



public works

Department:
Public Works
PROVINCE OF KWAZULU-NATAL

SERVICING, MAINTENANCE, REPAIR, UPGRADING, REPLACEMENT AND NEW WORKS FOR ELECTRICAL, MECHANICAL AND PLUMBING INSTALLATIONS, PLANT AND EQUIPMENT INSTALLED IN KWA-ZULU NATAL PROVINCIAL ADMINISTRATION BUILDINGS AND INSTITUTIONS

**PROVINCIAL ADMINISTRATION OF KWAZULU-NATAL
DEPARTMENT OF PUBLIC WORKS**

TENDER DOCUMENT

SECTION 1 OF VOLUME 1

PRINCIPAL AGENT

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HEAD: WORKS

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KwaZulu-Natal Provincial Administration
Private Bag X9041
PIETERMARITZBURG
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THE DIRECTOR: PDQC

Department of Public Works
KwaZulu-Natal Provincial Administration
Private Bag X9041
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3200

TENDER NUMBER	WCS NO	EPWP NO	MONTH/YEAR
ZNT55G/66W/2016	062903	N/A	December 2016

NOTE: THIS DOCUMENT MUST BE COMPLETED IN FULL AND THE ENTIRE DOCUMENT MUST BE SUBMITTED AT CLOSING DATE OF TENDERS

Compulsory Site Briefing			
Location:	As per venues listed in the tender advert		
Date:	As per tender advert	Time:	As per tender advert

NAME OF TENDERING ENTITY:

CENTRAL SUPPLIERS DATABASE REGISTRATION NUMBER:

CIDB REGISTRATION NUMBER:

CIDB GRADE:

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Copy of Tax Compliance Status (TCS) PIN Certificate	80 to 81
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Copy of CIDB Registration Certificate	N/A
Proof of Qualifications of Personnel Employed (Certified Copies)	N/A
BBBEE Certificate (Certified Copy)	N/A
Certified Copy of Registration as an Electrical Contractor with Department of Labour (for CIDB category EB and EP)	N/A
Proof of Registration on the Central Suppliers Database (CSD)	N/A
Copy of CIPC Certificate	N/A
All Bid Documents on Compact Disc (CD)	N/A

Annexures to this Tender Document

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T1.1. Tender Notice and Invitation to Tender

The Department of Public Works – KwaZulu-Natal, invites tenders for the provision of:

SERVICING, MAINTENANCE, REPAIR, UPGRADING, REPLACEMENT AND NEW WORKS FOR ELECTRICAL, MECHANICAL AND PLUMBING INSTALLATIONS, PLANT AND EQUIPMENT INSTALLED IN KWA-ZULU NATAL PROVINCIAL ADMINISTRATION BUILDINGS AND INSTITUTIONS

Tender Number

ZNT55G/66W/2016

Tenders must be registered with a CIDB contractor grading designation of higher or equal than specified. Service Providers will be listed and classified according to their CIDB gradings and will only be considered for work during the contract period that falls within the ranges and classes of construction works within the CIDB gradings and values.

Service Providers will be able to upgrade during the existence of the contract to a higher grade approved by CIDB. Documentary proof in such case must be submitted.

The Conditions of Contract are the NEC3 Engineering AND Construction Short Contract (April 2013).

1ME or 1EB or 1EP or
1SF or 1SL or 1SD or
1SO or 1SI or higher

This tender will be subject to the Preferential Procurement Regulations 2011, regarding the Preference Point system and the evaluation of tenders and the KwaZulu-Natal Supply Chain Management Policy Framework published by the KwaZulu-Natal Provincial Treasury for the Appeals Process. All responsive tenderers will be scrutinized and evaluated with respect to financial, logistical and technical capabilities. The Department of Public Works will evaluate the information completed by tenderers in the Preference Certificate which is included in this tender document for the purpose of awarding of preference points for the application of the 80/20 or 90/10 preference points systems, which are described in the KwaZulu-Natal Supply Chain Management Policy Framework to each "Accepted Contractor"/Service Provider and such preference points will be taken into account in the award of a project.

After the first year of the contract being in existence, the Department of Public Works will have the option to invite tenders for further service providers to be included on the list of service providers under this contract on the same conditions that this tender was invited. This process may be completed at each anniversary of the contract.

Tender documents will be made available in the formats as indicated in the tender advertisement. The CD's, with a soft copy of the tender document, can be collected as indicated in the tender advertisement.

A compulsory pre-tender meeting with representatives of the Employer will take place at: **REFER TO TENDER ADVERTISEMENT**

The closing time for receipt of tenders is

11:00

hrs on

04 May 2017

Telegraphic, telephonic, telex, facsimile and late tenders will not be accepted.

Tenders may only be submitted on the tender documentation that is issued.

T1.2. Tender Data

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement as amended in terms of the Regulations in Government Gazette 29138 dated 18 August 2006. (see www.cidb.org.za). – Refer to pages F1 to F9 bound into this document.

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The Conditions of Contract are the NEC3 Engineering and Construction Short Contract (April 2013).

F.1.1. The employer is:

Head: Works (The Department of Public Works – Province of KwaZulu-Natal)

F.1.2. The tender documents issued by the employer comprise:

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Authority to Sign a Tender	76 to 77
Compulsory Pre-Tender Meeting Attendance Certificate	78

F.1.4. The Employer's Principal Agent is:

Name:	SSA Consulting Engineers (Pty) Ltd
Address:	P.O. Box 11096
	DORPSPRUIT
	3206
Tel:	033 394 4244
Fax:	033 394 4814
E-mail:	ssaeng@iafrica.com

F.2.1 Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation of:

1ME or 1EB or 1EP or 1SD or 1SF or 1SL or 1SO or 1SI or higher class of construction work, are eligible to have their tenders evaluated.

Joint ventures will not be applicable to this contract.

F.2.7 Site Visit and Clarification Meeting

The arrangements for a compulsory/non-compulsory classification meeting are:

LOCATION: REFER TO TENDER ADVERTISEMENT

Confirmation of attendance to be notified at least one full working day in advance to:

NAME:	N/A
TEL:	N/A
FAX:	N/A

F.2.12 Alternative Tender Offers

No alternative tender offers will be considered

F.2.13.1 Tenderers may offer to provide any of the following parts, or combinations thereof, of the works, services or supply identified in the contract data: "Schedule of Items tendered for."

F.2.13.3 Parts of each tender offer communicated on paper shall be submitted as an original, plus

0 Copies.

F.2.13.5 The employer's address for delivery of tender offers identification details to be shown on each tender offer package are:

Location of tender box:

SEE BELOW

Physical address:

The Head: Works
Department of Public Works
191 Prince Alfred Street
PIETERMARITZBURG
3201

Identification details:

Seal the original of the tender offer and mark the packages as "ORIGINAL" AND INDICATE THE TENDER NUMBER

Employer's address and identification details to be shown on package:

The Head: Works
Department of Public Works
Private Bag X 9041
PIETERMARITZBURG
3201

F.2.13.
and F.3.5. A two-envelope approach will not be followed

F.2.15. The closing time for submission of tender offer is

11:00

 hrs
on

Thursday

 (day)

04 May 2017

 (date).

Telephonic, telegraphic, telex, facsimile or e-mail tender offers will not be accepted.

F.2.16. The tender offer validity period is 120 calendar days.

F.2.22. Return all tender documents at closing date of tenders.

F.2.23. The tenderer is required to submit with his/her tender:

1. Copy of Tax Compliance Status (TCS) PIN certificate
2. All proof of qualifications (certified copies) of artisans and personnel employed by the Contractor and all other information as listed in section T3.1.
3. Copy of proof that the tenderer is in Good Standing with the Compensation Commissioner.
4. A copy of the tenderer's Construction Industry Development Board (CIDB) Certificate.
5. A certified copy of the BBBEE Certificate of the tenderer.

6. Valid Electrical Registration Certificate, as issued by the Department of Labour, for the electrical installation category of work (certified copies), where applicable, see Section C3.1, clause 31.4.
7. Proof of Registration on the Central Suppliers Database (CSD)
8. Copy of Companies and Intellectual Property Commission (CIPC) Certificate

F.3.4.

The time and location for opening of the tender offers are:

Time	11:00	Date	04 May 2017
Location :			
The Head: Works			
Department of Public Works			
191 Prince Alfred Street			
PIETERMARITZBURG			

F.3.11.

The procedure for the evaluation of responsive tenders is **Method 2**

The financial offer will be scored using Formula: $Nfo = W_1 \times A$ where $A = (1 - (P - P_m) / P_m)$
AND

(option 1) where the value of W_1 is:

1. 90 where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R 1 000 000.00; or
2. 80 where the financial value inclusive of VAT of one or more responsive tender offers equals or is less than R 1 000 000.00

Up to 100 minus W_1 tender evaluation points will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed.

F3.13.1.

Tender offers will only be accepted if:

- a) The tenderer has to provide Tax Compliance Status (TCS) PIN to verify on-line the supplier compliance status via SARS e-filing.
- b) The tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation in respect of the items tendered for;
- c) 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; and
- d) The tenderer has not:
 - i. Abused the Employer's Supply Chain Management System; or
 - ii. Failed to perform satisfactorily on any current contract and has been given a written notice to this effect.
- e) The tenderer has submitted proof of all qualifications as requested.
- f) The tenderer has submitted a certified copy of proof that the tenderer is in good standing with the Compensation Commissioner.

- g) The tender has submitted a valid certified copy of his BBBEE certificate.
- h) The tender has submitted a certified copy of his registration certificate with Department of Labour as electrical contractor when tendering for category EB or EP type work.

F.3.18. The number of paper copies of the signed contract to be provided by the employer is

ONE

 Copies.

The additional conditions of tender are:

N/A

F STANDARD CONDITIONS OF TENDER

F.1. General

F.1.1. Actions

The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently.

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, shall not form part of any contract arising from the invitation to tender.

F.1.3.3. For the purposes of these conditions for the calling for expressions of interest, the following definitions apply:

- a) **Comparative offer** means the tenderers financial offer after the factors of non-firm prices, all unconditional discounts and any other tendered parameters that will affect the value of the financial offer have been taken into consideration.
- b) **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
- c) **Fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or 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.

F.1.4. Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be read, copied and recorded. Writing shall be in the English language. The employer shall 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 shall not accept or incur any liability to a tenderer for such cancellation and rejection, but will give 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 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.2. Tenderer's obligations

F.2.1. Eligibility

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

F.2.2. Cost of tendering

Accept that 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 the demonstration that aspects of the offer satisfy 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 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. Site visit and clarification meeting

Attend, where required, a site visit and 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) may 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.

F.2.10.2. Show VAT payable by the employer separately as an addition to the tendered total of prices.

- F.2.10.3.** Provide rates and prices that are fixed for the duration of the contract and not subject to the 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 of documents

Not to 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 shall initial all such alterations. Erasures and the use of masking fluid are prohibited.

F.2.12. Alternative tender offers

- F.2.12.1.** No alternative offers will be considered.

F.2.13. Submitting a tender offer

- F.2.13.1.** Submit a tender offer to provide the whole of the works, services or supply identified in the contract data, 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 in black 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 shall state which of the signatories is the lead partner whom the employer shall 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 shall 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 details.
- 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 shall 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 details.
- 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 shall 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 Electronic bid documents

- F.2.13.9.1** The bidder is required to submit the bid offer, returnable documents, and the relevant supporting documents and in some instances the priced Bill of Quantities (BOQ) for the bid evaluation process.
- F.2.13.9.2** Bidders are to ensure that their company details appear on the entire relevant bid documentation and must be legible when submitting bids.
- F.2.13.9.3** All bids including supporting documents and priced Bills of Quantities where applicable must be scanned onto a readable compact disc (CD) (PDF) and submitted with the bid at their own cost. The CD must be clearly marked with the bid information and company details.
- F.2.13.9.4** The bid document and CD with scanned information must be submitted in the same envelope at closing date of tenders. Failure to do so will invalidate the tender submission.

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. Proof of posting shall not be accepted as proof of delivery. The employer shall not accept tender offers submitted by telegraph, telex, facsimile or e-mail, unless stated otherwise in the tender data.
- 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.3.3. Return late tender offers

Return tender offer 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 the tenderer's 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 opening 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, the total of his prices, preferences claimed and time for completion, if any, 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 tenderer's 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 advise 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 proposal of tenderers, who score in the quality evaluation above 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 preferences 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

Determine, on opening and for detailed evaluation, whether each tender offer properly received:

- a) meets 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.

A responsive tender is one that conforms that 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:

- detrimentally affect the scope, quality or performance of the works, services or supply identified in the Scope of Work.
- change the Employer's or the tenderer's risks and responsibilities under the contract, or
- 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

Check responsive tender offers for arithmetical errors, correcting them in the following manner:

- Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern.
- If a bill of quantities (or schedule of quantities or schedule of rates) applies 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 shall govern and the rate shall be corrected.

- 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 shall govern and the tenderer will be asked to revise selected item prices (and their rates if a bill of quantities applies) to achieve the tendered total of the prices.

Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of his arithmetical errors in the manner described above.

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 it using the tender evaluation method that is indicated in the Tender Data and described below:

Method 1: Financial offer

- 1) Rank tender offers from the most favourable to the least favourable comparative offer.
- 2) Recommend highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.

Method 2: Financial offer and preferences

- 1) Score tender evaluation points for financial offer.
- 2) Confirm that tenderers are eligible for the preferences claimed and if so, score tender evaluation points for preferencing.
- 3) Calculate total tender evaluation points.
- 4) Rank tender offers from the highest number of tender evaluation points to the lowest.
- 5) 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.

Method 3: Financial offer and quality

- 1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data.
- 2) Score tender evaluation points for financial offer.
- 3) Calculate total tender evaluation points.
- 4) Rank tender offers from the highest number of tender evaluation points to the lowest.
- 5) 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.

Method 4: Financial offer, quality and preferences

- 1) Score quality, rejecting all tender offers that fail to score the minimum number of points for quality stated in the Tender data.
- 2) Score tender evaluation points for financial offer.
- 3) Confirm that tenderers are eligible for the preferences claimed, and if so, score tender evaluation points for preferencing.
- 4) Calculate total tender evaluation points.
- 5) Rank tender offers from the highest number of tender evaluation points to the lowest.
- 6) 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.

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

F.3.11.2. 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} = the number of tender evaluation points awarded for the financial offer.

W_1 = the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.

A = a number calculated using either formulas 1 or 2 below as stated in the Tender Data.

