



Agricultural Bank of Namibia (Agribank)

BIDDING DOCUMENTS

Issued on: 06 July 2021

For

Procurement of

**RENOVATIONS TO THE AGRIBANK RUNDU
BRANCH, KAVANGO-EAST REGION, NAMIBIA**

Procurement Reference No: W/ONB/AGRI – 01/2021-2022

Cost: N\$ 300.00

BIDDING SUMMARY



RENOVATIONS TO THE AGRIBANK RUNDU BRANCH, KAVANGO-EAST REGION, NAMIBIA

Procurement Reference No: W/ONB/AGRI – 01/2021-2022

Summary for Bid Opening Purposes

(Summary brought forward from Part 1 – Section IV of the Bid Document)

#	TOTAL BID PRICE (INCLUDING VAT AND CONTINGENCIES)
1	N\$
2	AMOUNT IN WORDS:

NAME OF BIDDER:_____

SIGNED ON BEHALF OF BIDDER:_____

DATE:_____

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PART 1 – Bidding Procedures

Section I - Instructions to Bidders

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Section I - Instructions to Bidders

A. General

- 1. Scope of Bid**
 - 1.1 The Public Entity as defined in Section II “Bidding Data Sheet” (**BDS**) also referred to herein as Employer invites bids for the construction of Works, as **described in the BDS** and Section VII, “Special Conditions of Contract” (SCC).

The name and identification number of the Contract are **provided in the BDS and the SCC**
 - 1.2 The successful Bidder shall be expected to complete the Works by the Intended Completion Period **specified in the BDS**.
 - 1.3 Throughout these bidding documents, the terms:
 - (a) the term “in writing” means communicated in written form (e.g. by mail, e-mail, fax,) with proof of receipt;
 - (b) if the context so requires, “singular” means “plural” and vice versa;
 - (c) “day” means calendar day unless otherwise stated; and
- 2. Source of Fund**
 - 2.1 The Works shall be financed by the Public Entity’s own budgetary allocation, **unless otherwise stated in the BDS**.
- 3. Public Entities Related to Bidding Documents & to application for review**
 - 3.1 The public entities related to these bidding documents are the Public Entity, acting as procurement entity (Purchaser), the Procurement Policy Unit, in charge of issuing standard bidding documents and responsible for any amendment these may require, the Central Procurement Board in charge of vetting Bidding document, receiving and evaluation of bids in respect of major contracts and the Review Panel, set up under the Public Procurement Act, 2015 (hereinafter referred to as the Act.)

**The Chairperson
Review Panel
Ministry of Finance
Private Bag 13295
Windhoek, Namibia**
- 4. Fraud and Corruption**
 - 4.1 The Government of the Republic of Namibia requires that bidders/suppliers/contractors, participating in procurement in Namibia, observe the highest standard of ethics during the procurement process and execution of contracts.
 - 4.2 The Employer will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

For the purposes of this Sub-Clause:

- (i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) “obstructive practice” is deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation.

4.3. Bidders, suppliers and public officials shall also be aware of the provisions stated in section 67 and 68 of the Public Procurement Act, 2015 which can be consulted on the website of the Procurement Policy Unit (PPU): www.mof.gov.na/procurement-policy-unit

5. Eligible Bidders

- 5.1. A Bidder may be a natural person, private entity, or government-owned entity or any combination of them in the form of a joint venture, under an existing agreement, or with the intent to constitute a legally-enforceable joint venture. All partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms.
- 5.2. A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:
 - (a) they have a controlling partner in common; or
 - (b) they receive or have received any direct or indirect subsidy from any of them; or

- (c) they have the same legal representative for purposes of this bid; or
- (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
- (e) a Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the party is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or
- (f) a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or
- (g) a Bidder, or any of its affiliates has been hired (or is proposed to be hired) by the Employer as Engineer Manager for the contract.

5.3 (a) A bidder that is under a declaration of ineligibility by the Government of Namibia in accordance with applicable laws at the date of the deadline for bid submission and thereafter shall be disqualified

(b) Bids from contractors appearing on the ineligibility lists of African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank Group and World Bank Group shall be rejected.

5.4 Government-owned enterprises in the Republic of Namibia shall be eligible only if they can establish that they are legally and financially autonomous and operate under commercial law, and that they are not a dependent agency of the Government.

6. Qualifications of Bidders

6.1 All bidders shall provide in Section III, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

6.2 Bidders shall include the information and documents listed hereunder with their bids, unless otherwise **stated in the BDS**. The non-submission of the documents by the Bidder within the prescribed period may lead to the rejection of its bid.

- (a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business of the Bidder;

- (b) total monetary value of construction works performed for each of the last five years;
- (c) experience in works of a similar nature and size for each of the last five years or as otherwise **stated in the BDS**; and clients who may be contacted for further information on those contracts;
- (d) major items of construction equipment proposed to carry out the Contract;
- (e) qualifications and experience of key site personnel and technical personnel proposed for the contract;
- (f) report on the financial standing of the Bidder for the last three years, such as certified copies of Financial Statements/Audited Accounts as filed at the Registrar of Companies;
- (g) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);
- (h) authority to seek references from the Bidder's bankers; and
- (i) information regarding any litigation, current or during the last five years, in which the Bidder was/is involved, the parties concerned, the issues involved, the disputed amounts, and awards;
- (j) proposals for subcontracting components of the Works amounting to more than 10 percent of the Contract Price.

- 6.3 To qualify for award of the Contract, bidders shall meet the following minimum qualifying criteria:
- (a) a minimum average annual financial amount of construction work over the period **specified in the BDS**.
 - (b) experience as prime contractor in the construction of a minimum number of works of a nature and complexity equivalent to the Works over a period as **specified in the BDS** (To comply with this requirement, works cited should be at least 70 percent complete);
 - (c) proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment **listed in the BDS**;
 - (d) a Contract Manager/Supervisor with five years' experience in works of an equivalent nature and volume, including no less than three years as Manager or as otherwise **specified in the BDS**; and
 - (e) liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of no less than the amount **specified in the BDS**.

A consistent history of litigation or arbitration awards against the Applicant or any partner of a Joint Venture may result in disqualification.

B. Contents of Bidding Document

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| 7. Sections of Bidding Document | 7.1 The Bidding Document consists of all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 10.

Section I - Instructions to Bidders (ITB)
Section II - Bidding Data Sheet
Section III - Evaluation Criteria
Section IV - Bidding Forms
Section V - Employer's Requirements
Section VI - General Conditions of Contract
Section VII - Special Conditions of Contract
Section VIII - Contract Forms |
| 8. Clarification of Bidding Document | 8.1 The Invitation for Bids issued by the Employer is not part of the Bidding Document.

8.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer's address indicated in the BDS . |

The Employer will respond in writing to any request for clarification, provided that such request is received 14 days prior to the deadline for submission of bids.

Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 10.

- 9. Site visit/Pre-bid meeting**
- 9.1 Bidders, at the Bidders' own responsibility and risk, are encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing their Bids and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidders' own expense.
- 9.2 The Bidder or its designated representative is invited to attend a pre-bid meeting, as **provided for in the BDS**. The purpose of the pre-bid meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

- 10. Amendment of Bidding Document**
- 10.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Document by issuing addenda and extend the deadline for submission of bids, if needed.

C. Preparation of Bids

- 11. Cost of Bidding**
- 11.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs irrespective of the outcome of the bidding process.
- 12. Language of Bid**
- 12.1 The Bid, supporting documents as well as all correspondence relating to the bid exchanged by the Bidder and the Employer shall be in English Language.
- 13. Documents Comprising the Bid**
- 13.1 The Bid shall comprise the following:
- (a) Bid submission Form (in the format indicated in Section IV);
 - (b) Qualification information and documentary evidence establishing the Bidder's qualifications to perform the contract;
 - (c) completed Bill of Quantities / Activity Schedule;
 - (d) the following documentary evidence is required

1. have a valid company Registration Certificate;

2. have an original valid good Standing Tax Certificate
 3. have an original valid good Standing Social Security Certificate;
 4. have a valid certified copy by the Namibian Police of Affirmative Action Compliance Certificate, proof from Employment Equity Commissioner that bidder is not a relevant employer, or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998;
 5. have a certificate indicating SME Status (for Bids reserved for SMEs);
 6. an undertaking on the part of the Bidder that the salaries and wages payable to its personnel in respect of this proposal are compliant to the relevant laws, Remuneration Order, and Award, where applicable and that it will abide to sub-clause 4.6 of the General conditions of Contract if it is awarded the contract or part thereof; and;
 7. a signed Bid-securing Declaration.
- (e) any other documentary evidence **required in this Bidding Document..**

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| <p>14. Bid Submission Form and Schedules</p> | <p>14.1</p> | <p>The Bid Submission Form, Schedules, and all documents listed under ITB 13.1 shall be prepared using the relevant forms, if so provided.</p> |
| <p>15. Alternative Proposal</p> | <p>15.1</p> | <p>Alternative Technical Proposals and completion dates if allowed shall be indicated in Section V- Specifications. The evaluation methodologies for their consideration shall be given in Section III.</p> |
| <p>16. Bid Prices and Discounts</p> | <p>16.1</p> | <p>The Contract shall be for the whole Works, as described in ITB Sub-Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.</p> |
| | <p>16.2</p> | <p>Bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items for which no rate or price is entered by Bidders, shall not be paid for by the Public Entity when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities. Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.</p> |
| | <p>16.3</p> | <p>All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 14 days prior to the deadline for submission of bids, shall be included in the rates, prices, and total Bid price submitted by Bidders.</p> |

- 16.4 The price to be quoted in the Bid Submission Form shall be the total price of bid after any discount offered.
- The discount if any and the conditions of its application shall be indicated separately.
- 17. Currencies of Bid and Payment**
- 17.1 The bid price and rates shall be in Namibian Dollars and fixed for the duration of the contract unless otherwise **specified in the BDS**.
- 17.2 Unless otherwise **specified in BDS** interim payment for Plant and Material on site is applicable as per GCC 39.7.
- 18. Documents Comprising the Technical Proposal**
- 18.1 The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in the Bidder Qualification Form (section IV), in sufficient details to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.
- 19. Period of Validity of Bids**
- 19.1 Bids shall remain valid for a period **specified in the BDS**. The Bid Validity period should not exceed 180 days.
- 19.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing.
- 20. Bid Security / Bid Securing Declaration**
- 20.1 The Bidder shall furnish either a subscription to a Bid Securing Declaration or a Bid Security in its original form with its bid as part of its bid, if so **required in the BDS**.
- 20.2 Bid Security shall be in the form of a Bank Guarantee from a local commercial bank as per the format contained in section IV and shall be valid for a period of 30 days beyond the validity period of the bid or beyond any period of extension.
- 20.3 Any bid not accompanied by an enforceable and substantially compliant Bid Security or a subscription to a Bid Securing Declaration in the Bid Submission Form, if required in accordance with ITB 20.1, shall be rejected by the Employer as non-responsive.
- 20.4 Bid Security shall be forfeited or the Bid Securing declaration exercised for non-compliance on the part of the Bidder for reasons mentioned in the Bid Security format contained in Section III or the Bid Suring Declaration contained as Appendix to the Bid Submission Form.
- 21. Format and Signing of id**
- 21.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 13.1 and clearly mark it

“ORIGINAL”. In addition, the Bidder shall submit the number of copies **as specified in the BDS**, clearly mark with the label “COPY.” In the event of any discrepancy between the original and the copies, the original shall prevail.

- 21.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder.

D. Submission and Opening of Bids

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| 22. Sealing and Marking of Bids | 22.1 | Bidders may always submit their bids by mail or by hand. Procedures for submission, sealing and marking are as follows: <ul style="list-style-type: none">(a) Bidders submitting bids by mail or by hand shall enclose the original and each copy of the Bid, including alternative bids, if permitted in accordance with ITB 15, in separate sealed envelopes, duly marking the envelopes as “ORIGINAL”, “ALTERNATIVE” and “COPY.” These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB sub-Clauses 22.2. |
| | 22.2 | The inner and outer envelopes shall: <ul style="list-style-type: none">(a) bear the name and address of the Bidder;(b) be addressed to the Employer as indicated in ITB 22.1;(c) bear the specific identification of this bidding process indicated in accordance with ITB 1.1; and(d) bear a warning not to open before the time and date for bid opening. |
| 23. Deadline for Submission of Bids | 23.1 | Bids shall be delivered to the Employer at the address and no later than the time and date specified in the BDS . <p>The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in accordance with ITB 10.</p> |
| 24. Late Bids | 24.1 | Late bids shall not be considered. They will be returned unopened. |
| 25. Withdrawal, Substitution, and Modification of Bids | 25.1 | No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid submission Form or any extension thereof. |

- 26. Bid Opening**
- 26.1 The Employer shall open the bids at the time place and address **specified in the BDS** in the presence of Bidders` designated representatives who choose to attend.
- 26.2 The bidders' names, the Bid Prices, the total amount of each bid, any discounts, any alternative bid, bid modifications and withdrawals, the presence or absence of bid security, and such other details as the Employer may consider appropriate, will be announced and recorded by the Employer at the opening.

E. Evaluation and Comparison of Bids

- 27. Confidentiality**
- 27.1 Information relating to the examination, evaluation, comparison, and post-qualification of bids and recommendation of contract award, shall not be disclosed to Bidders or any other person not officially concerned with such process.
- 27.2 Any attempt by a Bidder to influence the Employer in the evaluation of the bids or Contract award decisions may result in the rejection of its bid.
- 28. Clarification of Bids**
- 28.1 To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its bid. No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetical errors discovered by the Employer in the evaluation of the bids, in accordance with ITB 31.
- 29. Determination of Responsiveness**
- 29.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB13.
- 29.2 A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission.
- 29.3 The Employer shall examine the technical aspects of the bid submitted in accordance with ITB 18, Technical Proposal, in particular, to confirm that all requirements of Section V (Employer's Requirements) have been met without any material deviation, reservation or omission.
- 29.4 If a bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 30. Non-conformities,**
- 30.1 Provided that a bid is substantially responsive, the Employer may waive any non-material non-conformity in the bid, request that the Bidder submit the necessary information or documentation, to rectify nonmaterial nonconformities in the bid related to

Errors, and Omissions			documentation requirements but not related to any aspect of the price of the bid; and shall rectify quantifiable nonmaterial nonconformities related to the Bid Price.
31. Correction of Arithmetical Errors	of	31.1	<p>Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:</p> <ul style="list-style-type: none">(a) only for unit price contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;(b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and(c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
32. Margin Preference	of	32.1	Unless otherwise specified in the BDS , Margin of preference shall not apply.
33. Evaluation of Bids	of	33.1	The Employer shall use the criteria and methodology defined in this clause and no other evaluation criteria or methodologies shall be permitted.
		33.2	<p>To evaluate a bid, the Employer shall consider the following:</p> <ul style="list-style-type: none">(a) the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities for admeasurement contracts or Schedule of Prices for lump sum contracts, but including Daywork items, where priced competitively; and(b) price adjustment for correction of arithmetic errors, discounts, non-conformities, due to the supplementary criteria as defined in Section III, and Margin of Preference, if applicable.
		33.3	If this Bidding Document allows Bidders to quote separate prices for different contracts, and to award multiple contracts to a single Bidder, the methodology to determine the lowest evaluated price of the contract combinations, including any discount offered in the Bid Submission Form, is specified in Section III (Evaluation and Qualification Criteria).

- 33.4 If the bid for an admeasurement contract, which results in the lowest Evaluated Bid Price, is seriously unbalanced, front loaded or substantially below updated estimates or if any item in the Priced Activity Schedule is front loaded or contains an erroneous amount in the opinion of the Employer, the Employer may after clarification require the Bidder to produce detailed price analysis for any or all items that the amount of the performance security be increased at the expense of the Bidder.
- 34. Comparison of Bids** 34.1 The Employer shall compare all substantially responsive bids in accordance with ITB 33 to determine the lowest evaluated bid.
- 35. Qualification of the Bidder** 35.1 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated substantially responsive bid meets the qualifying criteria.
- 36. Employer's Right to Accept Any Bid, and to Reject Any or All Bids** 36.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.

F. Award of Contract

- 37. Award Criteria** 37.1 Subject to ITB 36.1, the Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily
- 38. Notification of Award** 38.1 Prior to the expiration of the period of bid validity, the Employer shall, for contract amount above the prescribed threshold of N\$ 2 M, notify the selected bidder of the proposed award and accordingly notify unsuccessful bidders. Subject to Challenge, the Employer shall notify the selected Bidder, in writing, by a Notification of award for award of contract. The Notification of award shall specify the sum that the Employer will pay the Contractor in consideration of the execution and completion of the Works (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price") and the requirement for the Contractor to remedy any defects therein as prescribed by the Contract. Within seven days from the issue of notification of award, the Purchaser shall publish on the Public Procurement Portal (www.mof.gov.na/procurement-policy-unit) and the Purchaser's website, the results of the Bidding Process identifying the bid and lot numbers and the following information:

- (i) name of the successful Bidder, and the Price it offered, as well as the duration and summary scope of the contract awarded; and
 - (ii) an executive summary of the Bid Evaluation Report.
- 38.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.
- 39. Signing of Contract**
 - 39.2 Promptly upon issue of notification of award, the Employer shall send to the successful Bidder the Contract Agreement.
 - 39.2 Within thirty (30) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer
- 40. Performance Security**
 - 40.1 Within thirty (30) days of the receipt of the notification of award from the Employer, the successful Bidder shall furnish the Performance Security in accordance with the conditions of contract, using for that purpose the Performance Security Form included in Section VIII (Contract Forms).
 - 40.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract Agreement within the prescribed delay shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- 41. Advance Payment and Security**
 - 41.1 The Public Entity shall provide an Advance Payment on the Contract Price as stipulated in the GCC, subject to a maximum amount, **as stated in the BDS**. The Advance Payment shall be guaranteed by a security as per the format contained in Section VIII.
- 42. Plant and Materials on site**
 - 42.1 Unless otherwise **specified in BDS** interim payment for Plant and Material on site is applicable as per GCC 39.7.
- 43. Debriefing**
 - 43.1 The Purchaser shall promptly attend to all debriefing for the contract made in writing and within 30 days from the date of the publication of the award or date the unsuccessful bidders are informed about the award.

Section II - Bidding Data Sheet (BDS)

The following specific data for the works to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

A. General	
ITB 1.1	<p>The Public Entity is: Agricultural Bank of Namibia (Agribank).</p> <p>The Works are Civil, Structural, Electrical and Mechanical Renovations to the Agribank Rundu Branch, Kavango-East Region, Namibia.</p> <p>The name and identification of the Contract are: Renovations to the Agribank Rundu Branch, Procurement Reference No: W/ONB/AGRI – 01/2021-2022.</p>
ITB 1.2	The Intended Completion period is 120 calendar days from the Start Date.
ITB 2.1	The Funding Agency is: Agricultural Bank of Namibia (Agribank).
ITB 5.3	<p>A list of firms debarred from participating in Public Procurement in Namibia is available at http://www.mof.gov.na/procurement-policy-unit</p> <p>A list of firms debarred by World Bank is available at http://www.worldbank.org/debarr</p>
ITB 6.1	“All bidders shall provide in Section III...” should read “All bidders shall provide in Section IV...”
ITB 6.2	<p>The information required from bidders in ITB Sub-Clause 6.2 is modified as follows:</p> <p>“A valid original document; or a valid certified copy of an original document, as certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths, 1963 (Act No. 16 of 1963) as amended.”</p>
ITB 6.2 (c)	Contractors shall have at least five (5) years of experience in construction works.
ITB 6.3 (a)	The Contractor must have a minimum average annual financial amount of construction of N\$ 9,000,000.00 over the last (3) years.
ITB 6.3 (b)	<p>The number of works is: Five (5) of similar size and nature, 100% completed (<i>For Civil/Structural Construction Works, Electrical and Mechanical Installations</i>).</p> <p>Bidders must submit a complete list of past experience and include CLIENT REFERENCES AS PER THE ATTACHED template for projects of similar size and nature (Bidders are permitted to Sub-Contract all Electrical and Mechanical Installations).</p>
ITB 6.3 (c)	The essential equipment to be made available for the Contract by the successful Bidder shall be listed by the Bidder in detail:

	Refer to Part 1 – Section IV (Bidding Forms), Qualification information – Table 1.4.
ITB 6.3 (d)	<p>Add: Bidders shall provide a detailed CV of all Key Staff to be appointed for this project.</p> <p>Refer to Part 1 – Section IV (Bidding Forms), Qualification information – Table 2.1 Responsiveness Score Sheet/Technical Evaluation Criteria.</p>
ITB 6.3 (e)	The minimum amount of liquid assets and/or credit facilities net of other contractual commitments of the successful Bidder shall be N\$2 000 000.00.
B. Bidding Documents	
ITB 8.1	<p>The Public Entity's address for clarification is:</p> <p>Ms. Victoria Hauwanga Email: vhauwanga@agribank.com.na Tel: +264 61 207 4221 Agribank Head Office 10 Post Street Mall, Windhoek, Namibia</p>
C. Preparation of Bids	
ITB 11.1	<p>Bidders may purchase the bid document as follow:</p> <ol style="list-style-type: none"> Prospect bidders will be required to pay a non-refundable administration fee of N\$ 300.00 including VAT, during the bidding process. All payments are strictly electronic. Payments can be done through the following account: <div style="margin-left: 40px;"> Account Name : Agricultural Bank of Namibia Bank Name : Standard Bank Account Number : 041469380 Branch Number : 082372 Swift Code : SBNMNANX </div> A valid proof of payment must be forwarded Ombingeneeko@agribank.com.na before a Bid Document is issued and a valid proof of payment must be attached to the Bid document when submitting.
ITB 13.1(d)	<p>The documentary evidence required from bidders in ITB Sub-Clause 13.1 (d) shall be accepted as follows:</p> <p>“A valid original document; or a valid certified copy of an original document, as certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths, 1963 (Act No. 16 of 1963) as amended.”</p>
ITB 13.1(e)	<p>Any additional materials required to be completed and submitted by the Bidders are:</p> <p>Written acknowledgement and acceptance of Employer's specific requirements for the bid to be deemed responsive, as set out in Part 1 – Section IV (Bidding Forms), Qualification information – Table 2.1 Responsiveness Score Sheet/Technical Evaluation Criteria.</p>

ITB 17.1	The Contract is not subject to price adjustment in accordance with GCC Clause 44.
ITB 17.2	Interim Payment for Plant and Material on site is applicable to 80% of the value of material on site.
ITB 19.1	The Bid shall be valid for 90 days after the deadline set for the submission of bid, the deadline being counted as day one of the validity period.
ITB 20.1	The Bid shall include a subscription to a Bid Securing Declaration.
D. Submission and Opening of Bids	
ITB 21.1	In addition to the original of the bid, the number of copies is: 0 (None).
ITB 23.1	The deadline for submission of bids shall be Tuesday, 03 August 2021, at 11:00 PM, Namibian Time
ITB 23.1	The Employer's address for the purpose of Bid submission is: Attention: Procurement Management Unit Address: 10 Post Street Mall, Windhoek, Namibia Agribank Head Office Building Bid Box, Ground Floor Electronic bidding will not be permitted. Late bids will be rejected.
ITB 26.1	The bid opening shall take place at: Agribank Head Office 10 Post Street Mall, Windhoek, Namibia Tuesday, 03 August 2021, at 11:10 PM Namibian Time
ITB 29.2	A minimum requirement is set on the evaluation criteria to be met to be determined substantially responsive. This is set out in Table 2.1 "Responsiveness Score Sheet" [Section IV - Bidding Forms, Qualification Information, Sub-Clause/ Section 2. Additional Requirements.
E. Evaluation and Comparison of Bids	
ITB 32.1	A margin of preference shall not apply.
ITB 33.2	This document contains supplementary evaluation criteria as defined below: 1. Section IV - Bidding Forms, Qualification Information, "Sub-Clause/ Section 2. Additional Requirements". This section contains: a. a written acknowledgement whereby the bidder accepts the methodology of determining a responsive bid and; Table 2.1 "Responsiveness Score Sheet" clearly indicating how each criteria and scoring will be applied.
ITB 33.4	Bid Rates and Bid Prices will be evaluated against reasonable standard "benchmark" rates that are based on realistic and verifiable actual input costs as determined by the Employer. By ensuring that contracts are signed at reasonable rates the Employer will ensure that the risk of default will be reduced. Bidders whose Bid Price varies by more than 10% up or 15% down from the respective standard benchmark Bid Amount calculated, i.e. the Employer's estimate, shall be deemed to be non-compliant and shall be rejected.

