KAI !GARIB MUNICIPALITY

CONTRACT T009/2019
HIGH MAST LIGHTING PROJECT: 2018/19

PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK & VREDESVALLEI

TENDER DOCUMENT

PROPOSED BY:

The Municipal Manager
Kai !Garib Municipality
Private Bag X6
KAKAMAS
8870

Contact Person: Mr M Clarke

Tel. Nr. (054) 461 6700

ISSUED BY:

BVi Consulting Engineers
P.O. Box 1155
UPINGTON
8800

Contact Person: Charles Mokholoane
Malcolm du Plessis
Tel. Nr. (054) 337 6600

NAME OF TENDERER: .....

TENDER PRICE: .....(incl. VAT & Contingencies)

FEBRUARY 2019

The Tenderer is required to check the numbers of pages and should any be found to be missing or duplicated, or should any of the typing be distinct, or any doubt or obscurity arise as to the meaning of any description or particular of any item, or if the Tender Document contains any obvious errors, then the Tenderer must immediately inform the Engineer and have them rectified or explained in writing as the case may be. No liability whatsoever will be admitted by reason of the Tenderer having failure to comply with the foregoing instructions.

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Contractor	**Witness for Contractor**	**Employer**	**Witness for Employer**

1: The Tender

Part T1: Tendering procedures

KAI !GARIB MUNICIPALITY
BID NOTICE T007/2019

PROVISION OF HIGH MAST LIGHTING RIEMVASMAAK & VREDESVALLEI

Bids are hereby invited for the supply and installation of high mast lights in Riemvasmaak and Vredesvallei. This tender comprises inter alia the following Works:

25 m Scissor galvanized high mast lights with, 8 LED flood lights equivalent to a 400 Watt HPS flood light. Excavations for the casting of steel reinforced foundations, steel reinforced foundations and Eskom connections for the high mast lights.

Tender documents and specifications are available from BVi Consulting Engineers, 55 Bult Street, P.O. Box 1155, Upington, at an amount of R500,00 in cash or electronic transfer per document, payable to BVi Consulting Engineers. This amount is non-refundable.

Sealed tenders marked, ***"CONTRACT T007/ 2019 (33610): PROVISION OF HIGH MAST LIGHTS IN RIEMVASMAAK AND VREDESVALLEI, UPINGTON"*** must reach the Municipal Manager or be placed in the tender box before or on **Friday 22 March 2019** at **11:00** at the **Kai !Garib Municipal offices in Keimoes** and will be opened directly thereafter.

A compulsory site inspection will be held at **11:00** promptly on **Wednesday, 27 February 2019** at the **Kai Garib Municipal Offices in Kakamas**. The doors will be locked at **11:00** promptly after which no further Tenderers will be allowed. The Certificate that the Tenderer has visited the site will at the same time be signed by the Engineer. For further information, contact the Consulting Engineers, at telephone number (054) 337 6600.

Only representatives of the tenderer will be allowed in the tender meeting who is:

a) In full time/ part-time employment of the bidder.
b) Has the adequate experience to comprehend the scope of works.

The following conditions will apply including the Conditions of Tender or Tender Procedures contained in the Tender document:

1. Prices must be valid for ninety (90) days from tender closing date.
2. Prices quoted must be inclusive of VAT.
3. A firm delivery period must be indicated.
4. The tender document must be completed in black Ink by means of a ball point pen. Pencil entries will render the tender offer non-complaint. Computerized/ typed tenders will be disqualified.
5. The Tender document must be completed on the original tender document. Copies of the tender document or parts thereof will render the document non responsive.
6. Bidders are required to provide a realistic construction period, taking into account long leading items.
7. Penalties will be applied for late completion of the Works according to the formula stated in the contract data.
8. Bids will be evaluated in accordance with the applicable Preferential Point Scoring System as set out in the Councils Supply Chain Management Policy. The following forms, MBD 1, MBD 4, MBD 5, MBD 6.1, MBD 7.1, MBD 8 and MBD 9 must be completed and submitted with the bid. Clause 2.1 for functionality will also form part of the tender evaluation.
9. Bids that are late or non-compliant will not be considered, whilst the lowest or only bid will not necessarily be accepted. Bids per fax or E-mail will also not be considered.
10. A minimum CIDB grading of **5EP or higher** is required for this tender**.**
11. No B-BBEE points would be allocated if an original / original certified copy of the B-BBEE certificate is not attached to the bid document. An originally certified Sworn Affidavit may be submitted as an alternative. No points will be allocated if a copy of a certified
12. Letter from SARS including **PIN** to validate TAX clearance and VAT registration should be submitted with the tender offer, the Kai ! Garib Municipality will confirm the TAX Compliance after tenders are submitted.
13. A valid CSD registration certificate is compulsory and should be included in the bid offer.
14. Proof of registration (Letter/ Registration Certificate) at the Electrical Bargaining Council of South Africa must be included in the Tender Submission.
15. The following compulsory documents must be included in the tender submission:
    a. Letter from Department of Labour for Registration as an Electrical Contractor in terms of the Occupational Health and Safety Act, Electrical Installation Regulations, Regulation No. 5.
    b. Original certified copy of the intended Electrician's Wiremen's licence.
    c. Valid registration of a Construction Health and Safety officer with the SACPCMP.
16. Bidders scoring below the required functionality scoring will be disqualified.
17. A signed Joint Venture agreement must be submitted with the tender submission. Additional Joint Venture documents must be submitted as per Tender data F2.1.

Yours in Development

IGA DE WAAL,
Acting Municipal Manager
Kai !Garib Municipality
11th Avenue
KAKAMAS
8870

T1.2: Tender Data

Clause number	
	The conditions of tender are the Standard Conditions of Tender as contained in **Annex F of the CIDB Standard for Uniformity in Construction Procurement.** (See www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annex to the Tender Data.) **The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data will have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender.** Each item of the Tender Data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.
F.1.1	The employer is the Kai !Garib Municipality.
F.1.2	The tender documents issued by the employer comprises: **The Tender** **Part T1: Tendering procedures** T1.1 Tender notice and invitation to tender T1.2 Tender data **Part T2: Returnable documents** T2.1 List of returnable documents T2.2 Returnable schedules **The Contract** **Part C1: Agreements and contract data** C1.1 Form of offer and acceptance C1.2 Contract data C1. Form of Guarantee C1.4 Occupational health and safety agreement C1.5 Pro forma ownership of plant **Part 2: Pricing data** C2.1 Pricing instructions C2.2 Summary of prices C2.3 Technical Schedules **Part 3: Scope of work** C3 Scope of work **Part 4: Site information** C4 Site information **Annexure A: Bill of Quantities** **Annexure B: MBD forms** **Annexure C: Additional Specifications**

Clause number	
	Should it be necessary for a bidder to obtain clarity on any matter arising from or referred to in this tender document, please refer queries, in writing, to the contact person listed below. Under no circumstances may any other employee within the Kai !Garib Municipality be approached for any information. Any such action may result to disqualification of a response submitted in competition to the tender process. Enquiries should reference specific page and or paragraph numbers, where appropriate. • All questions/enquiries must be forwarded in writing not later than **15 March 2019.** Questions/enquiries received after **15 March 2019** will not be considered. Name: Charles Mokholoane Malcolm du Plessis Capacity: Project Manager Project Engineer Address: 55 Bult Street Upington 8801 Tel: 054 337 6600 Fax: 054 337 6699 E-mail: charlesm@bvinc.co.za malcolmdp@bvinc.coza
F.2.1	The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated: a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a 5EP/EE class of construction work; b) contractors registered as potentially emerging enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of a) above and who satisfy the criteria listed in Tender Data; and c) Joint ventures are eligible to submit tenders provided that: 1. every member of the joint venture is registered with the CIDB; 2. the lead partner has a contractor grading designation in the 5EP/EE class of construction work; and 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for 5 EP/EE class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations. For eligibility refer to Notice and Invitation to Tender T1.1 **<u>Functionality criteria, points and evaluation</u>** Tenderers are required to demonstrate their ability to undertake the work and provide proof of experience, expertise, personnel, plant and equipment to undertake work of this nature. Tenderers are required to score a minimum of 21 points out of a possible 30 points (i.e. 70 %) in order to qualify for the tender. The onus rests with the tenderer to supply sufficient information to allow for the proper scoring, evaluation and award of points. Where insufficient information is provided, zero points will be awarded for such particular criterion. Tenderers will be adjudicated according to the points scoring for functionality, administrative responsiveness, pricing and BBBEE level of contribution.

Clause number	
	Functionality points will be awarded in accordance with the following provisions: **a) Plant Equipment (Maximum 10 points)** Points will be awarded for Plant and Equipment owned or hired by tenderer within the three categories listed below and which must be available for the execution and completion of the work. Where the tenderer owns: • Up to 1 No Excavator – 4 point maximum (NFU1) • Up to 1 No DCP testing equipment – 2 points maximum (NFU2) • Up to 1 No LUX meter plus electrical testing equipment – 2 points maximum (NFU3) • Up to 1 Truck with Crane (4 ton capacity or larger – 2 points maximum (NFU4) Where the tenderer elects to hire-in some or all of the above, points will be awarded within the applicable category, the same as listed above. Further, the allocation of points for Plant and Equipment to be hired will only be awarded should the tenderer submit an original "Letter of Intent", as an attachment to the tender, from a Plant Hire Company who is registered within the Contractors Plant Hire Association (CPHA). The "Letter of Intent" will clearly state that the Plant intended for the project will be available for the full duration of the project. The "Letter of Intent" will further be unqualified and certified by a registered Commissioner of Oaths. Only relevant items will be listed in the letter. Electrical testing equipment includes all equipment necessary to measure the necessary electrical parameters in order to issue a Certificate of Compliance for the electrical installation. Ownership details as well as those items to be hired-in will be declared and listed on Schedules of the "Returnable's Schedule that will be incorporated into the Contract". **b) Technical Expertise (Maximum 10 Points)** Points will be awarded for Technical Expertise applicable to the key personnel and individual construction staff members within the five categories listed below and who must be available for the execution and completion of the work. • Contracts and Project Manager who has a minimum of 5 years construction experience. Submit proof of in the form of a CV with relevant Contracts/ Project Management Experience. 5 points maximum (NFU5). • Site Foreman who has a minimum of 5 years construction experience. Submit proof of in the form of a CV with relevant site management experience. 5 points maximum (NFU6). • **Compulsory** - Licensed Electricians/Installation Electricians/ Master Electricians as contemplated in the Occupational Health and Safety Act, Regulation 9 and amendments thereof (Submit valid certificates and/ or registrations. • **Compulsory** - Registration with the Electrical Bargaining Council of South Africa Submit Registration status with a valid letter and/ or certificate). • **Compulsory** - Registration as an Electrical Contractor in terms of the Electrical Installation Regulation, Regulation 5 of the OHS Act and amendments thereof. • **Compulsory** – Health and Safety Officer with a valid registration at the SACPCMP as a Construction Health and Safety Officer Bidders may appoint an external body if the requirement is not present in the Bidders' electrical company. Curriculum Vitae's (CV's) of the Contracts Manager, Site Agent and Site Foreman that will be employed on this contract must be submitted with the tender document.

Clause number	
	Proof of licensed Electricians/Technicians must also be submitted with the tender document. Certificates should not be older than a year. The various individuals must be in the permanent employment of the tenderer to be awarded points. **c) High Mast Lighting Project Experience (Maximum 10 points)** Points will be awarded for past and current experience in contracts of the following nature: High Mast Lighting, underground cable connections, overhead line connections. The tenderer will indicate and declare their past track record in relation to the abovementioned project types. Points for contracts successfully completed or currently underway will be awarded as follows: • Contracts of value between R 1.5 million and R 2 million, inclusive of VAT – 3 points per contract (NFU7) up to three projects. • Contracts of value exceeding R 2 million to R 5 million, inclusive of VAT – 5 points per contract (NFU8) up to two projects. Bidders should take note that the above mentioned project brackets have no coloration with the actual tender value for this project. The values are used to allocate points for projects completed or currently underway. Particulars and details of each electrical construction contract will be declared and listed on the Schedule of the "Returnable Schedules that will be incorporated into the Contract". The summation of points awarded for the Functionality will be as follows: NFU = NFU1+ NFU2+ NFU3+ NFU4+ NFU5+ NFU6+ NFU7+ NFU8 Tenderers obtaining 21 or more Functionality Points will proceed for further evaluation.
F.2.7	For particulars regarding the compulsory pre-tender clarification meeting (site inspection meeting), see Notice and Invitation to Tender T1.1
F.2.12	No alternative proposals will be considered for tender evaluation. Main offers will be used for the tender evaluation. Bidders are allowed to provide alternative offers for consideration with the successful bidder.
F.2.13.2	Electronic tender offers will not be accepted.
F.2.13.3	Parts of each tender offer communicated on paper will be submitted as an original, plus Nil copies.
F.2.13.5	The employer's address for delivery of tender offers and identification details to be shown on each tender offer package are: Location of tender box: Kai !Garib Municipality Physical address: 11th Avenue Postal Address: Private Bag X6, Kakamas, 8870
F.2.15	The closing time for submission of tender offers is as per Notice and Invitation to Tender T1.1.
F.2.15	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
F.2.16	The tender offer validity period is 90 days.
F.2.19	Access will be provided for inspections, tests and analysis as may be required by the employer.

Clause number	
F.2.23	The tenderer is required to submit with his tender: 1. Contractor Registration and grading issued by the Construction Industry Development Board (CIDB) - **Compulsory** 2. SARS letter containing access PIN – **Compulsory.** 3. An original or original certified and valid B-BBEE Status Level verification. 4. Registration as an Electrical Contractor in terms of the Electrical Installation Regulations, Regulation No. 5 of the Occupational Health and Safety Act and amendments thereof. Department of Labour Letter - **Compulsory** 5. Qualifications and relevant experience of Electrician/ Installation Electrician (s) + Wiremen's Licence. 6. Qualifications and relevant experience of Health and Safety representative including health and safety framework. 7. Qualifications and relevant experience Site Manager and Project Manager. 8. Qualification and relevant experience of a Construction Health and Safety Officer - **Compulsory** 9. Central Supplier Database registration - **Compulsory** 10. Letter of good standing from the Compensation Commissioner - **Compulsory**
F.3.4.1	The time and location for opening of the tender offers are: As per tender notice
`	The procedure for the evaluation of responsive tenders is Method 2. The financial offer will be scored using Formula 1 (option 1) where the value of W1 is: 90 where the financial value inclusive of VAT of all responsive tenders received have a value excess of R 1 000 000.00
F.3.9.4	If the total sum of a specific item is incorrect due to a multiplication error, the rates will remain fixed and the sum item corrected.
F.3.13.1	Tender offers will only be accepted if: a) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; b) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; c) the tenderer has not: i) abused the employer's supply chain management system; or ii) failed to perform on any previous contract and has been given a written notice to this effect; and d) has completed the Compulsory Enterprise Questionnaire, SBD4, 6.1,, 8, 9 and the there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process. e) Has submitted the documentation listed in F2.23
F.3.18	Provide to the successful tenderer one copy of the signed contract document.

Annex F

(normative)

Standard Conditions of Tender

F.1 GENERAL

F.1.1 Actions

F.1.1.1 The employer and each tenderer submitting a tender offer will comply with these conditions of tender. In their dealings with each other, they will discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

F.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process will avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers will declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer will declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note: 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.

2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

F.1.1.3 The employer will not seek and a tenderer will not submit a tender without having a firm intention and the capacity to proceed with the contract.

F.1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

F.1.3 Interpretation

F.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

F.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, will not form part of any contract arising from the invitation to tender.

F.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

a) Conflict of interest means any situation in which:

i) Someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;

ii) An individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or

iii) Incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.

b) Comparative offer means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to be made between offers on a comparative basis.

c) Corrupt practice means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process; and

d) Fraudulent practice means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels.

e) Organization means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public bod.
f) Quality (functionality) means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs

F.1.4 Communication and employer's agent
Each communication between the employer and a tenderer will be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications will be in the English language. The employer will not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

F.1.5 The employer's right to accept or reject any tender offer

F.1.5.1 The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer will not accept or incur any liability to a tenderer for such cancellation and rejection, but will give written reasons for such action upon written request to do so.

F.1.5.2 The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received and such tender was returned unopened to the tenderer.

F.1.6 Procurement procedures

F.1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to F.3.13, be concluded with the tenderer who in terms of F.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

F.1.6.2 Competitive negotiation procedure

F.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers will submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of F.3.4, the employer will announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers will not apply.

F.1.6.2.2 All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, will be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of F.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

F.1.6.2.3 At the conclusion of each round of negotiations, tenderers will be invited by the employer to make a fresh tender offer, based on the same evaluation criteria, with or without adjusted weightings. Tenderers will be advised when they are to submit their best and final offer.

F.1.6.2.4 The contract will be awarded in accordance with the provisions of F.3.11 and F.3.13 after tenderers have been requested to submit their best and final offer.

F.1.6.3 Proposal procedure using the two stage-system

F.1.6.3.1 Option 1

Tenderers will in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer will evaluate each responsive submission in terms of the method of evaluation stated in the

tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

F.1.6.3.2 Option 2

F.1.6.3.2.1 Tenderers will submit in the first stage only technical proposals. The employer will invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

F.1.6.3.2.2 The employer will evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data, and award the contract in terms of these conditions of tender.

F.2 TENDERER'S OBLIGATIONS

F.2.1 Eligibility

F.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

F.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

F.2.2 Cost of tendering

Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

F.2.3 Check documents

Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

F.2.4 Confidentiality and copyright of documents

Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

F.2.5 Reference documents

Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

F.2.6 Acknowledge addenda

Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

F.2.7 Clarification meeting

Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

F.2.8 Seek clarification

Request clarification of the tender documents, if necessary, by notifying the employer at least five working days before the closing time stated in the tender data.

F.2.9 Insurance
Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

F.2.10 Pricing the tender offer

F.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes (except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable 14 days before the closing time stated in the tender data.

F2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

F.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

F.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

F.2.11 Alterations to documents
Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer will initial all such alterations. Erasures and the use of masking fluid are prohibited.

F.2.12 Alternative tender offers

F.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

F.2.12.2 Accept that an alternative tender offer may be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

F.2.13 Submitting a tender offer

F.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

F.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

F.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures will state which of the signatories is the lead partner whom the employer will hold liable for the purpose of the tender offer.

F.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package will state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

F.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked “financial proposal” and place the remaining returnable documents in an

envelope marked “technical proposal”. Each envelope will state on the outside the employer’s address and identification details stated in the tender data, as well as the tenderer's name and contact address.

F.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.

F.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

F.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

F.2.14 Information and data to be completed in all respects.
Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.

F.2.15 Closing time

F.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting will not be accepted as proof of delivery.

F.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

F.2.16 Tender offer validity

F.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

F.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

F.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer’s agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted.

F.2.16.4 Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as “SUBSTITUTE”.

F.2.17 Clarification of tender offer after submission
Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.
Note: Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

F.2.18 Provide other material

F.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer’s commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials. Considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer’s request, the employer may regard the tender offer as non-responsive.

F.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

F.2.19 Inspections, tests and analysis
Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

F.2.20 Submit securities, bonds, policies, etc.
If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the contract data.

F.2.21 Check final draft
Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

F.2.22 Return of other tender documents
If so instructed by the employer, return all retained tender documents within 28 days after the expiry of the validity period stated in the tender data.

F.2.23 Certificates
Include in the tender submission or provide the employer with any certificates as stated in the tender data.

F.3 THE EMPLOYER'S UNDERTAKINGS

F.3.1 Respond to requests from the tenderer

F.3.1.1 Unless otherwise stated in the Tender Data, respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:
a) An individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
b) The new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
c) In the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

F.3.2 Issue Addenda
If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, will then notify all tenderers who drew documents.

F.3.3 Return late tender offers
Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

F.3.4 Opening of tender submissions

F.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

F.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, preferences claimed and time for completion for the main tender offer only.

F.3.4.3 Make available the record outlined in F.3.4.2 to all interested persons upon request.

F.3.5 Two-envelope system

F.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

F.3.5.2 Evaluate the quality of the technical proposals offered by tenderers, then advice tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the quality evaluation more than the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any references claimed. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.

F.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

F.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

F.3.8 Test for responsiveness

F.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:
a) complies with the requirements of these Conditions of Tender,
b) has been properly and fully completed and signed, and
c) is responsive to the other requirements of the tender documents.

F.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:
a) Detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
b) Significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
c) Affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

F.3.9 Arithmetical errors, omissions and discrepancies

F.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words will govern.

F.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:
a) The gross misplacement of the decimal point in any unit rate;
b) Omissions made in completing the pricing schedule or bills of quantities; or
c) Arithmetic errors in:
    i) Line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
    ii) The summation of the prices.

F.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

F.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:
a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total will govern and the rate will be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted will govern, and the unit rate will be corrected.
b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices will govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

F.3.10 Clarification of a tender offer

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

F.3.11 Evaluation of tender offers

F.3.11.1 General

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

F.3.11.2 Method 1: Financial offer

In the case of a financial offer:
a) Rank tender offers from the most favourable to the least favourable comparative offer.
b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.
c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated.

F.3.11.3 Methods 2: Financial offer and preference

In the case of a financial offer and preferences:

a) Score each tender in respect of the financial offer made and preferences claimed, if any, in accordance with the provisions of F.3.11.7 and F.3.11.8.
b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
N_P is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender valuation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated

F.3.11.4 Method 3: Financial offer and quality

In the case of a financial offer and quality:

a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.

b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_Q$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
N_Q is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated.

F.3.11.5 Method 4: Financial offer, quality and preferences

In the case of a financial offer, quality and preferences:

a) Score each tender in respect of the financial offer made, preference claimed, if any, and the quality offered in accordance with the provisions of F.3.11.7 to F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.
b) Calculate the total number of tender evaluation points (T_{EV}) in accordance with the following formula, unless otherwise stated in the Tender Data:

$$T_{EV} = N_{FO} + N_P + N_Q$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
N_P is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.
N_Q is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

c) Rank tender offers from the highest number of tender evaluation points to the lowest.

d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.

e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub clause is repeated.

F.3.11.6 Decimal places

Score financial offers, preferences and quality, as relevant, to two decimal places.

F.3.11.7 Scoring Financial Offers

Score the financial offers of remaining responsive tender offers using the following formula:

$$N_{FO} = W_1 \times A$$

where: N_{FO} is the number of tender evaluation points awarded for the financial offer.
W_1 is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.
A is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1a	Option 2a
1	Highest price or discount	A = (1+ (P – Pm)/Pm)	A = P / Pm
2	Lowest price or percentage commission /fee	A = (1 – (P – Pm)/Pm)	A = Pm / P
a where: *Pm* = the comparative offer of the most favourable tender offer. *P* = the comparative offer of tender offer under consideration.			

F.3.11.8 Scoring preferences

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences. Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 Scoring quality

Score each of the criteria and sub criteria for quality in accordance with the provisions of the Tender Data. Calculate the total number of tender evaluation points for quality using the following formula:

$N_Q = W_2 \times S_O / M_S$

where: S_O is the score for quality allocated to the submission under consideration;
M_S is the maximum possible score for quality in respect of a submission; and
W_2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

F.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

F.3.13 Acceptance of tender offer

Accept the tender offer, if in the opinion of the employer, it does not present any unacceptable commercial risk and only if the tenderer:

a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
c) has the legal capacity to enter into the contract,
d) is not insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
e) complies with the legal requirements, if any, stated in the tender data, and
f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 Prepare contract documents

F.3.14.1 If necessary, revise documents that will form part of the contract and that were issued by the employer as part of the tender documents to take account of:
a) Addenda issued during the tender period,
b) Inclusion of some of the returnable documents, and
c) Other revisions agreed between the employer and the successful tenderer.

F.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

F.3.15 Complete adjudicator's contract
Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

F.3.16 Notice to unsuccessful tenderers

F.3.16.1 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

F.3.16.2 After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

F.3.17 Provide copies of the contracts

Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

F.3.18 Provide written reasons for actions taken

Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender, but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

Part T2: Returnable Schedules

T2.1: List of Returnable Documents

The complete tender document as received from the employer, together with all additional documentation as requested, must be submitted. No documentation must be removed from the tender document.

The tenderer must complete the following returnable documents:

1 Returnable Schedules required only for tender evaluation purposes

Resolution of board of directors / members / partners

Resolution of Board of Directors / Members / Sole Proprietor/ Partners of Partnership (if applicable)

Special Resolution of Joint Venture Partners

Compulsory Enterprise Questionnaire

Record of Addenda to Tender Documents

Proposed Amendments and Qualifications

Schedule of Subcontractors

Capacity of Tenderer

Site inspection certificate

Bill of quantities (Annexure A)

Municipal bidding documents (Annexure B)

2 Other documents required only for tender evaluation purposes

Proof of Contractor Registration and grading issued by the Construction Industry Development Board (CIDB) – **Compulsory**

A Tax Clearance Certificate issued by the South African Revenue Services – **Compulsory.**

An original and valid B-BBEE Status Level verification Certificate or certified copy thereof.

Valid proof of Central Suppliers Database registration.

Proof of Qualifications of the responsible Electrician (s) during construction and commissioning.

Proof of Qualifications of Health and Safety representative including health and safety framework.

Proof of Qualifications of Site Manager and Project Manager.

Proof of Qualifications of Electrician (s) responsible for electrical installations and testing.

Proof of registration of Closed Corporation or Company or other legal entities applicable to tender - Certified copy.

Letter of Good Standing from the Compensation Commissioner – **Compulsory.**

3 C1.1 Offer and Acceptance (the offer portion of C1.1)

4 C1.2 Contract Data (Part 2)

5 C1.3 Form of Guarantee

6 C2.2 Bills of quantities summary page (As per tender document, completed in black ink)

7 C2.3 Technical Schedules

8 Annexure A: Bill of Quantities

9 Annexure B: MBD 1, MBD 2, MBD 3.1, MBD4, MBD 6.1, MBD 7.1, MBD 8 and MBD 9.

10 Annexure C: Health and Safety Preamble

This returnable schedule needs to be completed if the tenderer is a company or other legal person.

Resolution of Board of Directors / Members / Partners

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

_____

_____
(*legally correct full name and registration number, if applicable, of the Enterprise)*

Held at _____ (*place)*

On _____ *(date)*

RESOLVED that:

1. The Enterprise submits a Tender to the Kai !Garib Municipality in respect of the following project:
   _____

   _____
   (*project description as per Tender Document)*

   Tender Number: _____*(Tender Number as per Tender Document)*

2. *Mr/Mrs/Ms:
   _____

   in *his/her Capacity as: : _____(*Position in the Enterprise)*

   and who will sign as follows: : _____

   be, and is hereby, authorised to sign the Tender, and any and all other documents and/or correspondence in connection with and relating to the Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Tender to the Enterprise mentioned above.