Formula	Basis for comparison	Option 1	Option 2
1.	Highest price or discount	$A = (1 + (P - P_m)) / P_m$	P / P_m
2.	Lowest price or percentage commission/fee	$A = (1 - (P - P_m)) / P_m$	P_m / P

Where:

P_m = the comparative offer of the most favourable tender offer.

P = the comparative offer of tender offer under consideration.

F.3.11.3. Scoring quality (functionality)

Tender Submissions will be evaluated according to the following criteria and weighting:

Criteria	Weight	Sub Minimum Points
Note: For tenderers who are tendering for Semi-Skilled Items only, semi-skilled employees with relevant experience will be adjudicated as skilled employees in the functionality below.		
Proven ability/capacity (equipment and experience) of the service provider to service the department, in terms of the items tendered for:	30	20
Include lists of previous projects completed of similar nature:		
• 1 Artisan/Technician/Engineer (refer to part C3.1, clause 30.1)	6 Points	
• More than 1 Artisan/Technician/Engineer (refer to clause 30.1 of part C3.1)	4 Points	
• Basic plant, power tools and equipment of the trade	5 points	
• Basic hand tools and testers of the trade	5 Points	
• Previously completed and current projects of Similar Nature & Value (5 x Projects minimum = 2 points each)	10 Points	

Criteria	Weight	Sub Minimum Points
<p>Note: For tenderers who are tendering for Semi-Skilled Items only, semi-skilled employees with relevant experience will be adjudicated as skilled employees in the functionality below.</p>		
<p>Detailed CV's/qualifications of key staff and artisans indicating experience of the personnel that will be engaged to do work under this contract, in terms of the items tendered for:</p> <ul style="list-style-type: none"> • Artisan(s)/Technician(s)/Engineer(s) (refer to part C3.1, clause 30.1) 25 Points • Apprentices in Training (refer to part C3.1, clause 30.3) 5 Points • No. of Years Past Experience <ul style="list-style-type: none"> • 1-5 years after trade test 5 Points • 6 or more years after trade test 5 Points 	40	30
<p>Submission of implementation plan to prove ability and capacity to react to the execution of urgent and emergency work under this contract:</p> <ul style="list-style-type: none"> • 24 hours Contact Number 5 Points • Number of Qualified Artisan/s available for urgent and emergency work (including after hours): <ul style="list-style-type: none"> • One 5 Points • More than One 6 Points • Sustainable spares stock available of Premises / Branch <ul style="list-style-type: none"> • R2000 – R5000 2 Points • R5001 – R10 000 3 points • R10 001 – R30 000 4 points • R30 001 – above 5 Points 	30	20
Total	100	70

Only those respondents who score a minimum of 70% for functionality will be considered for award of the contract.

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 condition of contract identified in the contract data, require the employer to provide.

F.3.13. Acceptance of tender offer

F.3.13.1. Accept tender offer only if the tenderer satisfies the legal requirements stated in the Tender Data.

F.3.13.2. 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. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful tenderer as described in the form of offer and acceptance.

F.3.14. Notice to unsuccessful tenderers

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

F.3.15. Prepare contract documents

If necessary, revise documents that shall 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 first tender period,

- b) inclusion of some of the returnable documents,
- c) other revisions agreed between the employer and the successful tenderer, and
- d) the schedule of deviations attached to form of offer and acceptance, if any.

F.3.16. Issue final contract

Prepare and issue the final draft of contract documents to the successful tenderer for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any). Only those documents that the conditions of tender require the tenderer to submit, after acceptance by the employer, shall be included.

F.3.17. 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.3.18. 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.3.19 Submission of documents to the Department of Public Works by the Service Provider prior to each and every award of work under this contract.

- Valid Tax Status – Tax Compliance Status (TCS) PIN certificate to be issued for verification purposes
- Copy of Letter of Good Standing with the Compensation Commissioner
- Certified copy of BBBEE Certificate
- Copy of CIDB Registration Certification
- Copy of CIPC Certificate
- Copy of Registration as an Electrical Contractor with the Department of Labour for Category EB and EP work
- Proof of Registration on the Central Suppliers Database

F.3.20 Withdrawal of appeals

F.3.20.1 An Appellant may at any time, after noting an appeal, and before the appeal is set down for hearing, withdraw such appeal, in writing, addressed to the Secretary of the Bid Appeals Tribunal and the Head of Department.

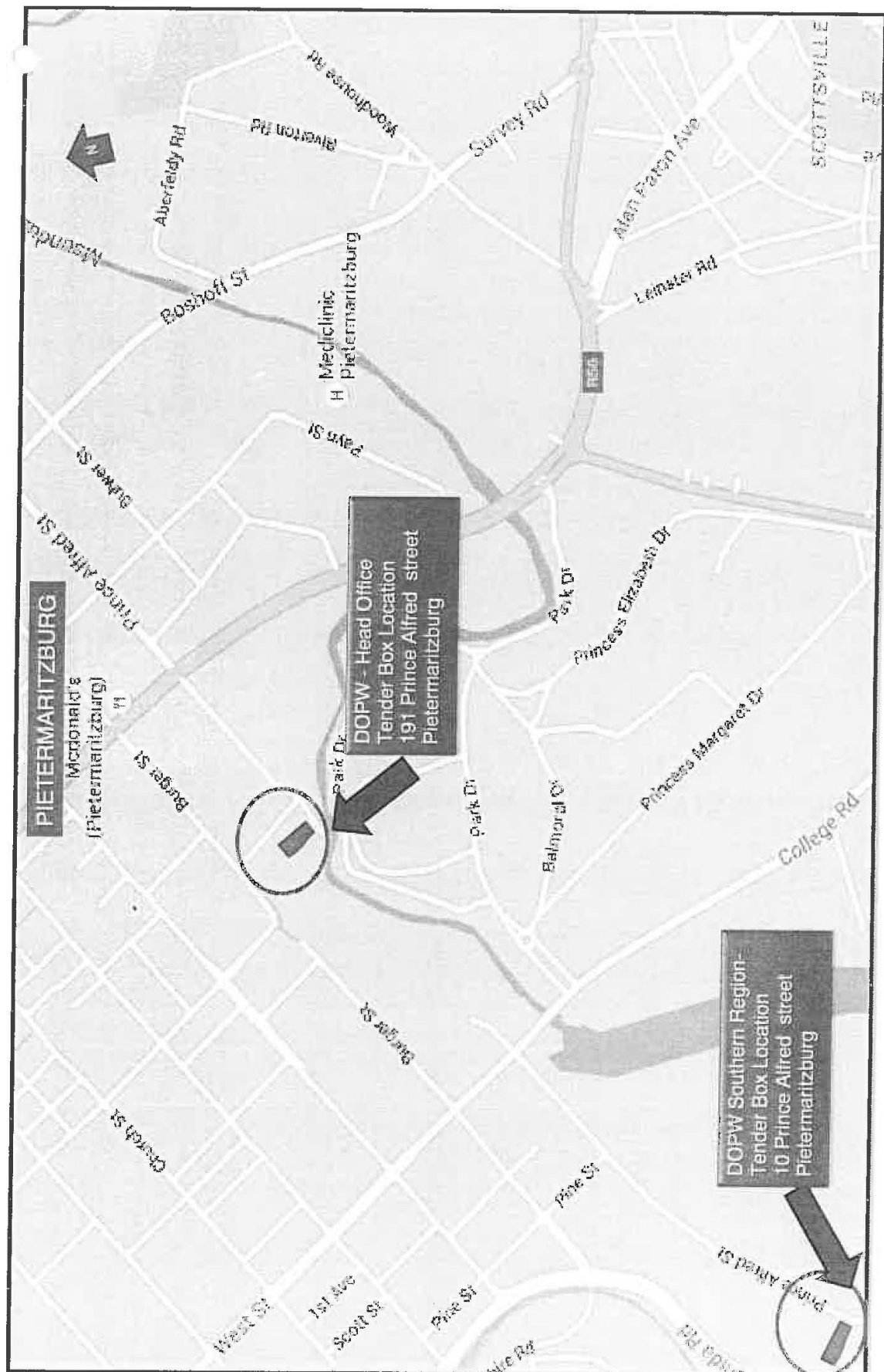
F.3.20.2 However, notwithstanding para 1 above, once the appeal has been set down for hearing, then an Appellant, wishing to withdraw such appeal, must:

F.3.20.2.1 Do so in writing, as per para 1 above;

F.3.20.2.2 The written withdrawal is to be accompanied by an affidavit explaining the reasons for the withdrawal and in particular making submissions as to why the withdrawal of the appeal should not be accompanied by the Appellant tendering to pay the Provincial government's costs relating to such withdrawal;

F.3.20.2.3 Upon receipt of the notice of withdrawal, plus explanatory affidavit, the Chairman or Deputy Chairman of the Bid Appeals Tribunal may consider the matter (without a hearing), and rule whether or not the withdrawing Appellant should be sanctioned with an appropriate order for costs".

M MAP INDICATING LOCALITY OF TENDER BOX



Engineering and Construction Short Contract

The general Conditions of Contract are the clauses contained in NEC3 Engineering and Construction Short Contract published by the NEC, April 2013 Edition. All service providers are recommended to obtain their own copy of the contract conditions.

**Contract between: THE PROVINCIAL ADMINISTRATION OF KWAZULU-NATAL:
DEPARTMENT OF PUBLIC WORKS**

(the *Employer*)

And

.....

(the *Service Provider*)

**For: SERVICING, MAINTENANCE, REPAIR, UPGRADING,
REPLACEMENT AND NEW WORKS FOR ELECTRICAL,
MECHANICAL AND PLUMBING INSTALLATIONS, PLANT
AND EQUIPMENT INSTALLED IN KWAZULU-NATAL
PROVINCIAL ADMINISTRATION BUILDINGS AND
INSTITUTIONS (the *service*)**

Contents	Number of Pages
Part C1 Agreements & Contract Data	1 to 8
Part C2 Pricing Instructions	9 to 15
Part C3 Employers Scope of Work	16 to 44

C.1.1. Form of Offer & Acceptance

Offer

The *Employer*, identified in the Acceptance signature book, has solicited offers to enter into contract for the procurement of:

SERVICING, MAINTENANCE, REPAIR, UPGRADING, REPLACEMENT AND NEW WORKS FOR ELECTRICAL, MECHANICAL AND PLUMBING INSTALLATIONS, PLANT AND EQUIPMENT INSTALLED IN KWAZULU-NATAL PROVINCIAL ADMINISTRATION BUILDINGS AND INSTITUTIONS

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.
<i>and</i>	examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.

By the representative of the tender, 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 *Service Provider* 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.

I/We, the undersigned (full trading name of Tenderer)

hereby offer to the State in its Province of KwaZulu-Natal, herein represented by the Head: Works (hereinafter referred to as the "Head"), to execute and complete any project in terms of the above-mentioned contract in accordance with the Drawings and/or Bills of Quantities and/or Specification and the Conditions of Contract to the entire satisfaction of the Head and subject to the Conditions of Tender set out hereafter, for the rates contained in the Tender Document and to provide all the labour, workmanship, machinery, plant and everything which is or may become necessary.

I/We acknowledge that I/We am/are fully acquainted with the contents of the Conditions of Tender, Conditions of Contract, specifications and other documentation set out hereafter and that I/we accept the conditions in all respects.

I/we agree that the laws of the Republic of South Africa shall be applicable to the contract resulting from the acceptance of my/our tender and that I/we elect *domicilium citandi et executandi* in the Republic at:

Physical Address of Tenderer:

Postal Address of Tenderer:

Telephone No.:

Fax No.:

Email Address:

CIDB Registration Number:

CIDB Category:

Central Suppliers Database Registration Number:

Name of Tendering Authority:

Signature of Authorized Person:

Print Name of Authorized Person:

(As per Form DOW 072 (i-ii):

Witnesses: 1. 2.

Print Name of Witness 1. 2.

This Offer may be accepted by the *Employer* by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Service Provider* in the *conditions of contract* identified in the Contract Data.

Acceptance

By signing this part of this Form of Offer and Acceptance, the *Employer* identified below accepts the tenderer's Offer. In consideration thereof, the *Employer* shall pay the *Service Provider* the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the *Employer* and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1 Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
- Part C2 Pricing Data
- Part C3 Scope of Work

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the document listed in the Tender Data and any addenda thereto listed in the Returnable 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 Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the *Employer's Representative* (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of his agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any).

Unless the tenderer (now *Service Provider*) 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 shall constitute a binding contract between the Parties.

Signature(s): _____

Name(s): _____

Capacity: _____

**For the
Employer**

(insert name and address of organization)

Name & Signature of witness	Date
_____	_____

Note: No alternate offers will be acceptable.

Schedule of Deviations

Note:

1. The extent of deviations from the tender documents issued by the *Employer* prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreements reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here.
3. In the event of conflict between the contents of this Schedule of Deviations and any other list or record of tender stage amendments or addenda, this Schedule shall take precedence.

NO.	Subject	Details
1		
2		
3		
4		
5		

By the duly authorized representatives signing this agreement, the *Employer* and the tenderer both 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 any addenda thereto listed in the Returnable Schedules, and
- any 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 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 Form shall have any meaning or effect in the contract between the parties arising from this agreement.

C.1.2. Contract Data

Part one – Data provided by the *Employer*

Please read the relevant clauses in the conditions of contract. The number of the principal clause is shown for each statement however other clauses may also use the same data.

Completion of this data in full is essential to create a complete contract.

Tenders are to obtain their own copy of the Conditions of Contract NEC3: Engineering and Construction Short Contract, April 2013 Version.