F. Award of Contract	
ITB 40.1	The Standard Form of Performance Security acceptable to the Public Entity shall be “a Bank Guarantee”. The Bank guarantee shall be 10% of the contract price inclusive of provisional sums, contingencies sum and VAT.
ITB 41.1	No Advance Payment shall be made.
ITB 42.1	Interim Payment for Plant and Material on site is applicable for Material on site as per ITB 17.2 and GCC 39.7.

Section III - Evaluation Criteria

This section contains supplementary criteria that the Employer shall use to evaluate bids.

1. Evaluation

In addition to the criteria listed in ITB 33 the following criteria shall apply:

(a) Adequacy of Technical Proposal

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section V (Employer's Requirements) and Section IV (Bidding Forms), Qualification Information, "Sub-Clause/Section 2. Additional Requirements". Table 2.1 "Responsiveness Score Sheet" clearly indicating how each criteria and scoring will be applied.

Item No.	Responsiveness Criteria	Score
1	Project Experience	50
2	Qualification and Experience of Proposed Technical Staff	25
3	Program of Works	3
4	Financial Resources	22
5	TOTAL RESPONSIVENESS SCORE	100

(b) Multiple Contracts

Pursuant sub-clause 1.1 of the Instructions to Bidders, if Works are grouped in multiple contracts, evaluation will be as follows: **Not Applicable**

(c) Completion Time

An alternative Completion Time, if permitted under ITB 15.1, will be evaluated as follows: **Not Applicable**

(d) Technical Alternatives

Technical alternatives, if permitted under ITB 15.1, will be evaluated as follows: **Not Applicable**

(e) Margin of Preference

Margin of Preference shall not be applicable for this Contract.

Section IV - Bidding Forms

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Bid Submission Form

The Bidder must prepare the Bid Submission Form on stationery with its letterhead clearly showing the Bidder's complete name and address.

Date:

Procurement Reference No: **W/ONB/AGRI – 01/2021-2022.**

To:
The Chief Executive Officer
Agricultural Bank of Namibia (Agribank)
P/Bag 13402,
Windhoek
Namibia

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 10;
- (b) We offer to execute in conformity with the Bidding Documents the following Works:
_____;
- (c) The total price of our Bid after discounts, if any, offered in item (d) below is:
N\$ _____ (incl. VAT);
- (d) The discounts offered and the methodology for their application are:

_____;
- (e) Our bid shall be valid for a period of _____ [insert validity period as specified in ITB 19.1.] days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) We hereby confirm that we have read and understood the content of the Bid Securing Declaration attached hereto and subscribe fully to the terms and conditions contained therein, if required. We understand that non-compliance to the conditions mentioned may lead to disqualification.
- (g) If our bid is accepted, we commit to obtain a Performance Security and a Preference Security (if applicable) in accordance with the Bidding Document;

- (h) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 5.2;
- (i) We are not participating, as a Bidder in more than one bid in this bidding process other than alternative offers submitted in accordance with ITB 15;
- (j) Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, has not been declared ineligible under the laws of Namibia;
- (k) We are not a government owned entity / We are a government owned entity but meet the requirements of ITB 5.4;¹
- (l) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (m) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive; and
- (n) If awarded the contract, the person named below shall act as Contractor's Representative:

Name:

In the capacity of:

Signed:

Duly authorized to sign
the Bid for and on behalf
of:

Date:

Seal of Company

¹ Use one of the two options as appropriate.

Appendix to Bid Submission Form

Bid Securing Declaration

(Section 45 of Act)

(Regulation 37(1)(b) and 37(5))

Date: \ \ [Day/month/year].

Procurement Ref No.: _____

To:

The Chief Executive Officer
Agricultural Bank of Namibia (Agribank)
P/Bag 13402,
Windhoek
Namibia

I/We* understand that in terms of section 45 of the Act a public entity must include in the bidding document the requirement for a declaration as an alternative form of bid security.

I/We* accept that under section 45 of the Act, I/we* may be suspended or disqualified in the event of

- (a) **a modification or withdrawal of a bid after the deadline for submission of bids during the period of validity;**
- (b) **refusal by a bidder to accept a correction of an error appearing on the face of a bid;**
- (c) **failure to sign a procurement contract in accordance with the terms and conditions set forth in the bidding document, should I/We* be successful bidder; or**
- (d) **failure to provide security for the performance of the procurement contract if required to do so by the bidding document.**

I/We* understand this bid securing declaration ceases to be valid if I am/We are* not the successful Bidder

Signed:
[insert signature of person whose name and capacity are shown]

Capacity of:
[indicate legal capacity of person(s) signing the Bid Securing Declaration]

Name:
[insert complete name of person signing the Bid Securing Declaration]

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____, _____
[insert date of signing]

Corporate Seal (where appropriate)

[Note*: In case of a joint venture, the bid securing declaration must be in the name of all partners to the joint venture that submits the bid.]

****delete if not applicable / appropriate***

Appendix to Bid Submission Form



Republic Of Namibia

Ministry of Labour, Industrial Relations and Employment Creation

**Written undertaking in terms of section 138 of the Labour Act, 2015
and section 50(2)(D) of the Public Procurement Act, 2015**

1. EMPLOYERS DETAILS

Company Trade Name:

Registration Number:

Vat Number:

Industry/Sector:

Place of Business:

Physical Address:

Tell No.:

Fax No.:

Email Address:

Postal Address:

Full name of Owner/Accounting Officer:

.....

Email Address:.....

2. PROCUREMENT DETAILS

Procurement Reference No.:

Procurement Description:

.....

.....

Anticipated Contract Duration:

Location where work will be done, good/services will be delivered:

.....

3. UNDERTAKING

I[insert full name], owner/representative
of[insert full name of company]

hereby undertake in writing that my company will at all relevant times comply fully with the relevant provisions of the Labour Act and the Terms and Conditions of Collective Agreements as applicable.

I am fully aware that failure to abide to such shall lead to the action as stipulated in section 138 of the labour Act, 2007, which include but not limited to the cancellation of the contract/licence/grant/permit or concession.

Signature:

Date:

Seal:.....

Please take note:

1. A labour inspector may conduct unannounced inspections to assess the level of compliance
2. This undertaking must be displayed at the workplace where it will be readily accessible and visible by the employees rendering service(s) in relations to the goods and services being procured under this contract.

Qualification Information

1. Individual Bidders or Individual Members of Joint Ventures

- 1.1 Constitution or legal status of Bidder: *[attach copy]*
Place of registration: *[insert]*
Principal place of business: *[insert]*
Evidence of signatory authorized to sign the bid (if applicable):
[attach]
- 1.2 Annual amounts of construction works performed during the last 5 years to the amount of N\$30,000,000.00 cumulative construction value (Civil/Structural Works). 5 years to the amount of N\$5,000,000.00 cumulative construction value (Electrical Installations). 5 years to the amount of N\$5,000,000.00 cumulative construction value (Mechanical Installations).
Bidders are permitted to Sub-Contract all Electrical and Mechanical Installations.
- 1.3 Number 5 of works of a nature and amount similar to the Works performed as prime Contractor over the last 5 years. *[Also list details of work under way or committed, including expected completion date(s).]*

COMPLETED WORKS – ATTACH CERTIFICATE OF COMPLETION/TAKE OVER CERTIFICATE				
Project/Contract name and country	Name of Employer and contact person (incl. contact details)	Type of work performed	Start Date And End Date [Mth/Yr]	Value of contract in NAD
(a)				
(b)				
(c)				
(d)				
(e)				
(f)				

(g)				
(h)				
(i)				
(j)				

Bidders must attach reference letters from Clients.

CURRENT CONTRACT WORK COMMITMENTS / WORK IN PROGRESS					
Name of contract	Name of Employer and contact person (incl. contact details)	Type of work performed	Estimated completion date [Mth/Yr]	Value of outstanding work (N\$)	Average monthly invoicing over last six months (N\$)
(a)					
(b)					
(c)					
(d)					
(e)					
(f)					
(g)					
(h)					
(i)					

Bidders must attach reference letters from Clients.

1.4 Major items of Contractor's Equipment proposed for carrying out the Works. *[List all information requested below. Refer also to ITB Sub-Clause 6.3 (c).]*

Item of equipment	Description, make, and age (years)	Condition (new, good, poor) and number available	Owned, leased (from whom?), or to be purchased (from whom?)
(a)			
(b)			
(c)			
(d)			
(e)			
(f)			
(g)			
(h)			
(i)			
(j)			
(k)			
(l)			

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. *[Attach biographical data. Refer also to ITB Sub-Clause 6.3 (d).]*

Position	Name	Years of experience (general)	Years of experience in proposed position
(a)			
(b)			
(c)			
(d)			
(e)			
(f)			
(g)			
(h)			
(i)			
(j)			
(k)			

1.6 Proposed subcontracts and firms involved. Refer to General Conditions of Contract Clause 7.

(Bidders are permitted to Sub-Contract all Electrical and Mechanical Installations.)

Sections of the Works	Value of subcontract	Subcontractor (name and address)	Experience in similar work
(a)			
(b)			
(c)			
(d)			
(e)			

1.7 Financial reports for the last 3 years: Financial Statements, Audited Accounts, etc. [List below and attach copies.]

Financial information in NAD Equivalent	Historic information for previous three (3) years (N\$ equivalent in Millions)		
	Year 1	Year 2	Year 3
Information from Balance Sheet			
Total Assets (TA)			
Total Liabilities (TL)			
Current Assets (CA)			
Current Liabilities (CL)			
Information from Income Statement			
Total Revenue (TR)			
Profits Before Taxes (PBT)			

To be completed by the Bidder, and if JV, by each partner.

- 1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents.

	Source of Financing	Amount in NAD
(a)		
(b)		
(c)		
(d)		
(e)		

Specify proposed sources of financing, net of current commitments, available to meet the total construction cash flow demands of the subject contract.

- 1.9 Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Public Entity.
- 1.10 Information on current litigation(s) in which the Bidder is involved.

	Other party(ies)	Cause of dispute	Amount involved
(a)			
(b)			
(c)			
(d)			

- 1.11 Proposed Program (work method and schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the Bidding Documents.

2. Additional Requirements

2.1 Bidders should provide any additional information requested in the Bidding Document.

Written acknowledgement and acceptance of employer's specific requirements for bid to be deemed responsive

The Bidder must complete this form in full.

Date: _____

Bidder's Reference No.: _____

Procurement Reference No: _____

We, the undersigned, declare that we acknowledge and accept

- (a) that according to ITB 6.3, a certain minimum criteria must be met, and
- (b) that according to ITB 29, for our Bid to be determined responsive, our Bid must score at least 70% on the Responsiveness Score Sheet in Table 2.1, and

Name: _____

In the capacity of: _____

Signed: _____

Duly authorized to
sign the Bid for and on
behalf of: _____

Date: _____

Seal of Company _____

Table 2.1 Responsiveness Score Sheet/Technical Evaluation Criteria

ITEM #	DESCRIPTION	SCORE (%)
1. PROJECT EXPERIENCE		
1.1	Completed at least 5 similar Civil/Structural projects: \geq N\$ 30 million cumulative construction value. (ATTACH AT LEAST 5 REFERENCES PER PROJECT AS PER THE ATTACHED CONTRACTOR'S PERFORMANCE EVALUATION FORM FROM PRINCIPAL AGENT/EMPLOYER. If no reference letter is attached, the Bidder will be scored zero. 20% maximum score).	20
1.2	<p>Completed at least 5 similar Electrical Installation projects: \geq N\$ 5 million cumulative construction value. (ATTACH AT LEAST 5 REFERENCES PER PROJECT AS PER THE ATTACHED CONTRACTOR'S PERFORMANCE EVALUATION FORM FROM PRINCIPAL AGENT/EMPLOYER. If no reference letter is attached, the Bidder will be scored zero. 10% maximum score).</p> <p>Bidders must be registered as a contractor at Nored (2.5% score).</p> <p>The Bidder must be able to demonstrate that a local / Namibian Agent or Partner will be able to provide after-sales service and maintenance on completion of the project (2.5% score).</p> <p><i>Bidders are permitted to Sub-Contract all Electrical Installations (Reference Letters to be in the name of the Sub-Contractor).</i></p> <p>LETTER OF INTENT OF PROPOSED ELECTRICAL SUB-CONTRACTOR TO BE INCLUDED IN BID SUBMISSION.</p>	15
1.3	<p>Completed at least 5 similar Mechanical Installation projects: \geq N\$ 5 million cumulative construction value. (ATTACH AT LEAST 5 REFERENCES PER PROJECT AS PER THE ATTACHED CONTRACTOR'S PERFORMANCE EVALUATION FORM FROM PRINCIPAL AGENT/EMPLOYER. If no reference letter is attached, the Bidder will be scored zero. 12.5% maximum score).</p> <p>The Bidder must be able to demonstrate that a local / Namibian Agent or Partner will be able to provide after-sales service and maintenance on completion of the project (2.5% score).</p> <p><i>Bidders are permitted to Sub-Contract all Mechanical Installations (Reference Letters to be in the name of the Sub-Contractor).</i></p> <p>LETTER OF INTENT OF PROPOSED MECHANICAL SUB-CONTRACTOR TO BE INCLUDED IN BID SUBMISSION.</p>	15
2. STAFF EXPERIENCE & QUALIFICATIONS	Qualification and Experience of Proposed Technical Staff (attach certified copy of Qualifications and C.V)	
2.1	Contract/Project Manager: has B. Degree or Diploma in Engineering / Construction / QS with 5 years in the same Management position. <u>Certified copies of qualifications must be attached to the CV.</u>	5

2.2	Site Agent: has Diploma in Civil Engineering with minimum 8 years in the same position. <u>Certified copies of qualifications must be attached to the CV.</u>	5
2.3	General Foreman: Qualified Builder with Level 3/ N3 Diploma and 10 years of experience in Building projects and Municipal services installations. <u>Certified copies of qualifications must be attached to the CV.</u>	5
2.4	Electrical Foreman: Qualified Electrician with Level 3/ N3 Diploma and 10 years of experience in Electrical installations. Must be in possession of a valid Wiremen’s License. <u>Certified copies of qualifications must be attached to the CV.</u>	5
2.5	Mechanical Foreman: Qualified Mechanical Technician with Level 3/ N3 Diploma and 10 years of experience in Mechanical installations. <u>Certified copies of qualifications must be attached to the CV.</u>	5
3. PROGRAM	Program of Works attached corresponding to the project duration.	3
4. FINANCIAL RESOURCES	Evidence of Financial Resources	
4.1	Financial Statements for the last three years (attach copies)	5
4.2	Letter of intent from a commercial bank to provide an “ On-Demand Performance Guarantee ”, equivalent to 10% of the contract price inclusive of provisional sums, contingencies sum and VAT. A deficit in the amount required will attract a score of 0%.	7
4.3	Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, minimum line of credit N\$ 3,500,000.00 . Attach copies of supporting documents.	10
5. TOTAL	TOTAL RESPONSIVENESS SCORE	100

Contractor's Performance Evaluation Form

To be completed by the respective Principal Agent/Employer per relevant Project.

Bill of Quantities

PREAMBLE TO THE BILL OF QUANTITIES

In this Bid Document, the term “Schedule of Quantities” means “Bill of Quantities” and vice versa.

The General Conditions of Contract, the Special Conditions of Contract the Specifications (including the Project Specification), and the Drawings are to be read in conjunction with the Bill of Quantities.

The Bill comprises items covering the Contractor's profit and costs of general liabilities and of the construction of temporary and permanent works.

The Bidder is at liberty to insert a rate of his own choosing for each item in the Bill and his attention is drawn to the fact that the Contractor has the right, under various circumstances, to payment for additional works carried out and that the Project Manager is obliged to base his assessment of the rates to be paid for such additional work on the rates inserted in the Bill by the Contractor.

Descriptions in the Bill of Quantities are abbreviated and the Bill has been drawn up generally in accordance with the latest issues of Civil Engineering quantities. Should any requirements of the measurement and payment clause of the applicable Standardized Specification, or the Project Specification, or the Particular Specification(s) conflict with the terms of the Bill or, when relevant, Civil engineering quantities, the requirement of the Standardized, Project, or Particular Specification as applicable, shall prevail.

Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made for waste.

The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices to the Employer for the work described under the several items. Such prices shall cover all costs and expenses that may be required in and for the construction of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the Bid is based. The Bidder shall ensure that his rates are exclusive of Value Added Tax (VAT) as laid down in existing legislation.

A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill.

The Bidder must price each item in the Bills of Quantities in **BLACK INK**.

The quantities of this Bill of Quantities shall be regarded as **approximate** and not necessarily the actual amount of work to be done nor shall these quantities be considered as limiting or extending the amount of work to be done or material to be supplied by the Contractor.

The Contract Price for the completed contract shall be computed from the actual quantities of work done and valued at the unit rates and Bid prices against the respective items in the Bill of Quantities.

The Bill of Quantities must not be used for the ordering of materials and the Contractor is advised to acquire his own information from the Specifications and Drawings and to consult with the Project Manager before materials are ordered.

The Bill of Quantities includes provision for Preliminary and General Items. Please note that the value of fixed P&G's may not be more than 15% of the total contract value (excluding contingencies and VAT). Also, the total P&G's (fixed + time related) may not be more than 20% of the total contract value (including contingencies and VAT).

Bill of Quantities

PART 2 – Employer's Requirements

Section V - Employer's Requirements

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Specifications

SCOPE OF PROJECT SPECIFICATIONS

The Project Specifications consist of the following Portions:

PORTION 1	covers amendments and additions to the SANS 1200 Standardised Specifications, applicable to the Contract.....	Pg. 45
PORTION 2	covers Specifications for Mechanical Installations.....	Pg. 54
PORTION 3	covers Specifications for Detailed Electrical Installations.....	Pg. 68
PORTION 4	covers Specifications for Standard Electrical Installations.....	Pg. 84

STATUS OF PROJECT SPECIFICATIONS

The Project Specifications form an integral part of the Contract Document and shall be deemed to be included in and form part of the Specifications.

Should any requirement of any portion of the Project Specification conflict with any requirement of the Standardised or Particular Specifications (listed in Portion 1 of the Project Specification), the requirement of the Project Specification shall prevail.

If there is any discrepancy between the project specifications and any part of the SANS 1200 standardized specifications, drawings or the schedule of quantities, the order of precedence shall be:

1. The Letter of Acceptance
2. Special Conditions of Contract
3. General Conditions of Contract
4. Project Specification
5. SANS 1200
6. Drawings
7. The Completed Schedule/Bills of Quantities

Throughout this Section (Specifications), the words "Project Manager" and "Engineer" will be used interchangeably, and refers to the Project Manager's Office and/or representative as mentioned in PART 3 Section VII - Special Conditions of Contract, GCC 1.1 (y).

PORTION 1: AMENDMENTS AND ADDITIONS TO SANS 1200 STANDARDISED SPECIFICATIONS

PREFACE TO PROJECT SPECIFICATIONS

The Clauses of the Project Specifications below are lettered "PS" followed by the relevant letter(s) of the corresponding Section of SANS 1200. The Clause or sub clause number(s) given in brackets after the heading of a clause or sub clause in the succeeding sections is/are, unless otherwise stated, the number(s) of the relevant clause(s) or sub clause(s) of the applicable Standardised Specification. Clause numbers referring to another section of the Standardised Specification will be followed by the letter(s) of such other section.

PSA GENERAL

PSA 3 MATERIALS

PSA 3.1 QUALITY

All materials to be built into the Works have to be approved by the Engineer beforehand. If required by the Engineer, the Contractor shall deliver samples of materials to any laboratory acceptable to the Engineer. Any materials built in without prior approval by the Engineer may be required to be removed at the Contractor's cost.

All materials proposed by the Contractor shall be tested. The tests, as well as the materials, shall be approved by the Engineer prior to any such materials being built into the Works, and all costs involved shall be deemed to be included in his rates.

PSA 4 PLANT

PSA 4.1 SILENCING OF PLANT

The Contractor's attention is drawn to the applicable regulations framed under the Machinery and Occupational Safety Act, 1983 (Act No. 6 of 1983). The Contractor shall provide and use suitable and effective silencing devices for pneumatic tools and other plant that would otherwise cause a noise level exceeding 85 dB during excavations and other work. Alternatively, he shall, by means of barriers, effectively isolate the source of any noise in order to comply with the said regulations.

PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

The extent of the Contractor's camp shall be restricted to the area allocated by the Employer or the Project Manager. No living quarters for the Contractor's employees shall be established on site or in the Contractor's camp. The Contractor shall make his own arrangements to house his employees off site and to transport them to the site. Not more than two watchmen shall be allowed on Site overnight, weekends, non-working days, except where special permission has been obtained from the Project Manager.

PSA 5 CONSTRUCTION

PSA 5.1 SURVEY

PSA 5.1.1 Setting Out of the Works

Add the following:

The Contractor shall be responsible for setting out the works and the correctness thereof. All the works shall be set out by the contractor who shall compare the positions and levels with the drawings and report all discrepancies to the Engineer in reasonable time to which the Engineer would respond within 7 days. Neither the Employer nor the Engineer would be liable for any delays caused to the progress of the works during this period.

The contractor will be required to notify all the surrounding land owners of his intended construction activities two days prior to commencing with the works affecting the specific property owners.

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

The Contractor would be required to confirm the positions of the services shown on the drawings. The location of existing services shown on the drawings is their approximate positions. Neither the Employer nor the Engineer would be liable for claims arising from information contained on these drawings.

It is the responsibility of the Contractor to find the exact position of existing services. If it is required to relocate or change existing services, the Contractor must inform the Engineer immediately after having determined the location of the service. The Contractor would be required to make the necessary arrangements with the relevant authorities for the relocation or changes to the service in question. The Contractor shall excavate the necessary trenches to enable the relocation of services by other departments.

The contractor will be required to open up, expose and protect all existing services within the project area. The Contractor will be required to survey the exact position of all existing services and show out these services and provide the survey information to the Engineer.

Having located a service, it shall be considered a known service and the Contractor must keep records of co-ordinated positions of each service. A copy of these records shall be submitted to the Engineer. The Contractor shall take extreme care to avoid damage to such a service, as the cost for the repairing of such a service will be for the account of the Contractor. The Contractor must furthermore co-operate with the relevant Municipal departments or regulatory bodies and allow them reasonable access and sufficient space and time to carry out the required work. Sewerage lines shall where and if required, be relocated by the Contractor.

No guarantees are given by the Employer or his Agent with respect to, the accuracy of the existing services shown on the drawings, and those shown on the drawings are not necessarily the only existing services.

The Contractor has to accept liability for the cost to repair known services damaged as a result of his operations, either by his authorised signature, or by admittance to the Engineer, who will confirm such admittance in writing to the Contractor. The Engineer reserves the right to deduct the cost to have such damaged services repaired by the relevant service departments, from payments due to the Contractor.

The Contractor is also responsible for the cost of temporary arrangements for water supply, if the time needed for repairs, exceeds 12 hours.

All exposed pipes, cables and appurtenant structures shall be backfilled before nightfall, and if this is not possible, watchmen shall be placed at the exposed services to ensure that the exposed pipe, cable or other service is not damaged or stolen during the night. Should anything be stolen or damaged in this way, the Contractor is also responsible for the cost of the repair and replacement thereof.

Any damage or loss resulting from failure to comply with this Clause will be to the Contractor's account.

Measurement and Payment

The unit of measurement to expose existing services, or to provide trenches for the relocation thereof, in accordance with Clause 8.8.4(c)1 shall be the cubic metre (m³) of material excavated in accordance with authorised dimensions, measured in place before excavation.

The tendered rate shall include full compensation for the detection, exposure, excavation, surveying, backfilling, watering and compacting the backfill to at least the same density as the in-situ material before excavation. The rate shall also include the proper documentation of the service.