	Name	Capacity	Signature
1			
2			
3			
4			
5			
6			

Note:

1. ** Delete which is not applicable*
2. ***NB**. This resolution must be signed by <u>all</u> the Directors / Members / Partners of the Tendering Enterprise*
3. *Should the number of Directors / Members/Partners exceed the space available above, additional names and signatures must be supplied on a separate page*

ENTERPRISE STAMP

Contractor	Witness for Contractor	Employer	Witness for Employer

This returnable schedule needs to be completed if the tenderer is a joint venture. This form must be completed by each partner of the joint venture. The name of the principal partner must be stated under Point 2.

Resolution of Board of Directors / Members / Sole Proprietor/ Partners of Partnership (i.e. of each legal person to comprise the Joint Venture Partnership)

RESOLUTION of a meeting of the Board of *Directors / Members / Sole Proprietor/ Partners of:

_____

_____

(*Legally correct full name and registration number, if applicable, of the Enterprise)*

Held at _____ (*place)*

On _____ *(date)*

RESOLVED that:

3. The Enterprise submits a Tender, in Joint Venture with the following Enterprises:

   _____

   _____

   (List all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the Joint Venture).

   to the Kai !Garib Municipality in respect of the following project:

   _____

   _____

   (*Project description as per Tender Document)*

   Tender Number: _____(*Tender Number as per Tender Document)*

4. The Principal Partner of the Joint Venture will be

   _____

   _____

   (*Legally correct full name and registration number, if applicable, of the Principal Partner of Joint Venture)*

5. *Mr/Mrs/Ms:

   _____

   in *his/her Capacity as: _____*(Position in the Enterprise)*

   and who will sign as follows: _____

   be, and is hereby, authorised to sign a joint venture agreement with the parties listed under item 1 above, and any and all other documents and/or correspondence in connection with and relating to the joint venture, in respect of the project described under item 1 above.

6. The Enterprise accepts joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the joint venture deriving from, and in any way connected with, the Contract to be entered into with the Kai !Garib Municipality in respect of the project described under item 1 above.

7. The Enterprise chooses as its *domicilium citandi et executandi* for all purposes arising from this joint venture agreement and the Contract with the Kai !Garib Municipality in respect of the project under item 1 above:

Physical address: _____

_____

_____

_____ (code)

Postal Address: _____

_____

_____

_____ (code)

Telephone number: _____(code)

Fax number: _____(code)

	Name	**Capacity**	**Signature**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Note:		**ENTERPRISE STAMP**
1. * *Delete which is not applicable* 2. ***NB**. This resolution must be signed by <u>all</u> the Directors / Members / Partners of the Bidding Enterprise* 3. *Should the number of Directors / Members/Partners exceed the space available above, additional names and signatures must be supplied on a separate page*		

This returnable schedule needs to be completed if the tenderer is a joint venture.

Special Resolution of Joint Venture Partners

RESOLUTION of a meeting of the duly authorised representatives of the following legal entities who have entered into a joint venture to jointly tender for the project mentioned below: (*legally correct full names and registration numbers, if applicable, of the Enterprises forming a Joint venture)*

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

6. _____

_____

7. _____

_____

8. _____

_____

Held at _____ (*place)*

On _____ *(date)*

RESOLVED that:

A. The abovementioned Enterprises submit a tender in joint venture partnership to the Kai !Garib Municipality in respect of the following project:

_____

_____

(*Project description as per Tender Document)*

Tender Number: _____(*Tender Number as per Tender Document)*

B. Mr/Mrs/Ms: _____

in *his/her Capacity as: _____*(Position in the Enterprise)*

and who will sign as follows: _____
be, and is hereby, authorised to sign the Tender, and any and all other documents and/or correspondence in connection with and relating to the Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Tender to the Enterprises in joint venture mentioned above.

B. The Enterprises constituting the Joint Venture, notwithstanding its composition, will conduct all business under the name and style of: _____

C. The Enterprises to the Joint Venture accept joint and several liability for the due fulfilment of the obligations of the Joint Venture deriving from, and in any way connected with, the contract entered into with the Kai !Garib Municipality in respect of the project described under item A above.

D. Any of the Enterprises to the Joint Venture intending to terminate the Joint Venture agreement, for whatever reason, will give the Kai !Garib Municipality 30 days written notice of such intention. Notwithstanding such decision to terminate, the Enterprises will remain jointly and severally liable to the Kai !Garib Municipality for the due fulfilment of the obligations of the Joint Venture as mentioned under item D above.

E. No Enterprise to the Joint Venture will, without the prior written consent of the other Enterprises to the Joint Venture and of the Kai !Garib Municipality, cede any of its rights or assign any of its obligations under the Joint Venture agreement in relation to the contract with the Kai !Garib Municipality referred to herein.

F. The Enterprises choose as the *domicilium citandi et executandi* of the Joint Venture for all purposes arising from the Joint Venture agreement and the contract with the Kai !Garib Municipality in respect of the project under item A above:

Physical address: _____

_____

_____

_____ (code)

Postal Address: _____

_____

_____

_____ (code)

Telephone number: _____ (code)

Fax number: _____ (code)

	Name	**Capacity**	**Signature**
1			
2			
3			
4			
5			
6			

7			
8			
9			
10			
11			
12			
13			
14			
15			

Note:

1. ** Delete which is not applicable*
2. ***NB**. This resolution must be signed by <u>all</u> the Duly Authorised Representatives of the Legal Entities to the Joint Venture submitting this Tender*
3. *Should the number of Duly Authorised Representatives of the Legal Entities joining forces in this Tender exceed the space available above, additional names and signatures must be supplied on a separate page*
4. *Resolutions, duly completed and signed, from the separate Enterprises who participate in this Joint venture must be attached to the Special Resolution*

Compulsory Enterprise Questionnaire

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise: . . . . . .

Section 2: VAT registration number, if any: . . . . . .

Section 3: CIDB registration number, if any: . . . . . .

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 5: Particulars of companies and close corporations

Company registration number . . . . . .

Close corporation number . . . . . .

Tax reference number . . . . . .

Section 6: Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- o a member of any municipal council
- o a member of any provincial legislature
- o a member of the National Assembly or the National Council of Province
- o a member of the board of directors of any municipal entity
- o an official of any municipality or municipal entity
- o an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- o a member of an accounting authority of any national or provincial public entity
- o an employee of Parliament or a provincial legislature
- o an employee, director or board member of or otherwise employed by or contracted to the Kai !Garib Municipality, or had or has any contractual relationships of any kind with the Kai !Garib Municipality.

If any of the above boxes are marked, disclose the following:

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	**Name of institution, public office, board or organ of state and position held**	**Status of service (tick appropriate column)**	
		Current	**Within last 12 months**

Contractor	**Witness for Contractor**	**Employer**	**Witness for Employer**

* insert separate page if necessary

Section 7: Record of spouses, children and parents in the service of the state

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

☐ a member of any Municipal Council

☐ a member of any Provincial Legislature

☐ a member of the National Assembly or the National Council of Province

☐ a member of the board of directors of any Municipal Entity

☐ an official of any Municipality or Municipal Entity

☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)

☐ a member of an accounting authority of any national or provincial public entity

☐ an employee of Parliament or a provincial legislature

☐ an employee, director or board member of or otherwise employed by or contracted to the Kai !Garib Municipality, or had or has any contractual relationships of any kind with the Kai !Garib Municipality.

Name of spouse, child or parent	**Name of institution, public office, board or organ of state and position held**	**Status of service (tick appropriate column)**	
		Current	**Within last 12 months**

*insert separate page if necessary

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

i) Authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;

ii) Confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of

Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;

iii) Confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;

iv) Confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and

iv) Confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Name	Position	Signed

Name of Tenderer	Date

Record of Addenda to tender documents

I / We confirm that the following communications received from the Kai !Garib Municipality before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer: *(Attach additional pages if more space is required)*

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		

Name	Position	Signed

Name of Tenderer	Date

Proposed Amendments and Qualifications

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule.

Page	Clause or item	Proposal

Name	Position	Signed

Name of Tenderer	Date

Proposed Subcontractors

In order to complete the Works under this Contract, I/we propose to employ the following subcontractors to carry out the portion/type of work as detailed.

(Note: All proposed subcontractors must be listed).

Subcontractor: Name, Address and Telephone No.	Portion/type of work to be undertaken	Estimated value of work

Name	Position	Signed

Name of Tenderer	Date

Capacity of Tenderer

1. **WORK CAPACITY:** *(The Tenderer is requested to furnish the following full particulars, attach additional pages if more space is required. Failure to furnish the particulars may result in the Tender being disregarded.)*

Skilled artisans employed		**Unskilled employees employed**	
Categories of artisans	**Number**	**Categories of employees**	**Number**

Machinery	**Plant**	**Workshops**

2. QUALIFICATIONS AND EXPERIENCE OF PROPOSED SITE SUPERVISION TEAM FOR THE PROJECT

Tenderer to provide name(s), key qualifications and experience of site supervision team that will supervise the project on behalf of the Contractor.

3. PARTICULARS OF COMMITMENTS WHICH THE TENDERER HAS PREVIOUSLY COMPLETED AND PRESENTLY ENGAGED WITH:

3.1. Current projects:

Project		Place (town)	Reference / Contact person	Contact Tel. No.	Contract amount	Contract period	Date of commencement	Scheduled date of completion
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

3.2. Previous projects:

Project		Place (town)	Reference / Contact person	Contact Tel. No.	Contract amount	Contract period	Date of commencement	Scheduled date of completion	Actual date of completion
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Site Inspection Certificate

This is to certify that I,	
Representing Company	
Position	
Visited the site on	

I have made myself familiar with all local conditions likely to influence the work and the cost thereof. I further certify that I am satisfied with the description of the work and explanations given at the site inspection meeting and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.

Name Tenderer's Representative	Position	Signed

Name of Tenderer	Date

Name of Employer's Representative	Signature	Date

Contractor	**Witness for Contractor**	**Employer**	**Witness for Employer**

T2.2 Tender Sum Breakdown

Schedule No	Description	Total
A	PRELIMINARY AND GENERAL	
B	STEEL MAST STRUCTURES AND FLOOD LIGHT LUMINAIRES	
C	CONCRETE WORKS AND EXCAVATIONS	
D	400 V UNDERGROUND CABLE CONNECTIONS	
	Subtotal	
	Plus Contingencies (10%)	
	Subtotal	
	Plus VAT (15%)	
	Total Tender Price	

2: The Contract

Part C1: Agreement and contract data

C1.1 Form of Offer and Acceptance

OFFER

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

T007 /2019": KAI !GARIB MUNICIPALITY FOR THE PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK & VREDESVALLEI

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

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

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

. . . . . .

. . . . . Rand (in words);

R . . . . . (in figures)

The scope of works will be completed by……., Amount of weeks:……..

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning a copy of this acceptance form to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature …… Date ……

Name ……

Capacity ……

For the tenderer

Name and address of organization ……

……

Name and signature of witnesses ……

……

Contractor	Witness for Contractor	Employer	Witness for Employer

Acceptance

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

The terms of the contract, are contained in:

Part C1: Agreements and contract data, (which includes this agreement)
Part C2: Pricing data
Part C3: Scope of work.
Part C4: Site information

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

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

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

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed signed acceptance form, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement will constitute a binding contract between the parties.

Signature ……. Date ……

Name …….

Capacity …….

For the Employer **The Kai !Garib Municipality**
MAIN STREET
KEIMOES, 8860

Name and address of organization ……
……
……
……

Name and signature of witness ……. Date ……
…….

Contractor	Witness for Contractor	Employer	Witness for Employer

Schedule of Deviations

1 Subject . . . . . .
Details . . . . . .
. . . . . .
. . . . . .
. . . . . .

2 Subject . . . . . .
Details . . . . . .
. . . . . .
. . . . . .
. . . . . .

3 Subject . . . . . .
Details . . . . . .
. . . . . .
. . . . . .
. . . . . .

4 Subject . . . . . .
Details . . . . . .
. . . . . .
. . . . . .
. . . . . .

5 Subject . . . . . .
Details . . . . . .
. . . . . .
. . . . . .
. . . . . .

By the duly authorized representatives signing this agreement, the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement will have any meaning or effect in the contract between the parties arising from this agreement.

C1.2 Contract Data

The General Conditions of Contract for Construction Works (2015) published by the South African Institution of Civil Engineering is applicable to this Contract. Copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering (Tel 011-805 5947).

The General Conditions of Contract make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data will have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract.

Each item of data given below is cross-referenced to the Clause in the General Conditions of Contract to which it mainly applies.

The following variations, amendments and additions to the Clauses of the General Conditions of Contract are contract specific data applicable to this Contract:

DATA PROVIDED BY THE EMPLOYER

CLAUSE	DESCRIPTION / WORDING
1.1	Add the following new definitions at the end of Clause 1.1: 1.1.25 "Conditions of Contract" mean the General Conditions of Contract as amended in the Contract Data. 1.1.26 "Schedule of Documents" means the documents so designated in and forming part of the Quotation Documents."
1.1.15 & 1.2.1.2	The Employer is, Kai !Garib Municipality The Employer's address for receipt of communications and notices is: **Physical address:** Kai !Garib Municipality 11TH Avenue KAKAMAS 8870 **Postal Address:** Private Bag X6 KAKAMAS 8870 Telephone: (054) 666 7311 Facsimile: (086) 666 7311
1.1.16 & 1.2.1.2	The Engineer is BVi Consulting Engineers (PTY) LTD, NORTHERN CAPE The Engineer's address for receipt of communications and notices is: **Physical Address:** 55 Bult Street Upington 8801 **Postal Address:** PO Box 1155 Upington 8800 Telephone: (054) 337 6600 Facsimile: (054) 337 6699

CLAUSE	DESCRIPTION / WORDING
4.3	Add the following new Clause after Clause 4.3.2: "4.3.3 The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as 'the Act', that the following arrangements and procedures will apply between them to ensure compliance by the Contractor with the provisions of the Act: (i) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act. The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with. The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations. The Contractor agrees that any duly authorised officials of the Employer will be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor. The Contractor will be obliged to report forthwith to the Employer and Engineer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and will, on written demand, provide full details in writing, to the Employer and Engineer, of such investigation, complaint or criminal charge. 4.3.4 The Contractor will furthermore, in compliance with Constructional Regulations 2003 to the Act (i) Acquaint him with the requirements of the Employer's health and safety specification as laid down in Regulation 4(1) (a) of the Construction Regulation 2003, and prepare a suitably and sufficiently documented health and safety plan as contemplated in Regulation 5(1) of the Construction Regulations 2003 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment will be submitted to the Employer for approval within seven (7) days after the Commencement Date and will be implemented and maintained from the Commencement of the Works. (ii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2003, to ensure that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations will entitle the Engineer, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified."
4.3	Add the following new Clause 4.3.3 "With regard to the Compensation for Occupational Injuries and Diseases Act (Act no. 130 of 1993), where applicable, the Contractor will before commencement of the Works deliver to the Employer a letter, either (a) from his insurance company certifying that the Contractor has effected insurance with the company for the full extent of his potential liability in respect of all workmen employed by him on the contract and undertaking to notify the Employer of the expiry date of the policy at least one calendar month before such date, or

<table>
<tr><th>CLAUSE</th><th>DESCRIPTION / WORDING</th></tr>
<tr><td></td><td>(b) from the Compensation Commissioner certifying that the Contractor has complied with the requirements of the above-mentioned Act and is at present in good standing with the Compensation Fund."</td></tr>
<tr><td>4.11.1</td><td>Replace the first paragraph of Clause 4.11.1 with the following:

"The Contractor will employ on for the purposes of the Contract, only such persons as are careful, competent and efficient in their several trades and callings."</td></tr>
<tr><td>5.3.1</td><td>No Form of Guarantee required.</td></tr>
<tr><td>5.3.1</td><td>The Contractor will commence executing the Works within fourteen (14) days after the Commencement Date.

Add the following after "… Commencement Date" in the fourth line:

"subject to the Contractor having an approved project specific health and safety plan in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2003 and complied with the initial requirements thereof."</td></tr>
<tr><td>5.4.1</td><td>Between the wording "… Site," and "the location …." in the second line, add the following:

"subject to the Contractor having an approved project specific health and safety plan in terms of the Occupational Health and Safety Act 1993: Construction Regulations 2003 and complied with the initial requirements thereof,"</td></tr>
<tr><td>5.5.1</td><td>Bidders must provide a realistic completion period, taking into account long leading items, soil composition for cable excavations and all possible interferences during construction.</td></tr>
<tr><td>5.6.1</td><td>The Contractor will deliver his Works programme within fourteen (14) days after the Commencement Date.</td></tr>
<tr><td>5.8</td><td>Delete the words “between sunrise and sunset” in the first line and replace with “within normal working hours”.

Add the following:

“Normal working hours will be between 7h00 and 17h00. The cost of supervision by the Engineer or his representatives outside of normal (Monday to Saturday) working hours in accordance with this Clause will be for the Contractor’s account”.</td></tr>
<tr><td>5.8.1</td><td>The special non-working days are all the applicable public holidays as well as the year-end break.</td></tr>
<tr><td>5.12.2.2</td><td>Add the following to Clause 5.12.2.:

No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal Climatic Conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, extension of time shall be granted in accordance with the provisions of Clause 5.12 in the event that delays to critical activities exceed the number of working days listed below for each month, then abnormal conditions shall be deemed to exist. The number of working days quoted below for each calendar month shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions by the Contractor.

<table>
<tr><th>Month</th><th>Working Days</th><th>Month</th><th>Working Days</th></tr>
<tr><td>January</td><td>0</td><td>July</td><td>3</td></tr>
<tr><td>February</td><td>0</td><td>August</td><td>3</td></tr>
<tr><td>March</td><td>0</td><td>September</td><td>1</td></tr>
<tr><td>April</td><td>1</td><td>October</td><td>0</td></tr>
<tr><td>May</td><td>3</td><td>November</td><td>0</td></tr>
<tr><td>June</td><td>3</td><td>December</td><td>0</td></tr>
</table>

Extension of time in terms of Clause 5.12 based on abnormal rainfall or wet conditions shall be calculated separately for each calendar month or part thereof according to the formula given below, for the full contract period including any extension thereof.</td></tr>
</table>

CLAUSE	DESCRIPTION / WORDING
	$$V = (N_w + N_n) + \frac{(R_w - R_n)}{X}$$ V : Extension of time in calendar days regarding the calendar month under consideration. Nw : Actual number of days during the calendar month whereupon a rainfall of Y mm or more was recorded. Nn : Average number of days during the relevant calendar month whereupon, according to existing rainfall data, a rainfall of Y mm or more was recorded. Rw : Actual rainfall in mm, for the calendar month under consideration. Rn : Average rainfall in mm, for the calendar month derived from existing rainfall data. X : This is regional factor and shall vary from 5 mm/calendar month for dry areas to 20 mm/ calendar month for wet areas. Clay soil must have a lower value than a lower value as sandy granular soil, since it will take longer to dry out. Y : This is the intensity of rain that will cause the cessation of work and can be about 10 mm/day. ▪ For the purpose of the contract, Nn, Rn, X and Y shall have the values as provided in the Annexures to the tender and/or the specifications. ▪ The total extension of time is the algebraic sum of the monthly totals for the subject period under consideration. ▪ Extension of time for part of a month shall be calculated by using the pro-rata values of Nn and Rn for the relevant calendar month. If the algebraic sum of the monthly totals is negative, no reduction in contract completion time will be applicable due to abnormal rainfall conditions.
5.13.1	The penalty for failing to complete the Works within the abovementioned time limit, plus approved extensions of time or condonation hereof is 0,003% of the tender award sum per calendar day.
6	The successful bidder will furnish the Engineer with a Performance guarantee from Lombard's or a commercial bank
6.3.4.1	Add the following: The Employer retains the right to revise the scope of works to suite the available funding, if tender offers surpass the allocated available funding.
6.8.2	Contract Price Adjustment will not be applicable.
6.8.3	Price adjustments for variations in the cost of special materials will not be allowed on this Contract.
6.10.1.3	Replace the contents of Clause 6.10.1.3 with the following: "Any amounts, by addition or deduction, to those referred to in this Clause which are due to the Contractor or the Employer and will include the deduction of penalties in terms of Clause 5.13.1."
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%.
6.10.3	The percentage retention on the amounts due to the Contractor is 10% and the limit of retention money is 5% of the Contract Price.
6.2.1	A retention money guarantee is not permitted.
7.1.1	Add the following at the end of Clause 7.1.1: "Unless otherwise directed in writing by the Engineer, all materials for the Permanent Works will be new and unused."
7.8.1	The Defects Liability Period is **12 calendar** months.
8.6.1	The contractor should provide proof of insurances for the duration of the contract as stipulated in 8.6
8.6.1.1	The value of materials supplied by the Employer amounts to Zero rand. (R 0,00)
8.6.1.1	The amount to cover professional fees in terms of this Clause amounts to: 0% of the original Contract Price.
8.6.1.2	Not required.
8.6.1.3	The limit of indemnity will be R 2,000,000. Add the following to Clause 8.6.1.3

CLAUSE	DESCRIPTION / WORDING
	"The minimum amount of insurance required in terms of this Clause will be per event, the number of events being unlimited."
8.6.1.5	None.
8.6.6	The insurance policies and proof of due payment will be produced to the Engineer within seven (7) days after the Commencement Date.
8.6.8	Add the following new Clause 8.6.8 "In the event of any claim arising under the policies held in terms of this Clause, the Contractor will forthwith take all necessary steps to lodge his claim on the joint behalf of himself and the Employer, and to secure settlement of such claim, and he will submit to the Engineer copies of all claims and associated documents. The claim submitted by the Contractor will cover the cost of repairing and making good as required in terms of Clauses 8.2.1 and 8.2.2."
9.1.2	Replace the contents of Clause 9.1.2 with the following: "Up to the time of termination of the Contract by either party in terms of this Clause, or until the Contractor gives notice in terms of this Clause to terminate the Contract and the Contractor is precluded from exercising his right to terminate the Contract because the Employer agrees to bear any resultant additional costs provided for in Clause 54.2.2 hereof, the Contractor: a) will be entitled to an extension of calendar time for working days lost as may be approved by the Engineer, and b) will be reimbursed the cost of delays per working day, where the number of working days will be determined pro rata the effect the delays have on the progress of the work as agreed with the Engineer. Payment in full and final settlement will be made at the rates tendered for the payment items specially provided in the Bill of Quantities. Where the circumstances described in Clauses 9.1.1 are applicable only to a certain portion of the Contract, the Engineer will decide after consulting the Contractor, to what extent the Contract as a whole is affected and whether or not a claim in terms of this Clause can be submitted. No payment will be made in terms of this Clause after the expiry of the Due Completion Date."
10.4 & 10.5	Dispute resolution will be by amicable settlement or adjudication, as so decided by both parties in writing.
10.7	The determination of unresolved disputes in terms of Clauses 10.4 & 10.5 will be referred for final settlement to arbitration.
10.7	Special disputes will be referred for final settlement to arbitration.

C1.3 Form of Guarantee

WHEREAS THE CHIEF EXECUTIVE, Kai !Garib MUNICIPALITY

(hereinafter referred to as "the Employer") entered into a Contract with . . . . . .

. . . . . .

(hereinafter called "the Contractor") on the. . . . . day of . . . . . 20. . . for **CONTRACT NO. T007/2019** for the

KAI !GARIB MUNICIPALITY, PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK & VREDESVALLEI.

AND WHEREAS it is provided by such Contract that the Contractor will provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

WHEREAS WE, ... (*name of Insurance Company/Bank)*

have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co principal Debtors to the Employer under renunciation of the benefits of division and excussion for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer will, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Due Completion Date of the Works under the said Contract, and that its rights under this guarantee will in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Due Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee will be limited to the payment of a sum of money.
3. The Employer will be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee will remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee will remain in full force and effect until all such claims have been paid or liquidated.
5. Our total liability hereunder will not exceed the sum of . . . . . .

   . . . . . .(R . . . .)
6. The Guarantor reserves the right to withdraw from this guarantee by depositing the Guarantee Sum with the beneficiary, whereupon the Guarantor's liability hereunder will cease.

7. We hereby choose our address for the serving of all notices for all purposes arising hereof as . . . . . .

. . . . . .

IN WITNESS WHEREOF this guarantee has been executed by us at . . . . . .

on this . . . . . day of. . . . . 20. . . . . .

As witnesses:

1. . . . . Signature

2. . . . . Duly authorized to sign on behalf of

. . . . . Address

. . . . . .

. . . . . .

C1.4 Occupational Health and Safety Agreement

(To be completed and signed by all Mandatories)

OCCUPATIONAL HEALTH AND SAFETY ACT NO. 85 of 1993

Note: Section I(1)(xxviii) of the Act defines a "Mandatory" as including "an Agent, a Contractor or a Contractor for Work".

The Employer and the Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act, Act No. 85 of 1993, herein after referred to as "the Act", that the Contractor as an employer in its own right and in its capacity as Contractor the execution of the works, shall have certain obligations and that the following arrangement shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:

1. The Contractor undertakes to acquaint the appropriate officials and the employees of the Contractor with all relevant provisions of the Act, and the regulations promulgated in terms of the Act, and

2. The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with, and

3. The Contractor hereby accepts sole liability for such compliance with the relevant duties, obligations and prohibitions imposed by the Act and regulations and expressly absolves the Employer and the Employer's Consulting Engineers from being obliged to comply with any of the aforesaid duties, obligations and prohibitions in respect of the work included in the Contract, and

4. The Contractor shall be obliged to report forthwith to the Employer any investigations, complaint or criminal charge with may arise as a consequence of the provisions of the Act and regulations pursuant to work performed on behalf of the Employer, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

As witnesses:

1. . . . . Signature

2. . . . . Duly authorized to sign on behalf of

on this . . . . . day of. . . . . 20….

. . . . . Address

. . . . . .

. . . . . .

C1.5 Pro forma Ownership of Plant

I/We, the undersigned, ……..…….

