANS 1091.

17. DAMAGE AND PROTECTION OF WORKS

The Contractor shall take all precautions necessary for the protection of life, equipment, and property in connection with the works during installation.

The Contractor shall be held completely responsible for any damage of equipment during transport and installation, as well as any damage to the building and shall repair any such damage at his own expense. Where equipment cannot be repaired to an "as new" condition, it will be completely replaced at the expense of the Contractor.

Equipment delivered to site shall be stored in a well-protected area where it cannot be damaged by either the weather or other trades.

18. WELDING

Welding shall be carried out in accordance with the current edition of SANS 10044 Parts 1 to 2 where applicable. All welding shall be performed according to the latest technology and where exposed, it shall be smoothly finished off.

19. BUILDING WORK AND REMOVAL OF EQUIPMENT

The following work shall be carried out by the main Contractor.

- A. Drilling and cutting of necessary holes in the concrete, brickwork, ceilings and wooden doors, including making good to match finish.
- B. Concrete plinths for installation of equipment.
- C. Waterproofing of roof penetrations and plinths.
- D. Provide drain points where required.

Sleeves shall be installed for the easy replacement of all services. Sleeves shall be of the same material as the pipes.

No holes may be drilled or cut through structural steel or concrete without the prior approval of the Project Manager

Under no circumstances may pipes be built or plastered into walls or slabs.

20. TESTING

The plant shall be tested and operated to meet the performance figures and duties specified. All safety features and interlocks shall be tested.

If leaks are found, welded connections shall be cut out and re-welded. Rectified piping shall be retested.

21. STAFF TRAINING

The Contractor shall be responsible for the training of the Client's site staff after the commissioning has been completed. The site staff shall receive enough instruction to ensure that they are fully conversant with the equipment concerned. The operating manuals shall be used during training. Upon completion of the training exercise the contractor is to obtain the client's representative's written acceptance of this handover tuition, thus acknowledging his complete understanding of the operational procedures for this installation. Site staff shall be instructed on:

- A. the general operating method of the plant.
- B. starting and stopping instructions.
- C. stopping the plant in an emergency and warning against restarting after an emergency.
- D. positions and normal settings of control equipment.
- E. safety measures.
- F. operational checks on gauges, flow switches, indicator lights, etc.
- G. name, address, and telephone number of competent person responsible for the maintenance of the plant.

22. COMMISSIONING

The installation shall be commissioned in accordance with the relevant codes and recognised commissioning procedure, or code approved by the consulting Project Manager:

The Contractor shall submit a commissioning program to the Consulting Project Manager at least two weeks prior to the commencement of commissioning and at the same time shall notify the consulting Project Manager of the code or procedure to which the plant will be commissioned.

The results of all checks and measurements shall be recorded in writing during the commissioning period. Commissioning records shall be handed over to the Consulting Project Manager prior to the first acceptance of the plant. The commissioning records shall also be included in the operation manuals.

If, in the discretion of the Project Manager test results are insufficient or not acceptable, the Contractor shall carry out necessary remedial work and repeat the necessary tests at his own expense.

23. CONTRACT PRICE ADJUSTMENT AND VALUE ADDED TAX:

No contract price adjustments of any kind whatsoever, except for variations in the rate of value added tax, will be applicable to this Contract. The tenderer will have to allow in his tender price for any possible price fluctuations.

As this is a taxable service in terms of the Value Added Tax Act, Act 89 of 1991, as amended, Value Added Tax is to be included in the tender price. VAT at the prevailing rate will be included in each progress payment certificate after deduction of the amount retained as retention money, if any.

24. PREFERENCE:

In adjudication of tender's preference will be given to South African materials or items manufactured in the Republic from South African materials which comply with the technical requirements of the specification.

Imported equipment and materials will only be considered where suitable local products are not available at competitive prices.

SECTION A

25. SCOPE OF WORK:

This section of the Contract is for:

- Supply, Delivery and Installation of Two (2) only under ceiling mounted split type air conditioners in Artist Workshop as shown within schedule of Particulars on Page 15 of Section A.
- Removal of Two (2) Console Units in Workshop.
- Servicing of Two (2) Console Air Conditioning units in Bedroom No 1 and No 2

26. HIGH/MID WALL SPLIT AIR CONDITIONING UNITS

A. General (New Air Conditioners)

The units shall be of the heat pump R410a or R32 inverter type.

Supply and install high/mid wall type split air conditioning units for the inverter control room area as shown. The air-conditioning units shall be standard factory assembled, piped and wired.

The units shall be thoroughly tested for all operating conditions.

The units shall be suitable for hanging on the walls shown on drawing and shall be so positioned that all serviceable areas can be easily reached. Spares shall be freely available in South Africa. On request, the Contractor shall provide the Project Manager with performance test certificates.