In cases where an exposed service cannot be backfilled before nightfall due to any delays, it shall be properly secured and made safe to ensure no damage to the services, the contractors staff or the public.

PSA 6 TOLERANCES

PSA 6.2 DEGREES OF ACCURACY

Degree of accuracy II shall apply.

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.8 TEMPORARY WORKS

PSA 8.8.2 Dealing with Traffic

Add the following:

The Contractor shall allow for access for the Project Manager, the Employer and their designated staff in accordance with the procedures agreed upon at the commencement of the Contract. **The Project Manager holds the right to assess whether the Contractor meets the above requirements, and monthly payments for traffic accommodation could, at the discretion of the Project Manager, be forfeited and a maximum monthly penalty amount of N\$ 8 000.00 could be deducted.**

The Contractor must protect completed layer works in order to prevent damage thereto. Any damage caused to completed layer works shall be for the Contractor's expenses.

The Contractor shall liaise and co-ordinate with the Rundu Town Council, the relevant Traffic Authorities, the regional engineer from Roads Authority and the Project Manager's Representatives wherever the Works affect existing roads. The Contractor shall submit to the responsible traffic officer(s) a written request, in the form accepted by the Engineer for the proposed accommodation of traffic for approval and subsequently for approval by the Engineer. The Contractor shall sign an

indemnity clearing the Employer, Rundu Town Council, Roads Authority and Engineer, as applicable, from all liabilities in respect of works in or adjacent to trafficked roads.

The Contractor shall provide and maintain, in proper condition, all necessary barricades, lights, warning signals and all direction signs necessary to enable traffic to follow routes to townland, accesses and alternative routes. **Prior to the closing of the roads, the Contractor shall submit a temporary road sign drawings for approval by the Engineer, the Rundu Town Council and/or Roads Authority.** The Contractor should maintain these road signs as long as needed.

If applicable, all traffic signs and the control of traffic shall be in accordance with the Namibian Road Traffic and Transportation Act and shall comply with the specification of the Southern Africa Road Traffic Signs Manual.

Payment for this item shall include for all work necessary to comply with this Project Specification. Subject to the provisions of Clause 8.2. of SANS 1200 A, payment of incremental amounts (calculated by the division of the tendered sum by the number of months required to complete the site activities for which the relevant sum was tendered) will be authorised in each of the subsequent progress certificates until the sum tendered has been paid. An approved extension of time will qualify the Contractor to receive payment at the monthly rate determined by the above method.

The maximum monthly penalty amount has been included in the Bill of Quantities as a negative pay item. The penalty cannot exceed N\$ 8000.00 per month. The implementation of this penalty is at total discretion of the Engineer and would be deducted should the Contractor not comply with this Project Specification.

PSA 8.8.5 Cost of Survey in Terms of the Land Survey Act

Setting out of works shall not be paid separately. The cost of setting out should be included in the tendered sum for preliminary and general costs, or included in the rates of the individual services/items that requires setting out.

PSC SITE CLEARANCE

PSC 3 MATERIALS

PSC 3.1 DISPOSAL OF MATERIAL

Add the following:

Material shall be disposed at the nearest approved Municipal dumpsite, or alternative site agreed upon by the Rundu Town Council and the Project Manager.

PSC 5 CONSTRUCTION

PSC 5.8 AREAS TO BE CLEARED AND GRUBBED

Add the following:

The areas along the roads, pipeline routes, and sewerage lines to be cleared and grubbed include river beds and areas within the road reserves where needed.

PSC 5.8 DEMOLITION OF STRUCTURES

Add the following:

Demolished structures should be disposed at approved dumpsites.

PSDB EARTHWORKS: PIPE TRENCHES

PSC 8 MEASUREMENT AND PAYMENT

PSC 8.3 SCHEDULED ITEMS

Add the following new pay items:

PSA 8.3.8 Demolition, removal and disposal at an approved dump site of miscellaneous, structures consisting of brickwork, nominally reinforced and unreinforced concrete.....Unit: m³

The unit of measurement shall be the net volume of the structure calculated before the demolition.

The tendered rate shall cover the cost of all material, equipment and labour necessary to demolish structures consisting of brickwork, nominally reinforced and unreinforced concrete, and the disposal within free haul distance.

PSA 8.3.9 Take up and set aside for later re-use external brick paving not exceeding 80mmUnit: m²

The unit of measurement shall be the net area of paving calculated before the removal.

The tendered rate shall cover the cost of all material, equipment and labour necessary to remove and store paving blocks.

PSDM EARTHWORKS (ROADS, SUBGRADE)

PSDM 1 SCOPE

Add the following:

All earthworks will be dealt with in this section and no work has been measured in SANS 1200 D (Earthworks).

PSDM 3 MATERIALS

PSDM 3.1 CLASSIFICATION FOR EXCAVATION PURPOSES

Delete SABS 1200 D Clause 3.1 and SABS 1200 DM Clause 3.1, and replace with the following:

PSDM 3.1.1 Method of Classifying

The Contractor may use any method he chooses to excavate any class of material but his chosen method of excavation shall not determine the classification of the excavation. The Engineer or his Representative will decide on the classification of materials. In the first instance classification will be based on inspection of the material to be excavated and on the criteria given in PSD 3.1.2(a) and (b).

PSDM 3.1.2 Classes of Excavation

All materials encountered in any excavation for any purpose including restricted excavation will be classified as follows:

a) Hard rock excavation

Hard rock excavation shall be excavation in material (including undecomposed boulders exceeding 0.15 cubic meters in individual volume) that cannot be efficiently removed without blasting, wedging and splitting, or hydraulic hammers.

This classification includes materials such as:

- solid unfractured rock occurring in bulk
- solid ledges thicker than 200mm
- igneous rock intrusions
- cemented sedimentary rocks.

b) Soft Excavation

Any material which can be removed by bulldozers, excavators or backhoes, shall be classified as soft excavation. Soft excavation shall be material not falling into the category of hard rock excavation.

PSDM 3.3 SELECTION

PSDM 3.3.1 General

Material excavated from the existing street pavements and approved by the Engineer shall be used for pavement material in the sidewalks. Any shortages shall be augmented from the designated borrowpit. Ideally the CBR at 93% Mod AASHTO, or 95% if so specified by the Engineer for increased strength, shall not be lower than 15.

Special care must be taken during the construction of sidewalks, that completed road surfaces are not damaged by material being left on these surfaces. Sidewalks should be completed as soon as possible during construction.

PSDM 5 CONSTRUCTION

PSDM 5.2.1 Stripping of Site

Add the following:

Local Ant and Termite Treatment of Existing Nest and Termite Mounds

Prior to stripping the Site Inspect site, locate and survey location of all significant ant and termite nests and mounds. Apply Termidor SC (or similar approved) as per manufacturers specifications for the treatment of existing termite mounds/colonies. After the nest is confirmed to be exterminated, site clearance and stripping can commence. After bulk excavation and before roadbed compaction,

remove 450mm in-situ material to a 4m perimeter of the center of the nest/mound, compact surface with a rammer compactor and re-fill local excavated area in layers of 150mm, compacted at O.M.C. to a minimum of 90% of the maximum modified AASHTO compaction.

PSDM 5.2.3.3 Treatment of Roadbed

Add the following:

Pre-construction Ant/Termite Treatment of the Roadbed

Premise 200 SC, Termidor SC, or similar approved, to be applied to the roadbed before compaction and to the manufacturer's application rate and instructions for pre-construction preventative application. Pesticide to be thoroughly mixed with material before compacting the roadbed.

Preparation and Compaction of Roadbed

Roadbed preparation in fill areas in general shall be done by ripping the in - situ material to a depth of 200 mm, watering, mixing and re-compacting at or slightly dry of optimum moisture content by a sheepfoot or tampering compactor to minimum 93% Mod AASHTO density. Areas where the width and in - situ densities, or strength, of the existing pavement are within specification to be excluded.

Special care must be taken during the construction of sidewalks that completed road surfaces are not damaged by material being left on these surfaces. Shoulders should be completed as soon as possible during construction.

PSDM 5.2.8 Transport

PSDM 5.2.8.2 Overhaul

Add the following:

Rates for sub-base, base course, surfacing stone and crusher dust obtained from commercial sources must include overhaul. The contractor should incorporate overhaul in his rates.

No overhaul will be paid under this contract for material from any sources including commercial sources.

PSDM 8 MEASUREMENT AND PAYMENT

PSDM 8.3 SCHEDULED ITEMS

Add the following new pay items:

PSDM 8.3.17 Pre-construction Ant/Termite Treatment of the Roadbed..... m²
Premise 200 SC, Termidor SC, or similar approved, to be applied to the roadbed before compaction and to the manufacturer's application rate and instructions for pre-construction preventative application. Poison to be thoroughly mixed with material before compaction.

The rate shall include the pesticide, mixing and sprayed/application to the roadbed as per the manufacturers's specifications. The Engineer or his representative must attend the application.

PSDM 8.3.18 Local Ant and Termite Treatment of Existing Nest and Termite Mounds.....No.

The rate shall include the pesticide, mixing and sprayed/application to the roadbed as per the manufacturers's specifications. The Engineer or his representative must attend the application of the termite/ant.

PSLD MEDIUM PRESSURE PIPELINES

PSLD 8 MEASUREMENT AND PAYMENT

Add the following new pay item:

PSLD 8.2.13 Water meter manhole completeSum

The rate shall be all inclusive (labor, travel, accommodation, and material incurred by the contractor, his appointed subcontractor, or both).

This rate shall include the partial demolition of the existing structure as well as the construction of the new water meter manhole as shown on W1497-Rundu-CW-2.0.

PSLD 8.2.1 Water meter complete with Elster Kent or simalr approved including isolating valves:.....Sum

The rate shall be all inclusive (labor, travel, accommodation, and material incurred by the contractor, his appointed subcontractor, or both).

The rate shall be for the complete assembled water meter and isolating valve fittings and labour as per W1497 – Rundu –CW 2.0

PSLD 8.2.11 Connection to Existing Municipal:.....Sum

The rate shall be all inclusive (labor, travel, accommodation, and material incurred by the contractor, his appointed subcontractor, or both).

The rate shall be for the necessary fittings and labour for the connection to the municipal domestic water supply line as per W1497 – Rundu –CW 2.0

PSLD SEWERS
PSLD 7 CLEANING AND TESTING

Add the following:

PSLD 7.1.9 The contractor shall clean the existing sewerage network by means of pressure jetting and assess the condition by means of visual rodding and an air test as per SANS 1200 LD.

The outcome of this assessment, through confirmation by the engineer, will determine whether any works shall be carried out on the sewerage network, inclusive of new manholes and connection to the municipal network.

PSLD 8 MEASUREMENT AND PAYMENT

Add the following new pay item:

PSLD 8.2.13 Clean and assess existing sewerage pipe by means of visual rodding and air testSum

The rate shall be all inclusive (labor, travel, accommodation, and material incurred by the contractor, his appointed subcontractor, or both).

This rate shall be for the cleaning by pressure jetting of the existing line and connected manholes, visual inspection by means of visual rodding with a camera inspection system of sufficient length, the final editing and submission of recorded pictures and video footage, and an air test as per SANS 1200 LD on the existing network or parts thereof as may be directed by the engineer.

<END>
<PORTION 1>

PORTION 2: MECHANICAL SPECIFICATIONS

AC. STANDARD MECHANICAL SPECIFICATIONS

AC.1 SUMMARY OF MECHANICAL WORKS

Supply and installation of a functional HVAC system consisting of wall mounted split units, ceiling split units, evaporative coolers, and fresh/extract air supply fans with ducting as outlined in relevant Project drawings and schedule of quantities attached hereto.

AC.2 DUCTWORK

This specification covers the air distribution system as shown on the Bid drawings and approved installation drawings.

Ductwork shall be manufactured in accordance with the Standard Specification for Air Conditioning Ductwork, SANS 1238.

Ductwork shall be erected in accordance with the Code of Practice for the Installation. Testing and Balancing of Ductwork for Air Conditioning SANS. 0173.

Unless otherwise specified in the "Project Specification", ductwork and accessories shall be manufactured from galvanised steel sheeting to SANS. 934-1969, "Commercial Coating Thickness".

AC.2.1 Fabrication Standards

Ductwork shall be fabricated and installed in accordance with the following specification which shall be read in conjunction with the standards laid down by the Sheet Metal and Air conditioning Contractors National Association (of America) (SMACNA) which standards shall be adhered to in detail excepting only as hereinafter specified.

AC.2.2 Cross Joints

All cross joints in duct work shall be sealed with a liberal coating of 3M or equal Duct Sealer.

AC.2.3 Flexible Connections

All ducts connections to vibrating equipment shall consist of a flanged joint, followed by a flexible connector consisting of a neoprene covered fiberglass cloth affixed on either side of the joint in a double lock seam to form an airtight flexible joint with a minimum 50 mm separation between metal edges. The Standard "Duro-Dyne" prefabricated flexible duct connector complies with these specifications. Ducting at flexible joints shall be so supported that the ductwork is held square with the adjoining duct and no stress is imposed upon the flexible joint.

Flexible ducts shall be equal to WIREMOLD type 57K comprising glass fiber fabric, PVC coated, spirally-wound metal inserts and having a 25mm thick PVC covered fiberglass insulating jacket. Where flexible ducts connect to normal sheet metal ductwork or other equipment, use a liberal coating of 3M or equal Duct Sealer, seal the joint with DURO-DYNE or equivalent 75mm wide duct tape and finish with an approved clamp ring or metal strapping to ensure an airtight joint

AC.2.4 Circular Ductwork

Circular ducting shall be of the spiral type.

AC.2.5 Accessories

The contractor is to provide all hangers and supports that are to be hot dipped galvanised after fabrication to SANS. 763-1997, "General Coating Thickness".

No explosive fasteners to the building structure shall be allowed, only approved expanding bolts or clamps are permissible.

The ductwork shall be connected to the air terminals by means of flexible ducting of two-element spiral connection composed of a corrosion-resistance and a coated fabric with a mineral base. When stated on the drawings, the ductwork shall have 25 mm thick, factory-fitted, non-combustible insulation, aluminium foil finished.

Where shown on the drawings and/or where required for inspection and maintenance, access panels shall be installed in the ducting as per SANS 1238.

AC.2.6 Insulation

Insulation shall in all instances be applied by specialist contractors and be of the highest standard.

Any section not installed to the approval of the Project Manager shall be re-done at the Contractor's expense.

Prior to insulation being fitted, all pressure testing shall be completed satisfactorily. Insulation, cladding and vapour barriers shall be painted as specified.

All items of plant likely to operate at temperatures below the surrounding ambient dew point shall be insulated and provided with a vapour barrier.

All air ducts carrying heated or cooled air, except where specifically excluded shall be thermally insulated.

Internal duct insulation shall consist of not less than 25mm thick neoprene or flexible fabric faced fibreglass which shall be secured to the duct by means of suitable adhesive in addition to metal fasteners, generally in accordance with SANS 1238. External insulation shall generally be in accordance with SANS 0173. It shall be similar to FRK type.

Fibreglass density shall be a minimum of 24kg/m³ for internal insulation and external insulation in unexposed areas. For external insulation in exposed areas such as plantrooms, service trenches and service ducts, the minimum density shall be 48kg/m³. Thermal conductivity in both instances shall not exceed 0,037 W/m²K. In unexposed areas such as roof spaces, etc., external insulation shall be protected with a neoprene or aluminium foil cover. These shall be strapped at intervals not exceeding 500mm with nylon straps and buckle clips or similar approved method.

All air conditioning ductwork externally insulated shall be provided with a continuous vapour barrier, sealed with adhesive aluminium tape or equal. The vapour barrier shall comply with the flammability requirements for sealing membranes as per SANS 1238.

Particular care shall be taken with insulation at ductwork joints to ensure maximum possible insulation of duct surfaces.

External insulation in exposed areas shall comprise 40mm thick fibreglass to cover all flanges, joints, etc. It shall be externally clad with a galvanised sheetmetal skin over a vapour barrier and painted to specification. Horizontal surfaces and joints in the sheet metal cladding shall be such that they shed water.

Flexible ducting shall be proprietary made complete with insulation at least 40mm thick fiberglass equivalent and an acceptable fire retardant outer layer. Where flexible-ducting joins on to sheet metal ducting the joints shall be sealed with foil backed adhesive tape.

AC.2.7 Duct Supports

All ductwork shall be securely supported by hangers, brackets and other appropriate forms of support. All supports and hangers for air duct installed shall be rigid galvanized steel rod, angle bar or U-channel construction.

All ductwork shall be securely supported so as to prevent vibrations or movements and arranged to allow expansion due to thermal stresses without distortion of the ductwork, rupture of insulation or damage to the supporting structure. Ductwork supports shall be positioned close to dampers, diffusers and all similar equipment which are not subjected to distortion, in addition to those hangers and supports generally required. Allowance shall be made in ductwork construction for instrument and controls connections and adequate local stiffening shall be incorporated to provide ridge mountings.

Sleeves shall be fitted to ducts at points where they pass through walls, floors and ceilings. Ductwork penetrations to walls and floors shall be packed with an approved insulation (fire rated, if required) and shall be flanged on both sides of the penetrations.

All angle iron brackets used are to be neatly cut and the ends must be grinded smooth.

Holes in mild steel brackets for bolts are to be drilled and no holes cut with a cutting torch will be permitted.

No ducts are to be hung from other services.

AC.2.8 Identification

A pointer 150 mm long shall show the direction of flow. Also colour coded labels with writing in words, identifying the service of the duct shall be provided at:

- a) Point of origin.
- b) On either side of walls, floor and partitioning.
- c) At intervals not exceeding 20 m.

Insulated and/or painted ductwork shall have the identification marks and flow arrows applied after insulation/painting has been completed.

Lettering of the labels shall be at least 50 mm high.

AC.2.9 Pressure Testing

Pressure testing for medium and high pressure ducting, shall be in accordance with the Code of Practice for the installation, Testing and Balancing of Ductwork for Air Conditioning SANS. 0173.

Low pressure ducting must be pressure tested as follows:

- a) The duct pressure shall be at least 2 times maximum operating pressure, or 150 Pa, whichever is greater.
- b) Smoke shall be introduced into the duct section under test.
- c) All leaks letting out visible smoke, shall be closed up with approved duct sealing compound.
- d) A further pressure test shall be performed at the duct pressure specified in (a) above and leaks sealed until a maximum allowable leakage rate is reached of 48%, suitable de-rated for the volume handled by the duct section being tested.

Pressure testing shall be performed with the spigots installed, temporarily capped, but before the application of the external insulation.

AC.2.10 Supply Air System Fans

Schedule below illustrate Fan parameters:

TAG	QTY	DUTY	ELECTRICAL REQUIREMENTS	UNIT TYPE
SAF-1	1	410 l/s @ 250Pa	220V,1 Phase, 50Hz	Duct mounted

AC.2.11 Extraction Air System Fans

Schedule below illustrate Fan parameters:

TAG	QTY	DUTY	ELECTRICAL REQUIREMENTS	UNIT TYPE
XF-1	1	120 l/s @ 100Pa	220V,1 Phase, 50Hz	Duct mounted
XF-2	1	90 l/s @ 100Pa	220V,1 Phase, 50Hz	Duct mounted
XF-3	5	60 l/s @ 100Pa	220V,1 Phase, 50Hz	Wall mounted
XF-4	2	90 l/s @ 150Pa	220V,1 Phase, 50Hz	Duct mounted

AC.3 AIR CONDITIONING

AC.3.1 Split Type Air Conditioning Unit

AC.3.1.1 General

This specification covers the requirements for split type, air cooled air conditioning units. The units shall be completely self-contained, direct expansion, unitary air-cooled units.

The air conditioners shall generally be in accordance with SANS 1125 with sound levels not exceeding the values specified in the Project Specification

The unit shall consist of an indoor section, consisting of a casing, heater (if applicable), filters, coil, supply air fan(s) and controls. The outdoor section consists of a casing, compressor(s) and condenser section. The unit shall be complete with adjustable supply air grille, interconnecting refrigerant piping and drain piping.

The unit shall comply with the local authority by-laws.

The unit shall comply with the 'Safety Code for Mechanical Refrigeration', SAS-B9.1.

AC.3.1.2 Type

The unit shall be either of the heat pump or cooling only type as stipulated in Project Specification.

The indoor unit shall be either of the ceiling suspended type, the high wall type, the cassette type, the vertical type or the console type, as specified in the Project Specification.

The unit shall be suitable for operation from an electrical supply as specified in the Project Specification.

The unit shall be suitable for the location shown on the Project Manager's drawings. Ample clearance shall be available for operation and maintenance.

AC.3.1.3 Duty

The unit shall be selected for the duty as specified in the Project Specification.

The unit shall be selected to operate under the selected duty continuously, 24 hours per day, each day, without breakdown.

Selection curves, graphs or tables, obtained from actual test data shall be available and submitted to the Project Manager, showing the operating point for which the unit was selected.

Special care shall be taken during the selection of the units to take the altitude above sea level, and the indoor unit entering conditions into account.

The unit shall be sized and designed to operate within the outside air temperature limits, as specified in the Project Specification.

AC.3.1.4 Casing

The casing of both the indoor and outdoor sections shall be of robust construction and completely insulated to prevent condensation of moisture and to muffle sound.

The casings shall have readily removable panels for easy access to all components which require service and maintenance.

The casings shall be of baked enamel finish to an approved colour.

When so specified in the Project Specification, the indoor unit shall have positive introduction of outside air into the room, controllable by means of a damper.

AC.3.1.5 Compressors

The outdoor unit shall contain the matching compressor unit, air-cooled condenser, condenser fan within a waterproof painted and corrosion protected casing.

The indoor/outdoor units shall be interconnected with refrigerant piping (separately insulated suction and delivery piping for reverse cycle units), electric wiring and interlocking control cabling.

Where visible and/or exposed to the weather or possible mechanical damage refrigerant piping and cabling shall be run inside galvanised sheet steel trunking, neatly erected and painted as specified.

The compressors shall be hermetic scroll type and be equipped with an inverter controller, capable of changing the rotating speed to follow variations in cooling and heating load.

Motors shall be suitably rated and inherently protected against overload.

If required by Project Specification, the compressor shall be of the inverter technology

The compressors shall be located in a sound attenuating compartment, and shall be equipped with suitable vibration isolators.

Minimum safety protection to be provided is high discharge pressure.

AC.3.1.6 Condensers

Unless otherwise specified in the Project Specification, the condenser coils shall have copper tubes with aluminium fins.

The condenser fans shall be of the propeller or centrifugal fan type with life lubricated bearings.

For reverse cycle heating units, including split type units, a proper drippan with drainage piping as above shall be provided for the outdoor units where dripping can create unacceptable conditions. Where drainage piping is required to be installed flush mounted, positioning and chasing shall be done in good time to meet construction programmes.

AC.3.1.7 Refrigerant Circuits

Where multiple compressors are used, each compressor shall have its own independent refrigerant circuit.

Adequate provision must be made to prevent liquid floodback to the compressor(s).

Refrigerant piping shall be copper, properly dehydrated and tested for leaks. The suction line shall be insulated to prevent condensation. The piping shall run perpendicular to building components and be securely bracketed.

AC.3.1.8 Filters

Filters shall be fire resistant, washable, dry media type.

AC.3.1.9 Evaporator Coils

The evaporator coils shall be made of copper tube, with aluminium fins, unless otherwise specified in the Project Specification.

The number of rows shall not be less than 3.

The insulated condensate drainpan shall be of galvanised steel and be tilted towards the drain outlet.

AC.3.1.10 Supply Air Fans

The fan(s) shall be direct driven centrifugal fan(s) with life lubricated bearings.

Motors shall be suitably rated and inherently protected against overload.

AC.3.1.11 Heating

Heating shall be via reverse (Heat pump) cycle. No resistive heating will be accepted.

AC.3.1.12 Controls

The unit's operation shall be controlled by a control switch and an adjustable thermostat located in an easily accessible position. The thermostat shall switch the heater and the compressor automatically in accordance with the room load, and have a dead zone of 1 °C between heating and cooling. Maximum differential to be 2 °C. The switch shall have 3 positions: OFF/AC/FAN.

Units with multiple compressors shall be designed for staggered compressor start-up.