……..……..…… (Name of the Contractor)

hereby declare that the materials for which payment is claimed in terms of Clause 49.1.5 of the General Conditions of Contract that:

1. The material as listed in the Bill of Quantities supplied pursuant to the Contract shall become the property of the Client after payment.
2. The material and equipment paid by the Client are set aside and are marked as the property of the Client.
3. It is confirmed that such material and equipment are in the care of the Contractor solely for the purposes of the Contract and shall not be within the ownership of or disposition of the Contractor.
4. Any interim certificate issued by the Engineer shall be without prejudice of the exercise of any power of the Engineer contained in the Contract to reject material and/or equipment which is not in accordance with the Contract and upon any such rejection the property in the rejected material and/or equipment shall immediately revert to the Contractor.
5. That we shall be liable for loss of or damage to any of the Contractor's equipment which may happen otherwise than through the default of the Employer.

Address where the material/equipment will be held:

…….

…….

Signed in the presence of the subscribing witnesses:

At ……. for and on behalf of the Contractor on this ……..… day of ……..……..

1. . . . . Signature

2. . . . . Duly authorized to sign on behalf of

on this . . . . . day of. . . . . 20….

. . . . . Address

. . . . . .

. . . . . .

C1.6 Expanded Public Works Programme- Commitment of Undertaking

I/We, the undersigned, ……..…….

……..……..…… (Name of the Contractor),

hereby commits to the use local labour in the specific Wards wherein the proposed construction works/ developments will take place. Appointments will be done:

1. In conjunction with the specific Ward Councillor and CLO, if applicable.
2. According to the latest Guidelines from the Department of Labour and Occupational Health and Safety Act.
3. According to the lasted Guidelines from the Expanded Public Works Programme.
4. With proper and appropriate compensation.
5. With Health and Safety inductions according to the Occupational Health and Safety Act and Construction Regulations.

Address where appointments will be managed:

……

……

Signed in the presence of the subscribing witnesses:

At ……. for and on behalf of the Contractor on this ……..… day of ……..……..

1. . . . . Signature

2. . . . . Duly authorized to sign on behalf of

on this . . . . . day of. . . . . 20….

. . . . . Address

. . . . . .

. . . . . .

Contractor	**Witness for Contractor**	**Employer**	**Witness for Employer**

Part C2: Pricing Data

C2.1 Pricing Instructions

The measurement and payment clauses of the SANS 1200 Standardized Specifications and the Standard and Particular Specifications will be deemed to form part of and included in the Pricing Instructions.

PREAMBLE TO BILL OF QUANTITIES

C2.1.1 General

1. The Contract Data, the Scope of the Work and the Site Information are to be read in conjunction with the Bill of Quantities and applicable drawings. **The Bill of Quantities is attached as Annexure A.**

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

b. All rates in the Bill of quantities should only include the rate for unskilled, semi–skilled and skilled labour employed full time by the Tenderer. All other Labour cost in terms of Local labour temporarily employed as set out in the tender Conditions is addressed in the Preliminary and General section of the Bill of quantities.

c. The Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill but 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 Engineer is obliged to base his assessment of the rates to be paid for such additional work on the rates inserted in the Bill.

d. The measurement and payment clauses of each Specification, read together with the relevant clauses of the Specification Data, set out what ancillary or associated activities are included in the rate for the operations specified.

2. The Bill of Quantities has been drawn up generally in accordance with the latest issue of the SANS Standardized Specifications. Descriptions in the Bill are abbreviated and must be read in conjunction with the measurement and payment clauses of the applicable Specifications.

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

4. Except that they will not include Value Added Tax (VAT), 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 each item. Such prices will cover all costs and expenses that may be required in and for the construction of the work described and will cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based. Provision is made in the Summary to the Bill of Quantities for VAT to be added.

5. 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 have a price or rate of R0,00.

6. The Schedule of Quantities forms part of, and must be read in conjunction with the Specification and must be submitted, duly completed, on the closing date of tenders.

7. Tenderers must complete the Schedule of Quantities and detail all required rate. The “Amount” will constitute the tender price for adjudication. Note: The Tenderer must price and extend each item, total each page and carry the total

of each section in the Bill of Quantities to the Summary page. Arithmetical errors occurring in the priced Schedule of Quantities will be corrected and the tender price adjusted accordingly.

8. No alteration, erasure or addition is to be made in the text. Should any alteration, erasure or addition be made it will not be recognized and the original wording of the Schedule of Quantities will be adhered to.

Construction

9. Attention is drawn to Clause 44.1 of the General Conditions of Contract and the Contractor must not order the quantities of materials stated in the Bill of Quantities until he has confirmed from the construction drawings or measurement on Site that such quantities are in fact the correct quantities.

10. Items in the Schedule of Quantities are deemed to include supply, delivery, installation, and connection where appropriate, unless stated to the contrary.

11. The quantities given in the Schedule of Quantities will be considered as provisional and cannot be regarded as exact and are subject to measurement on site after completion of the service and adjustments will be made according to the unit rates given in the Schedule of Quantities.

12. Materials

12.1 Supply of materials:	The onus is on the Contractor to order material well in advance to ensure timely delivery. No extension of time will be allowed for late delivery of material due to orders not placed on time.
12.2 Items for approval:	Where the specification refers to a specific brand name “or similar and equivalent” or “Other approved type” and alternative equipment is offered in lieu of that specified the written approval must be obtained from the Engineer before such equipment is installed. In certain cases the Contractor may be required to submit samples and where necessary, tests will be performed to establish the quality of the material offered.
12.3 Quality of materials:	Only new, good quality materials may be used and where applicable materials must comply with the specifications of the South African Bureau of Standards SABS/SANS, the British Standards Specifications (BSS), the International Organization for Standardization (ISO) or the International Electro technical Commission (IEC). Wherever possible, S.A. manufactured material must be used.

13. In the event of discrepancies between the drawings, specifications and Schedule of Quantities the Engineer will decide whether the work as executed will be measured on site or whether re-measurement will be effected from the working drawings only.

14. Provisional sums will be expended only as directed by Engineer and any balance remaining will be deducted from the amount of the contract Sum.

15. Where P.C. amounts are specified, no part of these amounts will be used without the written approval of the Engineer. Unused amounts will be omitted from the contract.

16. Where variation orders are necessary, instructions will be issued by the Engineer and all variations will be calculated according to the priced Schedule of Quantities. All the items in the bill must be priced by the Tenderer. Non-compliance with this requirement will deem the tender as non-responsive.

    Where no provisions are made for rates pertaining to specific variation orders, the successful bidder will furnish the Engineer with at least three competitive quotes with specifications.

    All Variation orders will be approved by the Client and Engineer prior to execution of the scope of works in the Variation Order.

17. No work, for which "Provisional" items are provided, will be commenced without written instruction from the Engineer.

18. The following will be considered for excavation:-

    a. Measurement will be to the bottom side of cables and measurement in m^3 will be calculated from the minimum dimensions in accordance with the specification and drawings.

    b. The rates will allow for additional costs like storing, protection of other services, pumping, smoothing of sides and bottoms, removal of rocks, bedding layer, clearing and removal of waste and all work incidental but not specifically mentioned in the schedule.

    c. Bidders will allow for frequent removal of unsuitable back filling in trenches and general housekeeping of the construction site when the construction period is calculated.

    c. The excavations will be protected as call for in Government Gazette No 667 and the latest issue of the Construction regulations.

19. The excavations will be measured according to the following types:-

    a. Pick able soil

    b. Soft rock

    c. Hard rock

20. The meaning of the above are as follows:-

    a. Pick able soil: All soil which can be excavated without the use of power driven tools.

    b. Soft rock: All soil which can be excavated with power driven tools, but without explosives.

    c. Hard rock: Rock which can only be excavated by means of explosives.

C2.2 Summary of Prices

KAI !GARIB MUNICIPALITY

T007/2019: Provision of High Mast Lighting in RIEMVASMAAK & VREDESVALLEI

SCHEDULE C2.2.1: SUMMARY OF PRICES FROM ANNEXURE A

Date:	2019-02-20
Revision:	Rev00

Schedule No	Description	Total
A	PRELIMINARY AND GENERAL	
B	STEEL MAST STRUCTURES AND FLOOD LIGHT LUMINAIRES	
C	CONCRETE WORKS AND EXCAVATIONS	
D	400 V UNDERGROUND CABLE CONNECTIONS	
	Subtotal	
	Plus Contingencies (10%)	
	Subtotal	
	Plus VAT (15%)	
	Total Tender Price	

Completion of the scope of works:…… (Date)……..amount of weeks.

Totals to be carried over to T2.2: Tender sum breakdown and the total tender price to C1.1: Form of offer and acceptance.

Signature …….. Date ……

Name ……

Capacity ……

For the tenderer

Name and address of organization ……

Name and signature of witnesses ……

C2.3 Technical Schedules

C2.3.1 Guaranteed delivery times

		Weeks
1.	Construction period (Completion)	…….
2.	High Mast Structure	…….
3.	600/1000V PVCSWA cables	…….
4.	5.LED flood light luminaires	…….
5.	Concrete foundations	…….

C2.3.2 High Mast Structure

1	Name of Manufacturer	…….
2	Material for structure	…….
3	Tensile strength of mast material	…….

C2.3.3 FLOOD LIGHT LUMINAIRES

1	Name of Manufacturer		…….
2	Type of lamp		…….
3	Lamp Wattage	W	……..……..
4	Lumens Output		……..……..
5	Circuit Wattage	W	…….

C2.3.7 SCHEDULE OF VARIATION RATES FOR DAY WORK

The rates will be applicable only in no rate exists in the Schedule of Quantities.

Item	Description		Rate
1	Labour charge for Foremen	per hour	.....
2	Labour charge for Artisan	per hour	.....
3	Labour charge for Apprentice	per hour	.....
4	Labour charge for Labourer	per hour	.....
5	All inclusive rate for Engineers	per hour	.....
6	Percentage profit charge on additional material		.....
7	Charge for private car	per km	.....
		per day	.....
8	Charge for truck not exceeding 1 ton, including driver	per km	.....
		per day	.....
9	Charge for truck not exceeding 5 tons, including driver	per km	.....
		per day	.....
10	Machinery and equipment:		
	.....		
	.....		
	.....		
	.....		

Part C3: Scope of Work

C3.1 List of Applicable Specifications

C.3.1.1 Specification data

The specification data is set out in two portions.

Portion 1: Quality standards

Portion 2: Guidelines and recommended practices

Should any requirement of the Specification Data conflict with any requirement of the specifications listed below, the requirement of the Specification Data will prevail.

C.3.1.2 Standardised specifications

Although not bound in nor issued with this document, the following standardized specifications for electrical engineering construction form part of this document and the edition specified below will apply:

C.3.1.2.1 Table 1 – Quality standards - General

Reference	Description
NRS 02:2000	Graphical symbols for electrical diagrams.
M 33 A:1992	The international metric system (SI). Guide to the use of the SI in South Africa.
NRS 059:2002	Recommendations to minimize problems associated with the theft of transformer neutral and neutral earthing copper conductors.
SANS 1019:2008	Standard voltages, currents, and insulation levels for electricity supply.
SANS 61936-1:2008 IEC 61936-1:2002	Power installations exceeding 1 kV a.c. Part 1: Common rules.
NRS 060:2005	Code of practice for clearances for electrical systems with rated voltages up to and including 145 kV, for the safety of persons.
SANS1200 A	General
SANS1200 C	Site clearance
SANS1200 HA	Structural steel work (Sundry items)
SANS1200 HB	Cladding and sheeting
SANS1200 HC	Corrosion protection for Steelworks
SANS1200 D	Earth works
SANS1200 CC1 & 2	Concrete (building and small plants)

C.3.1.2.2 Distribution within residential areas – General

Reference	Description
NRS 047-1:2005	Electricity supply - Quality of service Part 1: Minimum standards. (Outlines various service activities and minimum standards for measuring the quality of service provided to customers by electricity utilities in South Africa.
NRS 034 -1 2001	Electricity distribution - Guidelines for the provision of electrical distribution networks in residential areas Part 1: Planning and design of distribution systems.
NRS 034-0:2001	Electricity distribution - Guidelines for the provision of electrical distribution networks in residential areas Part 0: Definitions.

C.3.1.2.3 Earthing and Lightning protection

Reference	Description
SANS 121	Hot dip galvanised coating on fabricated iron and steel article – specifications and test methods.
SANS 1063	Earth rods, couplers and connections
SANS 1213	Mechanical cable glands
SANS 10142 - 1	Part 1 – The wiring of premises
SANS 10313	The protection of structures against lightning
SANS 62305 - 1	Protection against lightning: Part 1: General principles
SANS 62305 - 2	Protection against lightning: Part 2: Risk management
SANS 62305 – 3	Protection against lightning: Part 3: Physical damage to structures and life hazard
SANS 62305 - 4	Protection against lightning: Part 4: Electrical and electronic systems within structures
SANS 60227-1:2006 IEC 60227-1:1998	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V. Part 1: General requirements.

C.3.1.2.4 Luminaires

Reference	Description
SANS 1277	Street lighting luminaires
SANS 1279	Floodlighting luminaires
SANS 10225	The design and construction of lighting masts
SANS 61547	Equipment for general lighting purposes - EMC immunity requirements
SANS 61347 – 2 - 4	Lamp control gear Part 2-4: Particular requirements for d.c supplied electronic ballasts for general lighting
SANS 60598 – 2 - 3	Luminaires Part 2-3: Particular requirements - Luminaires for road and street lighting Public lighting Part 2: The lighting of certain specific areas of streets and highways
SANS 10098 - 2	Public lighting Part 1: The lighting of public thoroughfares
SANS 10098 – 1 SANS 62612	Self-ballasted LED lamps for general lighting services with supply voltages > 50 V - Performance requirements

SANS 62560	Self-ballasted LED-lamps for general lighting services by voltage > 50 V - Safety specification

C.3.1.2.5 LV cables

Reference	Description
NRS 074-1:2005	Low-voltage (600/1 000 V) cable systems for underground electrical distribution Part 1: Cables.
SANS 60227-1:2006 IEC 60227-1:1998	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V. Part 1: General requirements.

C.3.1.2.6 Surge arrestors

Reference	Description
SANS 60099-5:2007 IEC 60099-5:2000	Surge arresters Part 5: Selection and application recommendations
NRS 039-1:2008	Surge arresters for use in distribution systems Part 1: Guide for the application of gapless metal-oxide surge arrestors
SANS 60099-4:2007 IEC 60099-4:2006	Surge arresters Part 4: Metal-oxide surge arresters without gaps for a.c. systems
SANS 61643-1 IEC 61643-1	Low voltage lightning arrestors

C.3.1.2.7 Table 2 – Guidelines and recommended practices

Reference	Description
NRS 044:2002	Working procedures and standards in respect of the installation of new electrical works and telecommunication facilities, or the extension or modification of such existing works and facilities. (Covers the working procedures and standards for the execution of all projects in respect of the installation of new electrical works and telecommunication facilities or the extension or modification thereof. Prescribes the minimum safety clearances and requirements that have to be.
ARP 063:2005 IWA 4:2005	Quality management systems - Guidelines for the application of SANS 9001:2000 in local government.
ARP 22399:2008 ISO/PAS 22399:2007	Societal security - Guideline for incident preparedness and operational continuity management.
NRS 080:2004	Quantifying and reporting of energy losses in electricity distribution networks
NRS 047 – 2:2001	Electricity supply - Quality of service Part 2: Reporting guidelines (Contains recommended reporting formats for the quality-of-service activities stipulated in NRS 047-1, which the licensees in South Africa should use to report to the National Electricity Regulator.
SANS 100013:2003 ISO/TR 10013:2001 (2008-11-14)	Guidelines for quality management system documentation.
ARP 077:2006 ISO/TR 18492:2005	Long-term preservation of electronic document-based information.
ARP 23081-2:2008 ISO/TS 23081-2:2007	Information and documentation - Records management processes - Metadata for records Part 2: Conceptual and implementation issues.

NRS 002:2000	Graphical symbols for electrical diagrams.
M 33 A:1992	The international metric system (SI). Guide to the use of the SI in South Africa
NRS 040-6:2009	High-voltage operating instructions Part 6: Code of practice for earthing (Establishes and promotes the uniform use, understanding and implementation of the different types of medium-voltage and high-voltage earthing.
NRS 082:2004	Recommended maintenance policy for electricity networks.
NRS 059:2002	Recommendations to minimize problems associated with the theft of transformer neutral and neutral earthing copper conductors.

C.3.1.2.8 Distribution within residential areas – General

Reference	Description
NRS 034-0:2001	Electricity distribution - Guidelines for the provision of electrical distribution networks in residential areas Part 0: Definitions.
NRS 047-1:2005	Electricity supply - Quality of service Part 1: Minimum standards. (Outlines various service activities and minimum standards for measuring the quality of service provided to customers by electricity utilities in South Africa.
NRS 033:1996	Electricity distribution - Guidelines for the application design, planning and construction of medium voltage overhead power lines up to and including 22 kV, using wooden pole structures and bare conductors.
SANS 1019:2008	Standard voltages, currents, and insulation levels for electricity supply.
NRS 060:2005	Code of practice for clearances for electrical systems with rated voltages up to and including 145 kV, for the safety of persons.
NRS 034 -1 2001	Electricity distribution - Guidelines for the provision of electrical distribution networks in residential areas Part 1: Planning and design of distribution systems.
NRS 034 -3: 1999	Electricity distribution - Guidelines for the provision of electrical distribution networks in residential areas Part 3: Overhead distribution in very low, low and moderate consumption areas, including rural areas and informal settlements.
SANS 10280-1:2008 NRS 041-1:2008	Overhead power lines for conditions prevailing in South Africa Part 1: Safety.

C.3.1.2.9 Metering and Measurements

Reference	Description
IEC 62053	Electricity metering equipment (A.C.) – particular requirements
IEC 60051 – 1	Direct acting indicating analogue electrical measuring instruments and their accessories – definitions and general requirements common to all parts
IEC 61036	Alternating current static watt-hour meters for active energy
NRS 057/ SANS 474	Code of practice for electricity metering
NRS 049	Advanced metering infrastructure () for residential and commercial customers
240 - 56364444	Standard Metering Requirements for the Metering of Electrical Energy and Demand

C3.2 Specification Data

Portion 1: The works

C3.2.1 Description of the works

This contract covers the provision, installation and commissioning of 9 x high mast lights in RIEMVASMAAK & 3 x high mast lights VREDESVALLEI

The scope also includes the upholding, during the defects liability period, of all equipment referred to in this document either explicitly or implicitly and as shown on the drawings.

C3.2.2 Scope of the works

The scope of work comprises the following:

(a) 25 m Scissor high mast lighting structures,
(b) Concrete foundations for specified high mast lights,
(c) LED flood light luminaires,
(d) Distribution Boards with digital kWh meters,
(e) Minor underground cable works.

C3.3 Standardised Specification

Section A: General Technical Specification

C3.3.1 General

This part of the specifications gives the general requirements for electrical installation work. These requirements are based on the relevant quality specifications given in Part C3.3 and are augmented by the specific requirements for this contract given in Part C3.4

C3.3.2 Drawings

The drawings, as listed in Part C3.5 of this document, form an integral part of this project specification. Tenderers are advised to visit the site and thoroughly acquaint themselves with the nature and extent of the work to be done.

C3.3.3 Standards

In view of the fact that this installation is to be operated and maintained by others it is a condition of this contract that the standard of workmanship and quality of materials will comply with the relevant specifications and standards and will be subject to the approval of the Engineer and the party finally responsible for the operation and maintenance of the system. All correspondence in this regard will however be directed to the Engineer and the final approval will only be granted by him.

C3.3.4 Damage to other services

The Contractor will be held liable for all damage to other services and if such damage is not replaced to the satisfaction of the Engineer within a reasonable period the Engineer will be entitled to appoint another Contractor to repair such damage and debit the account of the electrical contract. It is essential that the Contractor should liaise with the Engineer and other Contractors on site in order to minimize such damage.

C3.3.5 Outages

Power outages will be required to perform some of the tasks involved on this project. Outages are to be planned allowing sufficient notice to the Employer and in compliance with any reasonable stipulations required. Liaison with the Engineer, Employer, other Contractors and the supply authority is compulsory.

C3.3.6 Standard of workmanship

All installation work in this Contract is to be executed by qualified electricians and cable jointers in accordance with modern techniques.

The Engineer will have the right to reject any work, which does not meet with his approval.

C3.3.7 Infrastructure provided by employer

A site will be indicated for the establishment of a site office and stores. The site is not serviced and the Contractor is required to make the necessary provision for sanitation, portable water and electricity.

C3.3.8 Plant supplied by employer for incorporating into the works

The Contractor must supply all Plant required for the erection and completion of the Works.

C3.3.9 Additional safety regulations

The Contractor hereby agree, in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act, Act No.85 of 1993, hereinafter referred to as "the Act", to comply with the Act in all respects with specific reference to the Construction Regulations promulgated under the Act.

The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and regulations and expressly absolves the Employer and the Employer's consulting engineers from being obliged to comply with any of the aforesaid duties, obligations and prohibitions in respect of the work included in the contract.

The Contractor undertakes to acquaint all his officials and employees whether temporary or permanent with all relevant provisions of the Act and the regulations and specifically the Construction Regulations promulgated in terms of the Act.

The contractor will inter alia ensure that:

Before starting on site present the Employer with an approved Health and Safety Plan based on the Health and Safety Specification compiled by the Agent (Consultant).

Any potential contractors submitting tenders have made provision for the cost of health and safety measures during the construction process.

Submit a copy of the Notification of the construction work to the Department of Labour (DoL) to the Client.

Submit proof that he/she and every contractor is registered and in good standing with the compensation fund or a licensed compensation insurer prior to the commencement of work and that all employees are ensured with the Unemployment Insurance Fund

Indicate who his/her competent Site Supervisor is. (Every contractor will appoint a full-time competent employee designated in writing as the construction supervisor, with the duty of supervising the performance of the construction work as well as other employees to assist with the supervision work.)

No principal contractor will appoint a contractor to perform construction work unless the principal contractor is reasonably satisfied that the contractor he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely.

Every contractor will ensure that a health and safety file, which will include all documentation required in terms of the provisions of the Act and these Regulations, is opened and kept on site and made available to an inspector, client, client's agent or principal contractor upon request.

A principal contractor will ensure that in addition to the documentation required in the health and safety file as determined in sub-regulations (7) and (8), a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done is included and available.

The principal contractor will hand over a consolidated health and safety file to the client upon completion of the construction work and will, in addition to the documentation referred to in sub-regulation (7), include a record of all drawings, designs, materials used and other similar information concerning the completed structure.

The Contractor will be obliged to report forthwith to the Employer any investigation, complaint, or criminal charge which may arise as a consequence of the provisions of the Act and regulations pursuant to work performed on behalf of the Employer and will, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

The Contractor will furthermore comply with all the Employer's requirements for security and safety. An active accident prevention programme will be maintained. A responsible person will be appointed in terms of the Occupational Health and Safety Act and he is to co-operate fully with the Engineers Representative in all matters pertaining to accident prevention.

C3.3.10 Limitations on the contractor's performance of the work

The Contractor will control his activities and processes in such a way as to ensure compliance with the specifications. He will carry out, as a minimum requirement; all the tests laid down in the specifications and will submit all the test results to the Engineer.

The Contractor will be responsible for the relevant Quality Assurance requirements to be imposed on his Sub-Contractors and suppliers of materials.

The Employer's personnel as well as other Contractors will be active on site during the execution of this contract. The inherent problems associated with this type of interaction must be taken into account and should be allowed fully for in tender prices and the Tenderer should take note of the fact that his program will be altered from time to time to accommodate the needs of the other Contractors and site conditions, everything to ensure the best co-ordination of the works in total, however not necessarily to the advantage of this electrical contract.

C3.3.11 Division of the works

It should however be noted that the official take over by the Client will only be at completion of this total contract and that partial take over will not be done.

The exception is portions of the works, which are handed over to the Client after completion thereof.

C3.3.12 Contract administration, completion, testing and commissioning

C3.3.12.1 Quality control during the execution of the contract

Daily inspection of the works by the Contractor is expected to ensure that all work is executed in accordance with the drawings and specifications.

These inspections will be monitored by the Engineer or his duly authorised representative.

The onus is on the Contractor to clarify any uncertainties with the Engineer to ensure that the work is executed as intended by the Engineer and to the required standards.

Failure to comply might result in the Contractor redoing unsatisfactory work for his own account.

C3.3.12.2 Maintenance of As-built drawings

During execution of the contract the Contractor will update a set of drawings daily with all the relevant information regarding cable routes, joints, sleeves, etc.

At the end of the contract, the Contractor will provide the necessary information to enable the Engineer to prepare as-built drawings of the installation together with 3 sets of any other drawings, wiring diagrams, services and instruction manuals for equipment supplied by him.

C3.3.12.3 Setting of protective devices and controls

a) All protective devices installed throughout will be correctly adjusted by the Contractor to the approval of the Engineer before any circuit is energized. The Contractor is required to obtain all data necessary to establish the correctness of the settings. Where doubts exist the Engineer's confirmation is to be sought.
b) Data with regard to all commissioning documentation and diagrams of all control, alarm and indication circuits are to be provided for approval prior to their installation.
c) These diagrams will include:

(i) Wiring diagram.
(ii) Schematic wiring diagram.
(ii) Device operating sequence diagram.
(iii) Operational narrative of the control and protective devices.

C3.3.12.4 Preliminary testing of major equipment

All items of major equipment are where feasible, to be factory tested prior to delivery to site, and results of such tests, in a format to be agreed in advance, are to be produced before the equipment is delivered.

All such tests are to be in accordance with the relevant codes of practice, and with any other requirements as set out in this documentation.

C3.3.12.5 Completion of installation

Before the commencement of any test or commissioning procedures, the Contractor is to ensure that all nuts and bolts are securely fastened, and that paintwork on all items supplied has been touched up where damage has occurred.

C3.3.12.6 Inspection and testing

On completion of the entire installation or any particular section thereof, as may be decided by the Engineer the following minimum tests will be carried out in the presence of the Mining Engineer and the Consulting Engineer or his authorized Representative.

(a) Miniature substation testing

(i) Factory test results and certificates as required by SANS 1029 will be furnished.
(ii) Megger testing (10000 V) of insulation (MV/LV and LV/E).
(iii) The recording and marking of phase rotation and voltage on the secondary side.
(iv) MV and LV transformer earth resistance.

(b) Cable testing. MV and LV cables will be tested by the Contractor for:

(i) Continuity
(ii) Insulation
(iii) Phase rotation

(c) LV testing. The tests on the LV system to be conducted are as follows:

(i) Operation tests of all circuit breakers.
(ii) Continuity tests.
(iii) Megger tests (not less than 1 000 volt).
(iv) Measuring and recording of clearances.