The air-conditioning units and installation in general shall be in accordance with the high/mid wall unit's supplier's recommendations. Any discrepancies between this specification and the supplier's recommendations that may influence the unit's performance or guarantee shall be clarified with the Project Manager during tender stage.

The electrical power requirements to the condensing units shall be Single Phase.

The indoor unit and condensing unit shall be interconnected with refrigerant piping, electrical wiring and interlocking control cabling. The pipe and cable connections shall be made in accordance with the unit supplier's recommendations. The refrigerant shall be of the R410a or R32 type.

Each condensing unit with connected evaporator unit shall be clearly labelled to identify different split units.

All units shall be **Mitsubishi MSZ/MUZ Set Series, Inverter Range.**

B. Generic Unit Requirements

High/Mid Wall units shall consist of a direct expansion, indoor fan coil evaporator unit and a separate (remote) externally located, air-cooled, condensing unit.

Heating shall be by means of heat pump action by the reversal of the cooling cycle. All the necessary control equipment, valves and piping required to perform this function shall be supplied as part of this work.

The evaporator unit shall be equipped with an easily accessible washable / high efficiency / long life filter, an adjustable speed centrifugal fan driven by a squirrel-cage induction motor and evaporator coils manufactured from seamless copper tubing mechanically bonded to aluminium fins.

The unit shall be fitted with a totally enclosed two or three speed electrical fan motor directly coupled to a quiet running fan.

The cooling coil shall be a direct expansion coil manufactured of copper tubes mechanically fixed to aluminium fins.

The unit shall be controlled via a control unit in the area. The unit shall be mounted against the wall in a position determined on site. PVC drain pipe shall be fitted to each unit brought to ground level for condensate drainage.

Also see controls section

The unit must be provided with a return air grille with removable washable filter.

Heating shall be by means of heat pump action by the reversal of the cooling cycle. All the necessary control equipment, valves and piping required to perform this function shall be supplied as part of this work.

The compressor unit shall be of the hermetic reciprocating / rotary or scroll type, powered by an induction motor, and installed with anti-vibration mounts such as rubber or spring isolators. The compressor shall be equipped with crankcase heater.

The condenser cooling fan shall be of the direct driven multi-wing, dynamically balanced propeller type axial flow fans. The outdoor unit shall be of the horizontal blow type.

The outdoor unit casing shall be manufactured from mild steel plate and shall be corrosion protected as follows or to a method as approved by the Project Manager:

- Galvanised
- Electro plated

The condensers shall be fitted with Hail guards.

The outdoor unit shall be colour coated as follows or to a method as approved by the Project Manager:

- Acrylic resin powder-coated
- Polyester powder-coated

The units shall also be able to operate in a "fan only" mode.

Electrical interlocking shall be provided to ensure that:

- Compressor cannot run without both evaporator and condenser fans running.
- It shall not be possible to switch cooling and heating on simultaneously.

C. Performance Specifications

Cooling and heating capacities are room conditions, and all equipment shall be de-rated to meet these requirements.

De-rating shall be done to compensate for the following:

- Altitude above sea level.
- Refrigerant pipe lengths.
- Design conditions specified.

All units shall be capable of meeting total and sensible cooling requirements. Tenderers shall provide proof of capacities with their tender. All capacities specified are to be achievable at medium evaporator fan speed.

The indoor and outdoor units shall comply with the safety requirements as set out in:

- SANS 60335-2-40: Household and similar electrical appliances – Safety. Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers.

26.1. REFRIGERANT CIRCUITS

Refrigerant piping shall be in accordance with the following standards:

- SABS 1453: Copper tubes for medical gas and vacuum services
- SABS 0147: Refrigerating systems including plants associated with air-conditioning systems

Fittings shall be copper based capillary solder fittings in accordance with SABS 1067. All soldered joints on proprietary manufactured units shall be carefully checked and remade if found damaged in transit. Pipe size selections shall be such as to produce moderately low velocities whilst, nevertheless:

- Ensuring proper oil return to the compressor and minimizing lubricating oil being trapped in the system.
- Ensuring practical lines without excessive pressure drops and with proper feed to evaporators.
- Preventing liquid refrigerant from entering the compressor during operation and at shutdown.

All refrigerant pipelines shall be insulated with the "Armaflex" type, lightweight, elastomeric nitrile rubber tube insulation. Insulation thickness shall be 13 mm.

Suction and liquid pipelines shall be insulated separately and joints on insulation shall be glued with the insulation manufacturer's recommended adhesive to create a vapour barrier.