Clause	Item	Data
10.1.	The Employer is	PROVINCE OF KWAZULU-NATAL: DEPARTMENT OF PUBLIC WORKS OR ANY OTHER PROVINCIAL DEPARTMENT WHO ELECT TO UTILIZE THIS CONTRACT
	Name	THE HEAD: WORKS
	Address	Private Bag X9041, PIETERMARITZBURG, 3201
	Telephone	033 3555569
	E-mail address	N/A
10.1.	<i>The Employer's Representative is</i>	The person responsible for administration of a project under this contract
	Name	Mr D. le Roux
	Address	Private Bag X 9041, PIETERMARITZBURG, 3201
	Telephone	033 355 5619
	E-mail address	danie.leroux@kznworks.gov.za
11.2 (11)	<i>The service is</i>	SERVICING, MAINTENANCE, REPAIR, UPGRADING, REPLACEMENT AND MINOR WORKS FOR ELECTRICAL, MECHANICAL AND PLUMBING INSTALLATIONS, PLANT AND EQUIPMENT INSTALLED IN KWAZULU-NATAL PROVINCIAL ADMINISTRATION BUILDINGS AND INSTITUTIONS
11.2. (1)	<i>The Scope of work is in</i>	Section C3.1 of this document and in parts of other documents to which Section C3.1 makes reference.
30.1.	<i>The starting date is</i>	The day of site handover to the service provider for a project executed under this contract.
30.1.	<i>The service period is</i>	36 months for the main contract. The project period for the individual projects executed under this contract will be indicated in the letter of award of the specific project.
50.1.	<i>The assessment day is</i>	That day as agreed upon by the service provider and the Employer's Representative
51.2	<i>The interest rate is</i>	Zero percent
80.2.	<i>The Service Provider is not liable to the Employer for loss or damage to the Employer's property in excess of</i>	The limit for indemnity liability insurance is unlimited

93.1.	The <i>Adjudicator</i> is		
	Name		
	Address		
	Telephone		Fax
	E-mail address		
93.2.	The <i>Adjudicator nominating body</i> is		
93.4.	The <i>tribunal</i> is		
	If the <i>tribunal</i> is arbitration, the arbitration procedure is		
Contractor's Offer	The <i>conditions of contract</i> are	The NEC 3 Engineering and Construction short contract and the Service Provider must obtain a copy of this document at his/her own expense and the following additional conditions shall be applicable.	
Clause No:	Subject matter:	Clause:	
Z1	INSURANCE	<ul style="list-style-type: none"> • All service providers shall maintain public liability insurance cover for the duration of the contract. • In respect of Projects, which are under taken via this contract, and which exceed R500 000.00 in value, the Service Provider without limiting his/her obligations in terms of the contract shall before commencement of the task order at his/her own cost effect and maintain the following insurances in the joint name of the Employer and the Service Provider: <ul style="list-style-type: none"> a) Insurance of the works against damage or physical loss from whatsoever cause arising except the clauses as set out in Clause Z4 (Excepted Risks) b) For which the service provider is responsible in terms of the task order, c) For a sum insured which shall be the aggregate of (1), the contract price, (2) the value of materials supplied by the Employer and not included in the contract price if any, (3) an amount of 30% of the contract price to cover professional fees, not included in the contract price payable in respect of the repair of reinforcement of damage to the Works or said movables. d) A coupon policy for Special risks Insurance issued by the South African Special risks Insurance Association. 	
Z2	RETENTION	In respect of all Projects (i.e. upgrading, replacement and new works) which are undertaken via this contract retention will withheld Briefly, 10% until the retained amount reaches 5% the Contract sum; reduced to 2.5 % upon issue of Completion Certificate and further reduced to 1.25 % on signing the Final Account. The balance will be released upon expiry of the defects liability period of twelve (12) months.	

Clause No:	Subject matter:	Clause:
Z3	PENALTIES	<p>If the Service Provider shall, by the due completion date, fail to complete the task to the extent which entitles him/her to receive a Certificate of Completion the Service Provider shall be liable for a penalty for every day which shall elapse between the due completion date and the Actual completion date. The imposition of such penalty shall not relieve the Service Provider from his obligation to complete the works or from any of his obligations and liabilities under the Contract.</p> <p>The penalty for failing to complete the works is 0.04% per day of the contract sum rounded up to the nearest R10.00</p>
Z4	EXCEPTED RISKS	<p>The "excepted risks" are risks of damage or physical loss or any other loss caused by or arising directly or indirectly as a result of or as a consequence of:</p> <ul style="list-style-type: none"> a) War, invasion, act of foreign enemies, hostilities or warlike operations (whether war be declared or not or civil war) b) Insurrection, rebellion or revolution c) Mutiny, military rising, military or usurped power, martial law, or state of siege, or any other event or cause which determines the proclamation or maintenance of martial law or state of siege d) Any event which at closing date of tenders, is defined as a risk in terms of insurance offers by the South African Special Risks Insurance Association. e) Any occurrence for which a fund has been established in terms of the War Damage Insurance and Compensation Act as amended, f) The impact of meteorites, g) Pressure waves caused by the aircraft or other aerial devices travelling at sonic or supersonic speeds, h) Ionizing radiation or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuels i) The use or occupation by the Employer or his employees or agents or other contractors (not employed by the Contractor) of any part of the Works, j) The design, specification or instruction of the Employer's representative, Employer or any of their employees or agents, or defects in the materials supplied by the Employer for incorporation in the works k) The confiscation, commandeering, nationalization, requisition or destruction of or damage to property by an order of government, or any public or local authority l) The fact that the values of materials as supplied by the Employer for incorporation in the works, exceeds the value thereof as specified by or on behalf of the Employer at the time of delivery thereof of the Employer

The purpose of this Contract is to complete a list of competent (approved Service Providers) who are able to execute servicing, repairs, maintenance, upgrading, replacement and new works for electrical, mechanical and plumbing installations, plant and equipment installed in KwaZulu-Natal Provincial Administration Buildings and Institutions.

Definitions

- a) **Servicing and Maintenance** (including preventative maintenance) is being defined as that work required to keep any existing mechanical/electrical/plumbing plant, equipment and installations installed in KwaZulu-Natal Provincial Administration Buildings and Institutions which is presently functioning in operational order.

The value of any specific contract for the servicing and maintenance (including preventative maintenance) of any plant, equipment and/or installation to be carried out in terms of this contract shall be limited to a maximum of R1 000 000.00, including Value Added Tax per task order.

- b) **Repair** is defined as that work required to be executed on any existing mechanical/electrical/plumbing plant, equipment and installations installed in KwaZulu-Natal Provincial Administration Buildings and Institutions which is at present not functioning and must be returned to its original state of functioning.

The value of any specific contract for the repair of any plant, equipment and/or installation to be carried out in terms of this contract shall be limited to a maximum of R1 000 000.00, including Value Added Tax per task order.

- c) **Upgrading** is defined as that work involved in taking out any existing mechanical/electrical/plumbing plant, equipment and installations installed in KwaZulu-Natal Provincial Administration Buildings and Institutions and replacing it with similar new equipment of additional capacity/capability and technological features and shall be limited to a maximum of R1 000 000.00, Including Value Added Tax per task order/project

- d) **Replacement** is defined as that work involved in taking out any existing mechanical/electrical/plumbing plant, equipment and installations installed in KwaZulu-Natal Provincial Administration Buildings and Institutions and replacing it with new equipment of the same capacity/capability and technological features.

The value of any specific contract for the replacement of any plant, equipment and/or installations to be carried out in terms of this contract shall be limited to a maximum of R1 000 000.00, including Value Added Tax per task order/project.

- e) **New works** is defined as the installation of mechanical/electrical/plumbing equipment of a type which:

- i. Was not previously installed or;
- ii. Is in addition to that which is installed.

The value of any specific contract for minor new works projects to be carried out in terms of this contract shall be limited to a maximum of R1 000 000.00, including Value Added Tax per task order/project.

Part 2 Data provided by the Service Provider

Clause	Item	Data
10.1. (1)	The <i>Service Provider</i> is: Name:	
	Address:	
	Telephone:	FAX:
	E-mail address:	
11.2.	The offered total of the Price	Will be determined at time of issue of a task order or when quotations are invited under this contract

C.2.1. Pricing Instructions

INDEX

1. GENERAL
2. TENDER DOCUMENT
3. PRICES FOR VARIATIONS
4. SCALE
5. PROVISIONAL ITEMS
6. TIMELY ORDERING OF MATERIALS
7. SAMPLES
8. ELECTRICAL LIGHTING, POWER AND WATER REQUIREMENTS
9. IMPORT PERMITS, DUTIES AND SURCHARGES
10. RATES
11. OCCUPATIONAL HEALTH AND SAFETY ACT
12. BROAD BASED BLACK ECONOMIC EMPOWERMENT
13. REGISTRATION ON CENTRAL SUPPLIERS DATA BASE
14. ESCALATION
15. APPROVAL OF TENDERERS
16. AWARDING OF WORK
17. ACCEPTANCE OF UNAUTHORISED WORK
18. REGISTRATION AS AN ELECTRICAL CONTRACTOR
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20. LIFTS

C.2.1. Pricing instructions

1. GENERAL

Where any item is not relevant to this specific contract, such item is marked N/A (signifying “not applicable”). Any reference made in this tender document to the HEAD: WORKS/EMPLOYER shall be understood to refer to the Officer appointed to the post of HEAD OF DEPARTMENT of Works or any other Provincial Department and shall include any person acting in that capacity or his/her duly appointed representative.

Except where there is specific reference to “Department of Public Works” the term Department/Employer shall mean any Provincial Administration Department who’s Head of Department has elected and given authority to use this contract and will enter into any resulting specific contract. It must therefore be noted that other Provincial Departments may also utilize this contract and the information in the Contract Data will then be respective information of that specific Department/Employer.

2. TENDER DOCUMENT

The pages of each of these documents are numbered consecutively and before the Tender submits his/her tender he/she should check the number of pages, and if any are found missing or duplicated, or the figures or writing indistinct, or the documents contain any obvious error, he/she should apply to the Head: Works at once and have same rectified as no liability whatsoever will be admitted by the Administration in respect of errors in the Tender due to the foregoing.

No alteration, erasure, omission or addition is to be made by the Tenderer in the text and conditions of the Tender Document and should any such alteration, amendment, note or addition be made, the same will not be recognized but the reading of the tender document as originally prepared by the Head : Works will be adhered to.

3. PRICES FOR VARIATIONS

Where prices or quotations for variations are submitted by the Contractor during the currency of the Contract, it is to be clearly understood that these are for the purpose of consideration by the Employer’s Representative and that there is no assumption of acceptance. The Contractor will be notified of acceptance of prices or quotations either by insertion of the amount on the variation order or by written intimation.

4. SCALE

The scale to which the Drawings are made is only to be made use of when no figured dimensions are given either on the Drawings or in the tender documents and the figured dimensions are always to be followed though they may not coincide with the scale of the Drawings, but dimensions where possible are to be taken from the buildings.

5. PROVISIONAL ITEMS

All items described as “Provisional” shall be used as directed by the Employer and measured and valued or paid for in terms of the quotation document.

No work for which “Provisional” items are allowed shall be commenced without written instructions from the Employer’s Representative.

6. TIMELY ORDERING OF MATERIALS

The Service Provider is warned to place all orders for materials or special articles as early as possible, as he will be hold solely responsible for any delay in the delivery of such goods.

Nevertheless, this tender is conditional upon no liability being attached to the Service Provider if the delivery of materials is rendered impossible by reason of any act of the Government.

7. SAMPLES

The Service Provider shall furnish, at his own expense, and without delay, such samples as called for or may be called for by the Employer, who may reject all materials or workmanship not corresponding with the approved sample. Reference to brand and trade names in bills of quantities in quotation documents shall indicate the quality and type of material or fitting required and no substitution of materials so specified will be permitted unless authority of the Head of Department has been obtained in writing **before quotations close**.

8. ELECTRICAL LIGHTING, POWER AND WATER REQUIREMENTS

Although site services e.g. water and electricity and sanitary conveniences may, by mutual arrangement with the responsible official on Site, be available for use by the Service Provider, this however, does not constitute automatic entitlement in every instance. Unless otherwise agreed the Service Provider shall make his own arrangement for such onsite services.

Tenderers are advised that the permanent light fittings and water points of any kind installed in the Works are not to be used to provide temporary lighting and supplement water requirements for construction purposes.

9. IMPORT PERMITS, DUTIES AND SURCHARGES

All tenders by means of which imported products are being called for, must use the rate of exchange 14 days prior to the closing date indicated in the tender documents. If this day falls on a weekend or public holiday, the next working day must be used.

Furthermore, tenderers must submit documentary proof (in the form of a certified copy) from their bank or legally recognized financial institution, clearly indicating what the rate of exchange was 14 days prior to the closing date, as mentioned above.

Together with this the tenderer must confirm that the tender price, relating to an imported product, was based on the rate of exchange 14 days prior to the closing date as mentioned above.

10. RATES

The Department is offering maximum labour rates, tariffs and mark-ups as set out in the Specification, which are deemed to be inclusive and take into account all preliminaries and condition of contract costs.

11. OCCUPATIONAL HEALTH AND SAFETY ACT NO. 85 OF 1993 (THE ACT)

By the submission of a tender, any tenderer will, if awarded the contract to which this tender document relates, be deemed to be mandatory as envisaged by Section 37 (2) of the Act. As a mandatory the successful tenderer will be deemed to be the “principle contractor” / principle Service Provider and an employer in his/her/their own right with duties as prescribed in the Act and accordingly will be deemed to have agreed to be solely responsible for ensuring that in connection with the service to which the tender document relates, all work will be performed and machinery and plant used in accordance with the Act. Should the Service Provider, for whatever reason be unable to perform as required by the Act, the Service Provider undertakes to inform the Employer accordingly.

Tenderers are therefore advised to study the ‘Generic Construction Safety, Health and Environmental Specification’ which is issued as part of this tender document, any project Specification included in this tender document/quotation documents issued under this contract and drawings which are referred to and issued as part of this tender document/quotation documents before preparing their own project specification ‘Construction Phase Safety, Health and Environmental Plan’. Tenderers are also advised that such a plan which is submitted with a tender/quotation but is incomplete or considered inadequate by the Employer or his Representative will invalidate the quotation.

The Service Provider will be deemed to have satisfied him/herself with his obligations in terms of the Act and to have allowed for all costs arising from compliance with the Act as no claim for extra costs arising from compliance with, and obligations in terms of the Act will be entertained.

12. BROAD BASED BLACK ECONOMIC EMPOWERMENT

It is the deliberate policy of the Provincial Administration of KwaZulu-Natal to foster and encourage the economic empowerment of Black South Africans. This policy will be implemented without prescription and without prejudicing the principles and integrity of the Provincial Administration of KwaZulu-Natal. Subject to these constraints and also subject to good business practice and commercial considerations, it is therefore considered appropriate that the Provincial Administration of KwaZulu-Natal should encourage business relationships with companies which actively pursue Affirmative Action and Black Economic Empowerment Programmes.

In responding to this tender, you are therefore encouraged to devote attention to these two subjects of Affirmative Action and Economic Empowerment. In addition, in considering the appointment of sub-contractors, you are requested to extend the spirit of these policies.