C3.3.12.7 Documentation

All instrumentation necessary for testing will be provided by the Contractor.
The results of all the tests must be clearly recorded, signed and handed to the Engineer or his authorised Representative. Where available standard or specifically designed forms should be used and in this regard Contractor is referred to any forms, included in this document.

C3.3.12.8 Commissioning, testing and documentation

(a) On completion of the entire installation or any particular section thereof, as may be decided by the Engineer, test will be carried out before commissioning, in full accordance with the current **edition of the "Code of Practice for the Wiring of Premises", the manufacturers and/or the SANS/IEC** specifications, in the presence of the Engineers or his authorized Representative.'

(b) The Contractor should note that where applicable at least the following test must be carried out:

i. Phase rotation tests
ii. Insulation test
iii. Continuity test
iv. Loop Line Earth Impedance Test
v. Polarity test
vi. Earth Leakage Circuit Breaker
vii. Earth termination test

(c) Any further tests to meet the Supply Authorities requirements or as deemed necessary by the Engineer.

(d) All instrumentation necessary for testing will be provided by the Contractor.

(e) The results of the above tests must be clearly recorded, signed and handed to the Engineer or his authorized Representative together with the Certificate Compliance or any such form of forms required by the local supply authority or Engineer.

(f) The Engineer requires at least the following:

i. Certificate of Compliance.
ii. Schedule of protection and control settings.
iii. Set of schematic wiring and function diagrams.
iv. Sequence diagram and control functional narrative for each control panel.
v. Drawings of the installation marked “As Built” and signed.
vi. File of distribution legends.
vii. Operating and maintenance instructions on equipment.
viii. List and description of clearance measurements at road crossings, Telkom crossings, between other services etc. all as per the OHS act, to determine compliance.
ix. Health and Safety file in accordance with the Construction Regulations
x. Guarantees ceded to the Employer.

Once the Engineer has inspected the complete installation and satisfied himself that all testing has been completed and the contract is complete in all aspects can the Employer be approached in writing, with the above documentation, with a view to arrange a hand-over date.

(g) Unacceptable tests and abortive handing over

Should the Employer find at the time of handing over that work is defective to the extent that they have to return for further inspections and the handover aborted, then the Employer reserves the right to claim expenses in whole or part from the Contractor.

(h) Labelling

All new Switchgear, LV cubicles and attendant circuits, circuit breakers, transformers, cables, poles etc. will be clearly labelled. The inscriptions to be used will be provided in Part 3.4 of the specification or after the award of tender.

(i) Training of institutional staff

Where applicable and as detailed in Part 3.4 of this specification allowance is to be made by the Contractor for the training of Institutional Staff in the setting up and operation of the various items of equipment supplied under the contract. At least one (1) full day should be allowed for in the tender price.

C3.3.13 Program of work

A program will be finalised during a meeting within **14 days** after a tender has been awarded. The Contractor will only deviate from this program if the Engineer approves. However the Engineer reserves the right to alter the program if necessary. This program will be regarded as a binding document and the handover date will be the date stipulated on the program. The penalty clause will be applied from the “Handover date”.

The program will not be drawn up in isolation but the Contractor must take cognisance of the program of the civil and other Contractors on site and should make provision to accommodate their requirements.

C3.3.14 Requirements regarding other contracts

Co-ordination between other contracts, which might run concurrently, is of the utmost importance and thus in those cases the following procedure will be followed:

As soon as tenders are awarded a meeting will be arranged during which the various construction programs will be co-ordinated to the satisfaction of the Employer, the Project Co-ordinator, the contractors and the consultants.

The contractors will have weekly meetings during which minor problems will be sorted out.
The consultants will hold their monthly site meetings together, so that mutual problems can be addressed immediately.

Money's provided for this item in the bill, will only be paid out at the end of the contract under the discretion of the Engineer.

The electrical Contractor will have no claims against the Employer due to bad planning on his part, which resulted in delays, either of his own contract or those of other parties. Thus if any delays are foreseen the Contractor must give the Engineer early warning i.e. at least 7 days and should act proactively to prevent such a delay.

C3.3.15 Off-loading, stacking and liability for breakages

The Contractor will be required, at his own expense, to make all arrangements for off-loading and carefully stacking all plant and materials delivered under this contract on the Site of the Works. The off-loading and stacking will be carried out strictly in accordance with the requirements of the Engineer so as to permit a thorough and careful examination and testing of all items for breakages, fractures, etc.

Plant and materials will be stored on site at the cost of the Contractor who will be fully responsible for its protection against theft or damage by water, weather, fire and any interference until such time as it is erected and installed, put into satisfactory operation and accepted by the Employer as complete.

C3.3.16 Storage

Facilities for extended storage on site for plant and materials may not always be available and the Contractor will therefore make his own arrangements for any off-site storage, which may be required for plant, and materials, which become available before delivery to the Site and installation thereof can be commenced.

No additional payment will be allowed for off-site storage.

C3.3.17 Inspection at site

All plant and materials will be carefully examined upon delivery at the site and all items showing defects or damage of any description will be laid aside as not being in accordance with the requirements of the contract and these will be removed and replaced by the Contractor at his own cost.

C3.3.18 Erection, installation, adjustment and operation

The erection and installation of the plant is to be carried out by skilled artisans, experienced in this type of work and under the personal supervision of the Contractor's site foreman, whose qualifications and experience to supervise this work must be acceptable to the Engineer. The plant, when erected and installed, will be of neat and workmanlike appearance, solidly and evenly supported, true to line and level, plumb and in proper working order. The drilling and grouting of al structural bolts, channels, etc. will be the responsibility of the Contractor under this contract.

Before handing over the Plant, the Contractor is to ensure that every component is operating satisfactorily. The Contract will not be deemed to have been completed until the Engineer is fully satisfied in this regard.

C3.3.19 Brand names

Brand names and references to catalogues are made to determine a standard for material to be delivered and are not prescriptive as the exact type to be used. Alternatives may be presented for approval.

C3.3.20 Name board

When applicable an approved name-board will be erected and maintained by the successful Tenderer at a position indicated by the Engineer or his representative.

The board will comply with the requirements of the South African Association of Consulting Engineers. The board will be in English and will bear the names of the Employer, the Consulting Engineer, the Contractor as well as the type of work being carried out.

C3.3.21 Laying of cables and excavations

C3.3.21.1 Handling

The storage, transportation, handling and laying of cables will be according to first class practice, and the Contractor will have adequate and suitable equipment and labour to ensure that no damage is done to cables during such operations.

Twisted, kinked or cables damaged in any way will be rejected.

Cable will be removed from the drum in such a way that no twisting, tension or mechanical damage is caused, and must be adequately supported at short intervals during the whole operation.

Particular care must be exercised where it is necessary to draw cables through pipes and ducts, to avoid abrasion, elongation or distortion of any kind.

The ends of such pipes and ducts will be sealed to approval of the Engineer after drawing in of the cables. The manufacturer's recommended bending radii for cables are to be adhered to.

C3.3.21.2 Excavations

The excavations of cable trenches will be carried out by the Contractor, along the routes and in the servitudes as shown on the drawings or as indicated on site.

The bottom of the trench will be level and clear and the bottom and sides will be free from rocks, stones, or other objects liable to cause damage to the cable.

All MV cables, unless otherwise specified, will be laid at a depth of at least 1000 mm and LV cables at 800 mm below FINAL FINISHED GROUND LEVEL.

Trenches will not be less than 400 mm wide for one or two cables, and the width will be increased where more than two cables are to be laid together so that the cables may be placed at least 150 mm apart throughout the run.

Where the nature of the ground does not permit the excavation of cable trenches to the specified depth without excessive blasting, the matter will be referred back to the Engineer, whose decision will be final.

The Contractor must take all necessary precautions to prevent trenching work being in any way a hazard to the public or hampering the progress of other Contractors on site and to safeguard all structures, roads, railways, sewers, works or other property from any risk of subsidence and damage.

Volumetric measurements for excavations will not be done and trenches will be measured on a cost per meter of trench, basis.

The Contractor will be responsible to remove all excess ground left over after trenches have been backfilled. He will ensure that the surface is left in the same condition in which it was handed to him.

No guarantee can be given that blasting will not be necessary. This item will be the full responsibility of the Contractor and he will be required to adhere to all laws, regulations and bylaws regarding this type of work. The onus is on the Contractor to visit the site before submitting his tender, to make an assessment of the soil type and to allow for blasting if deemed necessary as no extra claims will be considered.

C3.3.21.3 Bedding

In all trenches a layer of at least 100 mm of clean sand will be laid below the cable/sleeve, followed by a layer of at least 100 mm clean approved bedding laid above the cable/sleeve.

The Engineer must inspect the first 100 mm bedding and approve before the cable can installed and must also inspect the second layer of bedding and approve before the trench can be closed.

C3.3.21.4 Cable warning tape

A yellow PVC cable warning tape will be installed at least 300 mm above all cables in trenches.

C3.3.21.5 Backfilling

Backfilling after bedding and laying of concrete slabs and warning tape, where applicable, is to be carried out with a proper grading of material to ensure settling without voids, and the material is to be properly compacted after the addition of every 150 mm.

The surface is to be made good as previously described. Backfilling may not commence until the entire trench has been inspected by the Engineer, where necessary and the route recorded onto the “As Built” drawing.

C3.3.21.6 Recording and installation of joint and cable markers

Each length of power cable will be numbered with the drum number and its exact position entered on a route drawing, and after site testing these numbers will appear on the test sheet covering the respective length of cable and the test result.

Full details of all joints are to be submitted and each joint is to be numbered and the position, type and number recorded on the route drawing.

The jointer’s name and date of jointing as well as the weather conditions are to be recorded on such a drawing.

At the completion of each cable section the Contractor will install a concrete, pyramid type cable joint marker at every joint position. Cable markers will also be placed at every deviation and branch-off or where indicated on the drawings. The position of each joint or cable marker must be exactly indicated on the “as built” cable route drawing.

C3.3.21.7 Cable sleeves

Sleeves will be supplied and installed by the Contractor or by others as detailed in Part D.3 where cable routes cross roads or permanent hard slab construction. It is however the responsibility of the Contractor to ensure that the installation is done in accordance with this specification where this work is performed by others.

All sleeves will be installed at a final depth of 900 mm (to the bottom of the sleeve) fitted with a galvanised steel draw wire and both ends must be sealed off with glass fibre cloth “Think Pink” before backfilling.

Sleeves will consist of 110 mm diameter PVC water pipe and will extend to 1m on both sides of the road.

All damaged tarmac, concrete or other surfaces will be reinstated by the Contractor at his cost or by the person responsible for the installation of the sleeves and early notice will be given to the T001Authority as to when this work is to be carried out.

C3.3.22 LV PVC insulated cables

C3.3.22.1 General

All low voltage cables will be manufactured according to **NRS 074-1:2005** - Low-voltage (600/1 000 V) cable systems for underground electrical distribution Part 1: Cables and **SANS 60227-1:2006** / **IEC 60227-1:1998 -** Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V Part 1: General requirements, and will bear the SABS/IEC mark.

The voltage gradient of the PVC dielectric will be for 600/1 000 Volts and for general purpose use unless otherwise stated.

All low voltage PVC insulated cables will have stranded copper annealed conductors unless otherwise called for.

The following code will be used for identifying cables:-

C3.3.22.2 Identification

Component	Code Letters
PVC di-electric	PVC
PVC sheath or extruded bedding	PVC
PVC tape bedding	PVCT
Single wire armour	SWA
Earth continuity conductor in armour	ECC/SWA
Double wire armour	DWA
Concentric neutral or earth conductor	N, NE or ECC as relevant
PVC outer sheath	PVC
Where a supplementary earth core is included	G/Y

C3.3.22.3 Joints and terminations of PVCSWA cables

The ends of these cables will be made off in the conventional way with an earth bond between the armour, and the cores jointed through by means of crimping ferrules, colour to colour (no taping required).

PVC jointing kits will be used and these will consist of a celluloid jointing mould which will be placed around the joint. Into this mould will be poured a clear plastic compound which will be allowed to set after which the jointing mould will be removed. No joint will be permitted in any run of cable unless specifically specified or specifically approved by the Engineer.

Terminating PVC cable will only be by means of glands and shrouds. Connecting of cable cores to bolted type terminals will be affected by means of suitably sized lugs which will either be sweated of crimped onto the relevant conductor ends.

C3.3.22.4 Testing of cable terminations

The following tests are required:

(a) Before terminations. Prior to jointing or termination the insulation and continuity tests by means of resistance will be done:

MV cable : 10000V
LV cable : 1000V

(b) After terminations. The following tests will be carried out on completed cable sections of laid and jointed cable.

The Contractor will be responsible for all necessary test equipment and instruments and the necessary electricity supply to carry out the test.

(c) Paper insulated cables. A test voltage (either A.C. or D.C.) will be applied between conductors and between each conductor and the metal sheath, which should be held at earth potential. The voltage should be increased to the full appropriate value, and maintained at this value for 15 minutes.

1	2	3	4	5	6	7
Voltage rating of cable	Test voltage					
	Belted cables				Single-core and Screened cables	
	Between conductors		From conductor To sheath		Between conductor and Sheath or screen	
	a.c	d.c	a.c	d.c	a.c	d.c
3.3/3.3	7	9	7	9	-	-
3.8/6.6	13	19	8	11	8	11
6.6/6.6	13	19	13	19	-	-
6.35/11	22	31	13	19	13	19
11/11	22	31	22	31	-	-
12.7/22	-	-	-	-	25	36
19/33	-	-	-	-	38	54

NOTE: Direct current tests should NOT be applied on cross-linked polyethylene cables. All cables will be

discharged immediately after each and every test.

(d) PVC insulated cables. A 2 000V Megger will be used and the insulation between phases and phases to earth will be measured.

(e) Rejected cables. If breakdown of any cable occurs during testing it will be replaced and/or the cable end will be re-done. This will be to the Contractor's account.

C3.3.22.5 Handling

During loading and off-loading the cable drums must be handled carefully to avoid damage to the inner layers of the cable. Drums must not be dropped onto or off the delivery vehicle. If no winch, hoist or other mechanical means is available then drums must be gently rolled down suitable ramp or rails.

When rolling a drum of cable on the ground, it must always be rolled in the direction of the arrow stencilled by the manufacturer on the drum flange.

Periodic rotation of wooden drums is essential to avoid drum timbers from rotting through rising damp.

Incorrect handling of drums could result in rejection of the cable by the Engineer, without additional time for the contract, or any other compensation being granted.

C3.3.22.6 Installation of cables

The following points must be adhered to for the correct installation of cables. Robust cable jacks with a spindle strong enough to carry the total load, will be securely mounted and operated with the spindle level. The securing ropes must be cut so as to leave the inner end free to move, during unrolling operations.

Correct wire mesh pulling stockings must be used for the drawing in of cables.

The use of adequate, (approximately every 2 metres) well-oiled cable rollers, of the correct size or larger, will be used.

All pipe ducts must be cleared of all foreign matter before cables are pulled in.

Adequate protection and attention at the entrance and exit to pipe ducts is essential.

Maximum pulling forces specified by the manufacturers must not be exceeded.

No cables must be laid when temperature is 10°C or lower unless the special conditions is required by the Engineer, have been fully met.

The following bending radii are the absolute minimum and under no circumstances must the radii be less than these dimensions for the size of cable specified.

PVC insulated cable = 10 x D
Paper insulated lead covered = 12 x D
XLPE insulated cables = 15 x D

Where D = overall sheath diameter

The Engineer reserves the right to reject any cables which have been twisted, kinked or damaged in other way, without additional time being granted for completion of the contract.

When laying the cable, a certain "snaking" must be permitted so that contraction during cold weather will not detrimentally affect joints, etc. Due allowance for this has been made in this specification.

C3.3.22.7 Depth of cables

Existing and proposed Post & Telecommunications (GPO) cables are laid at a depth of 600 mm. The minimum or shortest distance between a P & T cable and any other service will be at least 300 mm. The provision of a vertical concrete slab with a P & T cable on one side and an electrical cable on the other side, would meet the above requirement.

Unless authorised otherwise in writing, cable depths to underside of cable will be as follows:

	Single or 3 per trench (max)	
(i) MV Cables	1000 mm	1 050/900 mm
(ii) Pipes/ducts under roads for cables	900 mm	900 mm
(iii) LV Kiosk supply cables only	800 mm	900/750 mm
(iv) Street-lighting, high mast or service connection cables only in street reserves	750 mm	900/750 mm
(v) Cables in common trench with MV cables	800 mm	900/750 mm
(vi) MV Cables, across domestic public open spaces, Church, schools, etc. sites	1 200 mm	1 200/1050 mm
(vii) LV Cables across domestic, public open spaces, Church, school, etc. sites	900 mm	900/750 mm

Where the above conditions cannot be met, the Engineer may approve one of the following:
i) Cement slabs over the cables or
ii) Cable duct pipe encased in 300 mm square concrete.

Reference must be made to detailed specifications relative to road crossings and trenching.

C3.3.22.8 Marking of cables

All cable joint and route markers will be approximately 300 mm long and 230 x 230 mm at the base and 150 x 150 mm at the top.

Cast into the top of the cable marker will be a 100 x 100 mm x 1,6 mm stainless steel insert on which the details of the cable will be clearly stamped. Insert to be noticed to assist holding.

Letter sizes on route markers will be approximately 10 mm minimum.

Joints will be marked showing the size of the cable, as well as the voltage, i.e.

i) 150 mm² LV Joint
ii) 35 mm² 11kV Joint

Route markers will show the direction of the cable run, the size of the cable and the number of cores.

i) 150 mm² LV Cable
ii) 35 mm² 11kV Joint

Cable route markers will be placed at

i) Approximately every 30 metres along a straight run and
ii) Above every change of direction of the cable.

Where cables terminate at a substation or a kiosk, the cable will be marked by means of 10 mm wide copper or stainless steel strap fixed approximately 500 mm above ground level showing the circuit designation with reference to the drawing. PVC or plastic markers will not be permitted.

C3.3.22.9 Protection of cables

Where 11 000 Volt or higher voltage cables are installed then the cable will be covered with cement slabs or bricks as detailed in the schedule of quantities. The cement slabs will be approximately 300 mm wide x 50 mm thick.

The cement slabs or bricks will be approximately 300 mm above the MV cable.

All cables will be covered with the 300 mm wide PVC danger tape irrespective of any other protection required.

The PVC danger tape will be placed approximately 300 mm below natural ground level.
PVC Danger tape will be 300 mm wide, 800 gauge thick and printed with the words, DANGER, GEVAAR, INGOZI, plus the skull and crossbones.

C3.3.22.10 Measurement of cables

Quantities as shown on the Schedule of Quantities are approximate and the successful tenderer will physically measure the route on site before ordering his cable.

All surplus cable at the end of the contract must be removed by the Contractor and the quantities for payment will be adjusted accordingly.

Cables will be measured by the clerk of works by means of a measuring wheel once the trenches have been closed.

In addition to the cable lengths measured in the trenches, THE FOLLOWING SLACK WILL BE ALLOWED:

i)	Slack in cable trenches	+X%
ii)	6.6/11/22 kV at miniature substations	+ 3 m
iii)	6.6/11/22 kV at brick substations (actual measurement)	
iv)	6.6/11/22 kV at overhead poles	+ 10 m

C3.3.22.11 Thermal resistivity

Cable current carrying capacity is affected by the thermal resistivity of the substances encountered.

The following table of values will be used:

(g) Thermal Res. °Cm/W

Water logged ground	0,50
Concrete	0,90
Gravel	1,00
Sandy soil	1,20
Clay	1,60
Chalky soil	1,80

Impurities such as slag, ash and intense vegetation in the cable trench cause an increase of “g” and must be avoided, particularly close to the cable.

C3.3.22.12 Positions of cables

The centre line of the trench for a single cable will be 1 000 mm from the official property boundary line pegs (fences may not be correct) unless written instructions to the contrary, are issued.

Where two or more cables are placed in a single trench and the cable are spaced at 150 mm centres, then the trench centre line will be 1 000 mm from the official property boundary line pegs.

C3.3.22.13 Testing on completion

Tests on completion will be carried out on site in the presence of the Engineer, and the test results properly recorded and submitted in triplicate.

On each completed section of laid and jointed cable, the insulated resistance will be tested on approval, with an approved “Megger” type instrument of not less than 10 000 Volts for MV and LV Low voltage has reference to 1 000 Volts and less while MV medium voltage has reference to more than 1 000 Volts.

On each completed section of laid and jointed MV cable a high voltage test will be carried out.

The test will be performed in the same manner as that described in clause 8.3 of SABS 97: 1959 (as amended) but alternating or direct current may be used. See the appropriate test voltages in C3.3.31.4.

All MV and LV switchboards will be “Megger” tested to approval after erection and installation on site, using the applicable test voltages.

C3.3.22.14 Installed route plan and cable schedules

The Contractor is responsible to submit a final cable route plan (as installed) to the satisfaction of the Engineer. Due to allowance will be made in the tender price for this work.

Failure to comply with this requirement will result in the delay of the issuing of the acceptance certificate. No completion certificate will be issued if these requirements are not met.

The following will be indicated on this route plan in a satisfactory manner for all installed cables:

a) The route length for each cable as well as distances between joints.
b) Cable route with references to fixed points.
c) Cable joints with references to fixed points.
d) The cable drum number for each length.
e) Positions of cable route markers with reference to fixed points. The route markers will be numbered and a separate drawing showing the face plates of all route markers (numbered), with North reference will be submitted.

A site plan will be provided to the Contractor for this work, who will submit a plastic film and our (4) paper prints of the route plan.

Cable schedules will be submitted on A1 sized sheets containing information as required by the Engineer.

Any uncertainty in this respect will be cleared before submission of the tender.

C3.3.23 Earthing systems

C3.3.23.1 Scope

This section covers the earthing of electrical installations in buildings or other structures. The total earthing system of any electrical installation will be in complete accordance with sans 10142.

C3.3.23.2 General requirements of an effective earth

An effective earth must prevent dangerous over voltages arising between metallic structures, frames, supports or enclosures of electrical equipment and the ground during fault conditions.

An effective earth must be able to permit fault currents of sufficient magnitude to flow so as to operate protective devices to isolate the fault before damage can occur.

The ohmic resistance of an effective earth must be low enough to ensure that the step potential on the ground in the vicinity of the earthing point is within safe limits under fault conditions i.e. a voltage gradient not exceeding 40 V/m for fault durations exceeding 1s.

C3.3.23.3 Recommendations on the practical installation of earth electrodes

There are generally three types of earth electrodes.

(a) Trench earths

Trench earths comprise a bare copper or galvanised iron conductor laid at a minimum of 800mm below ground level, usually when underground cables are installed. This type of earth electrode provides a relatively large contact area between electrode and surrounding ground, makes contact with a variety of types of soil and soils of varying moisture content en route and is economical to install.

(b) Spike earths

Spike earths comprise rods of bare copper, copper-coated steel, stainless steel or galvanised steel designed for the purpose of penetrating ground to depths of up to several metres. A low resistance earth may sometimes be obtained by driving multiple spikes at some distance from each other in order to provide parallel paths.

In hard or rocky ground, it is usually necessary to drill holes into which earth spikes are inserted and then packed with soft soil.

(c) Foundation earths

Foundation earths comprise bare copper or galvanised iron conductors laid under the foundations of buildings, miniature substations, distribution pillars, bases of wooden, concrete or steel poles and structures. Because soil under foundations usually retains moisture, foundation earths are located to take advantage of this favourable condition. Furthermore, they are economical to install.

C3.3.23.4 Materials for earth electrodes

Bare copper, either in stranded, strip or rod form, is considered the most suitable general purpose material for earth electrodes. Its main disadvantage is its cost and susceptibility to theft.
Bare galvanised iron and steel, either in stranded, strip or rod form, has a satisfactory record of survival in non-aggressive soils and is more economical than copper. Bare aluminium is unsuitable as electrode material.

C3.3.23.5 Corrosion

Because galvanised ferrous metals corrode sacrificially to copper, galvanised iron and steel electrodes should not be buried in close proximity to bare copper.

C3.3.23.6 Technical requirements of neutral earthing

C3.3.23.6.1 Distribution systems

Multiple Earthed Neutral (MEN) and Protective Multiple Earthing (PME) systems.

Distribution equipment associated with transformer substations that are either ground mounted or pole mounted and fed by underground cable or overhead line, with or without an earth continuity conductor, (ECC), should be installed, connected and earthed in accordance with the following requirements:

(a) Where the resistance to earth of the HV equipment earth is 1 ohm or less, it is permissible to earth the LV neutral to the HV earth electrode.
(b) Where the HV equipment earth exceeds 1 ohm the LV neutral will be earthed at a minimum distance of 6m from the HV equipment earth (i.e. 6m from the HV electrode/s and also from any earthed metalwork connected thereto).
(c) Notwithstanding the requirements of (a) above, where transformers are associated with HV overhead lines, it is considered good practice to separate the HV and LV earth electrodes. The minimum earth separation should be 6m or one LV span.
(d) The overall resistance to earth of the neutral of an LV distributor or distribution system must not exceed 10 ohms.

(e) The LV neutral may be connected to other supply neutrals, earth electrodes, cable sheaths and armouring and these connections used to obtain the required earthing value of 10 ohms or less specified in par. (d). above.
(f) The neutral of underground and overhead LV distributors must be earthed at the remote ends of each distributor.
(g) Where the overall resistance to earth of the neutral of the distribution system exceeds 10 OHMS, the neutral will be earthed at intermediate positions on the distributor/s to reduce its resistance to earth to below this limit.
(h) The cross-sectional area of the neutral of all LV distributors must not be less than that of a phase conductor.
(i) No circuit-breakers, isolators, fuses, switches or removable links will be installed in the neutral between the transformer star point and the remote end of any LV distributor or service connection.
(j) All metallic sheathing and armouring of cables and all metalwork associated with meter cabinets, fuse pillars, etc., supporting or enclosing LV cables will be bonded to the distributor neutral conductor.
(k) Where a Separate Neutral Earth (SNE) cable is part of an MEN or PME system, the armouring and/or metallic sheath and any ECC will be bonded to the neutral at the supply end of the cable.
(l) To ensure the integrity of the neutral, it is recommended that all connections and joints on or to overhead line conductors be made by compression fittings or, alternatively double bolted connectors.
(m) MEN or PME may be applied to any single LV distributor without alterations to other LV distributors supplied from the same transformer.