26.2. INSTALLATION OF INDOOR AND OUTDOOR UNITS

During installation, care shall be taken to ensure that no vibrations are carried over to structures to which the indoor and outdoor unit is fixed.

Indoor evaporative units to be installed according to manufacturer's specifications.

Outdoor condensing units shall be fastened by adequately sized fasteners and tico pads. on brackets securely bolted to walls with M10 rawl bolts.

Condenser Units to be installed with hail guards as per the manufacture guidelines, size and sides which needs protection.

26.3. INSTALLATION OF CONDENSATE DRAINPIPES

If an outdoor unit (heat pump type) is mounted against a wall more than 1 m above ground / floor level, the unit shall be fitted with an uPVC drainpipe (Blue) neatly saddled to the wall. Drainpipe sizes for outdoor condensing units shall be to the supplier's specification.

Condensate drainpipes shall always run together with refrigerant pipes and shall always be installed in the same trunking and on the same cable trays for as far as the installation permits. Surface mounted drain piping shall only be allowed where condensate drainpipes run in a different direction to either a service duct, wastewater pipe or any other location as indicated on the project drawings. Surface mounted drain piping shall be secured to the wall by means of galvanised steel saddles at no more than 1 m intervals.

Where units are mounted on the inside of exterior walls on wall-mounted brackets, the mechanical contractor shall drill sufficiently sized holes through which refrigerant pipes, drainpipes and cable wires shall penetrate the walls for the indoor unit. Drainpipes running from the indoor unit through the wall shall be adequately sloped to ensure positive drainage. Drainpipe sizes for indoor units shall be Ø 20 mm uPVC pipes.

All indoor units shall be quiet in operation and the mean sound pressure levels generated by each unit shall not exceed the NC35 values when measured at a distance of 2m from the units.

The condensing units shall be mounted on robust angle iron brackets against the walls. The unit must be complete with compressor and air-cooled condenser and be protected against the weather.

28. REMOVAL OF CONSOLE UNITS

Disconnect two (2) existing Console Air Conditioning units within Artist Workshop from electrical supply, carefully breakout and remove units from site.

29. SERVICE CONSOLE AIR CONDITIONERS

Disconnect existing two (2) Console Air Conditioners in Bedroom No1 and Bedroom No 2, remove Console Air Conditioners from apertures, and transport to contractor's workshop. Thoroughly check Air Conditioners for gas leaks, electrical faults and repair where necessary. Clean out cooling coil with approved degreasing/cleaning detergent. Refill Air Conditioners with approved refrigerant and replace return grill filters.

Deliver Air Conditioners to site, refit in apertures, reconnect to power supply and commission.

28. ELECTRICAL EQUIPMENT AND WIRING:

The supply voltage will be 220 volts, single phase, 50 Hz.

Single-phase power points shall be installed on the outside near each condensing unit by the electrical contractor. The electrical connection between isolators and A/C units shall form part of the mechanical work.

Power cabling and refrigerant tubing between the indoor units and condensing units shall be installed in neat sheet metal trunking with clip-on covers where visible on the outside and in 'Egga Tube' where visible on the inside of the building. The power cable between condensing unit and the blower unit must be of seven- (7) core armoured cable; no cabtyre will be acceptable.

29. **SCHEDULES OF PARTICULARS AND INFORMATION:**

All schedules which accompany this tender notice, form an integral part of it and shall be duly complete in every detail; FAILING which, the tender in question may be rendered ineligible for consideration.

Equipment offered and listed on the schedules shall be capable of performing the specified duties and complying with the Specification requirements in all respects; Should it transpire that such equipment, even when offered by make model and/or type, is unsuitable or incapable of meeting, or performing in accordance with, the Specification requirements in any respect, the Contractor or Sub-contractor shall nevertheless be responsible for any additional costs incurred in providing the required or suitable equipment.

30. **SCHEDULE OF PARTICULARS:**

The following schedule of particulars must be completed in full, and the equipment listed must be capable of performing the specified duties and of meeting the requirements of this specification in all respects. If it transpires that such equipment (even if offered by make or model) is incapable of meeting the requirements of the specification in any respect, the contractor shall nevertheless be responsible for any extra cost incurred in providing the required or suitable equipment.

SCHEDULE OF PARTICULARS.

		ARTIST WORKSHOP		
ITEM	PARTICULARS REQUIRED	24000 BTU		
1	Number of units	2 each		
2	Manufacturer			
3	Country of origin			
4	Size and model number			
5	Capacity of each unit in kW at specified conditions			
	(a) Cooling			
	(b) Heating			
6	Rated voltage			
7	Power input (kW)			
8	Sound pressure (NC)			
9	Recirculated air quantity (m/s)			
10	Type of fan			
11	Are spares carried in stock? (For minimum of 10 years)			

31. **SCHEDULE OF PRICES:**

The following schedule of prices shall be completed by the tenderer.