AC.3.1.13 Testing

On completion of the installation and placing into full operation thereof, the unit shall be tested on a sample basis, in the presence of the Project Manager to prove conformance of the equipment supplied and the system installed with the requirements of the specification.

The performance test will consist of recording:

- a) Power input.
- b) Air quantity delivered.
- c) Air entering conditions.

- d) Air leaving conditions.

All test instruments must have recently validated certificates.

The following shall be included into the total system's Operation & Maintenance' Manual:

- a) All performance curves, charts and tables showing operation points.
- b) Test report of acceptance tests.
- c) Maintenance instructions and schedules for all parts of the a/c unit.
- d) Spares part list for all parts of the a/c unit.

A Certificate of Completion will only be issued by the Project Manager upon satisfactory completion of the test, and when the system is operating to the complete satisfaction of the Project Manager.

AC.4 REFRIGERATION (A/C) PIPEWORK

AC.4.1 General

Refrigeration pipework between refrigeration condensing units and direct expansion cooling coils in air handling units shall be installed in full accordance with the requirements.

Refrigeration piping shall be carried out in seamless, bright, clean refrigeration quality copper tubing received from its suppliers with capped or sealed ends. Soft annealed tubing shall be used on all pipe sizes below 19 mm OD whilst hard drawn tubing shall be utilised on all larger sizes. Joints on soft copper lines shall be flared type, forged or drawn brass fittings similar or equal to "Mueller-Brass" being used. For joints on hard drawn copper lines use sweat fittings in conjunction with a suitable flux and silver solder. All pipe cuts shall be neatly reamed and cleaned prior to making joints.

All air-conditioning units without built in condensate pumps shall be fitted with an approved pump suitable for pumping condensate.

AC.4.2 Liquid Refrigerant Lines

Liquid refrigerant lines shall incorporate the following components should they not be included within the refrigeration condensing units:

- a) Bypass-flow replaceable desiccant type filter-dryers, angle types rated for the full refrigeration duty of each system.
- b) Y-Type full-flow strainers.
- c) Isolating valves of the diaphragm type to the filter dryers.
- d) Moisture-indicating type single part liquid sight glasses.
- e) Angle type, back seating, capped liquid charging valves with flare charging connections fitted with flare-fitting cap nuts.
- f) Liquid line solenoid valves.
- g) Thermostatic expansion valves of the external equaliser type, at the air handling units.

All existing openings are to be used for routing of refrigerant liquid lines.

AC.4.3 Vibration Eliminators

Vibration eliminators of “Anaconda” or equal make shall be installed in the positions indicated on the diagrams.

AC.4.4 Suction Lines

Suction lines shall be vapour-proof insulated with 38 mm thick pre-formed heavy density fibreglass sections covered with 8,0 kg canvas, the latter lapped and glued with a suitable adhesive.

Two coats of “Isoclad” liquid plastic membrane shall then be applied followed by a final paint finish, as later specified herein.

All existing openings are to be used for routing of refrigerant suction lines.

AC.4.5 Fittings

Fittings shall be insulated with neatly mitred fibreglass pipe sections, all butting and rough edges to be skim-coat plastered with hard setting compound or an asbestos plastering compound. Two coats of “Isoclad” shall then be applied followed by the paint finish, as later specified herein.

AC.4.6 Supports

Refrigeration pipework shall be supported at not exceeding 2 m centres. Pipes shall be securely clamped to points of support using suitable holder bats. Insulated piping shall have mouldered cork inserts of 50 mm thickness in place or normal insulation where supports occur, vapour-proofing at such positions being carefully executed.

All refrigeration pipework passing through plant room walls shall have mouldered cork surrounds of 50 mm thickness by width not less than that of the wall, vapour proofing at such positions being carefully executed.

The sensing bulb of the thermostatic expansion valves shall be securely fastened to the suction lines using copper strip and brass screws.

AC.4.7 Layout

Particular care shall be exercised to ensure that pipework is neatly run in straight lines, this applying more to the soft copper tubing. Pipes shall pitch 25 mm in 6 m in the direction of flow to prevent oil traps.

AC.4.8 Pressure Testing Refrigerant Piping

Field charged systems shall pressure tested and thereafter be vacuum tested.

- Refrigerant pipes and equipment shall be tested under vacuum and indications of leaks shall not be permitted at a pressure of 0,68 kPa absolute, maintained for a period of one hour with the vacuum pump uncoupled.
- Refrigerant pipes and equipment shall be tested with clean dry nitrogen with a small quantity of refrigerant for a period of 24 hours at a test pressure of 1,1 times the appropriate maximum working pressure in terms of SABS 0147 – 1978 : code of Practice for Refrigeration and Air-Conditioning Installations.

All connections shall be inspected for leaks by mean of a sensitive leak detector and soap bubble test. Test records shall be submitted of all pipe sections installed.

AC.5 CONDENSATE DRAIN PIPING

Materials	Ceiling void : uPVC all piping exposed to AIR CONDITIONING INSTALLATION damage: copper uPVC piping exposed to direct sunlight required a UV resistant paint coating.
Sizing	Strict as per relevant drawing
Slope	Preferably : 1:50 Min : 1:100
Accessories required	first 3 m of condensate line (if mounted in ceiling void) shall be Insulated P-Trap shall be installed if the condensate line terminates in the sewer Reticulation (To prevent the migration of unwanted odours).

All pipes, vessels etc. operating below ambient dew point shall be insulated and a vapour barrier provided.

The Drain connection of each indoor unit to the main Header should be of Min.25mm dia. The header pipe should be MIN 40mm dia. The drain pipe should be of hard PVC, whereas the connection of the indoor unit to the hard PVC pipe.

Piping shall be with flexible braided pipe. The drain piping should be insulated with 13 mm thick tubular Nitrile Rubber Elastomeric insulation and the cassette type units shall be provided with condensate drain water pump it should lift the water to the drain headers automatically.

Contractor to ensure that ceiling heights allow for the condensate pipe slope as required.

AC.6 PROVISION FOR FLASHING AND WATERPROOFING

The Contractor shall ensure that proper flashing and waterproofing is provided to all any opening through which services are laid.

AC.7 EVAPORATIVE COOLING INSTALLATIONS

This specification is for the supply, installation, testing and commissioning of evaporative cooling ducted systems for the outlet shops of Agribank of Namibia, Rundu.

AC.7.1 Evaporative Coolers

Refrigeration pipework between refrigeration condensing units and direct expansion cooling coils in air handling units shall be installed in full accordance with the requirements.

TAG	QTY	DUTY	ELECTRICAL REQUIREMENTS	UNIT TYPE
Evap-1	2	2080 l/s @ 200Pa	230V,1 Phase, 50Hz	Roof Mounted
Evap-2	2	1100 l/s @ 120Pa	230V,1 Phase, 50Hz	Roof Mounted
Evap-3	4	1700 l/s @ 160Pa	230V,1 Phase, 50Hz	Roof Mounted
Evap-4	4	2080 l/s @ 200Pa	230V,1 Phase, 50Hz	Roof Mounted

All selected evap-coolers shall be suitable for a ducted network installation. Provision is to be made for all additional controllers, fittings and all components required for a complete fully operational system.

Provision shall be made for water-proofing and flashing of roof openings.

- All data sheets are to be submitted to the engineer for approval, prior to purchasing and installation of systems.
- Shop drawings to be submitted to engineer for approval.

AD. PROJECT HANDOVER DOCUMENTATION

AD.1 GENERAL

The equipment shall be new and of the most modern but proven design. Definite preference shall be given to locally manufactured and/or locally available equipment, robust types of equipment for which highly skilled and specialized maintenance personnel are not required.

Moving parts shall operate reasonably silently and shall be so arranged to be easily and readily accessible for removal, maintenance and repair. Adequate protection shall be provided for the exclusion of vermin, birds and insects from all moving, enclosed or live parts and to prevent damage to insulation by vermin.

The design of all equipment shall be such that regular maintenance, lubrication or adjustment shall not be required at intervals of less than one week.

In particular, the equipment shall comply with the requirements of Occupational Health and Safety Act dealing with the general and safety measures for machinery and the generation, transformation, distribution and use of electrical energy.

AD.2 AS-BUILT DRAWINGS

The Contractor shall provide the Project Manager with a complete signed transparent set of "as-built" drawings as a prerequisite to final payment; and the Project Manager shall turn the set over to the Employer after having established their correctness. The "as-built" set shall include all electrical work. "As-Built" drawings shall be maintained on a current basis as work progresses.

AD.3 OPERATIONS AND MAINTENANCE MANUALS AND DATA BOOKS

Three (3) complete sets of manuals shall be prepared by the Contractor and issued to the Project Manager. The documents shall contain sufficient information and detail to enable the Employer to operate, maintain, dismantle, re-assemble and adjust all parts of the works. It shall also contain enough information to allow trouble shooting as well as to order spare parts.

The Works shall not be considered completed for the purposes of final hand-over until the above documentation has been completed to the satisfaction of the Project Manager. On the day of first handover, a draft copy of the document shall be handed to the Project Manager for perusal, upon which the latter will issue comments. The revised document (if required) shall be completed and re-submitted to the Project Manager within a period of three (3) weeks.

The manuals shall be in the ruling language and shall be neatly bound in suitable strong covers with external protection with plastic sheets.

The manuals shall consist of:

- a) INDEX
- b) DESIGN OF PLANT
 - General Assembly Drawings (GA's)
- c) OPERATING OF PLANT
 - Automatic and Manual Start-up and Shut-down Procedures
 - Operation and Sequence of all Automatic Controls (Functional Description)
 - Operator Procedures during Operation, i.e. Checks during Operation and Emergency Procedures
 - Scheduled description of all Control and Safety Instruments, listing function, make, model range, and differential (when applicable), and setting of instrument.
 - Functions of all switches, indication lamps, reset button and alarms, and instruments for adjustments and re-setting on control devices and cutout switches.
- d) TEST & COMPLIANCE CERTIFICATES
 - A Copy of the final Test Report or Certificate as accepted by a Qualified Project Manager.
 - A complete DATABOOK, approved by an Accredited Inspection Authority.
- e) PLANT AND EQUIPMENT
 - A scheduled list of all plant and equipment to include Employer's label number, Description, Make and Model and Suppliers Name and Contact Details.
 - Descriptive Literature of Suppliers, to include detail assembling instructions and descriptions, significant maintenance and operational procedures, performance curves or charts.
- f) MAINTENANCE SCHEDULES
 - A schedule on each item or component of the plant, containing the plant number, A description of the Plant, the frequency and extend of preventative maintenance procedures, defining both minor and extensive maintenance operations.
 - List of critical parts (spare parts) that should be kept by the Employer, together with a description of each part, make & model or part number and the contact details of the Supplier.
 - List of Special Tools or safety equipment that would be necessary in the servicing of the plant.
- g) DRAWINGS & AS-BUILT DOCUMENTS
 - List of all drawings
 - Photographically reduced to size A3 copies of all as-installed design drawings and diagrams as compiled by the Office of the Project Manager.
 - Full size Workshop/Equipment drawings as prepared by Contractor.
 - Full Size As-Built Plant Layout Drawings, showing actual sizes of all plant and equipment, ducts, and pipes, location of dampers and controls and the measured quantities of the different

services as build and commissioned by the Contractor. These drawings shall include plant descriptions & numbers as issued by the Employer.

- As-Built Control and Wiring Diagrams, noting where applicable, the control points, settings, variable rates, bands, ranges of any variable on the installation, to permit checking and adjustment of instruments, controls and motor control functions.
- DB & MCC Diagrams and Panel Layouts (should include label numbers)
- As-Built Cable Schedules with Label Numbers as issued by the Employer
- Electronic copies of all drawings shall be issued to the Project Manager in AutoCAD R14 format, unless requested otherwise.

AD.4 TECHNICAL PARTICULARS AND GUARANTEES OF MATERIAL AND EQUIPMENT

The Schedule of Equipment Offered shall list the technical particulars and guarantees to be supplied by the Bidder in respect of the material and equipment offered by him for execution of the Contract.

The benefit of any and all periods of guarantee by manufacturers which may be not be expired at the end of the period of maintenance, shall be transferred to the Employer by the Contractor.

AD.5 INSTALLATION GUARANTEES AND FREE MAINTENANCE

The Contractor shall maintain and service all installations, in accordance with the following requirements for a period of twelve months, calculated from the date of Practical Completion or, in the event of more than one certificate having been issued by the Project Manager, from the respective dates so certified.

During the "Maintenance Period" the Contractor shall service the installations regularly at quarterly intervals and make good any defects.

The Maintenance of the installations shall be carried out during normal working hours and at each service, the Contractor shall attend to the following:

- a) Report to an official nominated by the Employers on arriving and again on leaving the Works. Such person shall sign a monthly "Service Report" giving details of any defects reported and made good, temperature readings taken, etc. A copy of each "Service Report" shall be submitted to the Project Manager by the Contractor within fourteen (14) days of each service.
- b) Check the function of each item of the installations including all automatic controls and safety devices for correct operation and lubricate, tighten connections, adjust, clean and/or replace components and ancillaries as necessary.
- c) Repair and/or replace any defective parts or equipment by normal wear and tear / manufacturing defects.
- d) Check the electrical switch panels replacing any burnt contacts or pilot lamp bulbs, which have failed and tighten any loose connections.
- e) Attend to any complaints made with respect to the installations by the official nominated by the Employer, being the only other person authorised to instruct the Contractor or make any complaint (other than the Project Manager). No person shall have any right to instruct or make any complaint to the Contractor during this period.

While attending to any Defects and the Servicing of the installations, the Contractor shall not unduly disturb the functions of the staff in the areas concerned.

AD.6 SPARES AND SERVICING MATERIALS FOR MAINTENANCE

The Contractor shall deliver the specified spare parts to the Employers for safekeeping by the latter in order that repairs to the Plant can be executed with minimal delay, such parts being provided packaged in complete sets each duly labelled with their function. When applicable the following parts shall be free issue to the Employer, upon completion of the project.

THREE sets of panel keys.

The Contractor shall also supply with the above spares, lubricants and servicing material of all the types referred to in the Contractor's Maintenance Manual and in sufficient quantity for one full routine servicing of the complete installation

In addition the Contractor shall enter in a Schedule of Spare Parts, all the essential spares to be kept on site to ensure continuity of operation and satisfactory maintenance of the equipment. Spares to be provided shall generally be sufficient for one major overhaul of one of every different type of machine or equipment. These spares may be required to be supplied as part of the contract and the prices quoted shall include packing for permanent storage and protecting the spares against corrosion and damage. Larger spares may be packed individually or by grouping in adequately sealed containers with labels indicating the contents thereof for bulk storage.

<END>
<PORTION 2>

PORTION 3: DETAILED ELECTRICAL SPECIFICATIONS

1. INTRODUCTION

1.1 SCOPE OF SPECIFICATION

This specification covers the requirements for the Electrical Installation. The Scope of Works, Specifications and Performance Requirements shall be read together with the Standard Electrical Specifications and Requirements.

1.2 SCOPE OF WORK

This Contract is for the supply, delivery to site, installation, testing, commissioning, free maintenance during the guarantee period of 12 calendar months and handing over in good working order a complete electrical installation for the Renovation of Agribank Rundu Branch.

The Contractor shall provide all materials, labour, equipment, services, and incidentals required to provide an operational installation. The specification and drawings form part of, and shall be read in conjunction with all contract documents and drawings; bills of quantities and the standard specifications.

The Contractor shall study the building contract and make themselves fully aware of, and allow for all conditions and requirements as the Employer will not accept any responsibility for any disputes after submission of the quotation. The Contractor shall install all equipment in accordance with the Manufacturer's instructions and recommendations.

All work specified in this document form part of this contract unless specifically excluded – refer to clause 3.2 here below for more information on exclusions.

2. PROJECT-SPECIFIC INFORMATION

2.1 MAIN ELECTRICAL SUPPLY ON SITE

Electrical supply to the site will be as follows:

Supply Authority	CENORED
Source Distribution Station	Transformer (315kVA, Mini-Sub)
Voltage	400V, 3-Phase
Frequency	50Hz, $\pm 2.5\%$
No. Of Phases	Three, rotation RWB
System Earthing	Transformer Neutral Earthed
Symmetrical Three Phase Fault level	$\pm 12\text{kA}$, to be confirmed

The location and routes of LV cables is shown on the relevant drawings. No joints shall be allowed in new cables and no payment shall be made for left-over lengths of cable. The Contractor shall ensure that the exact lengths of cable are measured on site prior to placing his orders. Cable Trays as specified in Bill of Quantities.

The LV system operating conditions are as follows:

Operating Voltage	:	400V/230V +/- 10%
Operating Frequency	:	50Hz \pm 4%
Short Circuit Level	:	10kA (rms) at Main Distribution Board/Kiosk.

2.2 CONTRACTORS RESPONSIBILITIES

The Contractor shall be responsible for the supply, delivery to site, installation, testing, commissioning and free maintenance during the guarantee period of the installation detailed in this specification and on the accompanying drawings.

The Contractor shall provide all materials, equipment, labour and services necessary for the complete, safe and efficient operation of the electrical installation in accordance with the intention of this specification and drawings.

The work shall be carried out strictly in accordance with the following:

- ✓ Labour Act No. 11 of 2007 of Namibia relating to the Health and Safety of Employees at Work, as amended
- ✓ The Machinery and Occupational Safety Act No. 6 of 1983 of South Africa and the relevant regulations as amended.
- ✓ The Namibian Electricity Safety Code, 2009: Electricity Act, 2007
- ✓ Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1 900/3 300 V) Part 1: General – SANS 1507-1 as amended.
- ✓ Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1 900/3 300 V) Part 3: PVC distribution cables – SANS 1507-3 as amended.
- ✓ The Code of Practice for the Wiring of Premises - SANS 10142-1, IEC 61439-2/3 as amended.
- ✓ The Code of Practice for the Wiring of Premises - SANS 10142-2, IEC 61439-2/3 as amended.
- ✓ The Classification of hazardous locations and the selection of apparatus for use in such locations – SANS 10108 as amended.
- ✓ The Protection of Structures against Lightning – SANS 10313 of 2005 as amended.
- ✓ Protection of structures against lightning Part 1: General principles - SANS 61024-1 of 1990 as amended.
- ✓ Protection of structures against lightning Part 1: General principles Section 1: Guide A - Selection of protection levels for lightning protection systems - SANS 61024-1-1 of 1993 as amended.
- ✓ Protection of structures against lightning Part 1-2: General principles - Guide B - Design, installation, maintenance and inspection of lightning protection systems - SANS 61024-1-2 of 1998 as amended.
- ✓ The design and installation of earth electrodes - SANS 10199 of 2004 as amended.
- ✓ Low Voltage Switchgear and Control Gear – IEC 60439
- ✓ NRS-034:2001 – Rationalised User Specification: Electricity Distribution – Guidelines for the provision of electrical distribution networks in residential areas.
- ✓ The relevant local bye-laws and regulations of the supply authority.

The Contractor shall take note of his responsibilities in respect of:

- ✓ As-built drawings to be submitted upon completion of the contract
- ✓ Conflicts between specification and drawing if any such conflict is discovered whereupon the Engineer shall be informed.

- ✓ It is a requirement of this Bid document that the successful contractor must be **registered with The Local Electricity Supply Authority (CENORED)** at the time of bidding or bid award and should be a certified solar installer. **No work** may commence without confirmation of the contractor's license to operate within the CENORED area of operations.

2.3 EXPERIENCE AND FACILITIES OF THE CONTRACTOR

Submission of an offer to execute these works is a declaration that the Bidder is an experienced, competent contractor in the specified disciplines, and has an adequate complement of qualified staff to undertake these works. The Bidder shall therefore critically study the design and bring any errors or omissions at least one week prior to the bid closing date. The Employer/Project Manager shall in turn make such changes to the specifications or drawings as deemed necessary by way of an official notice to all the Bidders. Submission of a bid shall therefore constitute agreement by the Bidder that the units specified and offered by the Bidder will perform the specified duties stated in the documents and that the plant will be brought to be 100% operational within the construction period as stated herein.

Sufficiently qualified technicians shall be provided by the Contractor to supervise the manufacturing, installation and commissioning of the electrical installations. The names and C.Vs. of applicable personnel shall be disclosed within the bid document.

The commissioning of specialized equipment such as engines etc, shall be undertaken by the Suppliers of the respective components under the supervision of the Commissioning Technician.

3. GENERAL TECHNICAL SPECIFICATIONS

3.1 INTERPRETATION OF DOCUMENTS AND DRAWINGS

It is the responsibility of the Bidder to familiarize himself with all the drawings and no claim resulting from not being familiar with the drawings at Bid stage will be considered.

The Successful Bidder will be supplied with three sets of paper prints of all the drawings for construction purposes. The Contractor shall at his own cost make further paper prints of the drawings required by him for the construction of the Works.

Bid drawings must be handed in with the completed Bid document, as bid documents without drawings will be regarded as incomplete. The Contractor shall sign these drawings and clearly mark all proposed alterations, deviations and errors with a red ink pen.

3.2 WORK EXCLUDED FROM THIS CONTRACT

- Grid-tie Solar Photovoltaic installation

3.3 HEALTH AND SAFETY LEGISLATION IN NAMIBIA

All equipment, machinery and designed systems offered and supplied under this bid shall be deemed to be in full compliance with the following legislation:

No 156 - Labour Act, 1992: Regulations relating to the Health and Safety of Employees at Work

3.4 STANDARD SPECIFICATIONS

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Specification	Description	Published By
SANS 10142	Code of Practice for the Wiring of Premises	SANS
OSHACT	Occupational Health and Safety Act	

4. ELECTRICAL TECHNICAL SPECIFICATION

4.1 GENERAL

The work, as detailed herein and accompanying drawings, includes the sizing of components, supplying / manufacturing, delivery, installation, testing, commissioning and free maintenance for 12 months during the guarantee period to provide the Employer with a fully functional and operable Electrical plant.

The electrical low voltage works comprise:

- Rewiring of existing Distribution Boards.
- Supply and installation of internal and external LED light fittings.
- Supply and installation of Wire ways (cable ladders, cable trays, uPVC sleeves, draw boxes, etc.) for electrical and electronic (Fire Detection, Access Control, Data, Telephone, CCTV etc.) cabling as per relevant drawings.
- Supply and installation of socket outlets, Essential/UPS (Red) & Non-Essential (White) Switched Socket Outlets, RJ45 (Telephone and Data) outlets on powerskirting and wall.
- Supply and installation of site data/telecommunications underground sleeves and conduit ducts.
- Supply and installation of small power installation; switch socket outlets and isolator supply points.
- Supply and installation of power supply points (isolators, socket outlets etc.) for mechanical equipment (Fans, Pumps, A/C Units, Hot Water Heaters, etc.).
- Supply and installation of all electronic equipment wire ways (e.g. Telephone & Data, Fire Detection & Security Alarm Systems) and wall mount conduit cable boxes, junction/draw boxes.

Furthermore, the installation shall also include the following:

- The entire installation must conform to the requirements of this specification and must be complete in every respect. All items required to make this a complete working installation, whether expressly mentioned or not, must be allowed for in the contract price.
- The supply, delivery, installation, testing, commissioning and maintenance of the various systems.
- The provision of all necessary controls, instrumentation, and wiring from the control panels to the equipment as specified herein. The electrical supplies will terminate at isolators next to the relevant equipment.
- Pipe sleeves for all holes in walls, floors, and ceilings as well as the chasing into brick walls.
- All rigging, hoisting, transportation, and associated work necessary for placement of all equipment in the final location shown.
- The necessary piping, conduits, cable trunking, cable ladders, cable trays, controls and wiring as indicated to ensure the system complies with and operates to specification.
- All equipment (pipe and duct) supports, vibration eliminators, brackets and accessories to complete this installation.