Protective neutral bonding (PNB) system

Since the neutral is earthed at one point only, the question of multiple earthing does not arise and there is therefore no necessity to meet the MEN/PME technical requirements.

C3.3.23.6.2 Service connections

MEN System

The following conditions apply to consumers' service connections as well as service connections to traffic signals, road signs, street lighting and other power-consuming equipment installed in public places:

(a) All service connections must be by means of cable with an insulated phase, an insulated neutral conductor and an ECC.
(b) A single phase service connection comprises a live, a neutral and an ECC.
(c) A polyphase service connection comprises two or three phase conductors, a neutral and an ECC.
(d) The service neutral and ECC must be solidly and separately connected to the distributor neutral at the tee-off point.
(e) The consumer's earthing lead is connected to the Supply Authority's earth terminal which is in turn connected to the ECC in the service cable at the consumer's supply point.
(f) The neutral must not be connected to earth at the consumer's supply point.
(g) If required by the Supply Authority and earth electrode must be installed at the consumer's supply point.
(h) In a service connection to traffic signals, street light and other power-consuming equipment installed in public places, such equipment is earthed to the ECC of the service connection.

C3.3.23.6.3 PME System

(a) All service connections must be by means of a cable with an insulated phase and an insulated neutral conductor.
(b) A single phase service comprises a live conductor and a neutral.
(c) A polyphase service connection comprises two or three phase conductors and a neutral.
(d) The consumer’s earthing lead is connected to the supplier's neutral and to a mandatory earth electrode at the consumer's supply point.
(e) A label must be attached at the consumers supply point on his premises indicating that the installation is part of a PME system.

Note: It is not recommended that the PME system be applied to supply traffic signals, street signs or other power-consuming equipment installed in public places, because the PME system is inherently unsafe under "broken-neutral" conditions.

C3.3.23.7 Earthing of an electrical installation

(a) General

All earth conductors will be stranded copper with or without green PVC insulation. The conductors will be determined in accordance with SANS 10142, par. 4.6 where the earth does not form an integral part of the cable.

(b) Switchboards

A separate earth connection will be supplied between the earth busbar of the main switchboard and the earth busbar of every sub-switchboard. These connections will consist of bare or insulated stranded copper conductors installed along the same routes as the supply cables or in the same conduit as the supply conductors. Alternatively armoured cables with earth continuity conductors included in the armouring may be utilised.

(c) Sub-circuits

The earth conductors of all sub-circuits will be connected to the earth busbar in the supply switchboard in accordance with SANS 10142.

(d) Ring mains

Common earth conductors may be used where various circuits are installed in the same wiring channel in accordance with SANS 10142. In such instances the sizes of earth conductors will be specifically approved by the Employer. Earth conductors for individual circuits branching from the ring main will be connected to the common earth conductor with T-ferrules or soldered. The common earth will not be broken.

(e) Connections

Under no circumstances will connection points, bolts, screws, etc. used for earthing be utilised for any other purpose. It will be the responsibility of the Contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided. Unless earth conductors are connected to proper terminals, the ends will be tinned and lugged. Lugs may be crimped, using mechanical or pneumatic tools designed for this purpose, on condition that evidence is submitted that the method used complies with the performance requirements of BS 4579, Part 1: "COMPRESSION JOINTS IN COPPER."

(f) Non-metallic conduit

Where non-metallic conduit is specified or allowed, stranded copper earth conductors will be installed in the conduits and fixed securely to all metal appliances and equipment, including switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaries, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

(g) Flexible conduit

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

(h) Water pipes

Metal cold water mains will be bonded to the earth busbar in the Main Switchboard by solid 15 x 2mm copper strapping. All other hot and cold water pipes will be connected by 12 x 0,8mm perforated or solid copper strapping (not conductors) to the nearest switchboard. The strapping will be fixed to the pipe work by brass nuts and bolts and against walls be brass screws at 150mm centres. In all cases where metal water pipes, down pipes, flues, etc. are positioned within 1,6 m of switchboards, an earth connection consisting of copper strapping will be installed between the pipe work and the board. In vertical building ducts accommodating both metal water pipes and electrical cables, all the pipes will be earthed at each switchboard.

(i) Roofs

Where service connections consist of overhead conductors, all metal parts of roofs, gutters and down pipes will be earthed. One bare 10mm² copper conductor will be installed over the full length of the ceiling void, fixed to the top purlin and connected to the main earth conductor of each switchboard. The roof and gutters will be connected at 15m intervals to this conductor by means of 12 x 0,8mm copper strapping (not conductors) and galvanised bolts and nuts. Self-tapping screws are not acceptable. Where service connections consist of underground supplies, the above requirements are not applicable.

C3.3.24 Sensitive, photosensitive switches for the control of streetlights

C3.3.24.1 Scope

The switches shall be used for the control of street lights and shall be provided with switch contacts able to carry at least 5 A. The current during no-load conditions may not exceed 50 mA.

The units shall be suitable for 230 V + 6%, 50Hz, single-phase alternating current and shall comply with SANS 1777: Photoelectric control units for lighting (PECUs)

C3.3.24.2 Construction

The units shall be weather and vibration resistant as they are to be mounted on top of street-light luminaires. The design shall be of such a nature that the units will be able to withstand both hail damage and damage by stone-throwers. If the units do not meet with these requirements, separate wire screens shall be provided for this purpose.

The units shall be provided with a standard NEMA plug and socket. The socket shall have a bracket for mounting on a pole.

C3.3.24.3 All components shall be treated to be corrosion resistant.

C3.3.24.4 Technical requirements

The units shall switch on when the light intensity drops to 15 lux + 20% and shall switch off when the light intensity again reaches 40 lux + 20%.

When the unit is in the "on" position there must be a delay of one minute if it were to switch off in the case of a sudden increase in the light intensity.

The design of the switch shall be of such a nature that a positive switch-on and switch-off shall be ensured at all times.

3.3.25 HIgh mast light structure

C3.3.25.1 General

The proposed areas where the construction will be carried out, is mentioned in the Project Specifications. Positions of high mast lights are illustrated on layout drawings 33610-431-01-0 and 33610-431-02-0 respectively.

The final positions of the high mast structures and overhead line (s) will be established by the Engineer, Municipality and the successful bidder on site.

All high mast structures and ancillary equipment will comply with requirements given in the Standard and Project Specification. High mast structures will be installed on site by the supplier to ensure that the warranty remain valid.

Typical drawings are provided in the tender document. Bidders are required submit detailed drawings of the mast structures and concrete foundations for approval prior to placing orders.

C3.3.25.2 Technical data

All technical specifications, including drawings of the high mast lighting structures and luminaires will be attached to the specific technical schedule. The Engineer retains the right to request additional information for evaluation during tender evaluation.

The following information will accompany the tender proposal:

- Electrical wiring diagram of the electrical installations.
- Concrete foundation drawings + details.
- High mast light structure design.
- Locking facility drawing and specification.
- Adjustments of the angle of the light luminaire.

C3.3.25.3 High mast lighting structures

The high mast structures will be designed to carry the specified quantity of luminaires on top in accordance with SANS 10225 1991-1 Code of Practice for the Design and Construction of Lighting Masts. The bidder will provide relevant site information and typical wind speeds for the RIEMVASMAAK & VREDESVALLEI area.

C3.3.25.3.1 Design criteria

The masts will be octagonal in cross section and tapering uniformly to the top and will be assembled on site by means of one taper swage by a qualified installer.

The lower half of the masts will be divided into two fully enclosed half sections, which will form an octagonal section in the operating position with no unsightly steps or protrusions.

The pivoting will be located approximately at the mid-point of the mast and will consist of two full-length stainless steel sleeves and not of a shaft and hinge plates.

The pivoting half of the mast will be securely bolted to the base plate by means of an adequately designed vandal proof securing system. A special socket type spanner will be provided for this securing system.

A vandal-proof automatic locking device will be incorporated, requiring special tools for unlatching.

A suitable ring framework for the mounting of 8 x 279W LED floodlight luminaries will be fitted to the top of the mast.

The pivoting half of the mast will permit the accurate balancing of the top load in such a manner that one person using a Nylon roper only can perform the lowering operation.

Changes in the top load of the mast will be accommodated by changes in the counterweights at the base of the pivoting section of the mast.

A safety chain will connect the pivoting half with the fixed half to prevent accidental lowering or damage to the trailing cable.

The fixed part will have sufficient space to permit the mounting of electrical equipment such as Distribution board and a multi-pin socket.

High mast light structures will be fitted with a locking facility by means of a pad lock. The padlock will be of the Municipal range of padlocks for low voltage installations. The locking facility should be covered by a permanent steel cover for protection against vandalism.

The construction of the steel cover should be installed for non-hindered access to the pad lock.

All material used in the pivot construction will be of AISI grade 316 stainless steel. Steel used in the construction of the mast will have an ultimate tensile strength of between 460 and 680MPa and identical to SABS 1431 grade 355WA.

All parts of the masts will be hot dip galvanized to SANS 121 (ISO 1461) 2000-1 specifications and test certificates will be provided if required.

NO DRILLING, MACHINING OR WELDING WILL BE PERFORMED ON THE MASTS AFTER GALVANIZING.

C3.3.25.4 Concrete steel reinforced foundations

A foundation plan, adequately designed for the wind speeds, lowering of the mast, and based on a soil bearing capacity of 150kPa, giving details of the reinforcing required will be submitted. Soil bearing pressure and overturning safety factor will be stated prior to casting of the foundation.

In the event that soil bearing pressures are not adequate, the engineer should be informed prior to the casting of the foundation.

Excessive excavations will be filled with concrete; no backfilling will be used to compensate for excessive excavations

All reinforcing and foundation bolts will have a minimum of 100mm concrete cover. The 28 days cube strength of the concrete will be 25 MPa. Non-compliant test results will result in the replacement of the casted foundation at the cost of the Contractor.

All foundations will have a circular flat base from which a square plinth will rise to above the surrounding ground level. Top level of the foundation will be 150mm from N.G.L, with 45 degree chamfered edges

One or two PVC, Class B 50mm cable sleeves will be provided from the centre of the top of the foundation plinth, through the concrete to a point below ground level on the side of the plinth.

All concrete works will adhere to SANS 1200CA, class 25/38. Three concrete test cubes will be casted during the casting of each foundation. The test cubes will be tested to the applicable SANS requirements and the test results will be presented to the Engineer for approval.

After casting of the foundation, the slab will be covered by earth, properly compacted. The area around the plinth will be brought to the original level and will be left in a tidy and acceptable manner.

C3.3.25.5 Earthing

The foundation will be fitted with an earth mat prior to casting. Four (4) 1.2m long copper rods will be driven into the bottom of the foundation excavation in symmetrical manner at the outer edges of the foundation. The earth rods will be Cadwelded with 50m 70mm² bare copper earth conductor and bonded to the steel reinforcing.

The tails of the earth conductor will be bonded to the earth bar of the high mast structure. The 70mm² BCEC

in the cable trench should also be bonded to the earth bar.

C3.3.25.6 Electrical equipment in high mast light structure

The following electrical equipment will be installed in the mast structure in an IP30 rated distribution board:

a) 3 x 30A, 6kA Curve 2 circuit breakers for the main circuit breaker.
b) 1 x 20A, 30mA, 6kA earth leakage for socket outlet.
c) 1 x 16A industrial socket outlet mounted on outside of the distribution board.
d) 1 x 5 pin three phase contact socket and coupler for connection of trailing cable, rated at 30A similar to the Cekon CGW 532/6h.
e) 3 x 700V surge arrestors connected in an interphase manner and to ground.
f) 1 x digital energy meter capable of metering loads with a minimum rated current of 3A.
g) 1 x 40A, 6kA Contactor similar to the Klock Moeller of Telemecanique range.
h) 1 x 5A, 6kA bypass circuit breaker.

A splitter box with a IP65 rating will be mounted on top of the mast, fitted with a test socket of the CEE type with at least IP44 rating at the bottom of the box. A photocell will be mounted outside the splitter box and have a current carrying capacity of 10A @ 230V.

The splitter box will be fitted with a neutral copper bar for the connection of neutral conductors. Terminals should also be provided for connection of floodlight luminaires on the incoming cable en contact socket outlet.

The splitter box and photo cell will be installed so that the lighting at night will not affect the working of the control circuit.

Cables exposed to direct sunlight will be UV resistant.

The photocell will engage and disengage a contactor at 15 lux and 40 lux respectively and should be similar specified to a National type photocell. The contactor will be a 40A, 6kA contactor similar to the Klock Moeller of Telemecanique range.

All circuit breakers and isolators will have a rupturing capacity of 6kA and will bear the mark of the S.A.B.S. and will be accessible through cut outs in the cover without having to remove the cover.

All equipment will be clearly marked with engraved labels. No stick-on embossed tape will be used.

The distribution board will be fully wired and ready for connection to the incoming supply cables.

The installation of the distribution board will be in a manner for easy access and readings.

C3.3.25.7 Trailing cable

The electrical supply to the top splitter box will be facilitated with a flexible trailing copper cable. The cable will have a minimum of 2.5mm² x 7 cores and will be applied as follow:

a) Red phase : 2 Cores for three floodlight luminaires
b) White phase : 2 Cores for three floodlight luminaires
c) Blue phase : 2 Cores for three floodlight luminaires

Floodlight luminaires will be connected in manner to optimise the balance of the electrical load so that the blue phase will not exceed 3kW.

C3.3.25.8 Flood light luminaires

The following specification makes provision for LED flood light luminaires to be fitted on to the high mast structures specified in 3.3.28 and should be SABS approved and adhere to the following.

(a) Glass impact resistance rating of IK07.

(b) LED driver compartment will have an IP rating of 66.

(c) LED chip compartment will have an IP rating of 66.

(d) The casting will be of di cast aluminium to EN 1706 AC-44300

(e) The LED chipset and LED driver will be housed in two separate compartments.

(f) Neutral white colour temperature of 4000k, CRi greater or equal to 70

(g) Operating voltage of 230V@50Hz

(h) Surge protection class to withstand induced electromagnetic surges from lighting strikes and direct lightning strikes.

The construction will be of such a nature that the LED chipset and LED drivers can easily be replaced with the latest technologies. The fitment facilities of the LED should allow for the angel and level adjustments to optimise illumination. The construction of the luminaire should be manufactured so that the luminaire is de-energised if opened. An electronic heat monitoring circuit should also be included to prevent overheating of LED chips and power supply.

The floodlight luminaire will be constructed to withstand environmental conditions of extreme heat-, dust conditions and severe lighting.

The casing of the floodlight luminaire will be constructed to facilitate optimum heat dissipation of the LED's, prevent the accumulation of dust particles and moisture inside the casing, provide adequate shielding from mechanical impacts from hael, be able to withstand temporary mechanical loads from avifauna.

The final finish of the LED will be unpainted with the name tag/ plate engraved on the bottom with the nominal power consumption indicated and the code for the type of LED technology fitted.

Due to the rapidly developing nature of LED chips and drivers, proposals may be attached to Proposed Amendments and Qualifications on p. 34.

The combination of LED flood lights will provide a lux level of 1 (one) at a minimum radius of 98 meters from the centre of the high mast light structure.

C3.4 Particular (Project) Specifications

C3.4.1 GENERAL

Information regarding the scope of the project, the site, alterations and additions to the General Specification and other aspects relevant to the construction are given below.

Tenderers must take due cognisance of these and tender rates must make provision for any additional costs due to the factors mentioned.

Notwithstanding the information given, it remains the responsibility of the Tenderer to ascertain the actual conditions on site before submitting a tender.

The various items and materials will adhere to the standardised specifications listed in section C3.1.

C3.4.2 SUPPLY AUTHORITY

Kai !Garib Municipality is the supply authority and they will be responsible for the operation and maintenance of the electrical infrastructure on completion. Eskom will be the supply authority responsible for the electrical connections to the high mast lights.

C3.4.3. OTHER CONTRACTORS

New development and projects will be reported during appointment of the successful tender.

C3.4.4 PROVISION OF HIGH MAST LIGHTING IN THE KAI !GARIB DISTRIBUTION AREA

C3.4.4.1 A total of eight (12) high mast light structures are planned for RIEMVASMAAK & VREDESVALLEI. Refer to drawings 33610-431-01-0 and 33610-431-01-0 for the planned positions.

C3.4.4.2 High mast light structures and electrical connections

All high mast light structures will adhere to the Standard Specifications. The high mast structures will be 25 m high and of the scissor type. Alternatives for other masts are provided in the bill of quantities and may be used when the successful tenderer.

The rates for the alternatives will also be considered during the tender evaluation.

The high mast lighting structures will be placed in accordance with the layout drawings.
The electrical connection for the high mast light will be provided by Eskom. The materials and labour for the connection between the high mast light and distribution board of the high mast is included in the Bill of Quantities and must be installed by the successful bidder

C3.4.3 EARTHING

Earthing is done according to the General Technical Specifications and applicable Eskom D-DT drawings. SWA must be bonded to the earth bar.

All cable feeders will be installed with an appropriate bare copper electrical conductor; refer to attached drawings for cable routes and the appropriate bare copper sizes.

C3.4.4 INSPECTIONS, TESTING, COMMISSIONING AND HANDING OVER

C3.4.4.1 PHYSICAL INSPECTION PROCEDURE

a) Once the Contractor has completed the installation, written notice will be given to the Engineer in order that a mutually acceptable date can be arranged for a joint inspection.
b) During the course of the inspection, the representative of the Client will compile a list of items (if any) requiring further attention. A copy of this list will be provided to the Contractor who will have a period of 7 days in which to rectify the offending items of the installation.
c) The Contractor will then provide written notice that he is ready for an inspection of the remedial work to the offending items.
d) This procedure will continue until the entire installation has been correctly completed to the satisfaction of the Employer.

C3.4.4.2 TESTING AND OPERATIONAL INSPECTION PROCEDURE

a) In addition to the above the Contractor will have the complete installation tested and approved by the engineer where applicable.
b) Subsequent to the above testing and approval, the Contractor will in the presence of the representative of the Client test all circuits relays and equipment for proper functioning and with respect to:

(i) Phase balance.
(ii) Insulation level.
(iii) Polarity.

c) The Engineer has the right to call for or to execute any reasonable additional tests that may be necessary to render proof of the specification requirements having been met. The Contractor will render all the necessary assistance to have such tests carried out without delay.
d) All tests will be carried out in the presence of the Engineer and the costs will be included in the unit prices for the installation thereof. Upon completion of the installation and within 3 months of the handover date, the Contractor will provide and make available a recording voltmeter to record the voltage at three locations in the area over a period of 48 hours each. These locations will be nominated by the Client.

C3.4.4.3 COMMISSIONING

On completion the contractor will commission all the equipment installed to ensure proper and safe functioning.

C3.4.4.4 "AS BUILT" DRAWINGS AND COMPLETION DOCUMENTATION

a) As each portion of the work is completed, the Contractor will provide the Employer with as-built drawings showing the all sizes and the exact location measured from fixed points of all substations, miniature substations, HV & LV distribution boxes, cables, transmission lines, each outlet point, etc.
b) The safety posters as required by the OHSA will be permanently mounted inside substation buildings and on the outside of all housings of electrical equipment.
c) In addition a complete reticulation diagram showing all supply cables and switchboards will be provided behind a plastic cover in the substation or adjacent to the Main Switchboard if not located in a substation as well as a schematic diagram of the main supply system.

d) Moreover, upon completion of the work the Contractor will appoint a land surveyor to check all the pegs along the route and to reinstate them if necessary. The land surveyor will then submit a certificate confirming that all beacons are in order.
e) The Health and Safety file containing all documentation as required in the Construction Regulations promulgated under the OHSA. All commissioning testing information will also be filed on this file.
f) Copies of all Certificates of Compliance of the completed houses/dwellings will be handed over to the employer
g) Brochures of all equipment supplied must be provided for record purposes.

C3.4.4.5 CLEARING UP AND VACATING OF SITE

After completion of the Contract and after approval has been obtained from the Engineer, the Contractor will remove everything he has brought to the site or has handled in the execution of the Contract, as well as all excavated material which cannot be backfilled again, and will leave the site in a clean and neat condition to the satisfaction of the Engineer.

C3.4.4.6 FINAL HANDOVER OF THE PROJECT TO THE CLIENT

The installation will be formally handed over to the Client on completion by means of a written hand over certificate.

The installation will not be regarded as complete and handed over to the Client until all of the above requirements have been met.

C3.5 List of Drawings

C3.5.1 DESIGN SERVICES AND ACTIVITY MATRIX

Works designed by, per design stage:

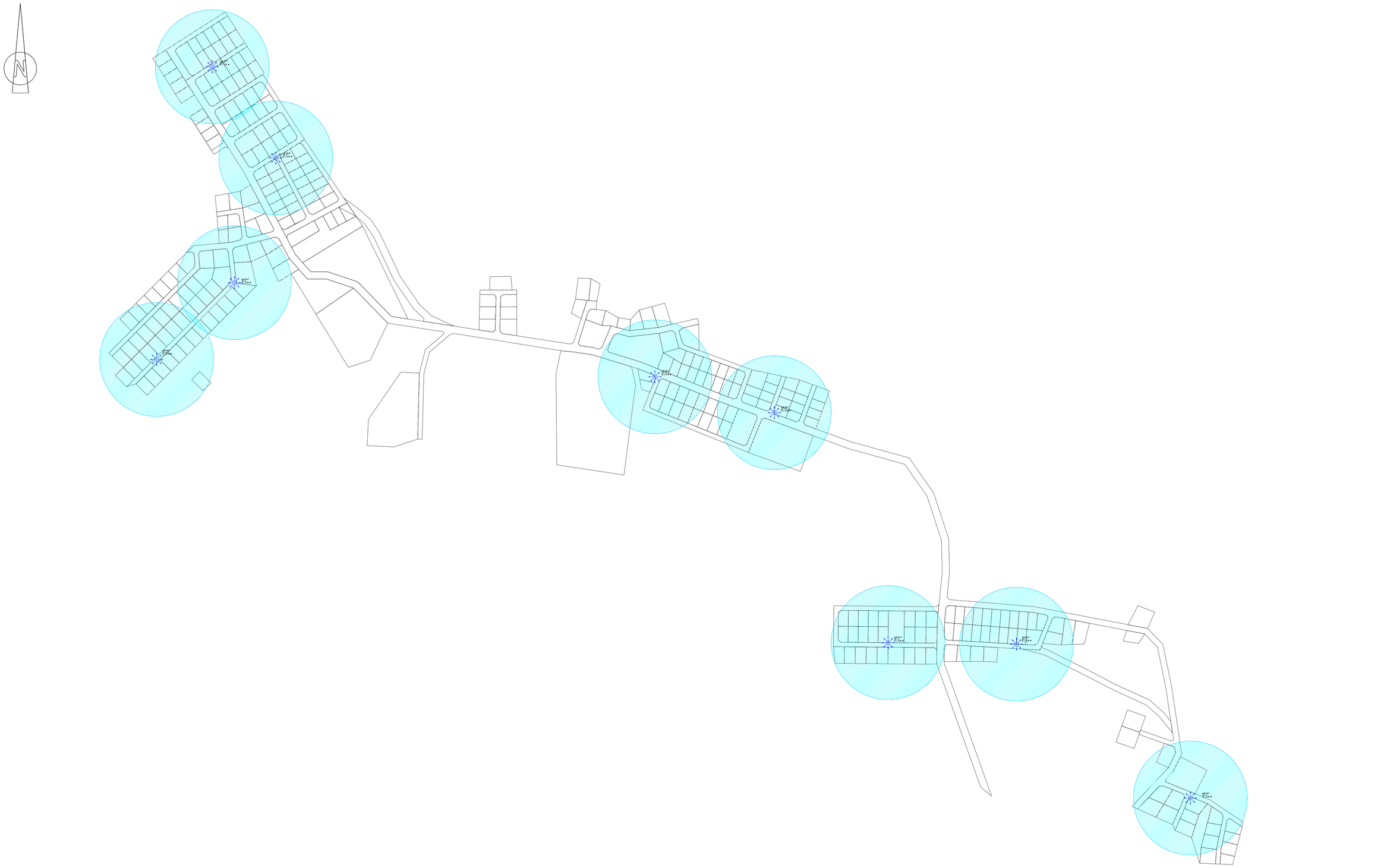
Concept, feasibility and overall process	Consulting Engineers for Employer
Basic engineering and detail layout to tender stage	Consulting Engineers for Employer
Final design to approved for construction stage	Consulting Engineers for Employer
Temporary works	Contractor
Preparation of “as built” drawings	Contractor

C3.5.2 DRAWINGS

The drawings listed below are attached in order to give an overview of the project.
Additional construction drawings will be issued to the Contractor by the Engineer/Employer on the commencement date and from time to time as required.