ITEM	DESCRIPTION	PRICE IN SA CURRENCY DUTY PAID
(a)	Price of all equipment and material	
	1) Imported equipment	R
	2) Local equipment	R
(b)	Price for delivery to site	R
(c)	Price for mechanical installation	R
(d)	Price for electrical installation	R
(e)	Profit & Attendance (P&G)	R
(f)	Total price (VAT excluded) to be carried over to Summary Section 2 Bill No1 page 15 Item (d)	R



WILLIAM HUMPHREYS ART GALLERY

BILL OF QUANTITIES

FOR

REFURBISHMENT OF ARTIST FLAT

SECTION 2 BILL 4

CIVIL

**MVD Kalahari Consulting Engineers and
Town Planners**

**186 du Toitspan Road
Kimberley
8301**

DATE: October 2024

Tender No 6247-04

WILLIAM HUMPHREYS ART GALLERY: ALTERATIONS TO EXISTING BUILDING

Schedule of Quantities

SECTION B: CONSTRUCTION OF DISABLED RAMP

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		<u>SECTION B: CONSTRUCTION OF DISABLED RAMP</u>				
	SANS 1200 DB	<u>EXISTING SERVICES</u>				
	DB 8.3.5	<u>Existing Services</u>				
B.1		a) Provision must be made to detect and protect existing services against damage irrespective the type of service..	No	1		
		b) Provision must be made to move existing services detected that are in the way of construction work.				
B.2		i) Electrical Services	No	1		
B.3		ii) Water pipes	No	1		
		c) Provision must be made to repair existing services damaged by construction which were not shown on drawings nor pointed out by the Engineer.				
B.4		i) Electrical Services	No	1		
B.5		ii) Water Pipes	No	1		
	SANS 1200 MJ	<u>60 mm BLOCK PAVING</u>				
B.6		Remove and store existing paving where the ramp needs to be casted.	m ²	28		
	SANS 1200 DE	<u>IN-SITU MATERIAL</u>				
B.7	8.3.5	Rip and recompact in-situ material to 90% Mod.AASHTO density. (150 mm deep)	m ³	4		
	DA 8.3.4	<u>IMPORTING OF MATERIAL FROM COMMERCIAL SOURCES</u>				
		Approved imported gravel from sources supplied by the contractor and compacted to 95% Mod.AASHTO density (Import-to-fill to specifications). Included in price is the loosening in quarry, loading of material and the transporting of the material to the site, placing, mixing with excavated material, wetting and compaction of the material.				
B.8		a) 150 mm Thick imported gravel to G5 quality.	m ³	30		

Total Carried Forward									
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Tender No 6247-04

WILLIAM HUMPHREYS ART GALLERY: ALTERATIONS TO EXISTING BUILDING

Schedule of Quantities

SECTION B: CONSTRUCTION OF DISABLED RAMP

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
B.9		<u>DENSITY TESTS</u> Density tests by an Engineer approved independent laboratory before surface bed is constructed.	No	1		
	SANS 1200 D	<u>EXCAVATIONS</u> <u>Restricted Excavation</u>				
	D 8.3.3 (a)	Excavate for restricted foundations and concrete footings in all materials and use for backfill or embankment or dispose				
B.10		a) Strip foundations and column bases to a maximum depth of 1.2 m or as instructed by Engineer.	m ³	10		
		<u>TRIMMING OF EXCAVATIONS</u>				
B.11		Strip foundations	m ²	50		
	B 8.2.25	<u>SOIL INSECTICIDE</u>				
B.12		Supply and apply weed-killer under floor slabs on top of filling in accordance with SANS 0124 and SANS 12165. Weed-killer to be a mixture of 1:1 KYDRO and HYVAR or similar approved, diluted and applied in accordance with Supplier's specifications.	m ²	35		
		<u>WATERPROOFING</u>				
B.13		Supply and lay one layer 250 micron "Gundel" or similar approved plastic waterproof sheeting under floor slab and paving of building.	m ²	35		
	SANS 1200 G	<u>CONCRETE</u>				
	G 8.4.1	<u>Prescribed mix concrete</u> Provide, mix, place and curing of concrete. Minimum strength after 28 days as specified. Included steel and/or wood floating of concrete surfaces and shuttering against excavated surfaces complete.				
B.14		a) Strip foundations and bases (Class 20 MPa/19 mm). Wood float.	m ³	4		

B.15		b) Blinding (Class 15 MPa/19 mm). Wood float	m²	0,5		
Total Carried Forward						