- Supply and installation of low voltage feeders and associated switchgear between substation/transformer and distribution boards.
- Supply and installation of distribution boards, low voltage feeders between distribution boards and meter boards in specific locations.
- Supply and installation of luminaries, light switches and switched socket outlets.
- Installing Conduits, cable trenches, PVC insulated copper wiring to luminaries, socket outlets, isolators and switches.
- Supply and installation of communication, data and electronic services wire ways, channels, sleeves and manholes.
- Supply and installation of maintenance isolators to fixed equipment such as geysers, sterilizers, chillers, evaporative coolers, compressors etc.
- Supply and installation of public and parking area luminaries.
- Supply and installation of statutory earthing bonding and lightning surge protection of structures.
- Attendance of all site meetings including first and final delivery inspections.
- One year's full comprehensive maintenance of the equipment, including consumables and spares. Submission of a programme, schedule of maintenance checks, log books and notification to the Employer's maintenance department when work is to be carried out for inspection purposes, after being witnessed as complete and accepted by the Employer.
- Supply of Spares and tools where applicable, as provided with the equipment.
- Submission of detailed Operating and Maintenance Manuals.
- **Submission of workshop drawings of the complete installation for approval by the Engineer prior to ordering or manufacturing (to include piping diagrams, workshop drawings etc.)**
- Fees, permits, inspections, taxes, and approach from agencies that have the applicable jurisdiction.
- Testing, commissioning and hand-over of the completed installation, including provision for as-built drawings.
- Free maintenance on the completed installation during a 12 month guarantee period.

The successful Bidder shall provide all materials, tools, equipment, labour and services necessary for the complete, safe and efficient operation of the installation in accordance with the intent of this specification.

The specification lists preferred Suppliers and Makes of equipment. Deviation from this requirement should be verified with the Employer/Project Manager before submittal of the Bid. The Employer and Project Manager accepts no responsibility whatsoever if prospective Bidders are not strictly following bid procedures as explained above.

4.2 METERING

The main distribution board (Main LV Panel) shall be fitted with suitable sized metering CT's, which will be wired to the metering board containing CB, CT test block, an electronic three phase maximum demand power meter, type Elster A1700 or Landis & Gyr ZMD405CT44 [CENORED approved standard meters], and with all associated equipment.

4.3 CABLE SUPPORTS AND WIRING CHANNELS

- Wiring between the distribution boards and isolators, power outlets, luminaries and switches shall be drawn in 20mm [light circuits], 25mm [switched-socket circuits and isolators] or 50mm [other loads] galvanised steel conduits, power skirting, channels [P2000 - 41 x 41mm] and/or trunking.
- Conduits shall be PVC in the wall, cast into concrete slab and/ or fixed to the underside of slab in area's with suspended ceiling with appropriate saddles. Aluminium conduits must be used for interior surface installations], affixed to the walls with stainless steel brackets. Conduit joints will only be allowed in conduit lengths exceeding 3m. Conduit routes shall be carefully planned to avoid cross-overs. Where a cross-over is inevitable, one conduit only shall be offset to cross the other. Cross-overs shall be as short as possible and shall be uniform.
- Power channels and shall be galvanised punched base cable trays complete with all accessories, IP65. Cable tray shall be used as wire ways for the loads and sub distribution panel feeder circuits in the Finishing plant area. They are to be installed against the steel trusses and walls hall trading area.
- Where otherwise installed in roof space, threaded rod shall be used for suspension of the trays if support on trusses is not possible. Cables shall be laid and fixed firmly to the perforated trays by means of cable ties and shall be spaced evenly and uniformly next to each other, without excessive crossing and bundling.
- Power skirting shall be used in the office and shall be of the 2 compartment, 2 layer type with minimum total dimensions of 150 x 50mm, mounted against the brickwork. The power skirting shall be of the "Cabstrut – Venus" or equivalent PVC type sections with snap-on covers. The power skirting shall be installed complete with bends, elbows, end caps and etc. The colour of preference shall be Gray. A sample shall be submitted to the Engineer for approval prior to ordering and installation.

4.4 CABLE INSTALLATION

The low voltage distribution cables from various distribution boards to fixed isolator points and/or electrical control boxes shall be via armoured 600-1000Vac, PVC/SWA/PVC, stranded copper conductors as specified in the relevant drawings. Low voltage cables shall comprise of multi-core, copper conductors, PVC/SWA/PVC grade 600/1000V insulated cables together with a bare copper earth continuity conductor. The Contractor shall ensure that the exact lengths of cable are measured on site prior to placing his orders. No joints shall be allowed in new cables and no payment shall be made for left-over lengths of cable.

Low voltage cables shall be installed in cable trays and/or channels and/or sleeves as indicated in relevant drawings. Cable location, routes, cable trays and channel details are shown on the relevant layout drawings.

All cable installation work shall be done in accordance with SANS 10198 and to the satisfaction of the Employer and the Engineer. The storage, transportation, handling and laying of underground cables shall conform to SANS 10198 and to BS 6004, and the Contractor shall have adequate and suitable equipment (SANS 10142) and labour to ensure that no damage is done to cables during such operations. Twisted or kinked cables, or cables damaged in any other way, will be rejected.

4.5 COMMUNICATIONS CABLE INSTALLATIONS

The Electrical Contractor shall supply and install sleeves pipes as shown on the layout drawings, with appropriate diameter for all communication cable installations. All sleeves shall be PVC (in concrete) and a rust free, steel draw wire shall be installed in all sleeves. Draw boxes and cover plates shall be supplied by the Electrical Contractor.

4.6 DISTRIBUTION BOARDS

All distribution boards and panels shall be flush mounted, unless otherwise stipulated and/or agreed upon. Wiring diagrams of the applicable main and sub-distribution boards are shown on the drawings. Special attention shall be paid to the ventilation of interior-mounted boards to ensure that the temperature rise does not exceed the specified ambient thermal limits for switchgear mounted inside the boards.

In addition, the distribution boards shall comply with the following:

- Impulse withstand category: IV
- Busbar rating: As Shown on Drawings.
- Minimum short circuit breaking capacity of circuit breakers:
- As Shown on Drawings
- Design temperature of switchgear: -5°C – 40°C
- Enclosure: Epoxy-coated sheet metal
- Spare Capacity; 30% Pre-fitted with Rail

Exterior labelling to be of engraved Trifoliate labels with 30mm high letters and numerals indicating "MDB", "SDB-1", and etc. Interior labelling to be of adhesive computer generated 15mm high letters and numerals indicating circuits as per drawings. Switchgear to be DIN rail mount and the Contractor shall ensure that at least 30% spare capacity (space) is provided for in each board with pre-fitted DIN rails.

All lighting, small power and fixed equipment circuits shall exit the DB's at the top via 20mm or bigger PVC compression glands, sealed off with silicone sealant to ensure the DB IP rating is not compromised. Conduits shall be terminated by means of a brass female bush and two locknuts in epoxy-coated distribution boards.

All switchgear supplied shall conform to specification as set out in this document.

4.7 ISOLATORS, POWER OUTLETS AND SWITCHES

Mounting heights for outlets sockets and clusters shall be either 350mm AFFL or 1200mm AFFL, unless otherwise indicated on drawings. All socket outlets shall be flush-mounted and of the same approved manufacturer, fitted with suitable, approved cover plates.

Outlet Sockets

16A, switched socket outlets shall be wired from the main and sub distribution boards via metallic (galvanized) conduit recessed in brickwork or power skirting for the office blocks and a combination of metallic conduits, trunking and/or P2000 channels in the market trading areas. The socket outlets shall be of the South African standard type with 2-Poles and Earth, which allow connection for a 3-Pin plug, 16A - 250Vac.

The weatherproof "Clipsal" range of outlet sockets is commercially available and will be an acceptable standard.

Outlet Clusters

Outlet Clusters shall be wired from the sub distribution board via pvc conduit recessed in brickwork or power skirting for the offices. The outlet clusters shall be as per drawings. The “Schneider Electric iconic” range of outlet clusters is commercially available and will be an acceptable standard.

All alternative types of switched outlet sockets and outlet clusters must be approved by the Engineer prior to placing orders / installation.

Switches

All light switches shall be rated to carry 16A. All light switches shall be flush-mounted, weatherproof, and of the same approved manufacturer and shall be fitted with suitable, approved cover plates. Mounting heights for switches shall be 1200mm AFFL. unless otherwise indicated on the drawings. The “Schneider Electric Iconic” range of light switches is commercially available and will be an acceptable standard.

4.8 HOT WATER CYLINDERS (SOLAR WATER HEATING SYSTEMS)

The supply and installation of hot water cylinders does not form part of this contract. However, provision of electrical supply connections to these cylinders, does, and shall be carried out in accordance with Wiring of premises Code, with the exception of sprague tubing which is to be "Kopex" or equal approved flexible conduit and glands.

The Electrical Contractor shall liaise closely with the Plumbing or Solar Water Heating System Contractor as to the exact position of each isolator in relation to the cylinder. These isolators will be of the rotary with ratings as indicated below. The Plumbing or Solar Water Heating System Contractor will be responsible for the connecting up his plant to this isolator. The “Clipsal 56 Series” range of isolators is commercially available and will be an acceptable standard. Samples of the Isolators to be installed shall be submitted to the Engineer for approval prior to placing order / installing.

The small geyser isolators shall have the following ratings:

No. of Poles	:	Four (3-Phases & Neutral) / Two (Live & Neutral)
Voltage	:	400V / 230V
Category	:	AC-21
Rated current	:	16A (unless specified otherwise per relevant drawings)
IP Rating	:	IP 55 – IP 65

The boiler isolators shall have the following ratings:

No. of Poles	:	Four (3-Phases & Neutral)
Voltage	:	400V
Category	:	AC-22
Rated current	:	32A (unless specified otherwise per relevant drawings)
IP Rating	:	IP 55 – IP 65

4.9 FINAL CONNECTIONS TO OUTDOOR AIRCON UNITS (INCLUDES COMPRESSOR AND EVAPORATIVE COOLER, ETC.)

The supply and installation of all air-conditioning units does not form part of this contract. However, provision of electrical supply connections to these units does, and shall be carried out in accordance with SANS 10142. The Bidder must make provision for the installation of air-con compressor unit feeder cables from the distribution boards to the outdoor isolators / maintenance switches. The feeders shall terminate onto a local, wall mounted, isolator adjacent to each compressor. These isolators will be of the rotary, lockable type with ratings as indicated on the drawings. The air-conditioning installation Contractor will be responsible for the connecting up his plant to this isolator. The "Gewiss" range of isolators is commercially available and will be an acceptable standard. Samples of the Isolators to be installed shall be submitted to the Engineer for approval prior to placing order / installing.

The Electrical Contractor shall liaise closely with the Air-Conditioning Contractor as to the exact position of each isolator in relation to the units.

The air-conditioning unit isolators shall have the following ratings:

No. of Poles	:	Four (3-Phases & Neutral) / Two (Live & Neutral)
Voltage	:	400V / 230V
Category	:	AC-22
Rating	:	25A (unless specified otherwise per relevant drawings)
IP Rating	:	IP 55 – IP 65

4.10 CONNECTION TO FIXED EQUIPMENT

The supply and installation of fixed equipment does not form part of this contract. However, provision of electrical supply connections to this equipment does, and shall be carried out in accordance with Standard Specifications. All fixed equipment, machines, etc. shall be connected to the respective distribution boards or electrical control boxes via a multi-pole, rotary maintenance isolator. These isolators shall be of type "Gewiss to RT" or equal approved. The mounting positions are shown on the layout drawings. The Electrical Contractor shall liaise closely with the equipment supplier as to the exact position of each isolator in relation to the equipment.

All junction boxes and electrical connections within the hazardous locations shall comply with SANS 10108 applicable to the classification of hazardous locations and the selection of apparatus for use in such locations. Similarly, all electrical connections and terminations shall also comply with the SANS 60529 for required degree of Ingress Protection rating.

4.11 LIGHTING INSTALLATION

This section covers light fittings to be installed. Only new light fittings shall be utilized for all lighting installations. Light fittings used in the interior of cold/freezer rooms shall be water tight, and have a further stainless steel grid cover protection to prevent covers and the fluorescent lamps from falling onto the floor area.

The relevant layout drawings show the type (alphabetic) and approximate position of light fittings to be supplied. Final positions of light fittings must be determined on site taking into consideration all other services and/or structures. Clashes with other services or structures must be pointed out to the Engineer as soon as it becomes apparent, who will then issue instruction to clarify the matter.

All light fittings shall comply with the general specifications as well as any one of the following codes:

- SANS 10114 – Interior lighting
- SANS 10389 – Exterior lighting
- SANS 10098 – Public lighting
- SANS 890/1 – Ballasts for fluorescent lamps
- SANS 475 – Luminaires for interior lighting, streetlighting and floodlighting
- ARP 035 – Guidelines for the installation and maintenance of street lighting
- SANS 60598 – Luminaires
- VC 8011 – Lampholders
- SANS 1777 – Photoelectric control units for lighting
- SANS 529 – Heat resisting wiring cables
- SANS 1088 – Luminaire entries and spigots

For streetlight installations, lamp poles will be Galvanised Mild Steel type which is hot dipped galvanised with bitumen paint for footing installed into ground and shall be suitable for use in the inland area. The details of the streetlight poles and low voltage power supply cables to streetlights are specified on the relevant drawings

Bidders are not restricted from submitting alternative light fittings from those specified in this document. Full details (brochures, pamphlets) shall be submitted with all alternative light fittings offered. Alternative offers must be **separately priced on a covering letter**.

4.12 ELECTRONICS INSTALLATION

The Electrical Contractor shall supply and install 25mm diameter conduits unless otherwise indicated, to the electronics installations, which include telephone and data outlets and draw boxes as shown, fire detection points, intrusion detection, access control and CCTV and the provisions for the audio/visual installations. All conduits shall be PVC (in concrete) and a rust free, steel draw wire shall be installed in each conduit. Draw boxes and cover plates shall be supplied by the Electrical Contractor. The telephone installation (wiring) shall be done by others. Provision, however, for telephone wire-ways and boards form part of this contract.

4.13 UNINTERRUPTED POWER SUPPLY (UPS)

The system shall consist of a static UPS complete with the following components:

- a) rectifier/charger.
- b) inverter.
- c) battery.
- d) automatic electronic no-break bypass circuit and switch.
- e) separate manual bypass switch.
- f) protective devices and measuring equipment.
- g) the required controls and necessary equipment.
- h) a self-monitoring system with digital readout by means of which all critical functions can be checked.

The system shall be capable of providing an uninterrupted supply to the load with the output characteristics as specified for a minimum period of 30 minutes during a total mains failure. The batteries shall be rated at an AC load power factor of 0,8 lagging.

The complete system, including all controls shall be designed in such a way that the failure of any one vital central component will NOT cause a complete system failure. If necessary such a failure must be avoided by connecting the load directly to the mains by means of the bypass switch.

The UPS shall operate satisfactorily synchronous with the mains supply even under severe conditions of up to 100% unbalanced load.

The UPS shall be amply rated to carry the stated full load current. The UPS shall furthermore be capable of withstanding the following overloads:

- ✓ Static Overloads: 100% of full load continuously.
- ✓ 125% of full load for 5 minutes.
- ✓ 150% of full load for 2 minutes.
- ✓ 165% of full load for 1 second with inductive decay after initial equipment
- ✓ switch on surge current.
- ✓ Dynamic Overload: 300% for less than 5milli sec. 1000% for less than 1milli msec.

All component parts, cables and other connections shall be amply rated to withstand the overloads stated and maintain the input voltage at the load within the tolerances stated.

The equipment shall be designed for the maximum operating efficiency. The efficiency shall be determined when the system is delivering full load at 0,8 power factor with the batteries fully charged. The load required by the auxiliary equipment (controls, alarms, etc), electronic switches and cabinet fan shall be included in his determination of overall efficiency. A typical test report clearly showing how the efficiencies are calculated shall be submitted with the Bid.

It shall be the responsibility of the successful Bidder to ensure satisfactory operation of the complete system for the load to be supplied. It is, therefore, essential that the bidder acquaint himself fully with typical load conditions before the Bid closing date.

All cabinets containing thyristors shall be adequately screened and earthed to prevent direct radio frequency radiation.

Bidders shall submit with their bids a schematic diagram showing:

- ✓ Input circuit breakers.
- ✓ System busbars
- ✓ Rectifiers.
- ✓ Batteries.
- ✓ Inverters.
- ✓ Electronic switches
- ✓ Bypass circuit.
- ✓ Detour circuit.
- ✓ Fuse protection.
- ✓ Output circuit breakers.
- ✓ Oscillator.
- ✓ Power supply circuits to oscillator, alarms, controls, etc.
- ✓ Battery isolator.

4.14 STATUTORY EARTHING

The Electrical Contractor shall supply and install all statutory earthing systems to the electrical services, structures and piping services strictly in accordance with the "Standard Code of Practice for the Wiring of Premises".

The general requirements regarding the installation shall be in accordance with the SANS 10142. The specific requirements regarding the installation shall be in accordance with the requirements of the Supply Authority.

5. APPROVAL TO BE OBTAINED

The approximate routes of cables are shown on the drawings issued herewith. The successful Bidder shall inspect on site all such routes and shall be deemed to have satisfied himself/herself as to the site conditions. Before commencing wall chasing, cable tray mounting, the Contractor shall give all such notices and obtain approvals from the Engineer where necessary.

The Bidder shall obtain information and instructions in regard to the boundary line and to possible objections from the local utility/CENORED and/or the internet service providers (Telecom Namibia et al)

Where so required, excavation or drilling shall be carried out in the presence of a representative of the above-mentioned authorities.

6. INFORMATION, DIAGRAMS, DRAWINGS AND MANUALS TO BE SUBMITTED

As part of his/her bid and subsequent contract, it will be required from the Bidder/Contractor to submit certain documents, in accordance with the following programme:

a) With the Bid (at Closing Date):

- * Marked-up copies of all drawings indicating in red all required alterations to the concrete, brickwork or whatever other aspect falling outside the scope of his contract;
- * Manufacturer's pamphlets and/or brochures illustrating all equipment offered;
- * Sketches/rough drawings showing the principle of the design in general and specifically where it deviates from the proposed layout and details given by the Engineer. Attention should be given to space requirements, ease of maintenance, practical problems during installation, etc. in drawing up sketches. If no such sketches are submitted or if any aspect of the design is not specifically detailed or highlighted, it will be assumed that the Engineer's proposal is acceptable, practical and economical;
- * Any other information that the Bidder regards necessary to clarify his offer.

b) Within 14 days after Award of the Contract:

- * Working/Shop drawings of all Electrical boards showing layouts, equipment used and dimensions of boards for approval;
- * Working drawings of all electrical boards showing layouts, equipment used and dimensions of boards for approval;
- * Equipment Data Schedule complete, with all attachments as specified under standard specifications.

Drawings:

- * Shop and General Assembly Drawings of complete system;
- * Submit design drawings and structural, mechanical, and "U" value calculations;
- * Builders Requirements Sketches (where plinths, openings in walls etc are needed);
- * Schematic wiring diagrams and field wiring diagram;
- * Plan showing locations of all the controls (man-machine interfaces) as well as all the distribution panels and Motor Control Centre(s) (MCC's);
- * A plan showing the required locations, routes and sizes of conduits (to be provided by others);
- * Front panel layouts of all control panels and MCC's;
- * Control Philosophy or Functional Description on Controls;

c) On Completion:

- * A complete set of "As-Built" drawings;
- * Final resistance test certificates;
- * Continuity measurement results to be conducted on the completed sections of the installation;
- * Cable schedule indicating sizes, lengths of all LV cables installed;
- * A copy of CENORED's Certificate of Compliance
- * A certificate of acceptance by the Employer;
- * Complete set of maintenance/operating manuals.

All certificates shall be completed in an orderly and logical manner, and shall be bound in booklet form with a protective cover. The text of instructions, diagrams and drawings shall be "English".

7. REJECTION OF INFERIOR WORK AND MATERIAL

All inferior work or work containing inferior material, shall be rejected by the Engineer at his discretion, where upon the Bidder shall immediately remove and rectify the works as required and bear all costs in connection therewith.

8. LOCAL AGENT AND AFTER SALE SERVICE

It is a requirement of this bid that the Bidder be a reputable maintenance and repair agent for all the make of equipment offered and documentary proof of this status must be submitted with the bid. A qualified artisan shall be available to carry out maintenance and repair work on call.

9. TESTING AND COMMISSIONING

Applicable to this Contract – refer to Standard Specifications.

10. MAINTENANCE AND GUARANTEE

Applicable to this Contract – refer to Standard Specifications.

The maintenance and guarantee period shall be twelve (12) months from the date of successful first delivery acceptance and shall comply with the relevant clauses of the Standard Specification.

It is required that Bidders allow for 12 months maintenance services of the installation, four visits, one every 3 months after successful practical completion.

11. TRAINING OF STAFF

The Contractor shall include in his price for comprehensive training of staff to allow them to operate the electrical system effectively. The Contractor shall price for the entire scope of training of 3x personnel of the entire installation.

12. OPERATING AND MAINTENANCE MANUALS

On completion of the installation, three sets of manuals, incorporating inter alia the following shall be handed over to the Engineer:

- ✓ Layouts and Technical Specifications
- ✓ Operational Instructions
- ✓ Fault Finding Charts
- ✓ Spare Parts List and Numbers (Agents for spares' contact details)
- ✓ Maintenance Instructions

13. GENERAL STANDARD OF WORK

The specification and drawings are intended to show the type of plant required and the minimum standard of equipment acceptable. Should Bidders consider that additional plant, fittings, etc be necessary to ensure a satisfactory and first class installation, these must be allowed for on a separate priced sheet, indicating the extend of additional plant, fitting, etc. In the absence of any such variations in the bid, it will be understood that Bidders have included for everything to ensure a satisfactory installation which will comply with good Engineering Practice in all respects.

All work shall be done by a competent person(s) who has served a recognized apprenticeship or who has had a minimum of five years' experience in this type of installation. It is a requirement of CENORED [the ECB licensed utility in the Region] that all electrical works undertaken in their license area be done by CENORED registered electrician (and/or company), in the employ of the bidding company. Bidders shall ensure that they are properly registered or eligible for registration with CENORED as no construction work may be undertaken by a successful bidder throughout the duration of the contract; unless same has been duly registered and authorized thereto. Further information can be obtained from CENORED Electricity (Pty) Ltd. at telephone +264-67-304 700.

<END>
<PORTION 3>

PORTION 4: STANDARD ELECTRICAL SPECIFICATIONS

1. GENERAL

1.1 OVERVIEW

These specifications and standards contain the general requirements for the equipment, materials, installation, testing, commissioning and maintenance to be used in all disciplines of electrical installations.

- It is not intended that all requirements described herein shall necessarily form part of the installation, as it should be read in conjunction with the drawings, the detail project Specifications and the bill of quantities relating to the project. However, all parts, fittings, apparatus and materials supplied under the contract shall conform to the requirements of these specifications unless specifically revised in the other parts of the contract document.

Where the specification calls for a particular manufacturer's material or equipment, this shall be supplied as indicated. In the event of the unavailability of the specified equipment or if the Contractor wish to offer an alternative to the specified equipment, such offer/alternative shall be approved by the Engineer before the equipment can be ordered.

1.2 DEFINITIONS

In the Standard Specification the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise requires:

"Contractor" or "Sub-contractor" means the juristic person or partnership whose bid has been accepted by or on behalf of the Employer. Hence, any reference to "Contractor" or "Sub-contractor" refers to executor of the contract.

1.3 UNITS OF WEIGHTS AND MEASURE

The SI system of weights and measures shall be used as far as practically possible for all documents, correspondence and drawings relevant to the Quotation and the subsequent Contract.

1.4 STANDARDS AND REGULATIONS – GENERAL

The specification and drawings are intended to show the type of plant required and the minimum standard of equipment acceptable. Should Bidders consider that additional plant, fittings, etc be necessary to ensure a satisfactory and first class installation, these must be allowed for on a separate priced sheet, indicating the extend of additional plant, fitting, etc. In the absence of any such variations in the bid, it will be understood that Bidders have included for everything to ensure a satisfactory installation which will comply with good Engineering Practice in all respects.

All work shall be done by competent person(s) as stipulated in the eligibility criteria.

In general all material, equipment and work shall at least conform to the requirements of the below mentioned standards, regulations and codes of practice, etc.:

- A The South African Bureau of Standards (SABS/SANS) standard specifications, codes of practice or methods as applicable.