C3.5.2.1 DRAWINGS ATTACHED

DRAWING NO.	**TITLE**
33610 -431-01-0	Proposed High Mast Lighting Layout for RIEMVASMAAK
33610 -431-02-0	Proposed High Mast Lighting Layout for VREDESVALLEI
33610 -002-01-A	Project Notice Board 1/2
33610 -002-02-A	Project Notice Board 2/2
33610 -400-01-A	Combined Services Excavations
33610 -400-02-A	Typical High Mast Concrete Foundation
33610 -400-03-A	Electrical installation for High Mast Light
D-DT 0630 3-3-6	Protection Earthing



LEGEND

- EXISTING POLE TRANSFORMER
- EXISTING 11m WOOD POLE
- EXISTING 9m WOOD POLE
- EXISTING 7m WOOD POLE
- EXISTING STAY
- EXISTING SHORT STAY
- EXISTING STRUT POLE
- EXISTING EARTH MAT
- EXISTING CONDUCTOR TERMINATION
- EXISTING ABC CONDUCTOR
- HOUSEHOLD AIRDAC CONNECTION
- HOUSEHOLD CABLE CONNECTION
- EXISTING CABLE JOINT
- PLANNED POLE TRANSFORMER
- PLANNED 11m WOOD POLE
- PLANNED 9m WOOD POLE
- PLANNED 7m WOOD POLE
- PLANNED STAY
- PLANNED SHORT STAY
- PLANNED STRUT POLE
- PLANNED EARTH MAT
- PLANNED CONDUCTOR TERMINATION
- PLANNED ABC CONDUCTOR
- PLANNED HOUSEHOLD AIRDAC CONNECTION
- PLANNED HOUSEHOLD CABLE CONNECTION
- PLANNED CABLE JOINT
- TRANSFORMER DESCRIPTION AND CAPACITY
- 25 m HIGH MAST ILLUMINATION UNIT WITH 8 X 279 WATT LED LIGHTS
- END POINT EARTH FOR LV FEEDER
- UNDERGROUND CABLE CONNECTION
- 5m CABLE SLEEVE

A,B,C.../ : BEFORE TENDER
0 / : TENDER DRAWING
1,2,3.../ : AFTER TENDER
Z / : AS BUILT

/A : BY CLIENT
/B : BY ARCHITECT
/C : BY MECHANICAL OR ELECTRICAL
/D : BY BVI
/E : BY OTHER ( )

NOTES

ISSUE DATE:	DRAWING SIZE:	REVISION:
09/10/2018	A1/A3	0

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	INFO ONLY
X	FOR TENDER
	FOR CONSTRUCTION
	AS-BUILT

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Upington Office
Registration no: 1995/000054/07
ISO 9001 Registered
BBBEE Level 1
CESA Consulting Engineers South Africa

CLIENT
KAI !GARIB MUNISIPALITEIT-MUNICIPALITY

PROJECT
PROVISION OF HIGH MAST LIGHTS IN RIEMVASMAAK AND VREDESVALLEI

DRAWING TITLE
PROPOSED LAYOUT FOR HIGH MAST LIGHTS IN RIEMVASMAAK

APPROVED BY BVI

ENGINEER/TECHNOLOGIST	REG. NO.	APPROVED

SCALE	A1 (1:4000)	DRAWN	C. MOKHOLOANE
DESIGN	Q. TITUS	CHECKED	Q. TITUS

PLAN NUMBER	REVISION NO.	DATE SAVED
33610-431-01	0	14/01/19

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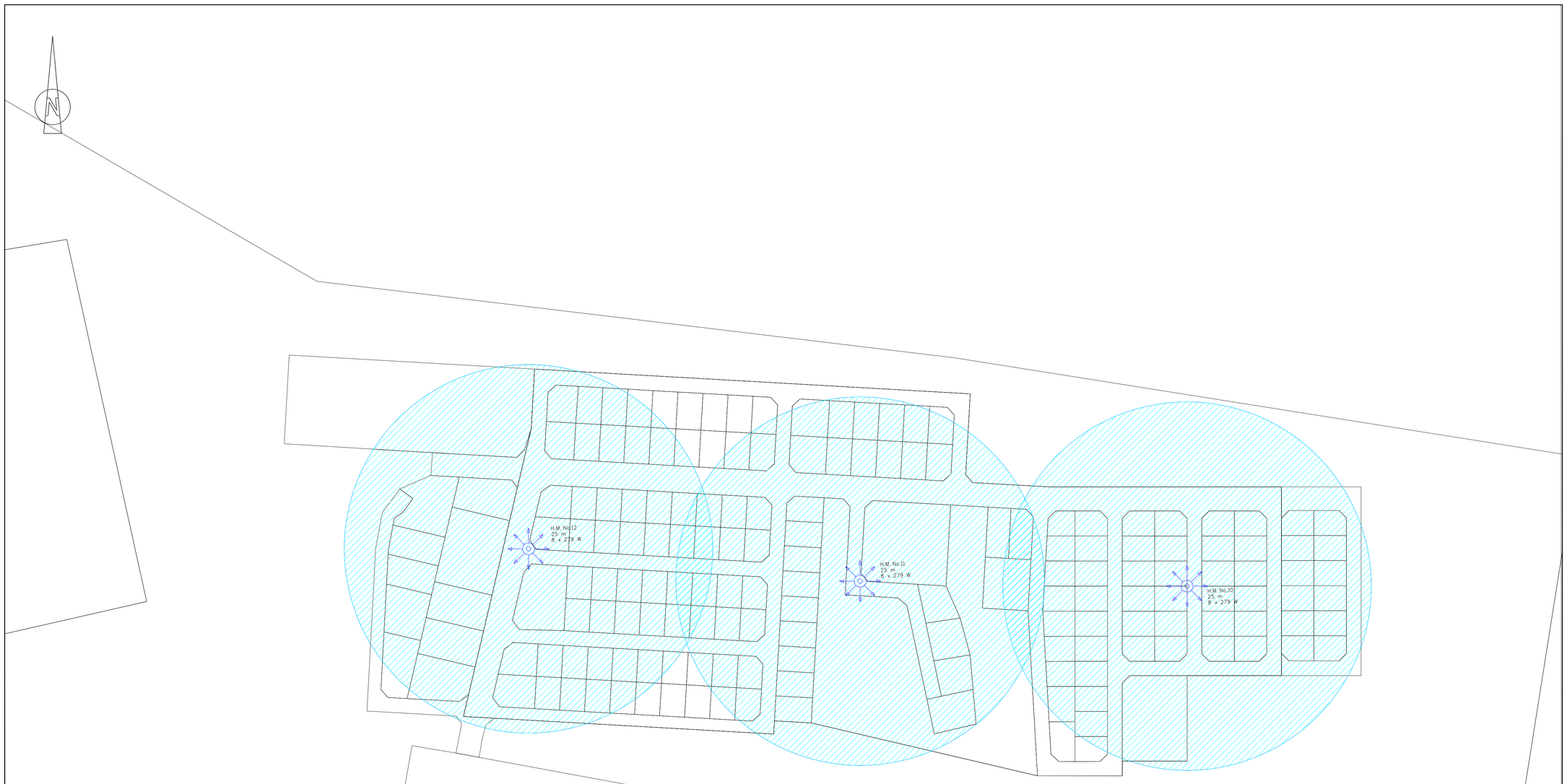

LEGEND

EXISTING POLE TRANSFORMER
EXISTING 11kV WOOD POLE
EXISTING 5m WOOD POLE
EXISTING 7m WOOD POLE
EXISTING STAY
EXISTING SHORT STAY
EXISTING STRUT POLE
EXISTING EARTH MAT
EXISTING CONDUCTOR TERMINATION
EXISTING HDC CONDUCTOR
HOUSEHOLD AIRDAC CONNECTION
HOUSEHOLD CABLE CONNECTION
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PLANNED SHORT STAY
PLANNED STRUT POLE
PLANNED EARTH MAT
PLANNED CONDUCTOR TERMINATION
PLANNED HDC CONDUCTOR
PLANNED HOUSEHOLD AIRDAC CONNECTION
PLANNED HOUSEHOLD CABLE CONNECTION
PLANNED CABLE JOINT
TRANSFORMER DESCRIPTION AND CAPACITY
25 m HIGH MAST LIGHTING STRUCTURE, EQUIPPED WITH X 279 WATT LED LIGHTS
END POINT EARTH FOR LV FEEDER
UNDERGROUND CABLE CONNECTION
5m CABLE SLEEVE

AMENDMENTS CODE

A,B,C,../ : BEFORE TENDER
0 / : TENDER DRAWING
1,2,3,../ : AFTER TENDER
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Uitenhage Office
Registration No. 1960/006924/07
ISO 9001 REGISTERED
BBBEE Level 1
CESA Consulting Engineers South Africa

CLIENT

KAI !GARIB MUNICIPALITEIT-MUNISIPALITY

PROJECT

PROVISION OF HIGH MAST LIGHTS IN RIEMVASMAAK AND VREDESVALLEI

DRAWING TITLE

PROPOSED LAYOUT FOR HIGH MAST LIGHTS IN VREDESVALLEI

APPROVED BY BVI

ENGINEER/TECHNOLOGIST | REG. NO. | APPROVED

SCALE	A1 (1:1500)	DRAWN	C. MOKHOLOANE
DESIGN	Q. TITUS	CHECKED	Q. TITUS
PLAN NUMBER		REVISION NO.	DATE SAVED
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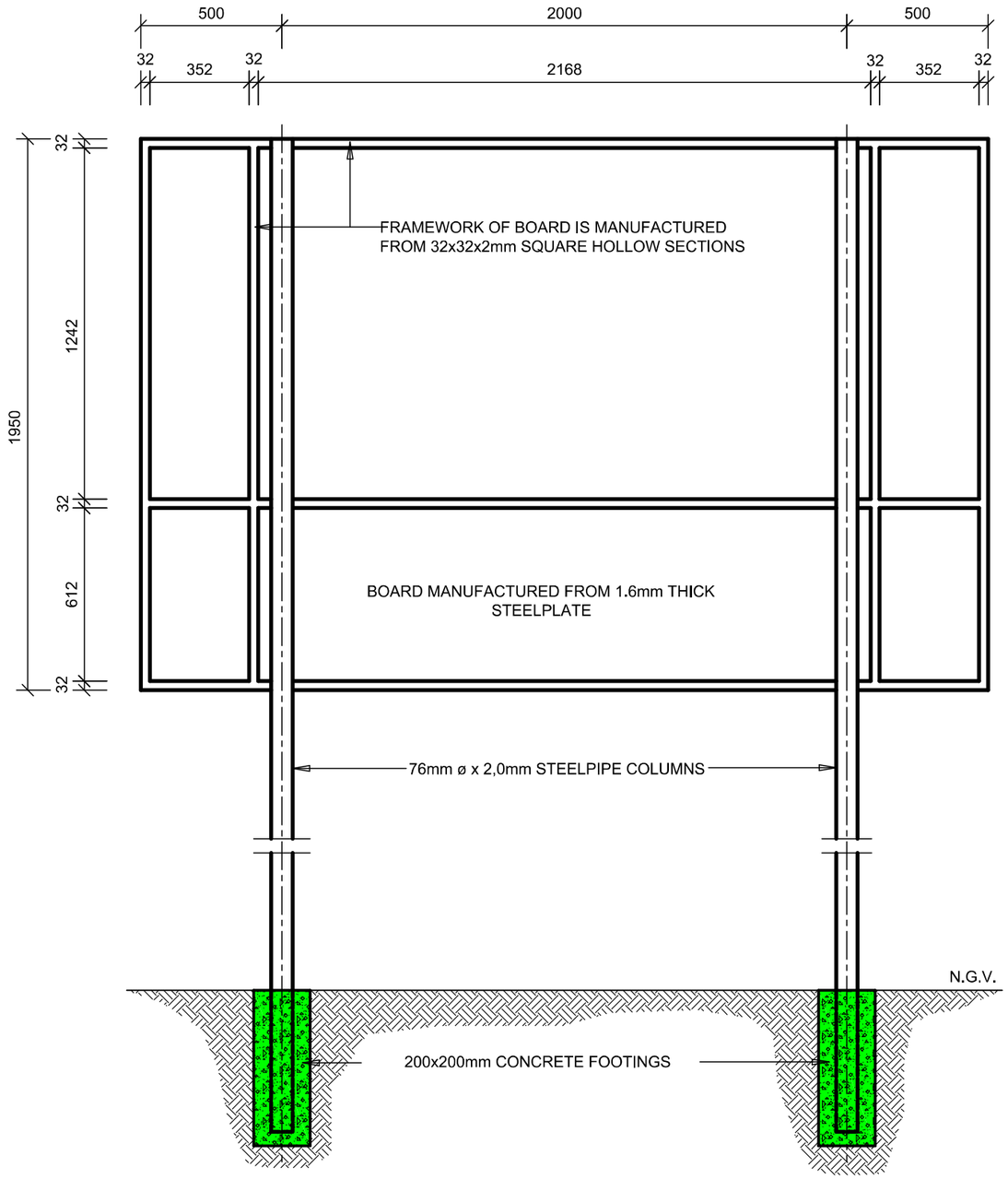

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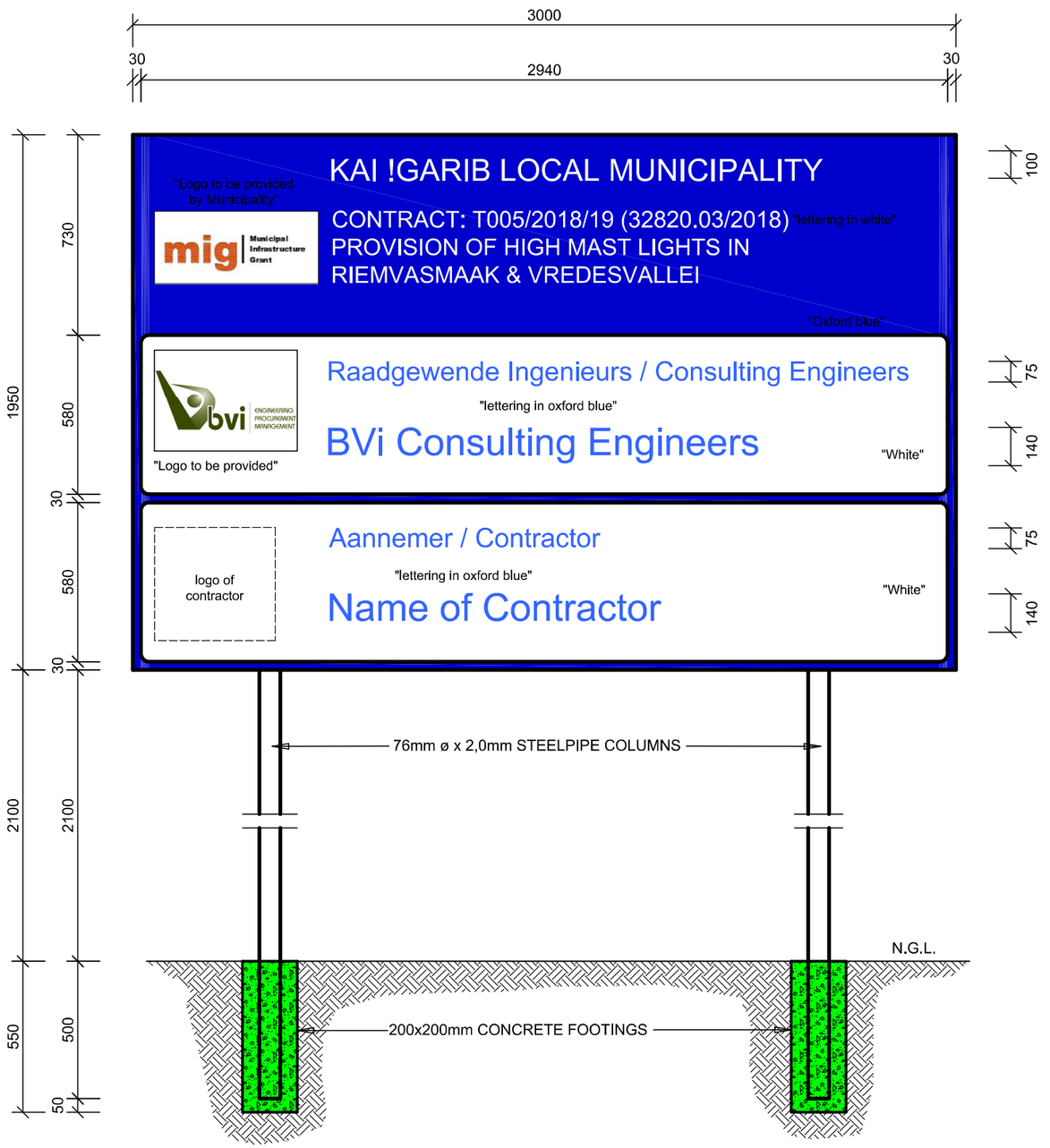

FRONT VIEW - 1:20

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ISO 9001 Registered
EBBEE Level 1
CESA Consulting Engineers South Africa

PROJECT

PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK & VREDESVALLEI

DRAWING TITLE

NOTICEBOARD (SHEET 1 OF 2)

APPROVED BY BVI

E. V. JAARSVELD PR. ENG.	20160578	20/02/2019
ENGINEER/TECHNOLOGIST	REG. NO.	DATE

SCALE	1:20	DRAWN	C. MOKHOLOANE
DESIGNED	Q. TITUS	CHECKED	Q. TITUS

PLAN NUMBER	REVISION NO.	DATE SAVED
LAYERS USED: 33610-002-01	0	20 Feb 2019

32820.03-002-01-0.drw

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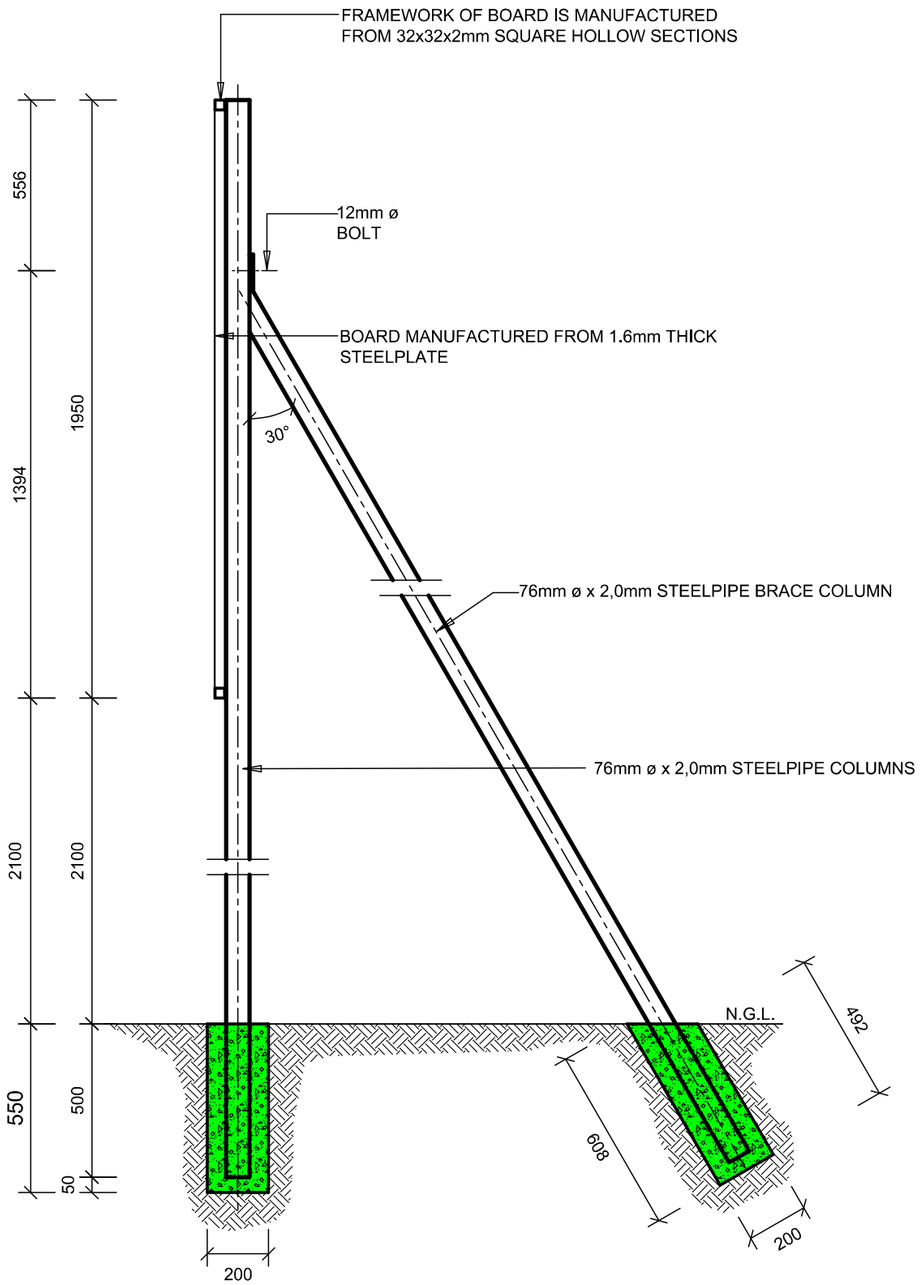
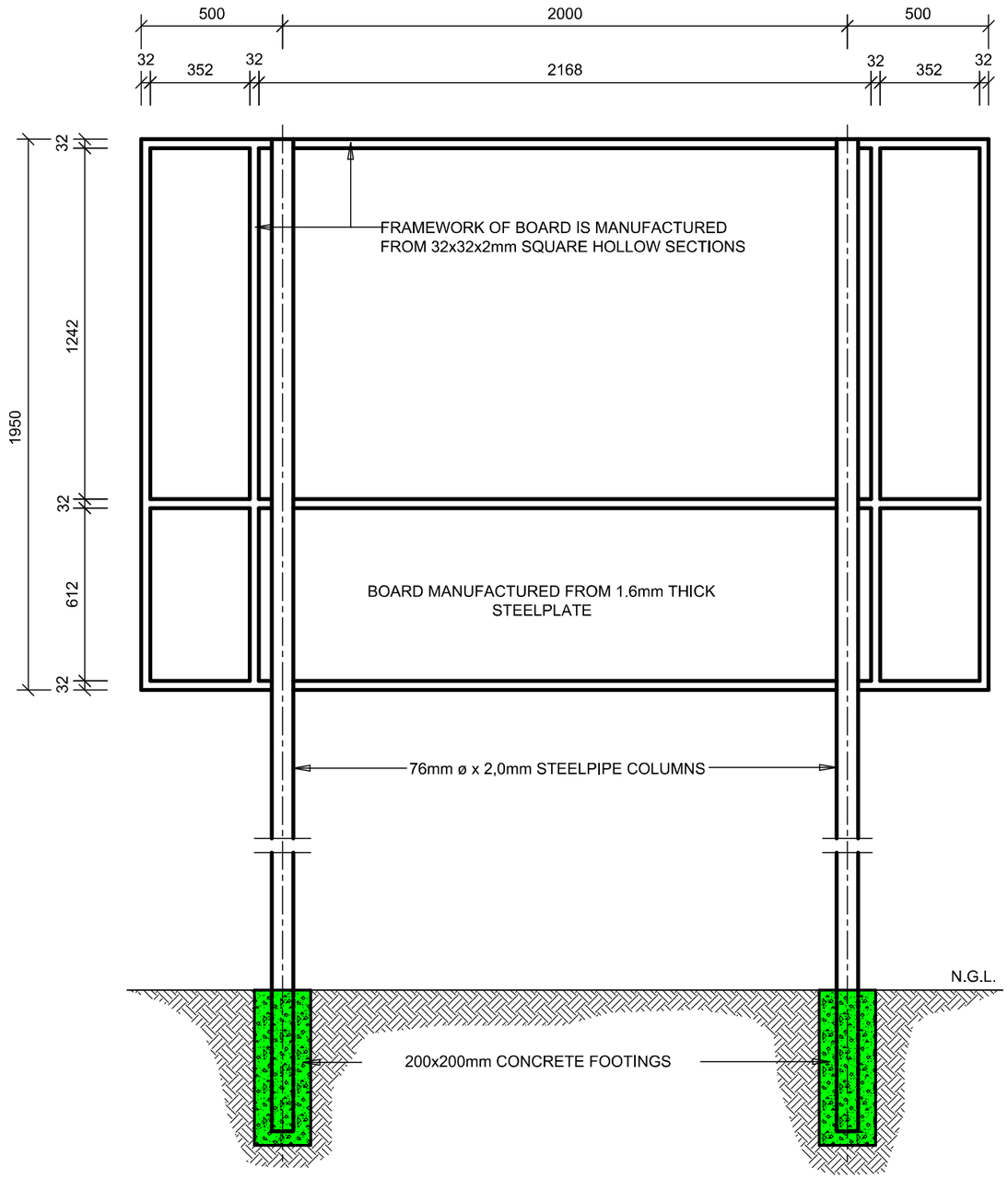


SIDE VIEW - 1:20



BACKVIEW - 1:20

NOTES/ LEGEND

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PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK & VREDESVALLEI

DRAWING TITLE

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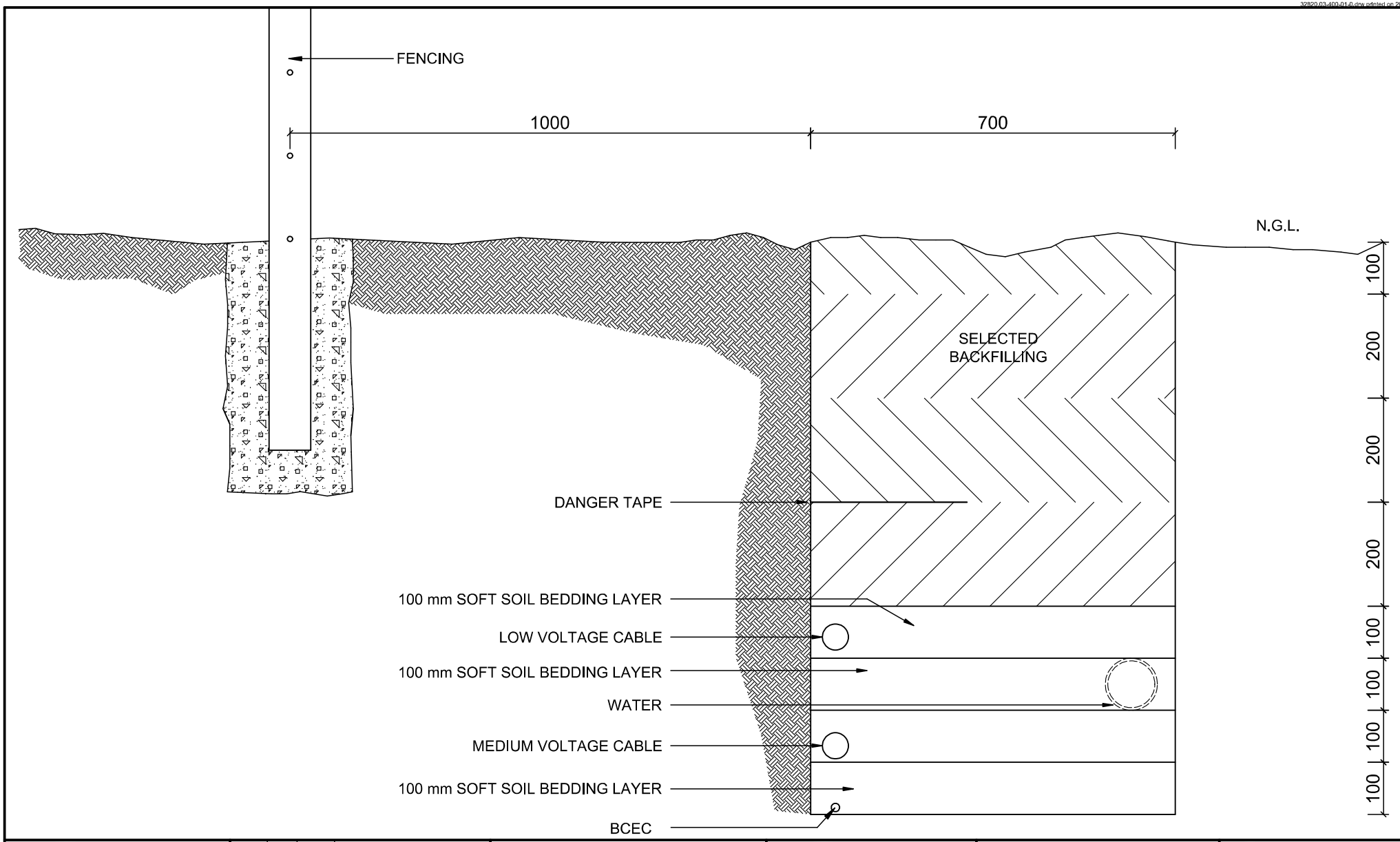