Tender No 6247-04**WILLIAM HUMPHREYS ART GALLERY: ALTERATIONS TO EXISTING BUILDING****Schedule of Quantities****SECTION B: CONSTRUCTION OF DISABLED RAMP**

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
B.16		c) Surface bed 100 mm thick (Class 25 MPa /19 mm). Wood float. <u>JOINTS IN SURFACE BED</u> Supply and install joints in surface bed as indicated on details from structural drawings. Complete.	m ³	10		
B.17		a) Expansion joint	m	35		
B.18		b) Construction joint	m	20		
	SANS 1200 GA	<u>CONCRETE CUBES</u>				
B.19	GA 7.2.1	Make provision to make 150 x 150 x 150 mm concrete cubes for testing. Sets of 6.	No	2		
	SANS 1200 G	<u>REINFORCEMENT</u>				
	G 8.3.2	<u>High-Tensile Welded Mesh</u>				
B.20		a) Surface Bed - Mesh ref. 193 - 226 m ² <u>BRICKWORK (Stretcher Bond)</u> Supply all material, plant and labour to construct brickwork from approved bricks (222 x 106 x 73 mm) (7 MPa). Included brickforce as indicated:	kg	436,2		
B.21		230 mm Wall from foundation to floor level with approved Corobrik 7MPa nominal compressive strength NFX non-loadbearing Imperial plaster brick, size 222 x 106 x 73 mm, manufactured in accordance with SANS 227:2007, laid in superstructure walls bedded and jointed in Class I mortar. Included brickforce in every row. <u>PLASTER WORK</u>	m ²	20		
B.22		Plaster mix for rough brick walls, internal and external, composed of 1 part 42,5N cement and 6 parts sand 10 mm - 20 mm thick finished with a wood float to rough brick walls. Cement is to be manufactured in accordance with SANS 50197-1. <u>PAINTING</u>	m ²	20		

		Prepare walls and paint as indicated and in accordance with manufacturer's specification. Price all inclusive.				
Total Carried Forward						

Tender No 6247-04

WILLIAM HUMPHREYS ART GALLERY: ALTERATIONS TO EXISTING BUILDING

Schedule of Quantities

SECTION B: CONSTRUCTION OF DISABLED RAMP

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
B.23		<u>External walls:</u> Plascon Wall & All to exterior new cement plaster. Surface to be dry, sound and clean and cured for a minimum of 14 days, with a moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less. Prime with one coat Plascon Plaster Primer with an overcoating time of 16 hours and finish with two coats Wall & All with 2 hours drying time between coats, for a maintenance cycle of 10 years in a C1 - inland environment. • Environment : C1 - inland • Topcoat : Wall & All • Number of coats of topcoat : two coats • Overcoating time for topcoat : 2hour • Primer/Base coat: Plascon Plaster Primer • Overcoating time for primer/base coat : 16hour • Colour to Client specifications.	m ²	30		
B.24		<u>HANDRAIL</u> Construct and install steel handrail according to drawings. Complete with material, paint and tools required for full installation including anchoring.	Sum	1		

Total Carried Forward To Summary									

Tender No 6247-04

WILLIAM HUMPHREYS ART GALLERY: ALTERATIONS TO EXISTING BUILDING
Schedule of Quantities

SUMMARY OF SECTIONS		AMOUNT R
SECTION	DESCRIPTION	
SECTION B: CONSTRUCTION OF		
Total Carried Forw Total Carried Forward To Summary Of Schedules		

DRAWINGS

NOTE/NOTA :
NO DIMENSIONS ARE TO BE SCALED OFF
ANY DRAWINGS. ALL DIMENSIONS ARE
TO BE TAKEN ON SITE PRIOR TO ANY
CONSTRUCTION.
GEEN AFMETINGS MAG VAN TEKENINGE
GESKAAL WORD NIE ALLE AFMETINGS
MOET OP TERREIN NAGEGAAN WORD
VOOR KONSTRUKSIE.

TENDER PURPOSE ONLY

A VOOR CONTRAK IN AANVANG LEEM.
BEFORE CONTRACT COMMENCES.
NA CONTRAK IN AANVANG GENEEM HET.
A1 AFTER CONTRACT HAS COMMENCED.

NR.	DATE/	REVISIONS
NO.	DATE	AMENDMENTS

OUTEUBREG IS GEVESTIG IN MVD KALAHARI
KRAGTENS DIE WET OP Outeursreg (WET 98 VAN 1978)
COPYRIGHT IS GESIG IN MVD KALAHARI
IN TERMS OF THE COPYRIGHT ACT, (ACT 98 OF 1978)

PROJECT/PROEJ
WILLIAM HUMPHREYS ART GALLERY:
REFURBISHMENT OF ARTIST FLAT

MVD

Kalahari

Roadworthy

Structural Engineers

Consulting Civil and Structural Engineers.