- B If applicable SABS specifications do not exist, the appropriate International Standards Organization (ISO), International Electrotechnical Commission (IEC), Deutsche Industry Norm (DIN), British Standards (BS) or equivalent standard, as approved by the Engineer, shall apply.
- C The entire installation shall comply with the relevant parts of the Machinery, Occupational & Safety Act of 1983, as amended. In the above regulations, the word "Contractor" shall be read in lieu of the word "user" appearing in the act, whenever applicable
- D The SANS 10142 - Code of Practice for the wiring of Premises.
- E The local Municipal Fire Regulations.
- G The IEC 61646, IEC61730 and IEC 61683 Regulations
- H SANS 10400 – The application of the National Building Regulations South
- I The requirements and by-laws of the Local or Governing Authority in the area where the project is undertaken, which include statutory regulations pertaining to machinery and electrical installations and equipment.

Wherever reference is made to Standards Regulations etc, the latest editions, supplements or amendments thereof are implied.

1.5 WORKING DRAWINGS AND DIAGRAMS

The overall sizes of working drawings shall conform to the ISO A series of which only the following four sizes shall be used.

CODE	SIZE OF SHEET – mm
A0	841 x 1189
A1	594 x 841
A2	420 x 594
A3	297 x 420

The standard size to be used is A3 and deviations from this size will only be considered in exceptional cases.

The standard of draughting and detailing shall conform to the requirements prescribed by the code of practice SABS 0111 and the notes on the drawings shall be in English. Electrical diagrams shall be drawn in accordance with a recognized code but preferably according to IEC recommendations 113 and 117. Graphical symbols used for pipes, valves and generating plant, shall comply with relevant ASI code.

The name of the scheme for which the work under the Contract is to be executed must appear prominently in the title block in the lower right hand corner of the drawing. The title block must also show the number ('s/Contractor's reference number) and date of the drawing while a minimum space of 15 mm high by 30 mm wide must be reserved for the Engineers registered number to be entered therein.

All scales shall be clearly stated and drawn on the drawings and shall be one of the following, with bigger multiples if required:

1:1	1:10	1:100
1:2	1:20	1:200
1:2,5	1:25	1:250
1:5	1:50	1:500

Working drawings shall be submitted for approval, in duplicate, and shall show full particulars and functional dimensions of the general arrangements and assemblies of the equipment as well as complete details regarding thickness and types of material, finishing of surfaces, fixing and connections, standard parts, clearances with regard to other machine parts or building faces and, in general, everything that may have a bearing on the satisfactory fabrication, erection and operation of the equipment shown on the Working Drawings. To enable working drawings to be approved by the date specified, the Contractor shall allow for rectifications or alterations to be made in at least two stages. Drawings submitted to the Engineer for approval will be returned within two weeks either with requests for alterations to be made or with an "approved for manufacture" stamp, as the case may be.

2. FACTORY ACCEPTANCE

Whenever larger equipment, structures and machines are manufactured, assembled or fabricated at a premises other than the construction site, the Engineer shall be afforded the opportunity to carry-out inspections as may be deemed necessary.

The quality of materials, workmanship and performance of all items of equipment shall be thoroughly tested at the places of manufacture and supply, and test certificates, in the official language, shall be submitted to the Engineer and his approval obtained prior to the shipment, railing or transport of the equipment concerned.

For the final factory inspection, the relevant items of equipment shall be completed, shop-assembled, aligned and connected together using fitting bolts and each item of such assembly shall be carefully checked for compliance with the approved dimensions and tolerances. Whenever applicable, individual parts of equipment and the assemblies shall be run and fully tested under operating as well as applicable overload conditions.

The fact that material and equipment has satisfactorily passed any such test and inspection at the places of manufacture and supply, shall in not relieve the Contractor's responsibility to obtain the same satisfactory results on completion of erection on site.

The cost incurred by the Contractor due to inspections, testing and re-testing carried out at the places of manufacture and supply as referred to in this Clause, shall be deemed to be included in the Contract Price.

3. TESTING AND COMMISSIONING OF ELECTRICAL INSTALLATIONS

3.1 SCOPE

This section provides an overview on the actions required to achieve the specified performance of the installation and the efficient operation of the entire system to the satisfaction of the Engineer.

The Contractor shall properly test and call for inspection by the Engineer, any work which is to be covered, concealed, built-in, otherwise closed up or rendered inaccessible before such closing up takes place. The Engineer may require any work of this nature which he has not been called on to inspect before closing up, to be uncovered, or made accessible to its inspectors entirely at the Contractor's expense, making good included.

This section shall be read with specific commissioning requirements for every mechanical and electrical component as specified herein.

3.2 COST FOR COMMISSIONING

All balancing, setting and testing shall be done by the Contractor entirely at his own expense.

Whether included as a scheduled item in the Bill of Quantities as contained herein or not, the Contractor shall be responsible for the testing, setting, balancing and commissioning of the entire installation and the costs thereof. The costs for the commissioning of specialised equipment that forms part of the scope of supply, such as PLC's, UPS etc, whether undertaken by Sub-Contractors or Suppliers shall be included in the total price for the project.

3.3 COMMISSIONING STAFF

If specified, a responsible and sufficiently qualified Commissioning Technician shall be employed by the Contractor to supervise the commissioning and testing of the entire plant. The name and C.V. of this person will be disclosed to the Engineer in the beginning of the project. The Engineer has the ability to reject such a proposal and the Contractor is obliged to employ more suitable candidates to the satisfaction of the Engineer.

The Engineer's ruling in this regard will be final and no negotiation will follow, as it is expected of the Contractor to include costs for such a person in his bid.

The commissioning of specialised equipment such as PLC's, UPS, etc, shall be undertaken by the Suppliers of the respective components under the supervision of the Commissioning Technician.

3.4 PREPARATION FOR COMMISSIONING AND TESTING

The Contractor shall, when required, provide the Engineer with equipment selection and performance data for all major items of plant.

All test instruments shall be checked for accuracy by the Manufacturers, Suppliers or approved laboratory and certificates showing the verification of the accuracy of test instruments shall be supplied to the Engineer.

Commissioning of equipment and systems shall not be undertaken if damage to the equipment, systems or the building could result due to incomplete and incorrect installation work.

3.5 TEST RECORDS

Upon completion of the testing and commissioning of the entire plant or substantiated portions of the plant, the Engineer shall be provided with a Commissioning Report, which shall contain the information - listed here below.

If the Engineer is satisfied with the contents of the report a Performance Acceptance Inspection will be scheduled by the Engineer.

The commissioning report shall contain the following information:

- a) An Index listing the contents of the report
- b) Calibration certificates for the test instruments. Depending on the plant the Engineer may require that an Accredited Inspection Authority should approve calibration certificates.
- c) Calibration certificates of all instrumentation and safety devices (e.g. electricity meters) shall be obtained from Suppliers, when instrumentation forms part of the plant. If required by the Engineer, calibration or accuracy of these instruments must be verified on site.
- d) Factory Commissioning Certificates of all plant and equipment that were tested by Suppliers or Manufacturers prior to delivery to site.
- e) Tabulated test recordings, setting out the test procedure, the tested component/item, specified performance, the measured performance.
- f) Electrical Compliance Certificates in terms of the relevant SABS/SANS code, issued by a qualified Electrician as required by the OSH Act.
- g) A list of all the electrical drives indicating the measured running current of every item. Settings on all electrical overload devices should be listed.
- h) If applicable, confirmation that all tests as required by the Statutory Law and/or Local Authorities has been conducted to the satisfaction of these respective Authorities.

3.6 PERFORMANCE AND CAPACITY TESTS

Tests are required to demonstrate specified capacity and general operating characteristics of all systems and equipment, shall be undertaken by the Contractor under the direction of the Engineer at time of final inspection.

Where applicable, all installations shall be tested to full design capacity or beyond.

3.7 INSTRUCTION PERIOD

The Contractor shall instruct the Employer in the correct operation and use of the Plant. For this purpose the Contractor shall allow for the time of a competent instructor for a total of four (4) hours on site and one trip to the Site for the purpose of providing such instruction.

During this session the Contractor shall fully explain the layout, operation and maintenance of the plant to the Employer or the Employer's representative.

At the conclusion of this period of instruction the Contractor shall obtain from the Employer an acknowledgement in writing that the instruction has been properly given for the prescribed period. A copy of the acknowledgement shall be forwarded to the Engineer.

4. PROJECT HANDOVER DOCUMENTATION

4.1 GENERAL

The equipment shall be new and of the most modern but proven design. Definite preference shall be given to locally manufactured and/or locally available equipment, robust types of equipment for which highly skilled and specialized maintenance personnel are not required.

Moving parts shall operate reasonably silently and shall be so arranged to be easily and readily accessible for removal, maintenance and repair. Adequate protection shall be provided for the exclusion of vermin, birds and insects from all moving, enclosed or live parts and to prevent damage to insulation by vermin.

The design of all equipment shall be such that regular maintenance, lubrication or adjustment shall not be required at intervals of less than one week.

In particular, the equipment shall comply with the requirements of Occupational Health and Safety Act dealing with the general and safety measures for machinery and the generation, transformation, distribution and use of electrical energy.

4.2 AS-BUILT DRAWINGS

The Contractor shall provide the Engineer with a complete signed transparent set of "as-built" drawings as a prerequisite to final payment; and the Engineer shall turn the set over to the Employer after having established their correctness. The "as-built" set shall include all electrical work. "As-Built" drawings shall be maintained on a current basis as work progresses.

4.3 OPERATIONS AND MAINTENANCE MANUALS AND DATA BOOKS

Three (3) complete sets of manuals shall be prepared by the Contractor and issued to the Engineer. The documents shall contain sufficient information and detail to enable the Employer to operate, maintain, dismantle, re-assemble and adjust all parts of the works. It shall also contain enough information to allow trouble shooting as well as to order spare parts.

The Works shall not be considered completed for the purposes of final hand-over until the above documentation has been completed to the satisfaction of the Engineer. On the day of first handover, a draft copy of the document shall be handed to the Engineer for perusal, upon which the latter will issue comments. The revised document (if required) shall be completed and re-submitted to the Engineer within a period of three (3) weeks.

The manuals shall be in the ruling language and shall be neatly bound in suitable strong covers with external protection with plastic sheets.

The manuals shall consist of:

- a) INDEX
- b) DESIGN OF PLANT
 - General Assembly Drawings (GA's)
- c) OPERATING OF PLANT
 - Automatic and Manual Start-up and Shut-down Procedures
 - Operation and Sequence of all Automatic Controls (Functional Description)
 - Operator Procedures during Operation, i.e. Checks during Operation and Emergency Procedures
 - Scheduled description of all Control and Safety Instruments, listing function, make, model range, and differential (when applicable), and setting of instrument.
 - Functions of all switches, indication lamps, reset button and alarms, and instruments for adjustments and re-setting on control devices and cutout switches.
- d) TEST & COMPLIANCE CERTIFICATES
 - A Copy of the final Test Report or Certificate as accepted by a Qualified Engineer.
 - A complete DATABOOK, approved by an Accredited Inspection Authority.
- e) PLANT AND EQUIPMENT
 - A scheduled list of all plant and equipment to include Employer's label number, Description, Make and Model and Suppliers Name and Contact Details.
 - Descriptive Literature of Suppliers, to include detail assembling instructions and descriptions, significant maintenance and operational procedures, performance curves or charts.
- f) MAINTENANCE SCHEDULES
 - A schedule on each item or component of the plant, containing the plant number, A description of the Plant, the frequency and extend of preventative maintenance procedures, defining both minor and extensive maintenance operations.
 - List of critical parts (spare parts) that should be kept by the Employer, together with a description of each part, make & model or part number and the contact details of the Supplier.
 - List of Special Tools or safety equipment that would be necessary in the servicing of the plant.
- g) DRAWINGS & AS-BUILT DOCUMENTS
 - List of all drawings
 - Photographically reduced to size A3 copies of all as-installed design drawings and diagrams as compiled by the Office of the Engineer.
 - Full size Workshop/Equipment drawings as prepared by Contractor.
 - Full Size As-Built Plant Layout Drawings, showing actual sizes of all plant and equipment, ducts, and pipes, location of dampers and controls and the measured quantities of the different services as build and commissioned by the Contractor. These drawings shall include plant descriptions & numbers as issued by the Employer.
 - As-Built Control and Wiring Diagrams, noting where applicable, the control points, settings, variable rates, bands, ranges of any variable on the installation, to permit checking and adjustment of instruments, controls and motor control functions.
 - DB & MCC Diagrams and Panel Layouts (should include label numbers)

- As-Built Cable Schedules with Label Numbers as issued by the Employer
- Electronic copies of all drawings shall be issued to the Engineer in AutoCAD R14 format, unless requested otherwise.

4.4 TECHNICAL PARTICULARS AND GUARANTEES OF MATERIAL AND EQUIPMENT

The Schedule of Equipment Offered shall list the technical particulars and guarantees to be supplied by the Bidder in respect of the material and equipment offered by him for execution of the Contract.

The benefit of any and all periods of guarantee by manufacturers which may be not be expired at the end of the period of maintenance, shall be transferred to the Employer by the Contractor.

5. 12-MONTH PLANT GUARANTEES AND FREE MAINTENANCE

The Contractor shall maintain and service the Plant, in accordance with the following requirements for a period of twelve months calculated from the date of Taking Over or, in the event of more than one certificate having been issued by the Engineer, from the respective dates so certified.

During the "Maintenance Period" the Contractor shall service the Plant regularly at quarterly intervals and make good any defects.

The Maintenance of the Plant shall be carried out during normal working hours and at each service the Contractor shall attend to the following:

Report to an official nominated by the Employers on arriving and again on leaving the Works. Such person shall sign a monthly "Service Report" giving details of any defects reported and made good, temperature readings taken, etc. A copy of each "Service Report" shall be submitted to the Engineer by the Contractor within fourteen (14) days of each service.

Check the function of each item of the Plant including all automatic controls and safety devices for correct operation and lubricate, tighten connections, adjust, clean and/or replace components and ancillaries as necessary.

Repair and/or replace any defective parts or equipment by normal wear and tear / manufacturing defects.

Check the electrical switch panels replacing any burnt contacts or pilot lamp bulbs, which have failed and tighten any loose connections.

Attend to any complaints made with respect to the Plant by the official nominated by the Employers, being the only other person authorised to instruct the Contractor or make any complaint (other than the Engineer). No person shall have any right to instruct or make any complaint to the.

While attending to any Defects and the Servicing of the Plant, the Contractor shall not unduly disturb the functions of the occupants in the areas concerned.

6. SPARES AND SERVICING MATERIALS FOR MAINTENANCE

The Contractor shall deliver the specified spare parts to the Employers for safekeeping by the latter in order that repairs to the Plant can be executed with minimal delay, such parts being provided packaged in complete sets each duly labelled with their function. When applicable the following parts shall be free issue to the Employer, upon completion of the project.

THREE sets of panel keys

The Contractor shall also supply with the above spares, lubricants and servicing material of all the types referred to in the Contractor's Maintenance Manual and in sufficient quantity for one full routine servicing of the complete installation

In addition the Contractor shall enter in a Schedule of Spare Parts, all the essential spares to be kept on site to ensure continuity of operation and satisfactory maintenance of the equipment. Spares to be provided shall generally be sufficient for one major overhaul of one of every different type of machine or equipment. These spares may be required to be supplied as part of the contract and the prices quoted shall include packing for permanent storage and protecting the spares against corrosion and damage. Larger spares may be packed individually or by grouping in adequately sealed containers with labels indicating the contents thereof for bulk storage.

7. LABELLING, COLOUR CODING AND IDENTIFICATION SYSTEMS

7.1 EQUIPMENT LABELLING

All equipment shall be labelled and identified using white Traffolite labels having 10 mm high black lettering engraved on them; where two similar items exist; they shall additionally be numbered for clarity in identification. Labels shall be neatly riveted or secured using epoxy-based glue, no other type of adhesive being acceptable.

7.2 PLANT ROOM SIGNAGE

When specified the following signage shall be supplied in plant rooms:

- a) Provide and install all necessary notices required in terms of Governmental and Local Authorities' laws, such as "No Entry to Unauthorised Persons", at all Plant room entrance door, etc. Such notices to be silk-screened onto 3mm minimum thickness PVC sheet, as obtainable from Messrs. Nine Safety Appliances.
- b) The Contractor shall provide a complete set of Plant Room Operating Instructions. These instructions shall be written in the ruling language and shall be supported with sketches, diagrams and photos, specifically intended for unskilled Operators.
- c) All Instructions shall be posted in weatherproof protected covers. These signs shall be mechanically fixed as agreed with the Engineer. Operating Instructions shall include:
 - Plant operating instructions, health or safety signs as required by statutory regulations.
 - A copy of Automatic and Shut-down procedures as contained in the Operations and Maintenance Manuals

8. SITE WORK

8.1 GENERAL

All site work necessary for the complete and satisfactory erection and operation of all mechanical and electrical equipment shall be executed by the Contractor and shall be deemed to be included in the Contract Price. The Contractor shall be responsible for the delivery of equipment and plant to storage at the site and handling and transporting of the same to positions of permanent erection or storage.

8.2 SITE ESTABLISHMENT

8.2.1 Packaging and Transport to Site

The Contractor shall be responsible for the delivery of equipment and plant to storage at the site and transporting of the same to positions of permanent erection or storage. The Contractor will be held responsible for any loss, damage or breakage of the equipment, parts and material during transit from the place of manufacture and supply to the site.

Packing materials and packages shall be adequate for complete protection of all items of equipment, materials and parts against any possible damage while they are being shipped and/or transported to the site. The cost of packing material and all handling shall be deemed to be included in the Contract Price.

8.2.2 Storage on Site

The Contractor shall be responsible for any loss or damage to plant, equipment, materials and parts stored on site pending erection. The cost of providing the necessary storage, protection and storing off the ground where necessary shall be borne by the Contractor unless specified otherwise herein.

8.2.3 Plant

The Contractor shall provide all the necessary plant and appliances for the erection of the permanent equipment and he shall be responsible for the safety and adequacy of such erection plant and appliances. All necessary work required for the fixing of supports for equipment and cables, such as the drilling of holes for wall bolts, shall be executed by the Contractor.

8.3 VIBRATION

In general all equipment shall be free from harmful vibration but specifically shall have a vibration limit not exceeding the requirements of BS 4657 for quality B vibration severity.

8.4 LUBRICATION

The equipment shall be designed for adoption of oil and/or grease gun lubrication and efficient means of lubricating all moving parts, shall be provided by the Contractor.

All grease or lubrication required shall comply with SABS 344, SABS 352, SABS 406, SABS, 1013, or SABS 1014 as applicable.

8.5 MECHANICAL FASTENERS AND LIFTING BOLTS

All nuts and bolts shall have hexagonal heads and shall comply with either SABS 135 or SABS 136. Threads shall be Metric except for special applications where it is impractical to comply herewith. Before installation, a coating of an anti seizing compound, Coppercote or similar, shall be applied to all threads.

8.6 QUALITY CONTROL MEASURES

8.6.1 Quality Control Plan

When requested by the Engineer, the Contractor shall submit a QCP for approval. The QCP shall be compiled by an accredited Inspection Authority, the costs of which shall be borne by the Contractor. The QCP should be strictly adhered to and the Engineer should be updated on a regular basis regarding the progress.

8.6.2 Material – Standard Codes of Manufacture

All materials shall be of the highest quality of their respective kinds in compliance with SABS, BSS or DIN codes if not specifically called for in this document. The Contractor shall furnish certified test reports of the materials when required by the Engineer.

The chemical composition, tensile strength, elastic limit and elongation of the various materials used shall under no circumstances be inferior in quality to the minimum requirements of this specification. All components shall be new and shall be manufactured from sound materials, completely free from visible imperfections such as surface corrosion, pitting, cracks, blowholes etc. No castings, forging or weld joints will be accepted in a condition known to be faulty, even under guarantee of replacement in case of failure.

8.6.3 Stress Relieving

Components manufactured partly or in full from forging, casting or welding processes shall be subjected to suitable stress relieving methods.

8.6.4 New Plant and Equipment

All plant and equipment shall of reputable make, robust in its construction and proven in the applicable working environment and industry. When a List of Preferred Suppliers are issued the Contractor strictly must comply with this requirement, but are allowed to offer alternatives to the specification for consideration.

9. INSPECTION AND COMMISSIONING

9.1 General

The entire electrical/electronic installation shall be subject to inspection, testing and commissioning in accordance with the contract documentation, Supply Authority requirements, Post and Telecommunications requirements and all requirements of appropriate SANS, BS and IEC Standards. The Electronic Installation Contractor shall be responsible for arranging, and giving due notice to, all relevant parties for the execution of inspection, testing and commissioning.

During the course of the inspections, testing and commissioning, the Engineer will compile a list of items, which require remedial works or further attention by the Contractor. All remedial and other works required shall be executed timeously by the Contractor. The Contractor shall complete all remedial and other work within seven (7) days of the list of required items being provided by the Engineer.

The Contractor shall give due notice to the Engineer of the intention to carry out inspection, testing and commissioning procedures. The Engineer shall witness all such procedures and a reasonable period of notice will generally be required.

The Contractor shall be responsible for providing necessary plant, equipment, machinery and materials, necessary for the full and complete execution of the required testing and commissioning procedures. The Contractor shall be responsible for all costs related to the inspection, testing and commissioning procedures.

Should there be any reason to doubt the accuracy of instruments, equipment etc., provided by the Contractor for the purposes of testing and commissioning, the Contractor shall, at his own expense, take the necessary steps to replace such items or to prove their accuracy to the satisfaction of the Engineer.

Following the successful completion of inspection, testing and commissioning procedures to the satisfaction of the Engineer, the Contractor shall provide, in triplicate, copies of all testing and commissioning records. Such records shall include manufacturer's test certificates, where applicable, as well as records of measurements taken and witnessed on site.

9.2 Manufacturer's Data

The Contractor shall obtain and supply to the Engineer copies of relevant manufacturer's data.

This data should include the following:

- a) Technical information in relation to the installation and connection of equipment and plant.
- b) Information in relation to the maintenance and servicing of equipment and plant.
- c) Test certificates of manufacturer's testing of equipment, plant and materials where required under the contract documentation and SABS, BS or IEC Standards.

Copies of all relevant information shall be handed to the Engineer.

Where plant and equipment is normally provided with specialized tool kits, these shall be handed to the Engineer upon completion of the contract.

10. PAINT, PREPARATION AND FINISHES

The metal work of the electrical equipment such as switchboards, enclosures, kiosks, etc. shall be prepared and finished with a paint application in accordance with the relevant SABS Standards. Galvanizing, hot metal spray corrosion protection, baked enamel paint, electrostatically applied powder coatings or other similar proven methods shall be used to provide the best available and highest quality corrosion resistant finish. All surfaces shall be prepared in accordance with the SABS prior to painting and care shall be taken to ensure that all edges and corners are properly covered. In general, prior to painting, all metal parts shall be thoroughly cleaned of rust, millscale, grease and other foreign matter by the use of sand or shot blasting or acid pickling and washing, or other approved procedures.

10.1 GALVANIZING

All Galvanizing shall be carried out by an SABS approved Galvanizing Company in accordance with relevant SABS Specifications. The hot dip process shall apply galvanizing. All drilling, punching, cutting and bending of parts shall be completed and all burrs removed before the Galvanizing process is applied. The Galvanizing Company shall ensure that the steelwork and especially all welding work are acceptable for Galvanizing to meet the requirements of the SABS. No steelwork shall be accepted without the SABS mark or written approval to indicate that the Galvanizing meets the SABS Standards. Care shall be taken with all Galvanized steelwork during transport, storage and erection. The Engineer reserves the right to inspect and order the replacement of any damaged steelwork after erection, but before painting. Where approved by the Engineer damage to Galvanizing may be treated by means of soldering or hot metal zinc spraying in accordance with SABS. Cadmium or other forms of plated corrosion protection shall not be accepted when

Galvanizing has been specified. Where specified bolts, nuts, washers, spring washers etc., shall also be hot dipped Galvanized in accordance with SABS.

10.2 HOT METAL SPRAY CORROSION PROTECTION

Where the size of a steel part or other factors makes the use of hot dipped Galvanizing process impracticable, an approved hot metal spray can be applied. Full details of the process to be used shall be submitted to the Engineer for his approval.