The foregoing enunciations of this policy are not intended to be prescriptive nor to preclude any individual or operation from responding to this tender.

13. REGISTRATION ON THE CENTRAL SUPPLIERS DATABASE

In terms of the Public Finance Management Act (PFMA), 1999 (Act No 1 of 1999) Section 38 (1) (a) (iii) and 51 (1) (iii) and Section 76 (4) of PFMA National Treasury developed a single platform, The Central

Supplier Database (CSD) for the registration of prospective suppliers including the verification functionality of key supplier information.

Prospective suppliers will be able to self-register on the CSD website: www.csd.gov.za

Once the supplier information has been verified with external data sources by National Treasury, a unique supplier number and security code will be allocated and communicated to the supplier. Suppliers will be required to keep their data updated regularly and should confirm at least once a year that their data is still current and updated.

Suppliers can provide their CSD suppliers number and unique security code to organs of state to view their verified CSD information.

Bidders are required to fill in clearly, legibly, in bold print and black ink their CSD suppliers number and unique security code on the title page.

14. ESCALATION

Labour rates will be escalated by the Department of Public Works annually in accordance with the latest available information from the Metal and Engineering Industries Bargaining Council (MEIBC) in the applicable sections.

Escalation will not be applicable to projects already awarded under this contract at the time of annual adjustment of rates. These projects are to be completed at the rates as per the approved quotation.

15. APPROVAL OF TENDERS

All responsive Tenders will be scrutinized and evaluated with respect to Logistical and Technical capabilities. The Department of Public Works will evaluate the information submitted in terms of the Preference Schedule and all tenderers will be notified in writing whether their tender has been accepted or not and the value of their preference points relating to Goals 1 and 2 (80/20 and 90/10) will be indicated by the Department. The fact that the tenderer's tender for this contract is accepted and such tenderer becomes known as an Accepted Service Provider does not automatically imply that contracts for specific projects will be awarded to the Accepted Service Provider. The competitiveness of the rates tendered by a Service Provider at time of invitation of quotations in the quotation documents together with the preference points will determine the successful accepted Service Provider for a specific project.

After awarding of Tenders by the Department of Public Works a list of Approved Service Providers with their preference percentages and limitations in respect of technical capabilities, if any, will be compiled and Departments will use this list for the execution of the works as and when required. All approved Service Providers will be notified accordingly.

Unsuccessful Tenderers will be entitled to appeal against the decision of the Department in terms of the KwaZulu-Natal Supply Chain Policy Framework.

16. AWARDING OF WORK

16.1. **Repair work, see C1.2 Z5 (b)** will be offered to the approved Service Provider's at the discretion of the Department utilizing this Contract, but taking into account geographical proximity to the Site, technical expertise, awarded items on the contract, and CIDB grading.

Where more than one service provider is based in the same town/city the work is to be rotated amongst all contractors registered for the applicable service type of work.

Repair work is classified as work where the full scope of the work is not known, i.e. not visible. Such work may require stripping equipment to ascertain the extent of the required repairs and may also require the removal of equipment from site to the service providers workshop. Such work shall be carried out on a proven cost basis in accordance with the contract rates i.e. quotations are not required. However, an estimated maximum amount shall be stated on the instruction to proceed/order for the specified work.

16.2. Project work (is defined in terms of this contract as preventative maintenance servicing, upgrading, replacement and new works) see C1.2 Z5 (a) (c) (d) (e) invitations to quote will be issued to all Service Providers listed on the approved list of approved service providers on the contract, with a CIDB grading equal or higher than the estimated value of the project and falls within the CIDB range for the specific service type/s. Invitations to quote will be issued in writing to service providers. Those indicating a willingness to quote will be issued with quotation documents. The invitations to quote will be complete in every detail and will inter alia include the following:

- a) A full and comprehensive specification, including the completion period of the project work; A full set of drawings of the project work to be executed as well as a complete Bill of Quantities of the project work to be executed.
- b) After receipt of such quotes, preference points as approved by the Department of Public Works, will be applied, and the Service Provider with the highest preference points and compliance with the specification, after the application of preference points, will be considered for award of the project work, by the Department utilizing this Contract.
- c) The Successful Service Provider will also be required to verify within five (5) working days in writing, whether he/she/they accepts the award for the execution of the Works, or not. If the Service Provider fails to reply within the five (5) working day period, he/she/they will be notified in writing that the project has been awarded by the Department, to the next highest Service Provider to specification, after application of the preference points.
- d) In respect of annual servicing, maintenance and repair work on fire hose reels, fire hydrants and fire extinguishers, invitations to quote must be issued to all service providers under Item 2.2.13. All work must be carried out in accordance with SANS 1475-1-2005 and SANS 1475-2-2003.

17. ACCEPTANCE OF UNAUTHORISED WORK

Under no circumstances may service providers undertake work, (service types), under cover of this contract, in respect of works/services for which they have not been officially appointed and approved as per their letter of appointment.

Should it be found that service providers are accepting work, under cover of this contract, outside of the categories of work (service types) for which they are appointed, then the entire tender award will be terminated in accordance with the conditions of the contract.

18. REGISTRATION AS ELECTRICAL CONTRACTOR

To qualify to bid, and to be accepted, for the Electrical bid items listed in Part C3 Clause 2.1 and 2.2 (i.e. **ALL** EB and EP items) only Service Providers registered with the Department of Labour as and Electrical Contractor, in accordance with Regulation 5 of the Occupational Health and Safety Act will be accepted and permitted to do work under this contract. The requirements of Regulation 5(2) will be strictly enforced by the EMPLOYER and is repeated for convenience purposes:

“5(2) Department of Labour, register a contractor, as an electrical contractor and enter in a register kept for that purpose the name of any person who applies thereof in terms of sub-regulation (1) and who-

- (a) Has a fixed address and has a telephone listed in his name; and
- (b) Employs an accredited person on a full-time basis, or is himself an accredited person.”

An “accredited person” is defined in the regulations as “a person registered in terms of regulation 9 (of the Act) as an electrical tester for single phase, an installation electrician or a master installation electrician, as the case may be”. If, for any reason whatsoever, the CONTRACTOR fails to comply with these statutory requirements during the CONTRACT period, after having been accepted initially to do work under this CONTRACT, the EMPLOYER shall terminate the services of the CONTRACTOR in accordance with Clause 90 of the CONDITIONS OF CONTRACT.

19. REGISTRATION WITH SAQCC GAS, SAQCC FIRE, ASIB AND PIRB

To qualify to bid for the relevant mechanical and plumbing items listed Part C3 Clause 2.1 and 2.2, tenderers must be registered with the applicable association and registration authority. Refer to clause 31 of Part C3.1.

20. LIFTS, ESCALATORS AND TRAVELLATORS

To qualify to bid for Item 2.1.54, the tenderer is to have in its full-time employ, a competent lift mechanic, as defined by the Occupational Health and Safety Act.

All new installations and upgrades, etc. to lifts, elevators and travellers are to be approved by a Registered Inspector, registered with the South African National Accreditation System and the Department of Labour

C.3.1. Employers Scope of Work

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C.3.1	EMPLOYER'S SCOPE OF WORK
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1. SITE

The works to be executed in terms of this contract will be carried out at various Provincial Government Institutions throughout the Province of KwaZulu-Natal.

2. DESCRIPTION OF THE SERVICE

This is a thirty-six (36) month multi-disciplinary contract which covers the maintenance, servicing, repairs, upgrading, replacement and new works in respect of the service mechanical, electrical and plumbing service types. These have been separated into skilled and semi-skilled work categories, as listed under sections 2.1 and 2.2 below.

Service providers should only tender for services in respect of their own area/s of expertise and for which they have in their direct employ staff with the required qualifications and experience to provide the service tendered for. All service providers are notified that in the event where service providers have tendered for services which fall outside of their own area of expertise, such tenders will be disregarded.

Note 1: Tenders shall state in the Schedule of Skilled Items Tendered For (see T3.1, page 46) and Schedule of Semi-Skilled Items Tendered For (see T3.1, page 47) which Tender Items and Work Categories they are tendering for. Refer to 2.12.1 and 2.2 hereunder.

Note 2: Should it be found, subsequent to the award of tender that service providers have misrepresented their in-house expertise, then the entire tender award may be terminated in accordance with the conditions of contract.

Note 3: In the event that service providers no longer have in their employ staff who provide expertise in respect of a specific category of work/service type, then the service provider shall advise the Department accordingly. In such an event the Department will delete the specific category of work from the service provider's contract appointment until such time as replacement, qualified staff, is/are employed. Failure to comply with this clause may result in termination of the tender award in accordance with the conditions of the contract.

Note 4: This contract will be readvertised annually for the acceptance of additional service providers and for existing approved service providers to bid for any additional bid items for which they may have subsequently qualified for.

The successful Service Provider shall supply all materials, labour, tools and plant etc. necessary to carry out maintenance, repairs, servicing, upgrading, replacement, and new Works of the items bidded for.

The services shall include inspection, pressure testing, cleaning, packing, adjusting, setting, lubricating and painting of equipment as required.

When it is necessary to remove the lagging or insulation, cover panels of belt guards etc., for the execution of work, the service provider shall restore same to its prior original state. Any damage caused to existing equipment or buildings shall be made good at the service provider's expense.

2.1. Schedule of Plant and Equipment (Mechanical, Plumbing, Electrical and Lift, Escalators and Travellators Service Types) To Be Maintained and Bid Item Numbers

ITEM NO.	DESCRIPTION: SKILLED WORK	CIDB CATERGORY
	<p>NOTE:</p> <p>To qualify for EB and EP CIDB category Items as listed hereunder, the Service Provider must provide proof that the Company is registered with the Department of Labour as an Electrical Contractor.</p> <p>All non EB/EP CIDB Category listed items where electrical work is involved, must obtain and issue an electrical COC for the work done on electrical items.</p>	
2.1.1.	Abattoir and Dairy Equipment	ME
2.1.2.	Air Conditioning Chiller Plant, Package Plant, Refrigeration Systems and Heat Pumps of rating > 18 kW refrigeration capacity, including chillers and condenser water equipment and reticulations, air distribution systems (ducting and associated components). Minimum requirement: SAQCC Gas Registration in Category B – Air Conditioning & Refrigeration Practitioner or Category C – Inspector Commercial/Industrial Air Conditioning & Refrigeration (See Clause 31.1.4)	ME
2.1.3.	Process Control Systems including Building Management Systems, Electronic and Pneumatic Systems	ME
2.1.4.	Writing software, and the maintenance thereof, for Process Control Systems	ME
2.1.5.	Particle counting of conditioned air in Operating Theatres (including replacement filters/seals etc. as and when required)	ME
2.1.6.	Ventilation Plant, including exhaust hoods, fans, canopies; associated ducting and filters	ME
2.1.7.	Laminar flow benches, and fume cupboards (including testing)	ME
2.1.8.	Steam Boilers and associated Ancillary Equipment, including preparation for Statutory Inspection and Testing	ME
2.1.9.	Steam Heated Calorifiers, Steam Reticulations and associated Equipment, including preparation for statutory inspections	ME
2.1.10.	Central Heating Systems	ME
2.1.11.	Hot and Cold Water reticulations including final connections to equipment	ME/SO
2.1.12.	Coal Fired Hot Water Boilers including preparation for statutory inspections	ME
2.1.13.	Electrically Heated hot water storage vessels above 1000 litre capacity	ME/EB
2.1.14.	Solar, Water, Heating Systems including reticulation	ME/SO
2.1.15.	Heat Pump Water Heating Systems including reticulation (New Installations Only)	ME/SO

2.1. Schedule of Plant and Equipment (Mechanical, Plumbing, Electrical and Lift, Escalators and Travellators Service Types) To Be Maintained and Bid Item Numbers
(Continued)

ITEM NO.	DESCRIPTION: SKILLED WORK	CIDB CATERGORY
2.1.16.	Coal and Oil Fired Incinerators including Emissions Testing	ME
2.1.17.	Industrial Compressed Air: Installations and Reticulations, including preparation for statutory inspections. Minimum requirement: registered employee with SAQCC Gas: Inert Gases – Industrial (See Clause 31.1.3).	ME
2.1.18.	LP Gas: Installations and Reticulations. Minimum requirement: registered employee with SAQCC Gas: LP Gas – Commercial or Industrial Practitioner (See Clause 31.1.1).	ME
2.1.19.	Medical Gas Installations, and Reticulations, including Medical Air and Vacuum Plant and Associated Control systems, including preparation for statutory inspections. Minimum requirement: registered employee with SAQCC Gas: Medical Gases – Industrial (See Clause 31.1.2).	ME
2.1.20.	Autoclaves/Sterilizers (including Free standing type, Table top type, including Ethylene Oxide and Formaldehyde Type), including preparation for statutory inspections	ME
2.1.21.	Ultra-Sonic Cleaners, Instrument Washers and Disinfectors, for Bed Pans, Bottles, Instruments, etc.	ME/EB
2.1.22.	Bottle/Fluid warming cabinets	ME/EB
2.1.23.	Operating Theatre Lights including Associated UPS	ME/EB
2.1.24.	Operating Theatre tables	ME/EB
2.1.25.	Dental Chairs and Dental Suction Equipment	ME/EB
2.1.26.	Diesel Engines: Stationary Type	ME
2.1.27.	Kitchen Equipment: Electrical and Mechanical, excluding LP Gas Equipment (including taps and drains up to first external gulley)	ME/EB
2.1.28.	Kitchen Equipment: Steam Operated (including taps and drains up to first external gulley) (electrical and steam operated)	ME
2.1.29.	Laundry Equipment (electrical and steam operated) (including taps and drains up to first external gulley)	ME/EB

2.1. Schedule of Plant and Equipment (Mechanical, Plumbing, Electrical and Lift, Escalators and Travellators Service Types) To Be Maintained and Bid Item Numbers
(Continued)