Du Toitspanweg 165 Du Toitspan Road

Pretoria P.O. Box 580 (Mabeshele) 000

Tel: (053) 631 1888/90

Fax: (053) 633 4491

E-Mail: mvd@africa.com

CLIENT/KLIENT
WILLIAM HUMPHREYS ART GALLERY

DRAWING DESCRIPTION/TEKENING BESKRIVING
Electrical Works & Notes

DRAWING NOTIFICATION NR.		
6247/02		
SCALE	NTS	DATE
SKAAL		DTUM
		10/10/2024

DESIGN	ONTWERP	
DRAWN	GETEKEN	
CHECKED	NAGEKOOK	
CLIENT	KLIENT	

NOTES

- Fluorescent Light Fittings:
Replace existing Fluorescent Light fittings with new 1500mm Double tube Narrow base LED Fittings inclusive of tubes in following areas:

Workshop: 4 of

Kitchen: 1 of

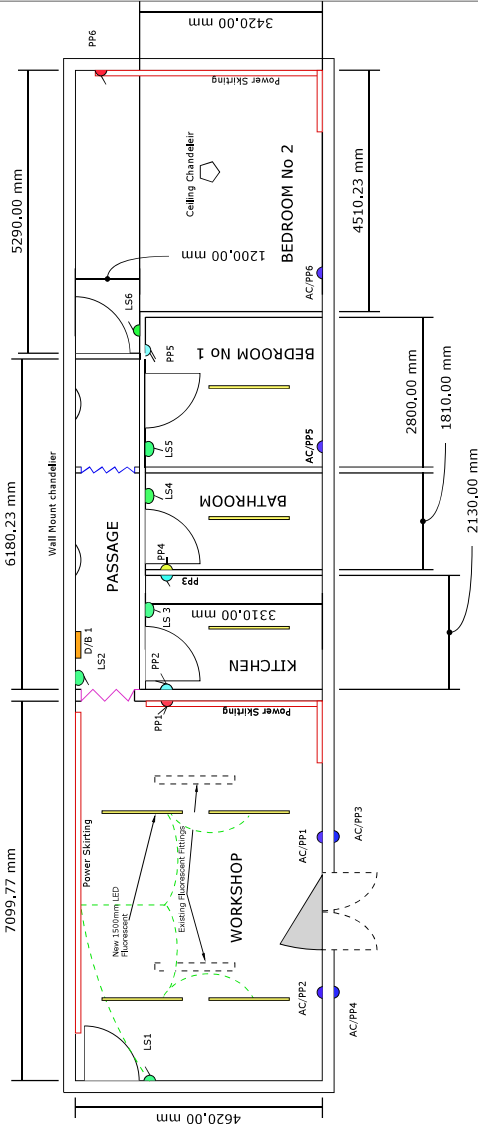
Bathroom: 1 of

Bedroom No 1: 1 of
- Chandelier Light Fittings:
Remove existing ceiling and wall mounted Fitting and replace with Chandelier Fittings as per specification.

Passage: 2 of

Bedroom No 2: 1 of
- Power Skirting:
Supply and install in positions as indicated, 100mm x 50mm Single Compartmented steel Power Skirting with clip on cover.
From D/B 1, supply and install conductors, socket outlets as per specification.
- Workshop
Bedroom No 2
- Socket Outlets:
Remove existing socket outlets as indicated and provide 100mm x 100mm surface mount draw box (for new circuits for Power Skirting) secured to existing flush mounted draw box by approved securing screws.

PP1, PP6
- New Socket Outlet
From socket outlet PP3, supply and install in Water Tight York Box, 1 x 15Amp 3 Pin socket outlet "PP4" for washing machine.
- Distribution Board D/B1:
Carefully remove architrave from existing D/B, supply and instal new Semi Recessed and secure to existing D/B tray. Supply, Install and connect to existing circuit conductors, new MCB as detailed inclusive of new conductors for Power Skirting circuits.