Steelwork to be hot metal sprayed shall be drilled, welded, punched, debarred and sand blasted before the metal coating is applied. The metal coating shall be at least 25% thicker than the zinc coating obtained by the hot dipped galvanizing process.

10.3 PAINTING AND GALVANIZED STEELWORK

Where galvanized steel has been treated with a passive coating, the galvanized section shall be wiped with a cloth and water and dried before application of any paint. After cleaning the galvanized section shall be painted as follows:-

- a) One coat of calcium pombate primer to SABS 912
- b) One coat of an undercoat complying with SABS 681 Type 2.
- c) Two final coats with paint complying with SABS 630 Grade 1.

The final colour of painted steelwork shall be agreed and in accordance with SABS 1091.

10.4 PAINTING OF UNGALVANISED STEELWORK

After preparation ungalvanized steelwork shall be painted as follows:

- a) All steelwork including spot-welds, welding runs, etc., shall be given one coat of approved primer immediately after cleaning.
- b) The dried film thickness of the primer coat shall be at least 25 micro-metres.
- c) The primer coat, zinc chromate primer shall comply with the requirements of SABS 679 Type 1.
- d) Two final coats, high gloss enamel paint complying with the requirements of Grade 1 of SABS 630 shall be applied.
- e) The dried film thickness of each final coat shall be at least 25 micro-metres.
- f) The total dried film thickness of the paint (primer and final coats) shall be at least 75 micro-metres.

All steelwork including nuts and bolts shall be painted unless chromium plated. Should the paintwork of any item be damaged during transit or erection the standard shall be made good on site using a method approved by the Engineer.

10.5 BAKED ENAMEL FINISH

Following cleaning, surfaces shall be treated with rust inhibiting metal phosphate film and dried. Following phosphating, a passivating layer of high quality zinc chromate primer shall be applied, followed by two coats of high alkalide-based baked enamel. The enamel finish shall comply with SABS 783 Type 3 for luminaries and SABS 783 Type 4 for switch panels etc.

10.6 POWDER COAT FINISH

Following cleaning, the metal parts shall be preheated and then covered by micro-structured paint powder applied electrostatically. The paint shall be baked on and shall harden within 100 minutes at a temperature of 190°C.

10.7 TOUCH-UP PAINT

In the case of switchboards and larger equipment enclosures, a tin of matching touch-up paint, not smaller than 1 litre, shall be provided. Unless otherwise specified the colours of materials and equipment shall be as follows:

- a) H.V. Switchboards and H.V. Switchgear shall be Dark Admiralty Grey, Colour G12 of SABS 1091.
- b) The colour of L.V. switchboards and equipment enclosures in buildings shall be light orange, colour B26 of SABS 1091.
- c) The colour of L.V. distribution kiosks and miniature substations shall be Light Stone, colour C37 of SABS 1091.

<END>

<PORTION 4>

SCHEDULE OF INFORMATION REQUIRED FOR MECHANICAL INSTALLATIONS

RETURNABLE SCHEDULES: EQUIPMENT OFFERED

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1. TECHNICAL EQUIPMENT OFFERED

The Bidder is required to complete the following schedule, stating where appropriate, the size or capacity of equipment, type or catalogue number, country of origin and any other detail he considers in full to enable the Engineer to evaluate bids on a fair basis.

In addition Bidders are requested to adhere to the following general guidelines in completing the schedules:

- Please use the SI system in the units in the schedules.
- Bidders should state clearly and deviations from the specifications on the given space. If the offered equipment does not deviate, he/she should write "NIL" in the space allowed.
- Bidders are required to supply pamphlets, brochures, drawings, photographs and/or graphs of the offered equipment.

2. VENTILATION FANS AND DIFFUSERS

Please fill in the following details:

XF-1	
Design Flow	60l/s
Trade name and model no.	
Type of fan	
FAN diameter	
Noise level 1 m from fan	
FAN RPM	
Number of blades	
Electrical	
-Starting current	
-Running current	
-Power input	

XF-2	
Design Flow	200l/s
Trade name and model no.	
Type of fan	
FAN diameter	
Noise level 1 m from fan	
FAN RPM	
Number of blades	
Electrical	
-Starting current	
-Running current	
-Power input	

WG-1 WALL GRILLE	
Trade name and model no.	
Material	
Finish	
Type	
Dimensions	

SOUND ATTENUATOR (for XF-2)	
Trade name and model no.	
Material	
Finish	
Dimensions	

XF-3	
Design Flow	90l/s
Trade name and model no.	
Type of fan	
FAN diameter	
Noise level 1 m from fan	
FAN RPM	
Number of blades	
Electrical	
-Starting current	
-Running current	
-Power input	

WG-2 WALL GRILLE	
Trade name and model no.	
Material	
Finish	
Type	
Dimensions	

SOUND ATTENUATOR (for XF-3)	
Trade name and model no.	
Material	
Finish	

SOUND ATTENUATOR (for XF-3)	
Dimensions	

XF-4	
Design Flow	200l/s
Trade name and model no.	
Type of fan	
FAN diameter	
Noise level 1 m from fan	
FAN RPM	
Number of blades	
Electrical	
-Starting current	
-Running current	
-Power input	

WG-2 WALL GRILLE	
Trade name and model no.	
Material	
Finish	
Type	
Dimensions	

SOUND ATTENUATOR (for XF-4)	
Trade name and model no.	
Material	
Finish	
Dimensions	

XF-5	
Design Flow	140l/s
Trade name and model no.	
Type of fan	
FAN diameter	
Noise level 1 m from fan	
FAN RPM	
Number of blades	

XF-5	
Electrical	
-Starting current	
-Running current	
-Power input	

PLENUM BOX TO SUITE XF-5	
Trade name and model no.	
Material	
Finish	
Type	
Dimensions	
Comes with electrical controlled weather louvre.	[y/n]

DG-1 DOOR GRILLE	
Trade name and model no.	
Material	
Finish	
Dimension	

EAG-1 EXTRACT AIR GRILLE	
Trade name and model no.	
Material	
Finish	
Dimension	

3. EVAP-COOLERS

Please fill in the following details:

EVAP-1

	UNITS:	SPECIFICATION PROVIDED:
Trade name and model no:	n/a	
Airflow and static pressure:	(l/s)@(Pa)	
Power consumption (total):	Watts	
	Current max (amp)	
Power supply:	Voltage/Phases/Hz	
Controller:	Type	
Fan:	Type	
	Dia x width (mm)	
Motor:	Type	
	Speed max (rpm)	
	Output Watts max	
	Overload and fuse	
	Enclosure	
Pump:	Type	
	Motor	
	Rating Watts (input)	
	Flow rate (L/min)	
	Voltage/Phases/Hz	
	Overload	
	Enclosure rating	
For office purposes:		
Comply with requirement?		y/n

EVAP-2

	UNITS:	SPECIFICATION PROVIDED:
Trade name and model no:	n/a	
Airflow and static pressure:	(l/s)@(Pa)	
Power consumption (total):	Watts	
	Current max (amp)	
Power supply:	Voltage/Phases/Hz	
Controller:	Type	
Fan:	Type	
	Dia x width (mm)	
Motor:	Type	
	Speed max (rpm)	
	Output Watts max	
	Overload and fuse	
	Enclosure	
Pump:	Type	
	Motor	

	UNITS:	SPECIFICATION PROVIDED:
	Rating Watts (input)	
	Flow rate (L/min)	
	Voltage/Phases/Hz	
	Overload	
	Enclosure rating	
For office purposes:		
Comply with requirement?		y/n

EVAP-3

	UNITS:	SPECIFICATION PROVIDED:
Trade name and model no:	n/a	
Airflow and static pressure:	(l/s)@(Pa)	
Power consumption (total):	Watts	
	Current max (amp)	
Power supply:	Voltage/Phases/Hz	
Controller:	Type	
Fan:	Type	
	Dia x width (mm)	
Motor:	Type	
	Speed max (rpm)	
	Output Watts max	
	Overload and fuse	
	Enclosure	
Pump:	Type	
	Motor	
	Rating Watts (input)	
	Flow rate (L/min)	
	Voltage/Phases/Hz	
	Overload	
	Enclosure rating	
For office purposes:		
Comply with requirement?		y/n

EVAP-4

	UNITS:	SPECIFICATION PROVIDED:
Trade name and model no:	n/a	
Airflow and static pressure:	(l/s)@(Pa)	
Power consumption (total):	Watts	
	Current max (amp)	
Power supply:	Voltage/Phases/Hz	
Controller:	Type	
Fan:	Type	
	Dia x width (mm)	

	UNITS:	SPECIFICATION PROVIDED:
Motor:	Type	
	Speed max (rpm)	
	Output Watts max	
	Overload and fuse	
	Enclosure	
Pump:	Type	
	Motor	
	Rating Watts (input)	
	Flow rate (L/min)	
	Voltage/Phases/Hz	
	Overload	
	Enclosure rating	
For office purposes:		
Comply with requirement?		y/n

<END>

< SCHEDULE OF INFORMATION REQUIRED FOR MECHANICAL INSTALLATIONS>

SCHEDULE OF INFORMATION REQUIRED FOR ELECTRICAL INSTALLATIONS

EQUIPMENT DATA: ELECTRICAL

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7.	ELECTRICAL CABLE SUPPORT & SLEEVES	110

1. SCHEDULE OF EQUIPMENT OFFERED

It is a requirement of this document that, in addition to the information of the equipment listed below to be furnished, the bidder shall attach the relevant pamphlets, brochures, etc. Quotations without these shall be regarded as incomplete.

2. LOW VOLTAGE CABLE INSTALLATION

LOW VOLTAGE (LV) CABLES (For AC cable installation up to 600/1000Vac)

(LV cables sizes (4mm² - 95mm²) multi-core copper, PVC/SWA/PVC/PVC up to 1000V insulated suitable for underground, trench, duct installation):

Manufacturer, Make & Type

Country of origin

Standard Specification Compliance:

Rated Operating Voltage:

Max Insulation Voltage:

Operating Temperature:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?..... (Yes/No)

LOW VOLTAGE CABLE JOINTS & TERMINATIONS

(Joints & Terminations for LV cable types: (4mm² - 95mm²) multi-core copper, PVC insulated):

LV Cable Joints: *(only applicable, where specified)*

Manufacturer, Make & Type

Country of origin

Standard Specification Compliance:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?..... (Yes/No)

LV Cable Terminations:

Manufacturer, Make & Type

Country of origin

Standard Specification Compliance:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?..... (Yes/No)

BARE COPPER EARTH WIRE

High conductivity stranded copper conductor: (2.5mm² - 70mm²):

Manufacturer, Make & Type

Country of origin

Standard Specification Compliance:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?.....(Yes/No)

SINGLE CORE PVC CABLE

General Purpose Wire (Housewire) - High conductivity stranded copper conductor: (2.5mm² - 35mm²):

Manufacturer, Make & Type

Country of origin

Standard Specification Compliance:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?.....(Yes/No)

SURFIX CABLE

Multi-core PVC sheathed UV stable with bare tinned copper earth wire:

Manufacturer, Make & Type

Country of origin

Standard Specification Compliance:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?.....(Yes/No)

3. ELECTRICAL DISTRIBUTION BOARDS

ELECTRICAL LV DISTRIBUTION CONTROL & SWITCHGEAR

All control & switchgear shall operate to 240/400Vac 50Hz, unless specified otherwise. Circuit breakers (MCCB & MCB) of various sizes/capacity and curve type: comply to SANS60947-2.

	Manufacturer & Type	Max. Operating Voltage & Frequency	Max. Short-circuit withstand (kA)	Operating Temp (°C)
Circuit Breakers (MCCB)
Circuit Breakers (MCB)
Isolators
Timers
Contactors
Voltmeters
Volt select switch
Ammeters
Amp select switch
Fuse holders
Surge Arrestor
kWh Meters
Under and Over Voltage detection
DIN Mount Control Transformers
Other (specify):
.....

For all LV Distribution Control & Switchgear:

Make & type:
Standard Specification Compliance:
Country of origin:
Deviations from Specification
.....
.....
Are pamphlets, brochures, etc. attached?..... (Yes/No)

4. ELECTRICAL ISOLATORS, SOCKET OUTLETS & LIGHT SWITCHES

Isolators (for external/outdoor installation):

Make & type:
Standard Specification Compliance:
Country of origin:
Rated Operating Voltage & Frequency:.....
Operating Temperature:
Max Sustained Current Rating:.....
Ingress Protection Rating:
Housing Material type/physical properties:
Deviations from Specification
.....
.....
Are pamphlets, brochures, etc. attached?..... (Yes/No)

Wall Socket Outlets (for internal/indoor installation):

Make & type:
Standard Specification Compliance:
Country of origin:
Rated Operating Voltage & Frequency:.....
Operating Temperature:
Max Sustained Current Rating:.....
Deviations from Specification
.....
.....
Are pamphlets, brochures, etc. attached?..... (Yes/No)

Light Switches (for internal/indoor installation):

Make & type:

5. ELECTRICAL LIGHT FITTINGS & LUMINAIRE

Light fittings and Luminaire to compile with SANS 475.

Light Fitting	Manufacturer	Lamp Type	Material of Construction & Paint type	Description (Model No. Wattage, IP Rating, etc.)
Type-A1:
Type-D1:
Type-D2:
Type-D3:
Type-E1:
Type-E3:
Type-P1:
Type-L:
Other (specify):
.....
.....
.....
.....

For all Light Fittings & Luminaire:

Make & type:

Operating Temperature:

Standard Specification Compliance:

Country of origin:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?.....(Yes/No)

6. ELECTRICAL CABLE SUPPORT & WIRE WAYS

Cable Ladder / Wire Mesh / Trays: (suitable for inland outdoor installation)

Make & Type

Manufacturer:

Country of origin

Standard Specification Compliance:

Environmental conditions:

Material type/physical properties:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?.....(Yes/No)

Power Skirting:

Make & Type

Manufacturer:

Country of origin

Standard Specification Compliance:

Environmental conditions:

Material type/physical properties:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?.....(Yes/No)

7. ELECTRICAL CABLE SUPPORT & SLEEVES

PVC Conduit Boxes: (installed into concrete and/or brickwork)

Make & Type

Country of origin

Standard Specification Compliance:

Environmental conditions:

Material type/physical properties:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?.....(Yes/No)

PVC sleeves: (installed into concrete floor and wall /brickwork)

Make & Type

Country of origin

Standard Specification Compliance:

Environmental conditions:

Material type/physical properties:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?..... (Yes/No)

HDPE sleeves: (installed below concrete paving and underground)

Make & Type

Country of origin

Standard Specification Compliance:

Environmental conditions:

Material type/physical properties:

Deviations from Specification

.....

.....

Are pamphlets, brochures, etc. attached?..... (Yes/No)

Departures from Specification and Remarks

--

<END>

< SCHEDULE OF INFORMATION REQUIRED FOR ELECTRICAL INSTALLATIONS>

Drawings

The Bid Document shall be read in conjunction with the relevant drawings and, in case of discrepancies, such discrepancies must be pointed out for correction. Likewise, any obvious errors and/or omissions in the Bid Document or on drawings shall be pointed out by the Bidder and such errors shall be rectified in writing by the Employer/Project Manager.

The following drawings shall be enclosed:

Drawing no.	Title and Description	Revision
ARCHITECTURAL DRAWINGS		
GH2.1-01	GROUND FLOOR TILING LAYOUT	-
GH2.1-02	GROUND FLOOR DEMOLITION PLAN LAYOUT	-
GH2.2-01	GROUND FLOOR CEILING LAYOUT	-
GH2.2-02	CEILING DETAILS	-
GH2.3-02	INTERIOR SIGNAGE DETAILS	-
GH2-1	GROUND FLOOR PLAN	-
GH2-2	ROOF LAYOUT	-
GH3-02	STRIP SECTION A	-
GH5.1-01	GROUND FLOOR DETAILED ROOM LAYOUT - ABLUTION	-
GH5.1-02	GROUND FLOOR DETAILED ROOM LAYOUT - ABLUTION	-
GH5.3-01	ROOF DETAILS	-
GH5.4-01 JF01	RECEPTION DESK & SCREEN	-
GH5.4-02 JF02	PRINTING AREA JOINERY	-
GH5.4-03 JF03	KITCHEN LAYOUT	-
GH5.4-04	KITCHENETTE JOINERY JF04	-
GH8.1-01	DOOR & WINDOW SCHEDULE	-
GH8.4-01	INTERIOR FINISH SCHEDULE	-
GH8.5-01	EXTERIOR FINISH SCHEDULE	-
GH8.6-01	PAINT SCHEDULE	-
GH8.7-01	EXTERNAL COLOUR SCHEME	-
GH8.8-01	INTERNAL COLOUR SCHEME WORKSHEET	-
STRUCTURAL DRAWINGS		
W1497/SIGN-CC-01	SIGNAGE BOARD LAYOUT AND DETAILS	-
W1497/WALK ROOF-CS-01	WALKWAY ROOF LAYOUT AND DETAILS	-
CIVIL DRAWINGS		
W1497-RUNDU-CR-01	PAVING AND STORMWATER CHANNEL LAYOUT	-
W1497- RUNDU-CR-02	PAVING AND STORMWATER CHANNEL DETAILS	-
W1497-RUNDU-CW-1.0	WATER RETICULATION LAYOUT	-
W1497-RUNDU-CW-2.0	WATER RETICULATION DETAILS AND INSTALLATION	-

ELECTRICAL DRAWINGS

W1497/E1-001	RETICULATION	-
W1497/E1-102	LIGHTING AND ELECTRONICS	-
W1497/ E2-100	SURFACE MOUNTED DISTRIBUTION BOARD	-
W1497/ E3-200	INTRUSION AND FIRE DETECTION LAYOUT	-

MECHANICAL DRAWINGS

W1497/RUNDU/M1-100	INTERNAL WATER SUPPLY & FIRE HOSE REEL SUPPLY	-
W1497/RUNDU/M1-101	INTERNAL WATER SUPPLY & FIRE HOSE REEL SUPPLY	-
W1497/RUNDU/M1-102	HVAC WATER SUPPLY ROOF LAYOUT	-
W1497/RUNDU/M1-300	GENERAL PLUMBING NOTES	-
W1497/RUNDU/M7-101	GROUND FLOOR HVAC LAYOUT	-
W1497/RUNDU/M7-102	OUTLET SHOPS 1-4	-
W1497/RUNDU/M7-103	OUTLET SHOPS 5-7	-
W1497/RUNDU/M7-200	AGRIBANK BRANCH SECTIONS	-
W1497/RUNDU/M7-201	HVAC ELEVATIONS	-
W1497/RUNDU/M7-300	STANDARD HVAC INSTALLATION NOTES	-
W1497/RUNDU/M7-301	TYPICAL HVAC INSTALLATION DETAILS	-
W1497/RUNDU/M10-100	EAST WING: FIRE PROTECTION LAYOUT	-
W1497/RUNDU/M10-101	WEST WING: FIRE PROTECTION LAYOUT	-

The bidder has to ensure that all listed drawings are enclosed.

**<END>
< DRAWINGS>**

PART 3 – Conditions of Contract and Contract Forms

Section VI - General Conditions of Contract

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General Conditions of Contract

A. General

1. Definitions

1.1 Boldface type is used to identify defined terms.

- (a) The Accepted Contract Amount means the amount accepted in the Notification of award for the execution and completion of the Works and the remedying of any defects.
- (b) The Activity Schedule is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity.
- (c) The Adjudicator is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in GCC 23.
- (d) Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.
- (e) Compensation Events are those defined in GCC Clause 41 hereunder.
- (f) The Completion Date is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 53.1.
- (g) The Contract is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.
- (h) The Contractor is the party whose Bid to carry out the Works has been accepted by the Employer.
- (i) The Contractor's Bid is the completed bidding document submitted by the Contractor to the Employer.
- (j) The Contract Price is the Accepted Contract Amount stated in the Notification of award and thereafter as adjusted in accordance with the Contract.
- (k) Days are calendar days; months are calendar months unless otherwise stated.
- (l) Dayworks are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- (m) A Defect is any part of the Works not completed in accordance with the Contract.

- (n) The Defects Liability Certificate is the certificate issued by Project Manager upon correction of defects by the Contractor.
- (o) The Defects Liability Period is the period **named in the SCC** pursuant to Sub-Clause 33.1 and calculated from the Completion Date.
- (p) Adjudicator means the single person appointed under Clause 23.
- (q) Drawings means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract, include calculations and other information provided or approved by the Project Manager for the execution of the Contract.
- (r) The Employer is the party who employs the Contractor to carry out the Works, **as specified in the SCC**.
- (s) Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- (t) "In writing" or "written" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;
- (u) The Initial Contract Price is the Contract Price listed in the Employer's Notification of award.
- (v) The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the SCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
- (w) Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- (x) Plant is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
- (y) The Project Manager is the person **named in the SCC** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
- (z) SCC means Special Conditions of Contract
- (aa) The Site is the area **defined as such in the SCC**.

- (bb) Site Investigation Reports are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- (cc) Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- (dd) The Start Date is **given in the SCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- (ee) A Subcontractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- (ff) Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- (gg) A Variation is an instruction given by the Project Manager which varies the Works.
- (hh) The Works are what the Contract requires the Contractor to construct, install, and turn over to the Employer, **as defined in the SCC**.

- 2. Interpretation**
- 2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.
 - 2.2 If sectional completion is **specified in the SCC**, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
 - 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
 - (a) Agreement,
 - (b) Notification of award,
 - (c) Contractor's Bid,
 - (d) Special Conditions of Contract,
 - (e) General Conditions of Contract,

- (f) Specifications,
 - (g) Drawings,
 - (h) Bill of Quantities, and
 - (i) any other document **listed in the SCC** as forming part of the Contract.
- 3. Language and Law** 3.1 The language of the Contract must be English and the law governing the Contract is the Law of Namibia.
- 4. Project Manager's Decisions** 4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer.
- 5. Delegation** 5.1 Otherwise **specified in the SCC**, the Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.
- 6. Communications** 6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing to the addresses **specified in the SCC**. A notice shall be effective only when it is delivered.
- 7. Subcontracting** 7.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations.
- 8. Other Contractors** 8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as **referred to in the SCC**. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.
- 9. Personnel and Equipment** 9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.

9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

- 10. Employer's and Contractor's Risks**
- 10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.
- 11. Employer's Risks**
- 11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Employer's risks:
- (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
 - (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
 - (ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
 - (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.
- 11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to
- (a) a Defect which existed on the Completion Date,
 - (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or
 - (c) the activities of the Contractor on the Site after the Completion Date.
- 12. Contractor's Risks**
- 12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.
- 12.2 From the Start Date until the Defects Liability Certificate has been issued, the following are contractor's risks:
- (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to

- (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
 - (ii) Negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
- (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the contractor, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

12.3 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is a contractor's risk except loss or damage due to

- (a) a Defect which existed on the Completion Date,
- (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or
- (c) The activities of the Contractor on the Site after the Completion Date.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the SCC** for the following events which are due to the Contractor's risks:

- (a) loss of or damage to the Works, Plant, and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- (d) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval within 21 days after issue of notification of award. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor

or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of insurance shall not be made without the approval of the Project Manager.

13.5 Both parties shall comply with any conditions of the insurance policies.

13.6 The policies which are in the joint names of the Contractor and the Employer shall contain a clause to include a waiver of subrogation of the Contractor's rights to the insurance carrier against the Employer.

14. Site Data 14.1 The Contractor shall be deemed to have examined any Site Data **referred to in the SCC**, supplemented by any information available to the Contractor.

15. Contractor to Construct the Works 15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

16. The Works to Be Completed by the Intended Completion Date 16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

17. Approval by the Project Manager 17.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, for his approval.

17.2 The Contractor shall be responsible for design of Temporary Works.

17.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

17.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

17.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

18. Safety 18.1 The Contractor shall be responsible for the safety of all activities on the Site.

19. Discoveries 19.1 The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

20. Possession of the Site 20.1 The Employer shall, after receiving the Performance security, the insurance covers and the Program for the Works all as per requirements, give possession of all parts of the Site to the

Contractor within thirty days for execution of works in accordance to the Program for the Works. If possession of a part is not given by the date **stated in the SCC**, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

21. Access to the Site 21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

22. Instructions 22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.

22.2 The Contractor shall permit persons appointed by the Employer to inspect the Site and/or the accounts and records of the Contractor and its sub-contractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the Employer if required by the Employer. The Contractor's attention is drawn to Sub-Clause 57.1 which provides, inter alia, that acts intended to materially impede the exercise of the inspection and audit rights provided for under Sub-Clause 22.2 constitute a prohibited practice subject to contract termination.