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PROJECT

PROVISION OF HIGH MAST LIGHTING IN RIEMSVASMAAK & VREDESVALLEI

DRAWING TITLE

COMBINED CABLE TRENCH EXCAVATIONS

APPROVED BY BVI

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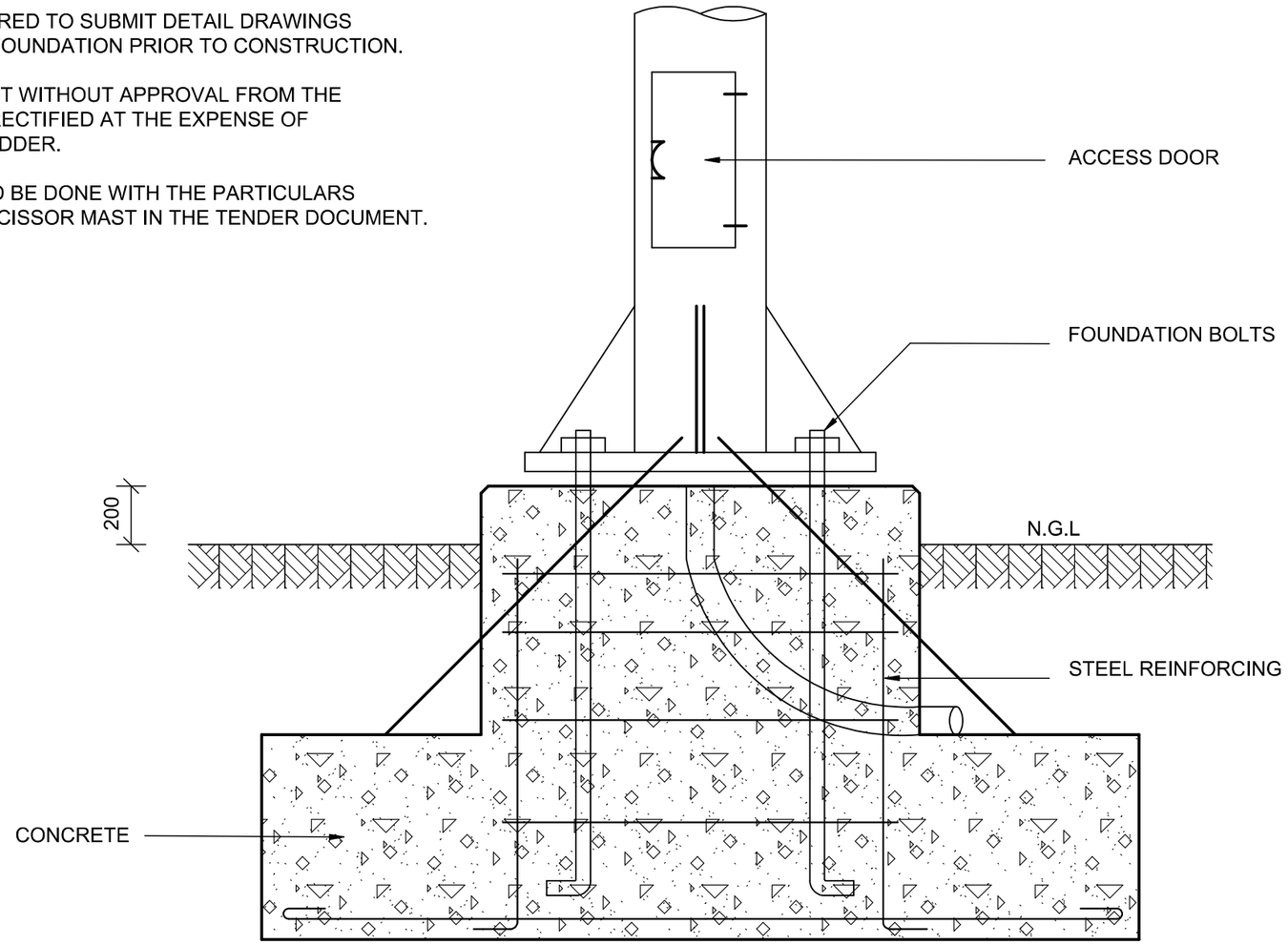
NOTE:

BIDDERS ARE REQUIRED TO SUBMIT DETAIL DRAWINGS
OF THE HIGH MAST FOUNDATION PRIOR TO CONSTRUCTION.

WORKS CARRIED OUT WITHOUT APPROVAL FROM THE
ENGINEER WILL BE RECTIFIED AT THE EXPENSE OF
THE SUCCESSFUL BIDDER.

THE DESIGN SHOULD BE DONE WITH THE PARTICULARS
OF THE SPECIFIED SCISSOR MAST IN THE TENDER DOCUMENT.



THE SIZE AND DESIGN OF THE FOPUNDATION MUST BE
ADAPTED TO THE TYPE OF MAST AND WIND CONDITIONS
OF THE SPECIFIC SITE.

NOTES / LEGEND

ISSUE DATE:	DRAWING SIZE:	REVISION:
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CITY ENGINEER / CLIENT | REG. NO. | DATE

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1,2,3.../ : AFTER TENDER
Z / : AS BUILT

/A : BY CLIENT
/B : BY ARCHITECT
/C : BY MECHANICAL OR ELECTRICAL
/D : BY BVi
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Free State	Bloemfontein	(051) 447-2137	bfn@bvifs.co.za
	Welkom	(057) 353-2499	wel@bvifs.co.za
Northern Cape	Upington	(054) 337-6800	upt@bvinc.co.za
	Springbok	(027) 712-9990	spk@bvinc.co.za
KwaZulu Natal	Durban	(031) 266-8382	dbn@bvikn.co.za
	Empangeni	(035) 788-0230	emp@bvikn.co.za
Eastern Cape	Port Elizabeth	(041) 373-4343	bviec@mweb.co.za
Western Cape	Cape Town	(021) 527-7000	cpt@bvlwc.co.za

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KAI !GARIB
MUNICIPALITY

PROJECT

PROVISION OF HIGH MAST
LIGHTING FOR RIEMVASMAAK
& VREDESVALLEI

DRAWING TITLE

GENERIC HIGH MAST LIGHT
CONCRETE FOUNDATION

APPROVED BY BVi

E. V. JAARSVELD PR. ENG. | 20160578 | 20/2/2019
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

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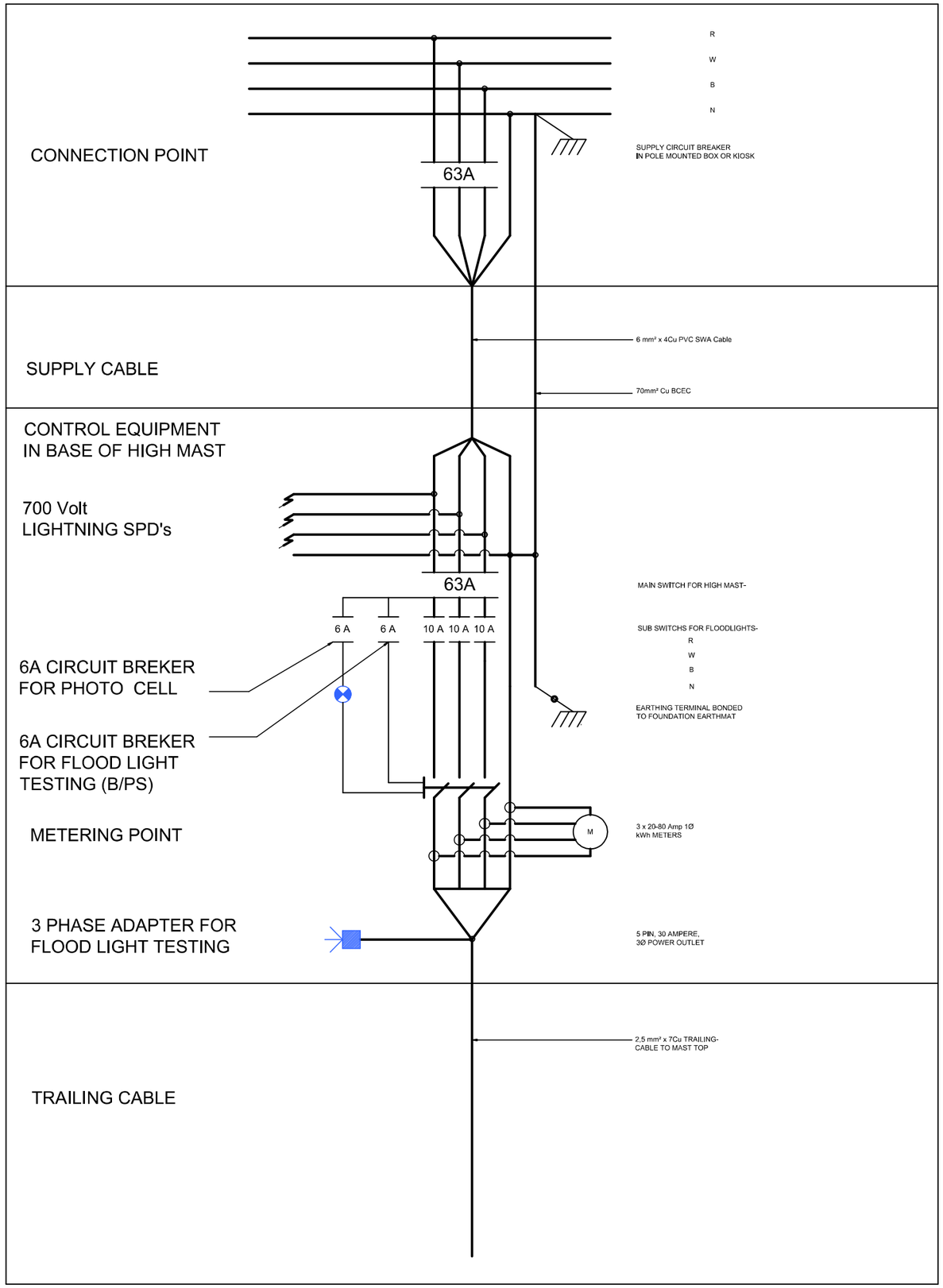

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KAI !GARIB MUNICIPALITY

PROJECT

PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK & VREDESVALLEI

DRAWING TITLE

HIGH MAST LIGHT ELECTRICAL INSTALLATION

APPROVED BY BVi

E. V. JAARSVELD PR. ENG. | 20160578 | 20/2/2019
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

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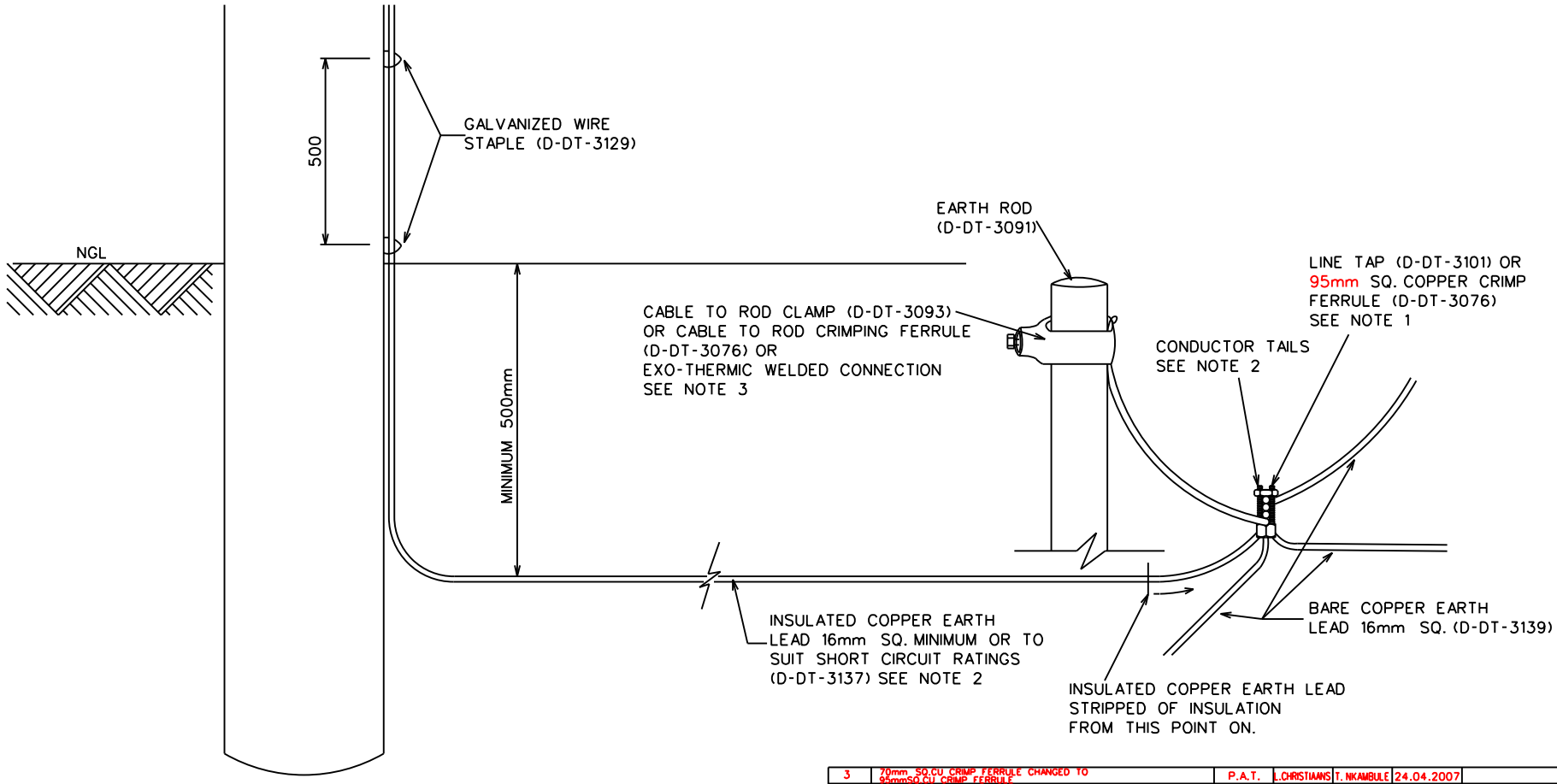

NOTE :

1. A DEEP INDENT CRIMP MAY BE USED ON THE 95mm SQ. COPPER FERRULE. THE CONNECTION AT THE MAIN JUNCTION POINT OF A THREE POINT STAR OR ALTERNATIVE ELECTRODE IS CRITICAL. AN EARTH ROD CLAMP (D-DT-3093) IS NOT SUITABLE FOR THIS CONNECTION.
2. INSULATED 5.19mm DIA. COPPER-CLAD STEEL CONDUCTOR (D-DT-3137) MAY BE USED AS AN EARTH LEAD IN AREAS WHERE COPPER THEFT IS OF CONCERN. WHERE COPPER-CLAD STEEL CONDUCTOR IS USED, THE CONDUCTOR TAILS MUST PROTRUDE FROM THE MAIN JUNCTION POINT CONNECTION BY 100mm.
3. WHEN USING A CABLE TO ROD CLAMP (D-DT-3093), THE CLAMP BOLT IS TIGHTENED ONTO THE EARTH ROD AND NOT THE COPPER LEAD.
4. THE INSULATION ON THE 16mm SQ. INSULATED CONDUCTOR FROM THE TRANSFORMER MUST BE STRIPPED BACK TO ENABLE A CONNECTION TO THE FERRULE OR LINE TAP.

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
3	70mm SQ.CU CRIMP FERRULE CHANGED TO 95mmSQ.CU CRIMP FERRULE	P.A.T.	L.CHRISTIAANS	T. NKAMBULE	24.04.2007	
2	DISCRIPTION INDICATION CORRECTED	P.A.V.	R. KELLY		24.04.2007	
1	LINE TAP SHOWN INSTEAD OF FERRULE, POSITION OF STRIPPED CONDUCTOR SHOWN & LOGO CHANGED AS PER NEW CORPORATE ID	P.A.V. PBM	T. NKAMBULE		31.07.2006	

Eskom

AUTH: P. CROWDY
DATE: 19.11.1999
CHKD: A.ABROSIE
DATE: 19.11.1999
DRAWN: J.F.S.
DATE: 29.06.1999

EARTHING

MV AND LV EARTH ELECTRODES DETAILS

D-DT-0642

SET	SHEET	REVISION
1	1	3

A3L

Part C4: Site Information

C4: SITE INFORMATION

C4.1 SITE FOR PROPOSED CONSTRUCTION

The construction will take place in RIEMVASMAAK & VREDESVALLEI in the Northern Cape.

C4.2 SUBSOIL INVESTIGATIONS

Tenders will familiarise themselves with the soil and subsoil conditions during the compulsory tender meeting at the proposed construction site.

C4.3 SITE FEATURES REQUIRING SPECIAL ATTENTION

C4.3.1 Access for others

The Contractor will allow safe access for other contractors and the employer's personnel during the contract period.

C4.3.2 Disposal

The Contractor will make his own arrangements, to the Engineer's satisfaction, for the disposal of unsuitable excavated material, surplus material and construction waste resulting from the Works.

C4.3.3 Weather data

Limited weather data is included in this specification and the Contractor is referred to the Weather Bureau, Department of Transport, Private Bag X097, Pretoria 0001 for detail information.

C4.4 SITE FACILITIES TO BE PROVIDED BY THE CONTRACTOR

C4.4.1 Office, workshops and stores

The Contractor will erect and maintain at his own cost all covered storage and offices that are required. The yard will be fenced by the Contractor and maintenance thereof will be his responsibility. The yard will at all times be kept in a clean and tidy condition and to the satisfaction of the Engineer.

On completion of the project, all structures and installations will be removed from site, to the satisfaction of the Engineer.

C4.4.2 Sanitary facilities and refuse disposal

Temporary and/or portable toilet facilities will be provided at the Contractor's yard by the Contractor and removed on completion of the Works.

A refuse control system will be established by the Contractor. All waste will be collected and disposed of as required by the Engineer.

C4.4.3 Telephone and telecommunications

The Contractor will be responsible for the supply on site of his own telephone or cellular phone.

C4.4.4 Accommodation of employees

The Contractor will make his own arrangements for the provision of adequate accommodation for his employee.

Annexure A – Bill of Quantities

KAI !GARIB MUNICIPALITY
(33610/2019): PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK AND VREDESVALLEI
SCHEDULE A: PRELIMINARY AND GENERAL

Date: 2019/02/20
Revision: 00

Item no.	Description	Unit	Qty	Rate	Amount
1	PRELIMINARY AND GENERAL				
1.1	Fixed Charge Items				
1.1.1	Contractual requirements, establish facilities on site:				
a)	Office and storage sheds	Sum	100%		
b)	Living accommodation	Sum	100%		
c)	Ablution and latrine facilities	Sum	100%		
d)	Water supplies, electric power & access	Sum	100%		
1.1.2	Remove Contractor's site on completion	Sum	100%		
1.1.3	Allow for project notice board x 2	No	100%		
1.1.4	Allow for co-operation and programming with other parties that may be working on site	Sum	100%		
1.1.5	Allow for submission and revisions of Works programme	Sum	100%		
1.1.6	Allow for the submission of instruction manuals and record drawings	Sum	100%		
1.1.7	Allow for the required Guarantee of 10% of the Contract Amount	Sum	100%		
1.1.8	Allow for compliance with all statutory requirements as specified	Sum	100%		
1.1.9	Health and Safety. The Contractor shall, as a condition of the contract, ensure that the Site of the Works and the Works at all times comply with all relevant legislation regarding health and safety of employees, as well as public legitimately on the Site or in the vicinity of the Site, while preventing unauthorized access to the Site of the Works. Contractor to list all items of health and safety included in the lump sum cost and provide the Employer with the aforementioned list at tender:	Sum	100%		
1.1.9.1	Training	Sum	100%		
1.1.9.2	Health and Safety Plan, (Documentation)	Sum	100%		
1.1.10	Mobile Crane Truck Make provision for a mobile crane truck for the hoisting and installation of high masts including Health and Safety Plan & Operating licences				
a)	Transport to Riemvasmaak and Vredesvallei	Sum	100%		
b)	Site establishment	Sum	100%		
c)	Qualified operator and personnel	Sum	100%		
1.1.11	ESKOM Electrical Connections	P.C	1	600 000.00	R 600 000.00
	Carried forward				

Item no.	Description	Unit	Qty	Rate	Amount
	Brought forward				
1.1.12	Registered Surveyor				
a)	Services of a registered surveyor for the establishment of erven peggs for construction purposes.	P.C	1	30 000.00	R 30 000.00
1.2	Time-related Items				
1.2.1	Allow for the following insurances:				
a)	Of the Works	Sum	100%		
b)	Public liability	Sum	100%		
c)	Plant and equipment	Sum	100%		
d)	Common law liability	Sum	100%		
e)	Any other insurance	Sum	100%		
f)	Specify: …….				
1.2.2	Supervision and Maintenance:				
a)	Allow for supervision	Sum	100%		
b)	Allow for maintenance of Health and Safety requirements and obligations	Sum	100%		
1.2.3	Contractual requirements, establish facilities on site:				
a)	Vehicles	Sum	100%		
b)	Living accommodation	Sum	100%		
c)	Telephone and fax facilities	Sum	100%		
	Note. Claims for payment will only be accepted on receiving written substantiated evidence from the Contractor.				
	TOTAL FOR PRELIMINARY AND GENERAL				

KAI !GARIB MUNICIPALITY
(33610/2019): PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK AND
SCHEDULE B: MAST STRUCTURES AND FLOOD LIGHT ARMATURES

Date: 2019/02/20
Revision: 00

Item no.	Description	Unit	Qty	Supply Rate	Install Rate	Amount
2	HIGH MAST LIGHT STRUCTURES AND FLOOD LIGHTS					
2.1	Mast structures					
2.1.1	Supply and install galvanised steel mast structures complete with all accessories, foundation bolts and nuts, mounting frame, steel hoist cable, electrical trailing cable, galvanized clamps, lightning air termination, electrical DB board with digital kWh consumption metering and mast top structure as specified. Special lock nuts for access shall be provided for all the high masts installed.					
a)	20 m Scissor Mast	No	12			R/O
b)	20 m Mast with top hat and lowering cables	No	12			R/O
c)	25 m Scissor Mast	No	12			
d)	25 m Mast with top hat and lowering cables	No	12			R/O
2.2	LED Flood light Armature					
2.2.1	Supply flood light armatures complete with nuts, bolts, washers, control equipment attached to the armature including wiring between control equipment and flood light.					
a)	279 Watt LED/ equivalent or equally specified to the Beka LEDflood Maxi range of flood light armatures.	No	96			
b)	400 W HPS FlooD Light	No	96			R/O
2.3	Mast Earthing					
2.3.1	Supply and Install the required materials to achieve the required eathing at the mast positions according to the technical and project specifications:					
a)	1.5 m copper rods for earth mat in concrete foundation	No	48			
b)	70 mm² BCEC for foundation earth mat	m	180			
c)	Earth mat testing	Sum	12			
2.4	Testing and commissioning of High masts					
2.4.1	Test electrical and mechanical functionality of high mast according to specifications including the adjustment angles of flood lights and Lux readings to ensure the appropriate lighting level.					
a)	High mast structure and electrical installations	No	12			
	TOTAL FOR MAST STRUCTURES AND FLOOD LIGHT ARMATURES					

KAI !GARIB MUNICIPALITY
(33610/2019): PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK AND
SCHEDULE C: CONCRETE WORKS AND EXCAVATIONS

Date: 2019/02/20
Revision: 00

Item no.	Description	Unit	Qty	Supply Rate	Install Rate	Amount
3	CONCRETE WORKS AND EXCAVATIONS					
3.1	Concrete footings					
3.1.1	Supply, delivery and installation all necessary materials for the casting of 25 MPa concrete foundations for high mast lights complete with test cubes, steel reinforcement as specified for:					
a)	25 m Scissor Mast	No	12			
b)	25 m Mast	No	12	---------	---------	R/O
c)	20 m Scissor Mast	No	12	---------	---------	R/O
d)	20 m Mast	No	12	---------	---------	R/O
3.2	Foundation Excavations					
3.2.1	Excavate soil for concrete foundation and remove to appointed disposal site in pickable soil for:					
a)	25 m Scissor Mast (102.36 m³)					
	i) Pickable soil	m³	35.83	---------		
	ii) Intermediate material	m³	66.53	---------		
	iii) Hard Material	m³	60.00			R/O
3.3	Soil bearing pressure test					
3.3.1	Perform DCP testing on floor of foundation excavation according to specifications and submit analysis with proposals.					
a)	DCP testing per mast	No	12	---------		
	TOTAL FOR CONCRETE WORKS AND EXCAVATIONS					

KAI !GARIB MUNICIPALITY
(33610/2019): PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK AND
SCHEDULE D: KAKAMAS 400 V UNDERGROUND CABLE CONNECTIONS

Date: 2019/02/20
Revision: 00

Item no.	Description	Unit	Qty	Supply Rate	Install Rate	Amount
4	400 V UNDERGROUND CABLE CONNECTIONS					
4.1	Route Clearance and Setting Out	Sum	1	-------		
4.2	LV Cable Reticulation					
4.2.1	Excavate cable trench (600 mm wide x 800 mm deep x m length) in pickable soil, supply bedding, backfill, compaction and disposal of surplus material or unsuitable material:	m³	173			-------
a)	Pickable Soil 35%	m³	60	-------		
b)	Intermediate Soil 65%	m³	112	-------		
c)	Hard Material	m³	R/O	-------		-------
d)	Excavations by hand for the recovery of existing cable/ services	m³	15	-------		
e)	Soft red soil bedding (200 mm deep)	m³	22	-------		
f)	Remove unsuitable excavation materials	m³	112	-------		
g)	Import suitable material for backfill	m³	112			
h)	Danger tape (300 mm above cable)	m	360			
i)	110 mm Ø Cable conduit (6 m per crossing)	m	144			
4.2.2	Supply, install, terminate and connect PVC SWA LV cable and BCEC complete with glands or K-clamps and lugs as specified:					
a)	10 mm² x 4 core Cu, SANS 1507-3	m	360			
b)	6 mm² x 4 core Cu, SANS 1507-3	m	360			R/O
c)	4 mm² x 4 core Cu, SANS 1507-3	m	360			R/O
d)	LV cable termination kit including suitable gland at Eskom kiosk and high Mast DB for:					
	i) 10 mm² x 4 core Cu, SANS 1507-3	No	24			
	ii) 6 mm² x 4 core Cu, SANS 1507-3	No	24			R/O
	iii) 4 mm² x 4 core Cu, SANS 1507-3	No	24			R/O
e)	16 mm² BCEC	m	360			
f)	BCEC termination at Eskom kiosk and high Mast DB	m	24			
g)	Pressure test to manufacturer's specification	Sum	1	-------		
	TOTAL FOR 400 V UNDERGROUND CABLE CONNECTIONS					

KAI !GARIB MUNICIPALITY
(33610/2019): PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK AND

SCHEDULE E: SUMMARY OF PRICES

Date: 2019/02/20
Revision: 00

Schedule No	Description		Total
A	PRELIMINARY AND GENERAL		
B	HIGH MAST LIGHT STRUCTURES AND FLOOD LIGHTS		
C	CONCRETE WORKS AND EXCAVATIONS		
D	400 V UNDERGROUND CABLE CONNECTIONS		
	Subtotal		
	Plus Contingencies,	**10%**	
	Subtotal		
	Plus VAT	**15%**	
	Total		

Annexure B – MBD Forms

PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DAWID KRUIPER MUNICIPALITY					
BID NUMBER:	T007/2019	CLOSING DATE:	22 MARCH 2019	CLOSING TIME:	11H00
DESCRIPTION	PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK AND VREDESVALLEI				

THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX
SITUATED AT *(STREET ADDRESS*

KAI ! GARIB MUNICIPALITY MUNICIPAL BUILDING
MAIN STREET
KEIMOES

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		**OR**	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	☐ Yes ☐ No	

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

ARE YOU THE ACCREDITED REPRESENTATIVE **IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	☐Yes ☐No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED		**TOTAL BID PRICE**	**R**
SIGNATURE OF BIDDER	……	**DATE**	
CAPACITY UNDER WHICH THIS BID IS SIGNED			

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		**TECHNICAL INFORMATION MAY BE DIRECTED TO:**	
DEPARTMENT	Supply Chain	CONTACT PERSON	Charles Mokholoane
CONTACT PERSON	Anthanique Beukes	TELEPHONE NUMBER	054 337 6600
TELEPHONE NUMBER	054 461 6700	FACSIMILE NUMBER	054 337 6699
CELLPHONE NUMBER	071 869 3437	E-MAIL ADDRESS	charlesm@bvinc.co.za
E-MAIL ADDRESS	koetzeeaf@kaigarib.gov.za		

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.