ITEM NO.	DESCRIPTION: SKILLED WORK	CIDB CATERGORY
2.1.30.	Water Pumps, Water Purification Plant, Pump Stations/Houses, Dosing Equipment, Valves, Filters and Associated Controls, Reticulations and Associated Installations	ME
2.1.31.	Supply and routine testing of Water Treatment Chemicals for A/C Plant, Boiler Plant, Heating and Cooling Systems, Water and Sewerage Treatment Plant	ME
2.1.32.	Independent testing of water quality (by a non-supplier of chemicals) for A/C Plant, Boiler Plant, Heating and Cooling Systems, Water and Sewerage Treatment Plan	ME
2.1.33.	Sewerage Purification Plant, Sewerage Pumps, Dosing Equipment, Valves, Filters and Associated Controls, Reticulations and Associated Installations (Excluding Septic Tanks and Drain Pipes there to)	ME
2.1.34.	Irrigation pumps, equipment installations & reticulations etc.	ME
2.1.35.	Fire Booster Pumps, Control Valves and associated controls	ME/SF
2.1.36.	Borehole pumps and associated mechanical, electrical, solar and wind control systems, including water supply reticulation to storage point (excluding drilling).	ME/EB
2.1.37.	Lawn Mowers	ME/EB
2.1.38.	Battery operated tow trucks, battery chargers and associated trolleys	ME/EB
2.1.39.	Central Vacuum Cleaning Systems	ME
2.1.40.	Fixed Wood and Metal Working Machines	ME/EB
2.1.41.	Workshop/Garage Roll up Type Doors, Electrically and Mechanically Driven	ME/EB
2.1.42.	Rewinding, and Repair of Electric Motors and Alternators (by Armature Winders only)	ME/EB
2.1.43.	Overhead Cranes, Blocks and Tackle Hoisting Equipment	ME
2.1.44.	Steel Structures, Water Tanks and Stands, Fire Escapes, Catwalks, Pipe and Equipment Supports	SL

2.1. Schedule of Plant and Equipment (Mechanical, Plumbing, Electrical and Lift, Escalators and Travellators Service Types) To Be Maintained and Bid Item Numbers
(Continued)

ITEM NO.	DESCRIPTION: SKILLED WORK	CIDB CATERGORY
2.1.45.	Plumbing: including Internal and External Plumbing; connections to hot and cold water reticulations; valves; taps; cisterns; showers; sanitary ware; urinals; drainage covers and grates; water supplies; sewage pipes/drains up to main sewer, septic tanks desludging of septic tanks; drainage connections to external main drain; including domestic/industrial hot water storage vessels/geysers up to 1000 litre capacity (See Clause 31.2).	SO
	NOTE: To qualify for these items the service provider MUST provide proof that THE COMPANY is registered with Department of Labour as an Electrical Contractor (See Clause 31.4).	
2.1.46.	LV Electrical Installations in Buildings	EB
2.1.47.	Electrical Reticulations within a plot of land (erf) or building site	EB
2.1.48.	Verification and issue of Certification of Electrical Installations on Premises	EB
2.1.49.	MV Switchgear, Transformers and Installations. Note: Actual switching can only be carried out by an individual who has successfully completed a MV Switching course (See Clauses 29 and 31.5).	EB
2.1.50.	Street and Area Lighting	EP
2.1.51.	Substations and Protection Systems	EP
2.1.52.	Generator Sets (Fixed and Portable) and Associated AMF and Prime Power Control Panels	EB/EP
2.1.53.	Uninterruptible Power Supplies (UPS)	EB
2.1.54.	Lifts, escalators and travellators (See Part C2.1 Clause 20).	SI

2.2. Schedule of Plant and Equipment (All Semi-Skilled Work Service Types) To Be Maintained and Bid Item Numbers

ITEM NO.	DESCRIPTION: SEMI-SKILLED WORK	CIDB CATERGORY
2.2.1.	Automatic Sprinkler Systems (excluding Fire Extinguishers, Hose Reels and Hydrants). Minimum requirement: registration as Conditional Installer with ASIB (See Clause 31.3).	SF
2.2.2.	Fire Detection and Evacuation Systems. Minimum requirement: minimum of one employee registered with SAQCC Fire – Detection as Level 3 Serviceman (See Clause 31.1.6).	SF
2.2.3.	Fire Suppression (Gas) Installations. Minimum requirement: minimum of one employee registered with SAQCC Fire – Gas Suppression as Level 3 Commissioner/ Serviceman (See Clause 31.1.7).	SF
2.2.4.	Stripping and Preliminary Assembly of Plant and Equipment (to be supervised by a qualified artisan)	ME/EB
2.2.5.	Air Conditioning Refrigeration units and Heat Pumps up to a cooling capacity of 18 kW. Minimum requirement: SAQCC Gas Registration in Category A – Air Conditioning and Refrigerant Installer or AC&R Apprentice/Learner (See Clause 31.1.5)	ME
2.2.6.	Manufacture, supply/installation of protective covers for Piping and Equipment; Portable/Mobile Operating Equipment such as Coal and Ash Handling Trolley's, Stoking and De-Ashing Tools: Security gates and bars for Plant rooms and Store rooms.	ME
2.2.7.	Installation and Repair of Ducting Systems	ME
2.2.8.	Painting and Colour Coding of Plant and Equipment (Excluding Medical and LP Gas)	ME
2.2.9.	Industrial Cleaning of Plant, Plant Rooms, Equipment, Extract Canopies and Ventilation Ducting	ME
2.2.10.	Cleaning and Repairing of air conditioning and associated ventilation plant ducting (Internal and External)	ME
2.2.11.	Fixing of Insulation and Cladding to Vessels, Pipe work Reticulations and Equipment	ME
2.2.12.	Repair of mobile equipment i.e. hospital trolleys, cabinets, drip stands, beds and cots, bed pan, bin, bowl, bucket and mop stands, material handling equipment/carts, bedside lockers, bassinet stands, cylinder carriers, bed screens linen carriers, operating theatre stools etc.	ME
2.2.13.	Fire Hose reels, Fire Hydrants and Fire Extinguishers. Minimum requirement: minimum of one employee registered with SAQCC Fire as Service Technician and valid company registration certificate with SANS 1475 (See Clause 31.1.8)	SF
2.2.14.	Unblocking and rooting of sewer and storm water systems	SO
2.2.15.	Semi-Skilled Electrical Work (to be supervised by a qualified artisan)	EB

- NOTE:**
- i) The abovementioned list of items includes all ancillary equipment, distribution boards and control panels and the associated installations as applicable.
 - ii) When skilled workers work on semi-skilled categories of work, they will only be paid the semi-skilled rate.

3. REPORTING ON SITE

The Service Provider's representatives and workmen are required to report to the Maintenance Foremen upon arrival and prior to departure from institutions. Where institutions do not possess Maintenance Foremen they shall report to the Administrator or Superintendent or Principal or Official in Charge or his/her second in command.

Artisan's daywork sheets must be signed and stamped. Arrival and departure times must be clearly specified on a daily basis by the abovementioned responsible officials at institutions. The point of last and next call is to be indicated on each daywork sheet. A separate job sheet is required per Artisan per day.

The Service Provider's daywork sheets shall be endorsed with the official order number and/or instruction to proceed number prior to submission to the responsible official on Site. The name of each of the Service Provider's employees engaged on the works shall be endorsed on the daywork sheet.

4. SAFETY HEALTH AND ENVIRONMENTAL (SHE) PLAN

Once appointed, in terms of this contract, Service Providers shall, before commencing any work, and within twenty one (21) days after appointment submit a Health and Safety Plan which must be approved by the Employer. Failure to submit a Health and Safety plan will prevent the service provider from being include on the database of approved contractors, and if this condition is not fulfilled within two months from date of letter of acceptance, the service provider will be excluded from the data base of approved service providers in total.

It will also be required, when applicable, after acceptance of quotations under this contract that the Service Provider update his Health and Safety and Environmental Plan for approval by the Department, which will contain all required risk assessments for the specific project for each and every project to be executed under this contract.

Refer also to the Contractors Health and Safety Declaration and required structure of the OHSE plan. This means that the Health and Safety and Environmental Plan needs to be amended and updated to take into account all risk assessments for the specific project.

5. PROGRESS CHART

The Service Provider must provide a progress chart, for approval by the Employer's Representative, for each project awarded to him/her within 7 days of the date of site handover. The progress chart must be in a bar chart format and must list all activities necessary for completion of the project.

6. WORK IN CONJUNCTION WITH OTHER SERVICE PROVIDERS

If directed in writing, the approved Service Provider shall execute work simultaneously with, or during a building Contract or other Contract, where the building or other service provider is designated by the Employer as the main Service Provider. The approved Service Provider shall co-ordinate and execute the works in accordance with the requirements of the Main Service Provider and indemnifies the Province against any claim whatsoever due to his/her actions of negligence in the execution of the works. Should a dispute arise in the coordination or execution of the Works between the approved Service Provider and Main Service Provider, the Employer shall issue an order in writing to resolve such a dispute.

7. COMPLETION PERIOD

The completion period for each particular project will be stated in the applicable project specification or task order. No work shall be commenced without approval of the Employer or without an official order or letter of award. When quotations are invited for services, no extra Work requested by the Department shall be performed unless covered by a written instruction.

8. DELAYS: CLAIMS PROCEDURE

In respect of any claims for an extension of time: The Service Provider shall within 28 working days after the circumstance, event, act or commission giving rise to such a claim has arisen or occurred, deliver to the Departments Representative a written claim. This clause takes precedence over Clause 60 and 61 of the NEC contract.

9. CESSION

The Service provider may not cede or assign any part of this contract without written approval of the Head: Works or his/her Representative.

The Service provider may not cede or assign any right or claim to monies due or to become due under this contract.

10. DRAWINGS

All drawings applicable to each and every project will be listed in the particular project specification for each project in respect of which quotations are invited.

Service Providers will be issued with copies of drawings and specifications at the time of site handover and such documentation must be available on site during the construction period.

(a) Scale

All dimensions are to be checked on site.

(b) **Interpretation of Drawings, Etc.**

Should it occur that any part or parts of the Drawings or Specification not be clearly intelligible to the Service Provider, or that the materials or articles to be used in the execution of the works be considered insufficiently described, it is to be clearly understood that the Head: Works shall be requested, in writing, to make clear, also in writing, his/her requirements, failing which the Service Provider shall be liable to make, at his/her own expense, any alterations or substitutions rendered necessary through incorrect interpretations of such Drawings and Specifications.

(c) **Details**

At the commencement of the Works the Service Provider will be expected to study the drawings supplied and to advise the Head: Works in writing of any further details he/she requires for the accurate interpretation of the drawings. If, during the course of the Contract, he/she finds that he/she requires further details he/she must apply for these in writing two (2) weeks before he/she reaches that particular stage of work affected. Failing this, he/she cannot claim delay through lack of details.

Upon receipt of a detail drawing for any work, the Service Provider shall, before putting that work in hand, ascertain that the dimensions given on the detail drawing correspond with the dimensions of any work already built which govern the size of the work for which the detail drawing is given. In the event of any detail drawings not agreeing with the work already built the drawing shall be at once be returned for alteration, as no claim for extra work will be entertained in this respect.

11. SPECIFICATION

SANS Codes and the General Electrical Specifications have been included as a reference for general specifications in Annexure A1 and A2, but project specifications will be included in quotation documents when quotations are invited for the specific project.

12. SERVICES PROVIDED BY THE EMPLOYER

Although site services e.g. water and electricity and sanitary conveniences may, by mutual arrangement with the responsible official on Site, be available for use by the Service Provider this however, does not constitute automatic entitlement in every instance. Unless otherwise agreed the Contractor shall make his/her own arrangement for such on site services.

13. EQUIPMENT TO BE PROVIDED BY THE SERVICE PROVIDER

The successful Service Provider shall supply all plant and tools normally required to carry out the type of work tendered for, which shall include portable generators, portable engine-driven welding machines and mobile compressors etc., as applicable. Where a Service Provider is required to hire plant or equipment not deemed to form part of his/her normal "Scope of Work", prior approval shall be obtained from the Head: Works or his/her duly appointed Representative.

The Service Provider shall be responsible for delivery, offloading and placing into the required position all items of equipment and materials.

The Service Provider shall be fully responsible for all arrangement for accommodation of his/her workmen and for the safe storage of his/her tools, material and vehicles. All materials and plant stored on Site must be suitably protected against deterioration through any cause whatsoever, including damage or loss by theft or otherwise. The Service Provider shall remain fully responsible for all material and plant etc. until the completed work is handed over to, or has been officially accepted by the Department.

14. INVOICE FORMAT AND SUPPORTING DOCUMENTATION

- (a) The following information shall be reflected on all invoices:
 - i) Name of institution or complex/building
 - ii) Official order number and appointed representative's reference number where applicable
 - iii) Full description of work performed. (In respect of emergency callouts, the time, date and name of the person who called the Service Provider out must be indicated)
 - iv) Detailed list of materials/spare parts used showing prices, Service Provider's mark-up and subtotal
 - v) Labour hours performed, rate and subtotal
 - vi) Kilometres travelled and dates, rates and subtotal
 - vii) Subsistence claimed and dates, rate and subtotal
 - viii) VAT (at current rate)
 - ix) Grand Total
 - (b) Original Invoices together with supporting documentation and daywork sheets shall be made out to the office indicated on the official order form/letter of appointment. The original invoices, supporting documentation and copies thereof must be submitted to the respective Appointed Representative of the Department in control of the project as applicable.
- NB.** It is essential that Service Providers have the administrative facilities to enable them to comply with the clerical and financial procedures entailed in the execution of any project in terms of this Contract.
- (c) VAT shall be reflected separately on invoices. Where VAT is not indicated on quotation documents and/or invoices, it will be accepted that the quotations/invoices are inclusive of VAT.
 - (d) Accounts submitted for extra Work performed will not be entertained unless accompanied by a copy of such written instruction or approved variation order.
 - (e) Except where prior fixed quotations have been accepted, supporting documentation must be furnished in respect of all materials/spare parts, equipment and sub-contract services bought out,

which shall be by means of copies of invoices from **bone fide suppliers** i.e. Manufacturers, accredited agents and accredited stockists.

- (f) Approved Service Providers may be requested to submit for approval fixed quotations in respect of repetitive type servicing, repairs and spare parts required for servicing/repairs. Such price lists and Schedules shall be based on the tendered rates and tariffs and covered by the necessary supporting documentation. Where quotations for fixed price preventative maintenance servicing have been accepted daywork sheets shall not be required, however, the applicable service Schedules shall be completed and submitted with the Service Providers invoice. Proof by means of a daywork sheet or a delivery note, duly signed and stamped by an official on Site in respect of spare parts supplied shall be submitted with the Service Provider's invoice.
- (g) Quotations shall be detailed as mentioned above.
- (h) The Department reserves the right to accept or reject such quotations.

15. LOG BOOKS

All Work carried out on Site shall be fully detailed in the applicable log book. Any disruptions which are deemed to be beyond the Service Provider's control and which result in the Service Provider's workmen having to leave the Site, and verified by the responsible official on site, shall be logged in the applicable logbook and on the Contractor's daywork sheet.