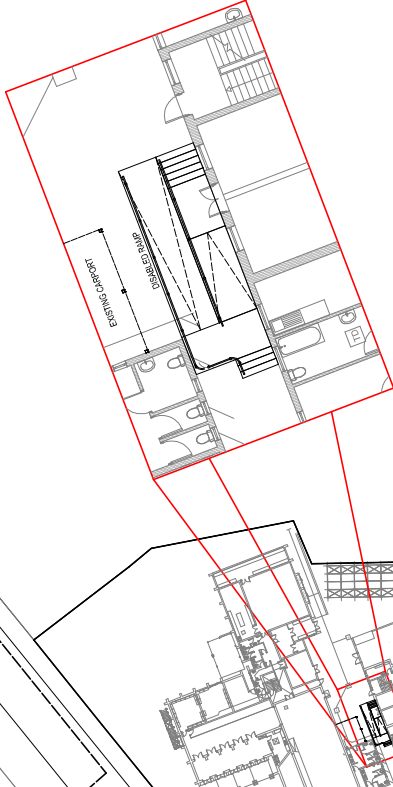


Scale: 1:100

6247 WHAG - REFURBISHMENT OF ARTIST FLAT

13993

DRAWING LIST, SITE LAYOUT AND GENERAL NOTES
DISABLED RAMP LAYOUT
STRIP FOUNDATION LAYOUT
SURFACE BED LAYOUT
SECTIONS
GENERAL DETAILS



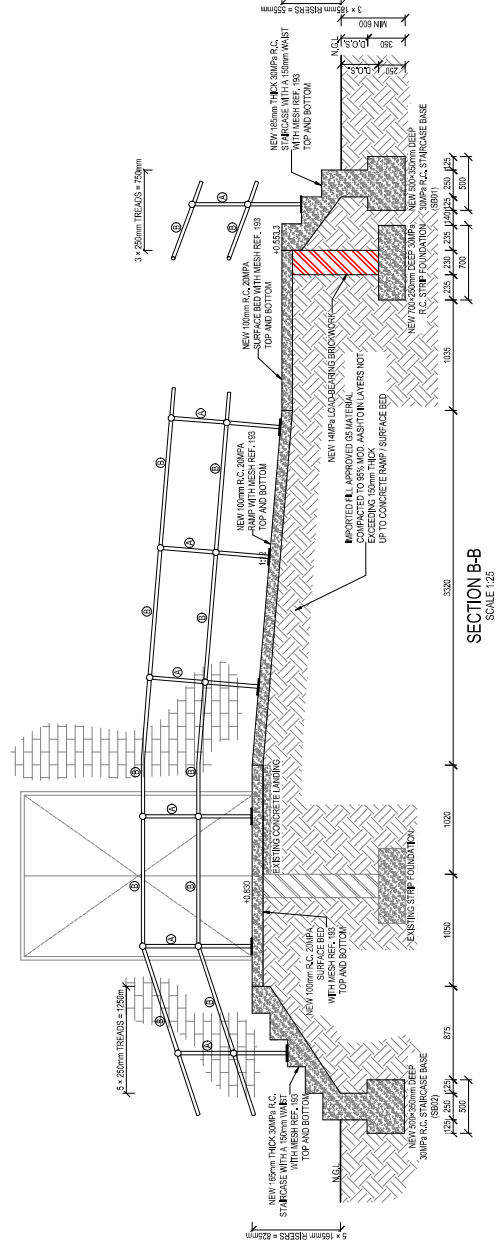
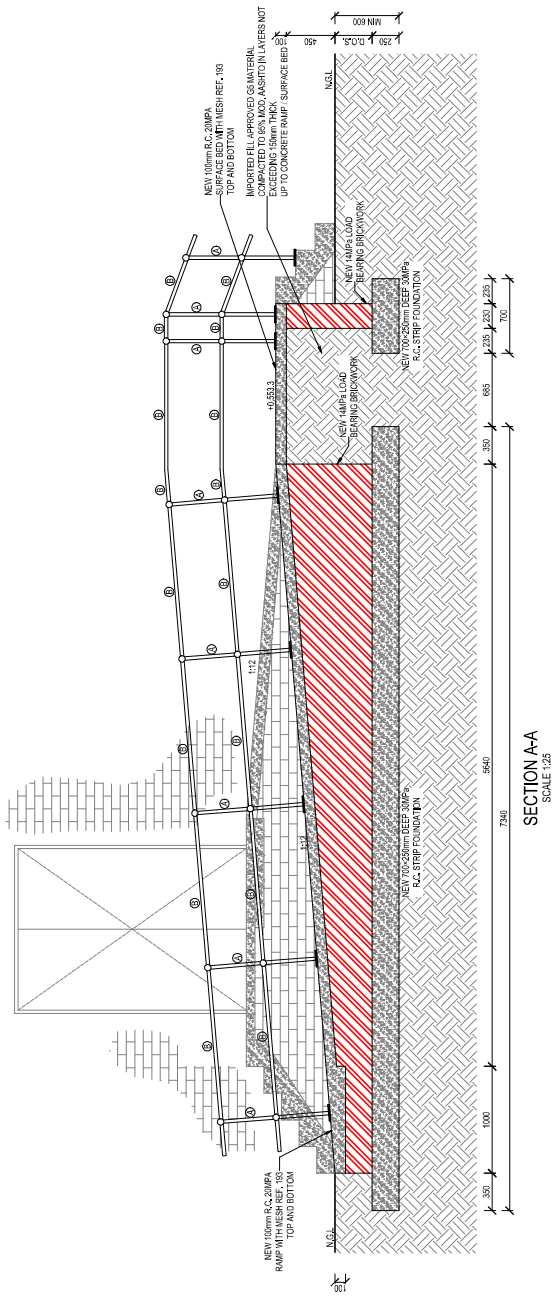
- [illegible]