23. Appointment of the Adjudicator 23.1 The Adjudicator shall be appointed jointly by the Employer and the Contractor, at the time of the Employer's issuance of the Notification of award. If, in the notification of award, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority **designated in the SCC**, to appoint the Adjudicator within 15 days of receipt of such request.

23.2 Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract; a new Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority **designated in the SCC** at the request of either party, within 30 days of receipt of such request.

24. Procedure for Disputes 24.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 15 days of the notification of the Project Manager's decision.

24.2 The Adjudicator shall give a decision in writing within 30 days of receipt of a notification of a dispute.

24.3 The Adjudicator shall be paid by the hour at the **rate specified in the SCC**, together with reimbursable expenses of the types **specified in the SCC**, and the cost shall be divided equally between

the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within thirty (30) days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above thirty (30) days, the Adjudicator's decision shall be final and binding.

24.4 The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and in the place specified **in the SCC**.

B. Time Control

25. Program

25.1 Within the time **stated in the SCC**, after the date of the Notification of award, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.

25.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

25.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period **stated**

in the SCC. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount **stated in the SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 15 days of being instructed to by the Project Manager.

25.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

26. Extension of the Intended Completion Date

26.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event (as defined in GCC 41) occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

26.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the

effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

27. Acceleration 27.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor.

27.2 If the Contractor's priced proposals for acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.

28. Delays Ordered by the Project Manager 28.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

29. Management Meetings 29.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

29.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

30. Early Warning 30.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

30.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

C. Quality Control

- 31. Identifying Defects** 31.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.
- 32. Tests** 32.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.
- 33. Correction of Defects** 33.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is **defined in the SCC**. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 33.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.
- 34. Uncorrected Defects** 34.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

- 35. Contract Price** 35.1 In the case of an admeasurement contract, the Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.
- 35.2 In the case of a lump sum contract, the Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to prepare interim valuations of works done.
- Any errors or inconsistencies including front loading detected in the Activity Schedule at any time during the execution of the project shall be resolved as directed as by the Project Manager.
- 36. Changes in the Contract Price** 36.1 In the case of an admeasurement contract:
- (a) If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent

of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change.

- (b) The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Employer.
- (c) If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

36.2 In the case of a lump sum contract, the Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

37. Variations

37.1 All Variations shall be included in updated Programs, and, in the case of a lump sum contract, also in the Activity Schedule, produced by the Contractor.

37.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.

37.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

37.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

37.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

37.6 In the case of an admeasurement contract, if the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.

- 38. Cash Flow Forecasts** 38.1 When the Program, or, in the case of a lump sum contract, the Activity Schedule, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast.
- 39. Payment Certificates** 39.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 39.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 39.3 The value of work executed shall be determined by the Project Manager.
- 39.4 The value of work executed shall comprise:
- (a) In the case of an admeasurement contract, the value of the quantities of work in the Bill of Quantities that have been completed; or
 - (b) In the case of a lump sum contract, the value of work executed shall comprise the value of completed activities in the Activity Schedule.
- 39.5 The value of work executed shall include the valuation of Variations and Compensation Events.
- 39.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- 39.7 Unless **otherwise specified in the SCC** Interim Payment may be made for Plant and Material delivered on site ready for incorporation within reasonable period of time in the permanent works, subject to the Contractor transferring ownership to the Employer and providing, where applicable, the right of the transfer of ownership vested upon the Contractor by its supplier.
- Notwithstanding the transfer of ownership the responsibility for care and custody thereof together with the risk of loss or damage thereto shall remain with the Contractor until taking over of the works or part thereof in which such Plant and Materials are incorporated and shall make good at its own cost any loss or damage that may occur to the works or part thereof from any cause whatsoever during such period prior to the taking over.
- 40. Payments** 40.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 30 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment

should have been made up to the date when the late payment is made at the prevailing rate of interest at the legal rate.

40.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

40.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions to the Contract Price.

40.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

41. Compensation Events

41.1 The following shall be Compensation Events:

- (a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 20.1.
- (b) The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
- (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
- (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
- (e) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Notification of award from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
- (f) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
- (g) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- (h) The advance payment is delayed.
- (i) The effects on the Contractor of any of the Employer's Risks.

- (j) The Project Manager unreasonably delays issuing a Certificate of Completion.
- (k) In situations of Force Majeure which makes the contractor's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances. Such events shall be limited to:
 - (a) reason of any exceptionally adverse weather conditions (as specified in the BDS) and
 - (b) reason of civil commotion, strike or lockout affecting any of the trades employed upon the Works or any of the trades engaged in the preparation, manufacture or transportation of any of the goods or materials required for the Works.

41.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

41.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

41.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

42. Tax

42.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 30 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 44.

43. Currencies

43.1 Where payments are made in currencies other than the currency of the Employer's country **specified in the SCC**, the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor's Bid.

44. Price Adjustment

44.1 Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the SCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:

$$P_c = A_c + B_c \text{ Imc/Ioc}$$

where:

P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency “c.”

A_c and B_c are coefficients² **specified in the SCC**, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency “c;” and

Imc is the index prevailing at the end of the month being invoiced and Ioc is the index prevailing 28 days before Bid opening for inputs payable; both in the specific currency “c.”

44.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

45. Retention

45.1 The Employer shall retain from each payment due to the Contractor the proportion **stated in the SCC** until Completion of the whole of the Works.

45.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 53.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an “on demand” Bank guarantee.

46. Liquidated Damages

46.1 The Contractor shall pay liquidated damages to the Employer at the rate per day **stated in the SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount **defined in the SCC**. The Employer may deduct liquidated damages from

² The sum of the two coefficients A_c and B_c should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A_c , for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sums of the adjustments for each currency are added to the Contract Price. [To be transferred to the User Guide]

payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

46.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 40.1.

47. Bonus

47.1 The Contractor shall not be paid a Bonus calculated at the rate per calendar day **stated in the SCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

48. Advance Payment

48.1 The Employer shall make advance payment to the Contractor of the amounts **stated in the SCC** by the date **stated in the SCC**, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

48.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

48.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

49. Securities

49.1 The Performance Security shall be provided to the Employer no later than the date specified in the Notification of award and shall be issued in an amount **specified in the SCC**, by a bank and denominated in the Namibian Dollars. The Performance Security shall be valid until a date 30 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee.

49.2(a) Where the contractor has benefitted from the application of the Margin of Preference for employment of local manpower, it shall:

- (i) in the execution of the contract, fulfill its obligation of maintaining local manpower force for 80 % or more of the man-days deployed in the execution of the Works with which it satisfied the criteria of eligibility for being awarded the contract in application of the Margin of Preference; and
 - (ii) concurrently with the above performance security, provide a preference security to guarantee it will fulfill its obligation in that respect.
- (b) For contracts above N\$ 5 M, the preference security shall be in the form of an “on demand” bank guarantee for an amount in a convertible currency equivalent to the difference between its bid price and the bid price of the lowest bid if the Margin of Preference was not applicable. It shall be issued by a commercial bank located in the Republic of [Insert name of country].
- (c) For contracts up to N\$ 5 M, an amount equal to the value of the preference security shall be retained from progressive payments to the contractor, to constitute the guarantee for the preference security.
- (d) The preference security shall be valid until the Contractor has completed the Works and a Completion Certificate has been issued by the Employer’s Representative as per GCC 53.
- (e) The cost of providing the security shall be borne by the Contractor.

49.3 Where a Preference Security is applicable:

- (i) the Employer’s Representative shall monitor the employment of local manpower throughout the execution of the contract and shall from time to time request a report from the contractor on the percentage of total men-days deployed using local manpower.
- (ii) the Contractor shall submit the local manpower employment reports as often as it is reasonably requested by the Employer’s Representative.
- (iii) the Employer’s and Contractor’s representatives shall consult each other to ensure that the Contractor’s obligation towards local manpower employment is met during the Works execution.
- (iv) At the time of works completion, the Contractor shall submit a certified audited report to the Employer to substantiate the actual percentage of local manpower employed throughout the execution of the works.

- (v) The preference security shall be forfeited by the employer in case of failure on the part of the contractor to employ at least 80% of the local manpower in the execution of the Works.

50. Dayworks

- 50.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.
- 50.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.
- 50.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

51. Cost of Repairs

- 51.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

52. Labour Clause

- 52.1 (a) The rates of remuneration and other conditions of work of the employees of the Contractor shall not be less favorable than those established for work of the same character in the trade concerned-
 - (i) by collective agreement applying to a substantial proportion of the workers and employers in the trade concerned;
 - (ii) by arbitration awards; or
 - (iii) by Remuneration Regulations made under the Labour Act, 2007.
- (b) Where remuneration and conditions of work are not regulated in a manner referred to at (a) above, the rates of the remuneration and other conditions of work shall be not less favourable than the general level observed in the trade in which the contractor is engaged by employers whose general circumstances are similar.
- 52.2 No Contractor shall be entitled to any payment in respect of work performed in the execution of the contract unless he has, together with his claim for payment, filed a certificate:
 - (a) stating the rates of remuneration and hours of work of the various categories of employees employed in the execution of the contracts;
 - (b) stating whether any remuneration payable in respect of work done is due;

(c) containing such other information as the Chief Executive Officer of the Public Body administering the contract may require to satisfy himself that the provisions under this clause have been complied with.

52.3 Every Contractor shall display a copy of this clause of the contract at the place at which the work required by the contract is performed.

E. Finishing the Contract

- 53. Completion** 53.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the whole of the Works is completed.
- 54. Taking Over** 54.1 The Employer shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.
- 55. Final Account** 55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 60 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 60 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.
- 56. Operating and Maintenance Manuals** 56.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates **stated in the SCC**.
- 56.2 If the Contractor does not supply the Drawings and/or manuals by the dates **stated in the SCC** pursuant to GCC Sub-Clause 55.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the SCC** from payments due to the Contractor.
- 57. Termination** 57.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 57.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:
- (a) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;

- (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
- (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 60 days of the date of the Project Manager's certificate;
- (e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- (f) the Contractor does not maintain a Security, which is required;
- (g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the SCC; or
- (h) if the Contractor, in the judgment of the Employer, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract, pursuant to GCC Clause 57.1.

57.3 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

57.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

57.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

58. Fraud and Corruption

58.1 If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 15 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of Clause 57 shall apply as if such expulsion had been made under Sub-Clause 57.5 [Termination by Employer].

58.2 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 9.

58.3 For the purposes of this Sub-Clause:

- (i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) “obstructive practice” is
 - (a) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (b) acts intended to materially impede the exercise of an inspection and audit rights provided for under Sub-Clause 22.2.

59. Payment upon Termination

- 59.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as **indicated in the SCC**. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
- 59.2 If the Contract is terminated for the Employer’s convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor’s personnel employed solely on the Works, and the Contractor’s costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

60. Property

60.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor's default.

61. Release from Performance

60.2 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

Section VII - Special Conditions of Contract

These clauses should be read in conjunction with the General Conditions of Contract

A. General	
GCC 1.1 (r)	The Employer is Agricultural Bank of Namibia (AGRIBANK) 10 Post Street Mall P/Bag 13402 Windhoek, Namibia Ms. Victoria Hauwanga
GCC 1.1 (v)	The Intended Completion Date for the whole of the Works shall be 120 calendar days from the Start Date.
GCC 1.1 (y)	The Project Manager is Burmeister & Partners (PTY) Ltd 126 Andimba Toivo Ya Toivo Street, Windhoek, Namibia PO Box 1496 Windhoek, Namibia Ms. Diana Katjuongua
GCC 1.1 (aa)	The Site is located at the corner of Usivi Road and Ekakakuru Road, Rundu, Kavango-East Region, Namibia.
GCC 1.1 (dd)	The Start Date shall be 7 days after Site Possession Date/hand-over.
GCC 1.1 (hh)	The Works consist of the supply, delivery, installation, testing and commissioning and free maintenance during the Defects Liability period for general Civil & Structural maintenance works and specialised Electrical and mechanical works, for the Agribank Rundu Branch Office; as guided by the Bills of Quantities and Drawings.
GCC 2.2	Sectional Completions are: None
GCC 2.3(i)	The following documents also form part of the Contract: Relevant and mentioned Standards and Regulations to be obtained by the Contractors at its own cost.
GCC 5.1	The Project manager may delegate any of his duties and responsibilities.

GCC 6.1	<p>Delivery address for notices is:</p> <p>Employer: Agricultural Bank of Namibia (AGRIBANK) 10 Post Street Mall Windhoek, Namibia</p> <p>Contractor <i>[Insert full address]</i>:</p> <p>.....</p> <p>.....</p>
GCC 8.1	Schedule of other contractors: None.
GCC 13.1	<p>Except for the cover mentioned in (d)(i) hereunder, the other insurance covers shall be in the joint names of the Contractor and the Employer and the minimum insurance amounts shall be:</p> <p>(a) for the Works, Plant and Materials for not less than the full reinstatement costs including demolition, removal of debris, professional fee and profit.</p> <p>(b) for loss or damage to Equipment for not less than the replacement value of the equipment that the Contractor intends to use on site until the taking over by the Employer.</p> <p>(c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract for an amount representing the value of the properties that are exposed to the action of the contractor in the execution of the works and extended to the property of the Procuring Entity.</p> <p>(d) for personal injury or death:</p> <p>(i) of the Contractor's employees: The Contractor shall take an adequate insurance cover against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death for its employees for any claim arising in the execution of the works].</p>

	<p>(ii) of other people: This cover shall be for an adequate amount for Third Party extended to the Employer and its representatives.</p> <p>(e) for loss or damage to materials on-site and for which payment have been included in the Interim Payment Certificate, where applicable.</p> <p>The Contractor shall choose to take the insurance covers indicated above as separate covers or a combination of the Contractor's All Risks coupled with the Employer's liability and First Loss Burglary, after approval of the Employer. All insurance covers shall be of nil or the minimum possible deductibles at sole expense of the contractor.</p>
GCC 14.1	Site Data: Not Applicable
GCC 20.1	The Site Possession Date shall be 21 days from the issuance of the Letter of Acceptance.
GCC 23.1 & GCC 23.2	Appointing Authority for the Adjudicator: No Adjudicator shall be appointed for this Contract.
GCC 24.	<p>In case a dispute of any kind arises between the Employer and the Contractor in connection with, or arising out of, the contract or the execution of works or after completion of works and whether before or after repudiation or other termination of Contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the Employer's Representative, the matter in dispute shall, in the first place, be referred in writing to the employer's representative, with a copy to the other party.</p> <p>The Employer and the Contractor shall make every effort to resolve the dispute amicably by direct informal negotiation. If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Public Entity or the Contractor may give notice to the other party of its intention to refer the matter to:</p> <p>The Professional Arbitration and Mediation Association of Namibia (PAMAN),</p> <p>"commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given".</p>
GCC 24.3	Hourly rate and types of reimbursable expenses to be paid to the Adjudicator: Not Applicable.
GCC 24.4	Any dispute or difference in respect of which a notice of intention to commence arbitration has been given shall be finally settled by arbitration in accordance with Namibian Laws by an Arbitrator to be appointed by both parties to the dispute or in any case of disagreement, by an Arbitrator to be appointed by a judge in Chambers of Namibia. The Arbitrator fees will

	be borne by the losing party. Any decision of the Arbitrator shall be final and binding to both parties”.
B. Time Control	
GCC 25.1	The Contractor shall submit for approval a Program for the Works within 21 days from the date of the Notification of award.
GCC 25.3	The period between Program updates is 15 days. The amount to be withheld for late submission of an updated Program is N\$7 500.00 per incidence.
C. Quality Control	
GCC 33.1	The Defects Liability Period is: 365 days.
GCC 39.1	Add: The Contractor shall submit to the Project Manager monthly statements as received from the Electrical and Mechanical Sub-Contractors (if applicable) of the estimated value of the respective work executed less the cumulative amount certified previously.
GCC 39.2	Add: Before issuing a Payment Certificate , the Project Manager shall request the Contractor to supply reasonable evidence that the Electrical and Mechanical Sub-Contractors (if applicable) have received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. The Contractor may submit reasonable evidence to the Project Manager that: a) the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and b) the Electrical and/or Mechanical Subcontractor has been notified of the Contractor’s entitlement. No Payment Certificates will be issued by the Project Manager should the Contractor fail to submit the above-stated evidence.
GCC 39.7	Interim Payment for Plant and Material on site is applicable for Material on site.
D. Cost Control	
GCC 41.1 (l)	Claims for extension of the completion date as a result of Adverse Weather Conditions, will have to be supported by certified data by the Namibia Meteorological Service as proof that the weather conditions differs vastly from the average; and other substantiating evidence recorded by the Contractor.
GCC 43.1	The currency of the Employer’s country is: Namibian Dollars.

GCC 44.1	The Contract is not subject to price adjustment in accordance with GCC Clause 44, and the following information regarding coefficients does not apply.
GCC 45.1	The proportion of payments retained is: 10% per payment of original contract amount. Half of the retention money will be released after formal taking over of the Works and the remaining shall be released after the Defects Liability Period, subject to the Contractor making good all defects.
GCC 46.1	The liquidated damages for the whole of the Works are 1% per week . The maximum amount of liquidated damages for the whole of the Works is 5% max of contract price .
GCC 47.1	The Contractor shall not receive a Bonus.
GCC 48.1	The Contractor shall not receive an advance payment.
GCC 49.1	The Performance Security amount is 10% of contract value (a) Bank Demand Guarantee: 10% of contract value
E. Finishing the Contract	
GCC 55.1	The date by which operating and maintenance manuals are required is 7 days from the commencement date for the Defects Liability Period. The date by which “as built” drawings are required is: 30 days from the commencement date for the Defects liability period.
GCC 55.2	The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is N\$ 10 000.00.
GCC 56.1	Operating and maintenance manuals should be supplied to the Employer by the Contractor no later than: 7 calendar days from the commencement date of the Defects liability Period.
GCC 56.1	Amount to be withheld should the maintenance and operation manuals not be provided is: N\$ 10 000.00.
GCC 57.2 (g)	The maximum number of days is: 35 days . Where the Contractor is behind program by more than Thirty Five (35) calendar days, the Employer may in cases where a default of the Contractor causes additional costs to the Employer, obtain the services of another Contractor to help the Contractor to catch up with the program. Any costs incurred as a result of such a measure, in addition to that included in the Bid, shall be for the account of the Contractor and shall be deducted from monies due to the Contractor.
GCC 59.1	The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is: 25%.

Section VIII - Contract Forms

[This Section contains forms which, once completed, will form part of the Contract. The form for Performance Security, when required, shall only be completed by the successful Bidder after contract award.]

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Contract Agreement

THIS AGREEMENT made on the _____ day of _____ 20____
between **AGRICULTURAL BANK OF NAMIBIA (AGRIBANK)** (hereinafter “the
Employer”), of the one part, and

(hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as **RENOVATIONS TO THE AGRIBANK RUNDU BRANCH** be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (a) the Notification of award
 - (b) the Bid
 - (c) the Addenda Nos _____ *[insert addenda numbers if any]*
 - (d) the Appendix to the General Conditions of Contract
 - (e) the General Conditions of Contract;
 - (f) the Specification
 - (g) the Drawings; and
 - (h) the completed Schedules,
3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Namibia on the day, month and year indicated above.

Signed by: _____
for and on behalf of the Employer

Signed by _____
for and on behalf of the Contractor

in the
presence of: _____
Witness, Name, Signature, Address, Date

in the
presence of: _____
Witness, Name, Signature, Address, Date

APPENDIX TO CONTRACT

Performance Security (Bank Guarantee)

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year) of Bid Submission]*

Procurement Reference No. and title: *[insert no. and title of bidding process]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

Beneficiary: *[insert complete name of Purchaser]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of goods and related services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s)³ in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*,⁴ and any demand for payment under it must be received by us at this office on or before that date.

.....**Bank's seal and authorized signature(s)**

³ The Bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, in the currency of the Contract.

⁴ Dates established in accordance with Clause 18.4 of the General Conditions of Contract ("GCC"), taking into account any warranty obligations of the Supplier under Clause 16.2 of the GCC intended to be secured by a partial Performance Guarantee. The Purchaser should note that in the event of an extension of the time to perform the Contract, the Purchaser would need to request an extension of this Guarantee from the Bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee. In preparing this Guarantee, the Purchaser might consider adding the following text to the Form, at the end of the penultimate paragraph: "We agree to a one-time extension of this Guarantee for a period not to exceed [six months] [one year], in response to the Purchaser's written request for such extension, such request to be presented to us before the expiry of the Guarantee."

BID SUBMISSION CHECKLIST SCHEDULE

Procurement Reference No.: W/ONB/AGRI –04/2020-202

#	Description	Attached / Completed	Not Attached / Not Completed
1	A valid certified copy of Company Registration Certificate; “A valid original document; or a valid certified copy of an original document, as certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths, 1963 (Act No. 16 of 1963) as amended.”		
2	An original valid Good Standing Tax Certificate; “A valid original document; or a valid certified copy of an original document, as certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths, 1963 (Act No. 16 of 1963) as amended.”		
3	An original valid Good Standing Social Security Certificate; “A valid original document; or a valid certified copy of an original document, as certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths, 1963 (Act No. 16 of 1963) as amended.”		
4	A valid certified copy by the Namibian Police of Affirmative Action Compliance Certificate, proof from Employment Equity Commissioner that bidder is not a relevant employer or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998.		
5	A signed Bid-securing Declaration.		
6	An undertaking on the part of the Bidder that the salaries and wages payable to its personnel in respect of this proposal are compliant to the relevant laws, Remuneration Order, and Award, where applicable and that it will abide to sub-clause 4.6 of the General conditions of Contract if it is awarded the contract or part thereof.		
7	Financial Statements for the last 3 years.		
8	Reference Letters of Works Completed.		
9	A Company Profile.		
10	CVs and supporting documentation of Proposed Personnel.		
11	Letter of Intent of Proposed Sub-Contractors.		
12	Programme of Works.		
13	Information of Specialist Equipment to be used.		
14	All pages initialled or signed where applicable.		
15	All forms completed or marked “N/A”.		

#	Description	Attached / Completed	Not Attached / Not Completed
16	All corrections made in the Bid Document signed.		
17	Black ink used to complete Bid Document.		
18	In case of JV, Letter of Intent to form JV including a draft agreement, or JV agreement in accordance with ITB Sub-Clauses 5.1.		
19	In case of JV, details of each JV Party as per PART 1 Section IV - Bidding Forms.		

Disclaimer: *The list defined above is meant to assist the Bidder in submitting the relevant documents and shall not be a ground for the bidder to justify its non-submission of major documents for its quotation to be responsive. The onus remains on the Bidder to ascertain that it has submitted all the documents that have been requested and are needed for its submission to be complete and responsive.*



PROCUREMENT MANAGEMENT UNIT Invitation for Bids (IFB)

Republic of Namibia

Agribank hereby invites competent and registered Namibian companies to submit bids through Open National Bidding (ONB) procedures as outlined below:

Procurement Reference Number	W/ONB/AGRI – 01/2021-2022
Title	RENOVATIONS TO THE AGRIBANK RUNDU BRANCH, KAVANGO-EAST REGION, NAMIBIA.
Bid Documents	Interested eligible bidders may obtain the Bidding Documents from the address below after payment of a fee of N\$ 300.00.
Enquiries / Clarifications	Ms. Victoria Hauwanga Email: vhauwanga@agribank.com.na Tel: +264 61 207 4221 Agribank Head Office 10 Post Street Mall, Windhoek, Namibia
Closing Date & Time	Tuesday, 03 August 2021, at 11:00 PM, Namibian Time
Delivery Address for Submission of Bids	10 Post Street Mall, Windhoek, Namibia Agribank Head Office Building Bid Box, Ground Floor Electronic bidding will not be permitted. Late bids will be rejected.