16. AGENCIES

The approved Service Providers will be required to submit quotations for certain services from time to time where applicable the following shall apply:

- i) Where approved contractors offer plant embodying units of manufacture other than those of their principles, and for which they are not accredited South African Agents and for which they do not stock spare parts, they must state in their quotations the name of the accredited South African Agents from whom spare parts for such units are obtainable. All things being equal, preference will be given to products for which there is a manufacturer or an accredited agent in the Republic of South Africa for spare parts, provided that such parts are already in stock.
- ii) In all cases the approved Service Provider must furnish an undertaking from him/her or the manufacturers or agents concerned, to the effect that he/she will, in the event of his/her offer being accepted, carry the necessary stock of spare parts of the particular units offered. Approved service providers shall also state whether they maintain properly trained staff to carry out servicing of the offered equipment.

17. PREVENTIVE MAINTENANCE SCHEDULES

Preventive maintenance servicing of plant and equipment shall be carried out in accordance with the maintenance schedules and programmes to be supplied by the Employer. Copies must be made by, and at the cost of, the Service Provider as required of these schedules.

Service Providers who are required to carry out preventative maintenance servicing are required to submit to the Employer's Representative their planned service itinerary at least one week (7 days) prior to commencing the specified service work.

18. OVERTIME WORK

18.1. The working of overtime is not intended under this Contract and no overtime will be paid in respect of normal Works. Overtime will only be entertained in cases of emergencies where breakdowns occur to essential services and urgent work as determined by the Department.

When overtime work is authorized by the Department, overtime rates as per the applicable rates as per the contract.

Should an emergency arise or where it is deemed necessary in the interests of the Department to work overtime, specific authority for such overtime must be obtained. The following are deemed as essential services:

18.1.1. Mechanical Installations

- i) All services serving operating theatres and intensive care units
- ii) Air conditioning/Refrigeration serving medicine storage, blood storage and specialized electronic laboratory equipment
- iii) Air conditioning /Heating serving Maternity, Paediatric, Premature and Children's Wards
- iv) Main steam supply
- v) Cold/Freezer room and Mortuary refrigeration plant
- vi) Diesel driven generating sets
- vii) Bulk cooking equipment e.g. cooking pots and cooking ranges
- viii) Hot water plant serving wards and Nurses' Quarters/Hostels (not domestic)
- ix) Water and sewerage pumps

18.1.2. Plumbing Installations

- i) Main water supply
- ii) Main drainage
- iii) Burst hot water cylinders, burst water pipes and water leaks

18.1.3. Electrical Installations

- i) Electrical power supplies to all of the services listed under 18.1.1
- ii) Main Electrical supplies to buildings and institutions.

18.2. Where working of overtime has been authorized by the Department overtime rates shall be applied as follows:

Monday to Saturday Inclusive

All overtime hours worked = Normal Time × 1.5

Sundays and Public Holidays

All overtime hours worked = Normal Time × 2

NOTE: For the purposes of determining when overtime shall commence, it will be taken that the normal working day is between the hours of 07h30 to 16h30, Monday to Friday.

19. PREPARATION OF STEAM BOILERS FOR INTERNAL/EXTERNAL INSPECTION AND HYDRAULIC PRESSURE TESTING

Where approved Service Providers are required to prepare Steam Boilers for the above mentioned inspections and tests, such official dates shall be strictly adhered to. Failure to comply with the official inspection requirements will make the Service Provider liable for any penalties which may be imposed by the Inspector of Machinery, and may further cause cancellation of the Contract.

20. CODED WELDING

Only welders in possession of valid Competence Certificates as defined in the Code of Practice for Welding (SANS 10044-1 and 2 of 2004) shall be employed in the construction and erection of Steam Equipment. All records and Competence Certificates relating to welding procedures and welders employed in the manufacture and the erection of Steam equipment, shall be accessible for inspection by the Department. Service Providers who tender for repairs to Steam Boilers shall state whether they have a Coded Welder/s in their employ, and if so shall furnish proof thereof with their Tender.

21. SUB CONTRACTING OF WORK

It is the intention that appointed Service Providers shall perform the Works using their own employees and resources. As such, sub-contract work is restricted to specialist services only, and shall be detailed and indicated on quotations and invoices accordingly.

The appointed Service Provider shall be held accountable for any incidences of non-performance, poor workmanship etc., in respect of any work undertaken by his/her sub-contractor.

Where building and electrical work associated with mechanical installations needs to be executed, the appointed Service Provider can execute such work using a specialist sub contract.

Where specific specialist work is required, for example internal inspections of pipes and ventilation systems, and x-rays of welding on structures, the appointed service provider can execute such work using a specialist subcontract.

Appointed Service providers shall not subcontract work for which they are directly appointed. Failure to comply with this clause may result in the termination of the tender award.

22. REDUNDANT MATERIALS, SPARE PARTS, PLANT AND EQUIPMENT

- (a) Redundant materials and spare parts which arise from servicing or emergency and essential repairs must be listed by the Service Provider's workmen and handed over to the responsible official at the institution and a signature obtained therefore.
- (b) Redundant materials, plant and equipment arising from planned replacement and upgrading work shall:
 - i) When considered scrap by the Department i.e. having no monetary value and no use to anyone, be removed from site by the Service Provider. An amount must be quoted for under the price schedule when required, for removal of scrap, which amount will form part of the total quotation method.
 - ii) When considered by the Department to have monetary value but is of no use to the Department the Service Provider may be invited to submit a quotation for the purchase and removal of same from Site. The Employer reserves the right to accept or reject such quotations.

NOTE: The Service Provider is responsible for all redundant materials and spare parts until handed over. No scrap or redundant parts, material, equipment or plant may be removed from Site without the prior written authority of the Department.

23. TESTING, FIRST DELIVERY, FINAL DELIVERY AND COMPLETION OF THE WORKS

(a) First Delivery

The procedure for First Delivery Inspection, in respect of servicing, maintenance and repair work, unless otherwise required by the Employer, and all upgrading, replacement and new works, shall be as follows:

- i) The Service Provider shall satisfy him/herself that the Works are tested and complete and to Specification in all respects, and to the satisfaction of the responsible official on Site.

The Service Provider shall then apply for an inspection on a date that suits both parties.

The Service Provider shall make timeous arrangements with the Employer's Representative for inspection of all Work prior to Departure of his/her workmen from the Site. The Service Provider shall submit his/her claim only after the Works are accepted.

- ii) Should any item whatsoever be noted during the inspection which may require attention or rectification, the Works will not be accepted. It will be necessary for the Service Provider to again arrange for an inspection once all outstanding items have been rectified at no cost to the Department. The Employer shall also be entitled, at his/her discretion, to deduct the costs of any fruitless inspection/s from monies owing to the Service Provider, in respect of the Works. Acceptance of the Works will only be taken as and when the Works are completed in every detail.
- iii) The Service Provider is responsible for appointing his/her own foremen or supervisors for the supervision of the Works. It is not the responsibility of the Department or its duly appointed representatives to perform such functions on behalf of the Service Provider.
- iv) Certificates of conformity/compliance are required to be submitted, by the service provider, at first delivery in respect of the following installations:
 - Electrical
 - Air Conditioning and Refrigeration
 - Medical Gas
 - LP Gas
 - Plumbing
 - Industrial Compressed Air
 - Fire Detection
 - Fire Suppression
 - Lifts, Escalators and Travellators
- v) When the Works are finished and complete in every detail, the Employer will issue a First Delivery Completion Certificate. The date of issue of the First Delivery Certificate shall be the date of commencement of the guarantee period.

(b) Final Delivery

On expiry of the guarantee period, the Employer will issue the Final Delivery Certificate, after satisfying him/ herself, at a site meeting held with the Service Provider that the Works are in all respects in sound and proper condition.

24. GUARANTEE PERIOD

- (a) The Service Provider shall unconditionally guarantee all servicing and repair work performed together with all materials and spare parts (inclusive of electrical components) supplied by him/her for a minimum period of six (6) months from the date of commissioning of the work undertaken.

- (b) The Service Provider shall unconditionally guarantee all new, replacement or additional equipment, and installations (inclusive of all electrical components) for a minimum period of twelve (12) months from the date of the first delivery certificate.

If the Service Provider's supplier has a standard guarantee which exceeds the minimum warranty called for, the greater period will be applicable.

- (c) The guarantee shall cover the performance of the Works and any defects due to inferior materials and/or workmanship of the Service Provider, or any of his/her Sub-Contractors, fair wear and tear excepted, and the Service Provider shall repair any such defects without delay and at his/her own cost. This guarantee shall include malfunction, and water, steam, gas, oxygen, oil, or air leaks, and adjustments.
- (d) Should any part of the complete Works perform unsatisfactorily so as to become detrimental to its functional use the Service Provider shall replace any such part or the complete Works with equipment as prescribed by the Employer without delay and at his/her own cost.
- (e) If any defects are not remedied with the period specified by the Employer, the Employer shall have such defect repaired at the risk and cost of the Service Provider, by another Service Provider whom the Employer deems to be proficient in the Work, without prejudice to any rights the Employer has against the defaulting Service Provider. The Employer will give written notice to the Service Provider of such instances where he/she appoints another Service Provider to remedy defects in the Works.

25. PROPRIETARY MATERIALS AND SUBSTITUTIONS OF MATERIALS

Where the term "or other approved" is used in connection with proprietary materials or articles it is to be understood that approval shall be at the sole discretion of the Employer.

Where brand or trade names are referred to in the Bills of Quantities in the quotation document these shall indicate the quality and type of material or fitting required and no substitution of materials so specified will be permitted unless authority of the Head: Works has been obtained in writing *before quotations close*.

In all cases where the Service Provider takes delivery of, handles, stores, uses, applies and/or fixes any proprietary product he/she shall do so in strict accordance with the manufacturer's instructions after consultation with the manufacturer or his/her authorized representative.

No substitution of the articles or materials specified in the tender specification will be permitted unless the authority of the Employer has been obtained, in writing, before quotations close. The Service Provider will otherwise be required to provide and/or use the specified articles or materials. Submission of materials will only be considered when the Employer is satisfied that if the substitution is approved, there is sufficient time remaining before quotations close to advise other service providers.

No work shall be carried out against these orders unless specifically instructed by the Employer.

26. PROTECTION OF HOT WORK

Any Service Provider performing “Hot Work” (welding, cutting etc.) must have at least 1 × 9kg DCP extinguisher at hand, the seal of which must be intact, and shall further ensure that no flammable materials or liquids are at risk. The Service Provider shall be held liable for any loss or damage sustained in this respect.

27. AVAILABILITY AND RESPONSE TIME TO BREAKDOWNS

The Service Provider is required to be available twenty-four (24) hours per day, seven (7) days per week, including public holidays, to respond timeously to breakdowns as and when instructed to do so.

In respect of each project, and if applicable, the service provider will be advised of the required response time to attend to breakdowns.

28. OPERATION AND MAINTENANCE MANUALS

The Service Provider shall hand over, at the completion of the Works three (3) copies of the necessary operating and maintenance requirements for all plant and equipment supplied and installed by him/her as part of the Works when applicable. Each copy of the operating and maintenance manual shall be separately bound, in a plastic covered hard cover ring binder, and shall contain the following data:

OPERATING AND MAINTENANCE MANUAL (PRO FORMA) CONTENTS

SECTION

1. SCOPE OF WORK (Part as amended by Service Provider as required)
2. OPERATING INSTRUCTIONS
 - 2.1 NORMAL OPERATION
 - 2.2 SAFETY MEASURES
 - 2.3 FAULT FINDING GUIDE
3. EQUIPMENT INFORMATION
 - 3.1 SCHEDULE OF INFORMATION
 - 3.2 LIST OF SPARES AND AGENTS
 - 3.3 DESIGN DATA
 - 3.4 AS-COMMISSIONED DATA

4. MAINTENANCE REQUIREMENTS

4.1 KZNPA SERVICE SCHEDULES

4.2 MANUFACTURERS SERVICE RECOMMENDATIONS

5. MANUFACTURERS LITERATURE

5.1 EQUIPMENT BROCHURES

5.2 PROPRIETARY DRAWINGS, EXPLODED VIEWS AND WIRING DIAGRAMS

6. AS FITTED DRAWINGS

6.1 ELECTRICAL DRAWINGS

6.2 SYSTEM LAYOUTS AND SCHEMATICS

(a) **As Built Drawings**

A complete set of full size paper prints of the drawings of the entire installation shall be included in each copy of the manual. The set shall include:

- i) Electrical wiring diagrams indicating all cable sizes, current ratings, fuses, control units, both internal and external to the machine.
- ii) Mechanical drawings and schematics showing all equipment, connections to the equipment and service runs installed by the Contractor, and isolating valves, etc.
- iii) Exploded views of all equipment showing each component part adequately identified and numbered.
- iv) The as built drawings on electronic records must be handed to the Employer's Representative at first delivery.

(b) **Equipment Schedules**

A complete schedule of all plant and equipment forming part of the Works shall be included in the manual. The schedule shall include, but shall not be restricted to the following data:

- i) Equipment type and model
- ii) Equipment identity number/serial number
- iii) Working load/pressure

- iv) Date of manufacture, testing installation and commissioning
- v) Country of manufacture
- vi) Manufacturer's name and contact address

(c) **Maintenance Requirements**

The manufacturer's recommendation with regard to the routine servicing and maintenance of all equipment shall be included in the manual. This data shall include the recommended service interval and the estimated hours required for each type of service, for each item of equipment, together with a list of agents/contractors authorized to carry out service/maintenance.

(d) **Operating Instructions**

A complete description of all-operating procedures and safety measures shall be included in the manual. A basic "Fault Finding Guide" shall also be included.

29. AUTHORITY TO DO SWITCHING ON ELECTRICAL SWITCHGEAR

NO switching of live electrical switchgear shall be done by an unauthorized person. The following persons are authorized to do switching on live electrical switchgear:

(a) Low Voltage Switchgear (1000V and lower)

Accredited Installation Electrician

(b) Medium Voltage (MV) Switchgear (1000V and higher)

Accredited Installation Electrician who successfully completed and acceptable medium voltage switching course at an approved authority such as ESKOM or MUNICIPAL ELECTRICITY CORPORATION. The installation electrician shall in any event be appointed in writing by the EMPLOYER to do medium voltage switching upon proof of his competency. The appointment shall clearly state the voltage, type of switchgear and specific installation/areas which he is authorized to do switching on.