1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR ONLINE**

1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.

2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.

2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.

2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.

2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.

2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA?	☐ YES ☐ NO
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	☐ YES ☐ NO
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	☐ YES ☐ NO
3.5.	IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	☐ YES ☐ NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE.

SIGNATURE OF BIDDER: ……

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……

DATE: ……...

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state∗.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.

3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name: ……

3.2 Identity Number: ……

3.3 Company Registration Number: ……

3.4 Tax Reference Number: ……

3.5 VAT Registration Number: ……

3.6 Are you presently in the service of the state∗ **YES / NO**

3.6.1 If so, furnish particulars.

……

……

3.7 Have you been in the service of the state for the past twelve months? **YES / NO**

3.7.1 If so, furnish particulars.

∗ MSCM Regulations: "in the service of the state" means to be –

(a) a member of –
  (i) any municipal council;
  (ii) any provincial legislature; or
  (iii) the national Assembly or the national Council of provinces;

(b) a member of the board of directors of any municipal entity;
(c) an official of any municipality or municipal entity;
(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
(e) a member of the accounting authority of any national or provincial public entity; or
(f) an employee of Parliament or a provincial legislature.

……

……

3.8 Do you, have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.8.1 If so, furnish particulars.

……

……

3.9 Are you, aware of any relationship (family, friend, other) between a bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.9.1 If so, furnish particulars

……

……

3.10 Are any of the company's directors, managers, principal shareholders or stakeholders in service of the state? **YES / NO**

3.10.1 If so, furnish particulars.

……

……

3.11 Are any spouse, child or parent of the company's directors, managers, principal shareholders or stakeholders in service of the state? **YES / NO**

3.11.1 If so, furnish particulars.

……

……

CERTIFICATION

I, THE UNDERSIGNED (NAME) ……

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

…….. ……..

Signature Date

……. …….

Position Name of Bidder

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

---

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2

a) The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable; or

b) Either the 80/20 or 90/10 preference point system will be applicable to this tender (*delete whichever is not applicable for this tender*).

1.3 Points for this bid shall be awarded for:

(a) Price; and

(b) B-BBEE Status Level of Contributor.

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	
B-BBEE STATUS LEVEL OF CONTRIBUTOR	
Total points for Price and B-BBEE must not exceed	**100**

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

(a) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;

(b) "**B-BBEE status level of contributor"** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;

(c) **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;

(d) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

(e) "EME" means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;

(f) **"functionality"** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.

(g) **"prices"** includes all applicable taxes less all unconditional discounts;

(h) **"proof of B-BBEE status level of contributor"** means:

1) B-BBEE Status level certificate issued by an authorized body or person;

2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;

3) Any other requirement prescribed in terms of the B-BBEE Act;

(i) **"QSE"** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;

(j) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right) \quad \text{or} \quad Ps = 90\left(1 - \frac{Pt - P\min}{P\min}\right)$$

Where

Ps = Points scored for price of bid under consideration

Pt = Price of bid under consideration

Pmin = Price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5. BID DECLARATION

5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

6.1 B-BBEE Status Level of Contributor: . = ……(maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

7. SUB-CONTRACTING

7.1 Will any portion of the contract be sub-contracted?

(***Tick applicable box***)

YES		NO	

7.1.1 If yes, indicate:

i) What percentage of the contract will be subcontracted.....……%
ii) The name of the sub-contractor……..
iii) The B-BBEE status level of the sub-contractor.....……..
iv) Whether the sub-contractor is an EME or QSE
(Tick applicable box)

YES		NO	

v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations 2017:

Designated Group: An EME or QSE which is at last 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

8. **DECLARATION WITH REGARD TO COMPANY/FIRM**

8.1 Name of company/firm:……..

8.2 VAT registration number:……

8.3 Company registration number:……

8.4 TYPE OF COMPANY/ FIRM

Partnership/Joint Venture / Consortium
One person business/sole propriety
Close corporation
Company
(Pty) Limited
[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

……
……
……
……

8.6 COMPANY CLASSIFICATION

Manufacturer
Supplier
Professional service provider
Other service providers, e.g. transporter, etc.
[*TICK APPLICABLE BOX*]

8.7 **MUNICIPAL INFORMATION**

Municipality where business is situated: ……

Registered Account Number: …….

Stand Number:……..

8.8 Total number of years the company/firm has been in business:……

8.9 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –

(a) disqualify the person from the bidding process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution.

WITNESSES 1. …….. 2. ……..	…… SIGNATURE(S) OF BIDDERS(S) DATE: …….. ADDRESS …….. …….. ……..

CONTRACT FORM - PURCHASE OF GOODS/WORKS

THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SUCCESSFUL BIDDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SUCCESSFUL BIDDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.

PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution)…… in accordance with the requirements and specifications stipulated in bid number…….. at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

   (i) Bidding documents, *viz*
   - Invitation to bid;
   - Tax clearance certificate;
   - Pricing schedule(s);
   - Technical Specification(s);
   - Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
   - Declaration of interest;
   - Declaration of bidder's past SCM practices;
   - Certificate of Independent Bid Determination;
   - Special Conditions of Contract;

   (ii) General Conditions of Contract; and
   (iii) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT) ……

CAPACITY ……

SIGNATURE ……

NAME OF FIRM ……

DATE ……

WITNESSES

1 ……

2. ……

DATE: ……

CONTRACT FORM - PURCHASE OF GOODS/WORKS

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I…… in my capacity as……..…..
accept your bid under reference number ……dated……for the supply of goods/works indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating delivery instructions is forthcoming.

3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

ITEM NO.	**PRICE (ALL APPLICABLE TAXES INCLUDED)**	**BRAND**	**DELIVERY PERIOD**	**B-BBEE STATUS LEVEL OF CONTRIBUTION**	**MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)**

4. I confirm that I am duly authorized to sign this contract.

SIGNED AT ……ON……..

NAME (PRINT) …….

SIGNATURE …….

OFFICIAL STAMP

WITNESSES

1. …….

2. …….

DATE …….

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

"In cases of Joint Ventures and Partnerships all parties must separately declare."

1 This Municipal Bidding Document must form part of all bids invited.

2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

3 The bid of any bidder may be rejected if that bidder, or any of its directors have:

a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
b. been convicted for fraud or corruption during the past five years;
c. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
d. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

4 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the *audi alteram partem* rule was applied). **The Database of Restricted Suppliers now resides on the National Treasury's website(www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? **The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		

4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
4.3.1	If so, furnish particulars:		

Item	Question	Yes	No
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) ……..……..…… CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

……... **……..**
Signature **Date**

……. **……..**
Position **Name of Bidder**

Js367bW

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

1 This Municipal Bidding Document (MBD) must form part of all bids[1] invited.

2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).[2] Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.

3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

a. take all reasonable steps to prevent such abuse;

b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and

c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

[1] Includes price quotations, advertised competitive bids, limited bids and proposals.

[2] Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

T007/2019: PROVISION OF HIGH MAST LIGHTING IN RIEMVASMAAK AND VREDESVALLEI

(Bid Number and Description)

in response to the invitation for the bid made by:

_____

(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of:_____that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word “competitor” shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:

    (a) has been requested to submit a bid in response to this bid invitation;
    (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
    (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder

6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium[3] will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
    (a) prices;
    (b) geographical area where product or service will be rendered (market allocation)
    (c) methods, factors or formulas used to calculate prices;
    (d) the intention or decision to submit or not to submit, a bid;
    (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
    (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

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

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

…… ……

Signature Date

…… ……

Position Name of Bidder

Js9141w 4

Annexure C – Health and Safety Preamble

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1. SCOPE

This specification has the objective to assist principal contractors entering into contracts with BVi, as Agent, and Kai !Garib Municipality that they comply with the Occupational Health and Safety (OH&S) Act, No. 85 of 1993. Compliance with this document does not absolve the principal contractor from complying with minimum legal requirements and the principal contractor remains responsible for the health and safety of his employees and those of his mandatories. Principal and other contractors should therefore insist that this part of the specification form part of any contract that he may have with other contractors and/or suppliers.

This section covers the development of a health and safety specification that addresses all aspects of occupational health and safety as affected by this contract. It provides the requirements that principal contractors and other contractors shall comply with in order to reduce the risks associated with this contract that may lead to incidents causing injury and/or ill health.

2. DEFINITIONS

Definitions

Agent – means any person who acts as a representative for a client;

Client – means any person for whom construction work is performed;

Contractor – means an employer, as defined in Section 1 of the Act, who performs construction work and includes Principal Contractors;

Health and Safety File – means a file, or other record in permanent form, containing the information required as contemplated in the regulations;

Health and Safety Plan – means a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified, it is specific to each project undertaken, and is compiled by a Principal Contractor or sub-contractor, and must be approved by the client;

Health and Safety Specification – means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

Method Statement – means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

Principal Contractor – means an employer, as defined in section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

Risk Assessment – means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard.

3. PROJECT DETAILS

This contract covers the provision, installation and commissioning of 9 x high mast lights in Riemvasmaak and 3 high mast lights in Vredesvallei. The scope of work comprises the following: 25 m high mast lighting structures, LED flood lights, Underground cable connections and Distribution Boards with kWh meters.

4. GENERAL OCCUPATIONAL HEALTH AND SAFETY PROVISIONS

4.1 Hazard Identification and Risk Assessment (Construction Regulation 7)

4.1.1 Risk Assessments

Paragraph 6 contains a generic list of risk assessment headings that have been identified by BVi, as Agent, and Kai !Garib Municipality as possibly applicable to this contract. It is, by no means, exhaustive and is offered as assistance to contractors entering in contract with BVi, as Agent, and Kai !Garib Municipality.

4.1.2 Development of Risk Assessments

Every principal contractor performing construction work shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, cause a risk assessment to be performed by a competent person, appointed in writing, and the risk assessment shall form part of the OH&S plan and be implemented and maintained as contemplated in Construction Regulation 5(1).

The risk assessment shall include, at least:

- the identification of the risks and hazards to which persons may be exposed
- the analysis and evaluation of the risks and hazards identified
- a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified
- a monitoring plan and
- a review plan

Based on the risk assessment, the principal contractor shall develop a set of site-specific OH&S rules that shall be applied to regulate the OH&S aspects of the construction. The risk assessment, together with the site-specific OH&S rules shall be submitted to The Department of Labour before construction on site commences. Despite the risk assessments listed in paragraph 4.1.2, the principal contractor shall conduct a baseline risk assessment and the aforesaid listed risk assessment shall be incorporated into the baseline risk assessment. The baseline risk assessment shall further include the standard working procedures and the applicable method statements based on the risk assessments

All variations to the scope of work shall similarly be subjected to a risk assessment process.

4.1.3 Review of Risk Assessment

The principal contractor shall review the hazard identification, risk assessments and standard working procedures at each production planning and progress report meeting as the contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes. The principal contractor shall provide The Department of Labour, other contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in paragraph 4.1.3.

4.2 Legal Requirements

A principal contractor shall, as a minimum, comply with:

The Occupational Health and Safety Act and Regulations (Act 85 of 1993), an up-to-date copy of which shall be available on site at all times.

The Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993), an up-to-date copy of which shall be available on site at all times.

Where work is being carried out on a “mine”, the contractor shall comply with the Mines Health and Safety Act and Regulations (Act 29 of 1996) and any other OH&S requirements that the mine may specify. An up-to-date copy of the Mines Health and Safety Act and Regulations shall be available on site at all times.

4.3 **Structure and Responsibilities**

4.3.1 Overall Supervision and Responsibility for OH&S

It is a requirement that the principal contractor, when he appoints contractors (Sub-contractors) in terms of Construction Regulations 5(3), 5(5), 5(9), 5(10) and 5(12) includes in his agreement with such contractors the following:

- OH&S Act (85 of 1993), Section 37(2) agreement: "Agreement with Mandatory"
- OH&S Act (85 of 1993), Section 16(2) appointee/s as detailed in his/her/their respective appointment forms.

4.3.2 Further (Specific) Supervision Responsibilities for OH&S

The contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations. Below is a generic list of identified appointments and may be used to select the appropriate appointments for this contract. The contractor shall note that it is a generic list only and is intended for use as a guideline.

Ref. Section/Regulation in OHS Act	
Construction Vehicles/Mobile Plant/Machinery Supervisor	(Construction Regulation 21)
Drivers/Operators of Construction Vehicles/Plant	(Construction Regulation 21)
Electrical Installation and Appliances Inspector	(Construction Regulation 22)
Electrical Hand Tools Inspector	(Construction Regulation 22)
Emergency/Security/Fire Coordinator	(Construction Regulation 27)
Excavation Supervisor	(Construction Regulation 11)
Explosive Powered Tool Supervisor	(Construction Regulation 19)
Fall Protection Supervisor	(Construction Regulation 8)
First Aider	(General Safety Regulation 3)
Fire Equipment Inspector	(Construction Regulation 27)
Formwork & Support work Supervisor	(Construction Regulation 10)
Hazardous Chemical Substances Supervisor	(HCS Regulations)
Incident Investigator	(General Admin Regulation 29)
Ladder Inspector	(General Safety Regulation 13A)
Lifting Equipment Inspector	(Construction Regulation 20)
Materials Hoist Inspector	(Construction Regulation 17)
OH&S Committee	(OHSAct Section 19)
OH&S Officer	(Construction Regulation 6(6)
OH&S Representatives	(OHSAct Section 17)
Person Responsible for Machinery	(General Machinery Regulation 2)
Stacking & Storage Supervisor	(Construction Regulation 26)
Structures Supervisor	(Construction Regulation 9)
Suspended Platform Supervisor	(Construction Regulation 15)
Vessels under Pressure Supervisor	(Vessels under Pressure Regulations)
Working on/next to Water Supervisor	(Construction Regulation 24)
Welding Supervisor	(General Safety Regulation 9)

In addition The Department of Labour requires that a Traffic Safety Officer be appointed (see COLTO Section 1500). The above appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated and agreed with the appointees. Notice of appointments shall be submitted to The Department Labour. All changes shall also be communicated to The Department Labour.

The principal contractor shall, furthermore, provide BVi, as Agent, and Kai !Garib Municipality with an organogram of all contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site. Where necessary, or when instructed by an inspector of the Department of Labour, the principal contractor shall appoint a competent construction safety officer.

4.3.3 Designation of OH&S Representatives (Section 17 of the OH&S Act)

Where the principal contractor employs more than 20 persons (including the employees of other contractors (subcontractors) he has to appoint one OH&S representatives for every 50 employees or part thereof. General Administrative Regulation 6 requires that the appointment or election and subsequent designation of the OH&S representatives be conducted in consultation with employee representatives or employees. (Section 17 of the Act and General Administrative Regulation 6 & 7). OH&S representatives shall be designated in writing and the designation shall include the area of responsibility of the person and term of the designation.

4.3.4. Duties and Functions of the OH&S Representatives (Section 18 of the OH&S Act)

The principal contractor shall ensure that the designated OH&S representatives conduct continuous monitoring and regular inspections of their respective areas of responsibility using a checklist and report thereon to the principal contractor. OH&S representatives shall be included in accident or incident investigations. OH&S representatives shall attend all OH&S committee meetings.

4.3.5. Appointment of OH&S Committee (Sections 19 and 20 of the OH&S Act)

The principal contractor shall establish an OH&S committee, which shall meet as specified in the Regulations.

4.4. Administrative Controls and the Occupational Health & Safety File

4.4.1. The OH&S File (Construction Regulation 5 (7))

As required by Construction Regulation 5(7), the principal contractor and other contractors shall each keep an OH&S file on site. The following list is not exhaustive and shall only be used as a guide:

- Notification of construction work (Construction Regulation 3)
- Latest copy of OH&S Act (General Administrative Regulation 4)
- Proof of registration and good standing with COID Insurer (Construction Regulation 4 (g)
- OH&S plan agreed with the Client including the underpinning risk assessment/s and method statements (Construction regulation 5 (1))
- Copies of OH&S committee and other relevant minutes
- Designs/drawings (Construction Regulation 5 (8)
- A list of contractors (subcontractors) including copies of the agreements between the parties and the type of work being done by each contractor (Construction Regulation 9)
- Appointment/designation forms as per paragraphs 4.1.1 and 4.1.2.
- Registers as follows:
  - Accident/Incident register (Annexure 1 of the General Administrative Regulations)
  - OH&S representatives' inspection register
  - Construction vehicles and mobile plant inspections by controller
  - Daily inspection of vehicles, plant and other equipment by the operator/driver/user
  - Designer's inspection of structures record
  - Electrical installations, -equipment and -appliances (including portable electrical tools)
  - Excavations inspection
  - Explosive powered tool inspection, maintenance, issue and returns register (incl. cartridges and nails)
  - Fall protection inspection register
  - First aid box contents
  - Fire equipment inspection and maintenance
  - Formwork and support work inspections
  - Hazardous chemical substances record
  - Ladder inspections
  - Lifting equipment register
  - Materials hoist inspection register
  - Machinery safety inspection register (incl. machine guards, lock-outs etc.)
  - Scaffolding inspections
  - Stacking and storage inspection
  - Inspection of structures
  - Inspection of suspended platforms
  - Inspection of tunnelling operations
  - Inspection of vessels under pressure
  - Welding equipment inspections
  - Inspection of work conducted on or near water

- All other applicable records including traffic safety officer reports.

BVi, as Agent, and Kai !Garib Municipality will conduct an audit on the OH&S file of the principal contractor from time-to-time.

4.5. **Notification of Construction Work (Construction Regulation 3)**

The principal contractor shall, where the contract meets the requirements laid down in Regulation 3(1) of Construction Regulations 2014, at least 7 working days before that work commences on site, notify the Department of Labour of the intention to carry out construction work and use the form (Annexure A in the Construction Regulations) for the purpose. A copy shall be kept on the OH&S file and a copy shall be forwarded to BVi, as Agent, and Kai !Garib Municipality for record keeping purposes.

4.6. **Training and Competence**

The contents of all training required by the Act and Regulations shall be included in the principal contractor's OH&S plan. The principal contractor shall be responsible for ensuring that all relevant training is undertaken. Only accredited service providers shall be used for OH&S training. The principal contractor shall ensure that his and other contractors' personnel appointed are competent and that all training required to do the work safely and without risk to health, has been completed before work commences. The principal contractor shall ensure that follow-up and refresher training is conducted as the contract work progresses and the work situation changes. Records of all training must be kept on the OH&S file for auditing purposes.

4.7 **Consultations, Communication and Liaison**

OH&S liaison between the client, the principal contractor, the other contractors, the designer and other concerned parties will be through the OH&S committee as contemplated in paragraph 4.3.5. In addition to the above, communication may be directly to the client or his appointed Agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their supervisors, OH&S representatives and the OH&S committee. The principal contractor shall be responsible for the dissemination of all relevant OH&S information to the other contractors e.g. design changes agreed with the client and the designer, instructions by the client and/or his/her Agent, exchange of information between contractors, the reporting of hazardous/dangerous conditions/situations etc. The principal contractors' most senior manager on site shall be required to attend all OH&S meetings.

4.8 **Checking, Reporting and Corrective Actions**

4.8.1. Monthly Audit by Client (Construction Regulation 4(1)(d)

BVi, as Agent, and Kai !Garib Municipality will conduct monthly audits to comply with Construction Regulation 4(1)(d) to ensure that the principal contractor has implemented and is maintaining the agreed and approved OH&S plan.

4.8.2. Other Audits and Inspections by BVi, as Agent, and Kai !Garib Municipality

BVi, as Agent, and Kai !Garib Municipality reserves the right to conduct other ad hoc audits and inspections as deemed necessary. This will include site safety walks.

4.8.3 Contractor's Audits and Inspections

The principal contractor is to conduct his own monthly internal audits to verify compliance with his own OH&S management system as well as with this specification.

4.8.4 Inspections by OH&S Representative's and other Appointees

OH&S representatives shall conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

4.8.5 Recording and Review of Inspection Results

All the results of the abovementioned inspections shall be in writing, reviewed at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

4.9 **Accidents and Incident Investigation (General Administrative Regulation 9)**

The principal contractor shall be responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic. The results of the investigation shall be entered into an accident/incident register listed in paragraph 4.4.1.

The principal contractor shall be responsible for the investigation of all minor and non-injury incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

4.10 **Reporting**

The principal contractor shall provide BVi, as Agent, and Kai !Garib Municipality with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring.

5. OPERATIONAL CONTROL

5.1 **Operational Procedures**

Each construction activity shall be assessed by the principal contractor so as to identify operational procedures that will mitigate against the occurrence of an incident during the execution of each activity. This specification requires the principal contractor:

- to be conversant with Regulations 8 to 29 (inclusive)
- to comply with their provisions
- to include them in his OH&S plan where relevant.

5.2. **Emergency Procedures**

Simultaneous with the identification of operational procedures (per paragraph 5.1 above), the principal contractor shall similarly identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in the principal contractor's OH&S plan.

5.3 **Personal & Other Protective Equipment (Sections 8/15/23 of the OH&S Act)**

The contractor shall identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable, take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

Where it is not possible to create an absolutely safe and healthy workplace the contractor shall inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating or discharging the employee.

The principal contractor shall include in his OH&S plan the PPE he intends issuing to his employees for use during construction and the sanctions he intends to apply in cases of non conformance by his employees. Conformance to the wearing of PPE shall be discussed at the weekly inspection meetings.

5.4 Other Regulations

Wherever in the Construction Regulations or this specification there is reference to other regulations (e.g. Construction Regulation 22: Electrical Installations and Machinery on Construction Sites) the principal contractor shall be conversant with and shall comply with these regulations.

5.5 Public Health & Safety (Section 9 of the OH&S Act)

The principal contractor shall be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers. This includes:

- Non- employees entering the site for whatever reason
- The surrounding community
- By-passers to the site.

6. PROJECT/SITE SPECIFIC REQUIREMENTS

6.1 List Of Risk Assessments

- Clearing and Grubbing of the area/site
- Site establishment including:
  - Office/s
  - Secure/safe storage for materials, plant and equipment
  - Ablutions
  - Sheltered eating area
  - Maintenance workshop
  - Vehicle access to the site
- Dealing with existing structures
- Location of existing services
- Installation and maintenance of temporary construction electrical supply, lighting and equipment
- Adjacent land uses/surrounding property exposures
- Boundary and access control/public liability exposures (NB: the employer is also responsible for the OH&S of non-employees affected by his/her work activities.)
- Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Dealing with HIV/Aids and other diseases
- Use of portable electrical equipment including
  - Angle grinder
  - Electrical drilling machine
  - Skill saw
- Excavations including
  - Ground/soil conditions
  - Trenching
  - Shoring
  - Drainage of trench
- Welding including
  - Arc welding
  - Gas welding
  - Flame cutting
  - Use of LP gas torches and appliances
- Loading and offloading of trucks
- Aggregate/sand and other materials delivery
- Manual and mechanical handling

- Lifting and lowering operations
- Driving and operation of construction vehicles and mobile plant including
  - Trenching machine
  - Excavator
  - Bomag roller
  - Plate compactor
  - Front end loader
  - Mobile cranes and the ancillary lifting tackle
  - Parking of vehicles and mobile plant
  - Towing of vehicles and mobile plant
- Use and storage of flammable liquids and other hazardous substances
- Layering and bedding
- Installation of underground cables in trenches
- Pressure testing of underground cables
- Backfilling of trenches
- Protection against flooding
- Use of explosives
- Protection from overhead power lines
- As discovered by the principal contractor's hazard identification exercise
- As discovered from any inspections and audits conducted by the client or by the principal contractor or any other contractor on site
- As discovered from any accident/incident investigation.