- [illegible]

[illegible]

PROJECT/PROJ. NO.	WILLIAM HUMPHREYS ART GALLERY REFURBISHMENT OF ARTIST FLAT
CLIENT/CLIENT	WILLIAM HUMPHREY ART GALLERY
DRAWING DESCRIPTION/TITLE/DESCRIPTION DRAWING LIST, SITE LAYOUT AND GENERAL NOTES	
PAPER SIZE/PAPER SIZE/NOTE	SCALE/SCALE DRAWING NO./DRAWING NO.
A1	1:500 6247-04/S/001





LEGEND	
	14MPS LOAD-BEARING BACKWORK
	700-250mm DEEP 30MPS R.C. STRIP FOUNDATION
	500-300mm DEEP 30MPS R.C. STAIRCASE BASE
	100mm THICK 20MPS R.C. SURFACE FOUNDATION
	165mm THICK 30MPS R.C. STAIRCASE WITH A 150mm VAIST
	165mm THICK 30MPS R.C. STAIRCASE WITH A 140mm VAIST
	MACLOCK
	MACLOCK HANDRAIL

[illegible]

NO. NR.	DATE DATUM	AMENDMENTS WYSKASINGS
.	.	.

[illegible]

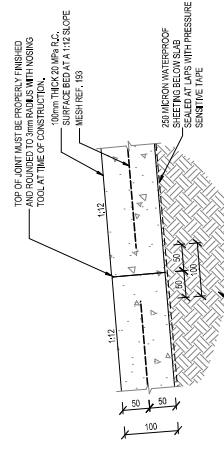
DESIGN ONTWERP	J.A. DU PLESSIS	
DESIGN GETEKEN	C.P. MUNDAY	
CHECKED INGEGEN	L.C. KING	
CLIENT KLIJNT	WHAG	
DATE DATUM	OCTOBER 2024	

PROJECT/PROJEK

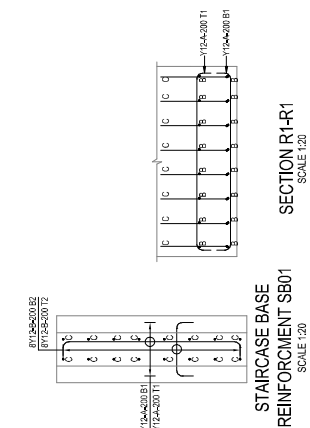
WILLIAM HUMPHREYS ART GALLERY
REFURBISHMENT OF ARTIST FLAT

CUSTOMER	WILLIAM HUMPHREY ART GALLERY		
DRAWING DESCRIPTION: TECHNICAL SKETCHING			
SECTIONS			
PAPER SIZE: PAPER GROSS	SCALE: SMALL	DRAWING NUMBER: 10/10	REV. NO. 1
A1	A.S.	6247-04/S/S/001	---

FOR APPROVAL		



CONSTRUCTION JOINT (CJ2)

STAIRCASE BASE
REINFORCEMENT SB01

SECTION R2-R2
SCALE 1:20

MEMBER	No OF	PASS PER MEMB	DIA.	LENGTH	TOTAL NUA- BER	MARK S C	B E N D I N G			
							A	B	C	D
600-500mm 330mm DEEP STAIRCASE SIDE SBRG	1	8 V/2 16 V/2 16 V/2	20	25	32	40	TOT	Date	2024/10/16	
					600	34		Det by	C.P. MUNDAY	
					1200	16		Ref Dwg	6247-S/S/C/D001	
					600	19 C		Job No	6247-2d4	
								Revision		
								Schedule No	SB02	

WVJ Kallabari

ART GALLERY

WILLIAM HUMPHREY'S

REFURBISHMENT OF ARTIST FLAT

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CLIENT/AGENT	WILLIAM HUMPHREY ART GALLERY	
DRAWING DESCRIPTION/TITLE/WORKING		
GENERAL DETAILS		
SHEET SIZE/PAPER/GROUPE	SCALES	REV. NO.
A1	A.S.	---
DRAWING NUMBER/WORKING NO.		REV. NO.
6247-04/S/C/D/001		---