30. SERVICE PROVIDER'S QUALIFICATIONS

To qualify for the rates listed as per Clause 34, Service Provider's staff shall comply with the following:

30.1. Skilled: Artisan/Technician/Engineer

Shall mean an employee who has completed a contract apprenticeship under Manpower Training Act 1981 (Act 56 of 1981) as amended or a contract of apprenticeship recognized by the INDUSTRIAL COUNCIL, or an employee who has passed a recognized trade test, or a NQF LEVEL 4

qualification with 480 credits completed, or any person who's qualification will enable him/her to register with the Engineering Council of South Africa, in any category.

In respect of foreign qualifications the service provider must obtain at his/her own cost verification from the South African Qualifications Authority that the foreign qualification is equal to the above mentioned paragraph. Certified copies of such verification must be submitted with the Tender.

30.2. Coded Welder

Shall mean an employee welder who is in possession of a valid Competence Welder's Performance Certificate as defined in the Code of Practice for Welding (SANS 10044-1 and 2:2004).

30.3. Apprentices

"APPRENTICE" shall mean an employee serving under a contract of apprenticeship registered under Manpower Training Act 1981 (Act 56 of 1981) as amended.

30.4. Semi-Skilled

"SEMI-SKILLED" shall mean an employee having a minimum of three (3) years' experience in performing work as is classified under item 2.2 inclusive and shall perform such work on a regular basis, or a person who has a valid SAQCC registration in an applicable category.

30.5. Unskilled

"UNSKILLED" shall mean an employee performing manual labour or as an assistant to skilled, semi-skilled or apprenticed workers.

31. PROOF OF QUALIFICATIONS

ALL copies of qualifications are to be certified by a Commissioner of Oaths.

The Tenderer shall provide proof by means of Certified Copies of Artisan(s) / Technician(s) / Coded Welder(s) / Apprentice(s) / Learners qualifications and indentureship papers and SAQCC Registration in the applicable categories, where applicable. Copies which are not certified proof will result in such employees being listed as semi-skilled in which case the semi-skilled rate will apply accordingly. Failure to provide any copies of qualifications will result in the employee being not listed on the contract.

Affidavits as proof of experience, signed by the employee and a Commissioner of Oaths are required in respect of semi-skilled workers, who shall have a minimum of 3 years related experience in respect of the service tendered for. Affidavits which are not signed by the employee and a Commissioner of Oaths will result in such employees being listed as unskilled, in which case,

the unskilled rate will apply accordingly. Failure to provide any affidavit of experience will result in the employee being not listed on the contract.

Should the appropriate proof of qualification not be submitted with the tender submission, the corresponding items tendered for will not be approved for the Tenderer.

Successful Tenderers shall during the period of validity of this Contract supply to the Employer proof of qualifications and/or experience in respect of any additional/replacement employees or changed qualifications of employees.

31.1. SAQCC Registrations

Certified proof of registration of permanent members of your staff are required to qualify for the following categories of works:

31.1.1. LP Gas Installations : Bid item 2.1.18

Certified proof of active registration with SAQCC Gas and the Liquefied Petroleum Gas Safety Association (LPGSASA) under the categories Commercial or Industrial Practitioner.

31.1.2. Medical Gas Installations : Bid item 2.1.19

Certified proof of active registration with SAQCC Gas and the South African Gas Association (SACGA) under the category: Medical Gases – Industrial.

31.1.3. Compressed Air : Bid item 2.1.17

Certified proof of active registration with SAQCC Gas and the South African Compressed Gas Association (SACGA) under the category : Inert Gases – Industrial.

31.1.4. Air Conditioning and Refrigeration - Category B : Bid items 2.1.2 (Greater than 18 kW cooling capacity)

Certified proof of active registration with SAQCC Gas and the South African Refrigeration and Air Conditioning Contractors Association (SARACCA) under the Category B: Air Conditioning & Refrigeration Practitioner or Category C: Inspector Commercial/Industrial Air Conditioning & Refrigeration.

31.1.5. Air Conditioning and Refrigeration - Category A : Bid item 2.2.5. (Less than 18 kW cooling capacity)

Certified proof of active registration with SAQCC Gas and the South African Refrigeration and Air Conditioning Contractors Association (SARACCA) under the Category A: Air Conditioning & Refrigeration Installer or AC&R Apprentice/Learner.

31.1.6. Fire Detection : Bid item 2.2.2

Certified proof of active registration with SAQCC Fire – Detection. It is a requirement that a minimum of one person who is registered as a Level 3 Serviceman be in the full time employ of the company.

31.1.7. Gas Suppression : Bid item 2.2.3

Certified proof of active registration with SAQCC Fire – Gas Suppression. It is a requirement that a minimum of one person who is registered as a Level 3 Commissioner/Serviceman be in the full time employ of the company.

31.1.8. Fire Fighting Equipment : Bid item 2.2.13

Certified proof of active registration with SAQCC Fire as a Service Technician.
Certified proof of the company's active registration with SANS 1475.

31.2. Plumbing : Bid items 2.1.14, 2.1.15, 2.1.45

Certified proof of active registration with a recognized authorising body (i.e. Plumbing Industry Registration Board – PIRB) is required.

31.3. Automatic Fire Sprinkler Installations : Bid item 2.2.1

Certified proof of active registration with the Automatic Sprinkler Inspection Bureau (ASIB). It is a requirement that the bidder be registered as a minimum of a Conditional Installer, all Provisional Installers will not be considered for this bid item.

31.4. Electrical Installations : All CIDB Graded EB/EP Bid items

Certified proof of registration with the Department of Labour as an Electrical Contractor shall be submitted.

31.5. Medium Voltage Switching : Bid Item 2.1.49

Certified proof of successful completion of acceptable medium voltage switching course at an approved authority such as ESKOM or MUNICIPAL ELECTRICITY CORPORATION, and copy of appointment in writing by the EMPLOYER to do medium voltage switching. See Clause 29.

32. LABOUR BROKERS

The services offered by labour brokers are specifically excluded from this Contract.

33. RATES AND TARIFFS

33.1. Labour Rates

- i) The Employer is offering maximum labour rates as set out under the priced schedule Clause 34.
 - ii) These labour rates are taken to cover all Service Provider's supervision, administration (including quoting) and overhead costs, printing of standard service schedules, consumables, insurance, sundries and preliminaries, as per the Conditions of Contract, and profit. Note: Sundries include unproven costs e.g. such as freight/postal charges.
- 33.1.1. The skilled Artisan/Technician/Coded Welder/Apprentice rates, Item 34.1.1/34.1.2 and 34.1.3 applies to a qualified person **working without assistance of a labourer**.
- 33.1.2. Claims for Semi-Skilled rates, Item 34.1.4, will only be entertained in respect of work covered under item 2.2.
- 33.1.3. Additional Unskilled labour. Services/work requiring additional labour to the skilled labour covered under the Artisan/Technician/Coded Welder/Apprentice rate in 33.1.1. above, shall be quoted for. Service Providers quoting for such work will be required to clearly define in their quotations for what purposes such additional labour is required.
- 33.1.4. The labour rates will be adjusted annually in accordance with the Metal and Engineering Industries Bargaining Council (MEIBC) Rates Adjustment percentage.

33.2. Subsistence Tariffs

- i) The Employer will reimburse the Service Provider for subsistence per 24 hour period in accordance with the tariffs set out in the price schedule under Item 34.2, which tariffs are based on the present Government tariff for subsistence.

These subsistence rates will also remain firm for the entire Service Period of thirty-six (36) months.

- ii) Where hotel or other accommodation is utilized and the costs (including a packed lunch) exceed the aforementioned fixed tariffs, the Service Provider may claim actual costs incurred, upon submission of the necessary accounts and receipts excluding the cost of telephone calls, laundry, and all alcoholic beverages, per night and providing that the nearest commercial accommodation to the Site is utilized.

NOTE: Either subsistence rate or the actual hotel/accommodation cost may be claimed, not both.

- iii) Claims in respect of food and refreshments consumed during the course of "day trips" will not be entertained.

33.3. Transport Tariffs – Sedans, LDV’S And Panel Vans

- i) The Employer will reimburse the Service Provider for transport and travelling costs in accordance with the maximum tariffs set out in the price schedule under item 35.1.1 as applicable, which tariffs are based on the LDV 1951 to 2150cc engine capacity. Department of Transport tariffs for private vehicles plus the applicable hourly rate calculated at an average speed throughout the service area of 80km/hr.
- ii) These tariffs will be reviewed by the Employer, annually based on the last fuel tariff increase. However, the Employer reserves the right to adjust these rates at any time should there be an abnormal (in the view of the Employer) fuel price fluctuation.
- iii) These tariffs include depreciation, maintenance and insurance etc. of vehicles, toll fees, delays due to road conditions or inclement weather and travelling time for the driver. Travelling time for additional labour may only be claimed for separately at the average speed referred to in (i) above, see Clause 35.1.3.

33.4. Transport Tariffs – Other Vehicles

The Employer is offering maximum fixed rates for other delivery vehicles, inclusive of the driver’s time. These rates will be adjusted in accordance with the increase percentage applicable to 33.3.ii) above.

33.5. Mark-Ups

a) Mark-Up on Materials, Spare Parts, Plant and Equipment

- i) A maximum mark-up on the supplier’s nett invoiced value, before the addition of VAT of materials and spare parts shall be allowed by the Employer.
- ii) The following sliding scale will apply in respect of the maximum allowable mark-up on the sum total cost, prior to the addition of VAT, on all materials, spare parts, plant and equipment.

1.	R0.00 to R300 000.00	
	Mark-up	@ 20%
2.	R300 000.00 to R500 000.00	
	First R300 000.00	@ 20%
	Balance	@ 15%
3.	R500 000.00 Plus	
	First R300 000.00	@ 20%
	Second R200 000.00	@ 15%
	Balance	@ 13%

NOTE: Mark-up may not be added to the proprietary items for which the Service Provider is the Manufacturer, or Agent, and which he/she retails. Such items should not be supplied at more than normal retail price, which is taken to include the Service Provider's mark-up.

b) **Mark-Up on Hired Transport**

A maximum mark-up of 10% on the supplier's nett invoiced value, before addition of VAT, on hired transport shall be allowed by the Employer.

c) **Mark-Up on Sub-Contract Services**

- i) Work performed for a Service Provider by a third party (sub-contractor) on Site shall be invoiced at nett cost, prior to the addition of VAT, plus a maximum of 15%.
- ii) Work performed for a Service Provider by a third party (sub-contractor) at the sub-contractor's premises shall be invoiced at nett cost, before the addition of VAT, plus a maximum of 20%.

33.6. Where a project has been accepted at the prescribed rates, applicable at the time of acceptance of a quotation, the applicable rates will be utilized for the entire contract period of such project, no adjustment of such rates will be entertained although there may be annual (or other) adjustment in the contract rates and tariffs.

34. SCHEDULE OF RATES AND TARIFFS: LABOUR AND SUBSISTENCE

34.1.	Labour Rates (See Clause 33.1) Excluding VAT	Rates		
ITEM	DESCRIPTION	NORMAL RATE TIME	OVER TIME x 1.5	OVERTIME x 2
34.1.1.	Artisan/Technician rate per hour, normal time (excluding labourer)	R 330.00	R 495.00	R 660.00
34.1.2.	Coded Welder rate per hour, normal time (excluding labourer)	R 330.00	R 495.00	R 660.00
34.1.3.	Apprentice rate per hour (normal time excluding labourer)			
(i)	First Year	R 130.00	R 195.00	R 260.00
(ii)	Second Year	R 165.00	R 247.50	R 330.00

(iii)	Third Year	R 198.00	R 297.00	R 396.00
(iv)	Fourth Year	R 291.50	R 437.25	R 583.00
34.1.4.	Semi-Skilled rate per hour (excluding labourer)	R 156.00	R 234.00	R 312.00
34.1.5.	Unskilled rate per hour (additional labour only)	R 82.50	R 123.75	R 165.00
34.2.	Subsistence Rates (See Clause 33.2) Excluding VAT per 24 hour period			
ITEM	DESCRIPTION	RATE		
34.2.1.	Artisan/Technician/Coded Welder/Apprentice: Semi-Skilled and Unskilled	R 511.50		

35. SCHEDULE OF RATES AND TARIFFS: TRANSPORT AND DELIVERY

35.1.	Transport Tariffs (See Clause 33.3) Excluding VAT					
ITEM	SERVICE PROVIDED	RATE 1 VEHICLE @ DOT TARRIFF R/km		RATE 2 SERVICE PROVIDERS TIME @ 80km/hr	RATE 3 VEHICLE + SERVICE PROVIDER = RATE/km Excluding VAT	
35.1.1.	Transport tariff per kilometre travelled – Sedans, LDV's and Vans including travelling time of 1 × Artisan or coded welder	PETROL	DIESEL		PETROL	DIESEL
(i)	Normal Time	R 3.83	R 3.58	+ R 4.12	R 7.95	R 7.70
(ii)	Normal Time × 1.5	R 3.83	R 3.58	+ R 6.18	R 10.01	R 9.76
(iii)	Normal Time × 2	R 3.83	R 3.58	+ R 8.25	R 12.08	R 11.83
35.1.2.	Transport tariff per kilometre travelled sedans and LDV's including travelling time for 1 × driver (semi-skilled)	R 3.83	R 3.58	+ R 1.95	R 5.78	R 5.53

35.1.3.	Transport tariff per kilometre travelled – for any additional employees travelling with the driver.	Normal Time (SERVICE PROVIDERS TIME @ 80km/hr)	Normal Time × 1.5 (SERVICE PROVIDERS TIME @ 80km/hr)	Normal Time × 2 (SERVICE PROVIDERS TIME @ 80km/hr)
	Apprentice (1st Year)	R 1.63	R 2.44	R 3.25
	Apprentice (2nd Year)	R 2.06	R 3.09	R 4.13
	Apprentice (3rd Year)	R 2.48	R 3.71	R 4.95
	Apprentice (4th Year)	R 3.64	R 5.47	R 7.29
	Semi-Skilled	R 1.95	R 2.93	R 3.90
	Unskilled	R 1.03	R 1.55	R 2.06

35.1.4.	Transport Tariffs Per Kilometre For Other Delivery Vehicles. See Clause 33.4 (Including Driver's Time) Excluding VAT	
ITEM	VEHICLE SIZE	Rate per Kilometre Excluding VAT
(i)	2.5 tonne	R 9.31
(ii)	3 tonne	R 10.80
(iii)	5 tonne	R 12.50
(iv)	7 tonne	R 14.50
(v)	10 tonne	R 16.80

Returnable Forms to be Completed by the Tenderer

Part T3: Returnable Documents to be Completed by the Tenderer	Page Number
T3.1. Schedule of Items Tendered For	46 to 47
T3.2. Company Profile	48 to 53
SBD 4 Declaration of Interest	54 to 57
SBD 8 Declaration of Bidder's Past Supply Chain Management Practices	58 to 59
SBD 9 Certificate of Independent Bid Determination	60 to 63
SBD 6 Preference Points Claim Form	64 to 70
Contractor's Safety, Health and Environmental Declaration	71 to 72
Compulsory Enterprise Questionnaire	73 to 75
Authority to Sign Tender	76 to 77
Compulsory Pre-Tender Meeting Attendance Certificate	78

T3.1: Schedule of Items Tendered For

SCHEDULE OF SKILLED ITEMS TENDERERED FOR (to be completed by SERVICE PROVIDER)

I/We hereby TENDER for the following items of SKILLED WORK as specified (Refer to C3.1 Employers Scope of Work Clause 2.1)

ITEM No.	DESCRIPTION	CIDB CATEGORY	ITEM No.	DESCRIPTION	CIDB CATEGORY

I/We hereby TENDER for the WORK indicated under this Schedule in accordance with all the Contract conditions, the contents of which I/We are fully acquainted with. (Additional copies of this page may be made and inserted if required).

COMPANY STAMP

DATE: _____

NAME OF SERVICE PROVIDER

AUTHORISED SIGNATURE

NAME/S (PRINT)

SCHEDULE OF SEMI-SKILLED ITEMS TENDERED FOR (to be completed by SERVICE PROVIDER)

I/We hereby TENDER for the following items of SEMI-SKILLED WORK as specified (Refer to C3.1 Employers Scope of Work Clause 2.2)

ITEM No.	DESCRIPTION	CIDB CATEGORY	ITEM No.	DESCRIPTION	CIDB CATEGORY

I/We hereby TENDER for the WORK indicated under this Schedule in accordance with all the Contract conditions, the contents of which I/We are fully acquainted with. (Additional copies of this page may be made and inserted if required).

COMPANY STAMP

DATE: _____

NAME OF SERVICE PROVIDER

AUTHORISED SIGNATURE

NAME/S (PRINT)

T3.2: Company Profile

Additional Data to be provided by the Service Provider

1. WORK CAPACITY

The service provider is requested to furnish the following particulars. Failure to do so may result in the tender being disregarded.

- 1.1. Skilled Employee/s Details: Artisan/Technician: Provide details of all full time skilled staff members together with copies of qualifications and details of experience in respect of the tender items on which the employee/s will work. (See Part C3 Clause 30.1, 30.2 and 31)

Name	Trade Qualifications	Proof of Qualification Submitted Yes/No	Years Exp.	Details of Experience and last 3 projects worked on

- 1.2. Apprentice Employee/s Details: Provide details of a full-time apprentice staff members together with copies of qualifications and details of experience in respect of the tender items on which the employee/s will work. (See Part C3 Clause 30.3 and 31)

Name	Proof of Apprenticeship Submitted Yes/No	Years Exp.	Details of Experience and last 3 projects worked on

(Submit certified copies of qualification papers) (See Part C3 Clause 29.6 and 29.7) (Copy and submit additional pages if required)

1.3. Semi-Skilled Employee/s Details: Provide details of all full time semi-skilled staff members together with proof of qualifications and details of experience in respect of the tender items on which the employee/s will work. (See Part C3 Clause 30.4)

Name	Qualifications	Proof of Qualifications/Affidavit of Experience Submitted? Yes/No	Years Exp.	Details of Experience and last 3 projects worked on

(Submit copies of qualification papers)

1.4. Full particulars of company workshop premises available:

1.5. Full particulars of company plant, power tools and equipment of the trade available:

1.6. Full particulars of company hand tools and testers of the trade available:

1.7. Full particulars of company transport available:

(Copy and submit additional pages if required)

1.8. List of Projects company previously completed by the Company in the past 5 years (Private and Government Sectors)

	Project	Contract/Sub-Contract Sum	Contract Period	Completion Date	Client	Name and Contact Details of Client
1						
2						
3						
4						
5						
6						
7						
8						

(Copy and submit additional pages if required)

1.9. Particulars of commitments on which the service provider is at present engaged (Private and Government Sectors):

	Project	Contract/Sub-Contract Sum	Contract Period	Completion Date	Client	Name and Contact Details of Client
1						
2						
3						
4						
5						
6						
7						
8						

(Copy and submit additional pages if required)

2. PAST EXPERIENCE – NEW ENTITIES

The tenderer is requested to furnish past experience for owners and employees of new entities:

	Name	Experience	Period
1			
2			
3			
4			
5			
6			
7			
8			

3. LIST OF MAIN MATERIAL SUPPLIERS

	Name
1	
2	
3	
4	
5	

4. RAND VALUE OF SUSTAINABLE SPARES STOCK FOR ITEMS TENDERED FOR

1	Main Premises	
2	Branch	

5. COMPANY DETAILS

a) Physical Address, Workshop:

Tel No.: ----- Fax No.: -----

b) Physical Address, Branch Office/Workshop:

Tel No.: ----- Fax No.: -----

c) E-mail Address: -----

d) After Hours Contact Number: -----

e) Cellular Phone Number: -----

f) Number of artisans available for emergency works 24 hours/day 7 days per week? -----

If yes state after hours contact numbers:

Cell Phone No. 1: -----

Cell Phone No. 2: -----

g) IS CERTIFIED PROOF OF VALID QUALIFICATIONS ATTACHED:

Artisan Qualifications Yes/No -----

Coded Welders Qualifications Yes/No -----

Apprentice Indentureship Papers Yes/No -----

Certificate of Registration in respect of inspection and testing of vessels under pressure Yes/No -----

SAQCC Registration:

• LP Gas: Commercial / Industrial Practitioner Yes/No -----

• Medical Gases: Industrial Yes/No -----

• Inert Gases: Industrial (Compressed Air) Yes/No -----

• Authorised Air Conditioning & Refrigeration Installer – Category A Yes/No -----

• Authorised Air Conditioning & Refrigeration Practitioner – Category B Yes/No -----

• Fire-Detection Yes/No -----

• Fire-Gas Suppression Yes/No -----

• Fire Fighting Equipment (Extinguishers, Hose Reels etc.) Yes/No -----

ASIB: Conditional Installer Yes/No -----

Plumbing: Registration with Plumbing Industrial Registration Board (if applicable) Yes/No -----

National Qualification Framework Qualifications Yes/No -----

Department of Labour registration certificate as an Electrical contractor Yes/No -----

Medium Voltage Switching: Proof of completed recognised MV switching course Yes/No -----

Certification with PSIRA as service provider in terms of fire detection equipment and installations (security equipment) Yes/No -----

h) CIDB REGISTRATION NUMBER -----

i) CIDB CATEGORY -----

Authorised Signature: ----- PRINT NAME: -----

Name of Service Provider: ----- Date: -----

DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-
 - the bidder is employed by the state; and/or
 - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.
2. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**
 - 2.1 Full Name of bidder or his or her representative:
 - 2.2 Identity Number:
 - 2.3 Position occupied in the Company (director, trustee, shareholder²):
 - 2.4 Company Registration Number:
 - 2.5 Tax Reference Number:
 - 2.6 VAT Registration Number:
 - 2.6.1. The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 3 below.

¹"State" means –

- (a) 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);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

²"Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

2.7 Are you or any person connected with the bidder presently employed by the state? **YES / NO**

2.7.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member:

Name of state institution at which you or the person connected to the bidder is employed :

Position occupied in the state institution:

Any other particulars:

.....

.....

.....

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attached proof of such authority to the bid document? **YES / NO**

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

2.7.2.2 If no, furnish reasons for non-submission of such proof:

.....

.....

.....

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**

2.8.1 If so, furnish particulars:

.....

.....

.....

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.9.1 If so, furnish particulars.

.....

.....

.....

2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid? **YES/NO**

2.10.1 If so, furnish particulars.

.....

2.11 Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract? **YES/NO**

2.11.1 If so, furnish particulars:

.....

3 Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	Personal Tax Reference Number	State Employee Number / Persal Number

4 DECLARATION

I, THE UNDERSIGNED (NAME).....

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 23
OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

May 2011

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Standard Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by institutions 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 disregarded if that bidder, or any of its directors have-
 - a. abused the institution's supply chain management system;
 - b. committed fraud or any other improper conduct in relation to such system; or
 - c. failed to perform on any previous contract.
- 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	<p>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?</p> <p>(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 <i>audi alteram partem</i> rule was applied).</p> <p>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.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>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)?</p> <p>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.</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	<p>Was the bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years?</p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

4.3.1	If so, furnish particulars:		
4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME).....
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS 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

Js36bW

CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Standard Bidding Document (SBD) must form part of all bids¹ 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 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
 - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
 - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- 4 This SBD 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 (SBD 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.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Institution)

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 consortium³ 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

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2011

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, 2011.

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 R1 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R1 000 000 (all applicable taxes included).

1.2. The value of this bid is estimated to exceed/not exceed R1 000 000 (all applicable taxes included) and therefore the system shall be applicable.

1.3. Preference points for this bid shall be awarded for:

- a) Price; and
- b) B-BBEE Status Level of Contribution.

1.3.1. The maximum points for this bid are allocated as follows:

POINTS

1.3.1.1. PRICE

.....

1.3.1.2. B-BBEE STATUS LEVEL OF CONTRIBUTION

.....

Total points for Price and B-BBEE must not exceed

100

1.4. Failure on the part of a bidder to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.5. 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

- 2.1. **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- 2.2. **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- 2.3. **“B-BBEE status level of contributor”** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- 2.4. **“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 services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
- 2.5. **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- 2.6. **“comparative price”** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- 2.7. **“consortium or joint venture”** 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;
- 2.8. **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.9. **“EME”** means any enterprise with an annual total revenue of R5 million or less.
- 2.10. **“Firm price”** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- 2.11. **“functionality”** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;
- 2.12. **“non-firm prices”** means all prices other than “firm” prices;
- 2.13. **“person”** includes a juristic person;
- 2.14. **“rand value”** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;

- 2.15. **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;
- 2.16. **“total revenue”** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;
- 2.17. **“trust”** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- 2.18. **“trustee”** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

- 3.1. The bidder obtaining the highest number of total points will be awarded the contract.
- 3.2. Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.
- 3.3. Points scored must be rounded off to the nearest 2 decimal places.
- 3.4. In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
- 3.5. However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.
- 3.6. Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

4.1. THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) & \mathbf{or} & P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \end{array}$$

Where

P_s = Points scored for comparative price of bid under consideration

P_t = Comparative price of bid under consideration

P_{\min} = Comparative price of lowest acceptable bid

5. Points awarded for B-BBEE Status Level of Contribution

- 5.1. In terms of Regulation 5 (2) and 6 (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	8	16
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

- 5.2. Bidders who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.
- 5.3. Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- 5.4. A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
- 5.5. A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- 5.6. Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

5.7. A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

5.8. A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. BID DECLARATION

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

7. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.3.1.2 AND 5.1

7.1. B-BBEE Status Level of Contribution: = (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA).

8. SUB-CONTRACTING

8.1. Will any portion of the contract be sub-contracted? YES / NO (delete which is not applicable)

8.1.1. 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? YES / NO (delete which is not applicable)

9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1. Name of company/firm:

9.2. VAT registration number:

9.3. Company registration number:

9.4. TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company

☐ (Pty) Limited
[TICK APPLICABLE BOX]

9.5. DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....
.....
.....

9.6. COMPANY CLASSIFICATION

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

9.7. Total number of years the company/firm has been in business?

9.8. 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 contribution indicated in paragraph 7 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 paragraph 7, 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 contribution 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) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, 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 BIDDER(S)

DATE:

ADDRESS:

.....

.....

.....

CONTRACTOR'S SAFETY, HEALTH AND ENVIRONMENTAL DECLARATION

In terms of Regulations 5(1) (h) of the Construction Regulations of February 2014 a Contractor may only be appointed to perform construction work if the Client is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and safety Act, Act 85 of 1993 and the Construction Regulations of February 2014. In line with this requirement the Contractor is required to read through this document carefully, sign it and submit it with his/her Bid.

DECLARATION

1. I, the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act 85 of 1993 and the Construction Regulations of February 2014 and the Construction Safety, Health and Environmental Specifications attached to this document.
2. I hereby declare that my company and its employees has the necessary competency and resources to safely carry out the construction works under this contract in compliance with the Occupational Health and Safety Act, Act 85 of 1993, the Construction Regulations of February 2014 and the Construction Safety, health and Environmental Specifications and as per the scope of work that I have tendered for in terms of this contract.
3. I hereby confirm that adequate provisions will be made in my Bid to cover the cost of all Safety, Health and environmental duties and responsibilities imposed on me by the Occupational Health and Safety Act, act 85 of 1993, the Construction Regulations of February 2014 and the Construction safety, Health and Environmental Specifications when quoting for work in terms of this contract.
4. I hereby undertake that if my Bid is accepted, to provide before commencement of the Works under the contract or as required by the Conditions of the Contract, a suitable and sufficiently documented Construction Safety, Health and Environmental Management Plan in accordance with Regulation 7(1) (a) of the Construction Regulations of February 2014, which shall be subject for approval by the Client.
5. I confirm that I may not commence with any part of construction work under the contract until my Construction Safety Health and Environmental Management Plan and the associated Risk assessments has been approved in writing by the Client.
6. I hereby undertake to carry out all required risk assessments for each project undertaken under this contract and amend my OHSE Management plan to accommodate and include such risk assessments and amend accordingly for implementation throughout the project to ensure a safe working environment.

I hereby confirm that copies of the following documentation will be kept on site for viewing and inspection purposes for the duration of the construction work:

- a) Clients Construction safety, health and Environmental Specification

- b) Approved Construction Safety, Health and Environmental Plan with associated risk assessments and current valid letter of Good Standing.
- c) Occupational Health and Safety Act, act 85 of 1993
- d) Construction Regulations of February 2014

7. I agree that my failure to complete and execute this declaration to the satisfaction of the Client will mean that I am unable to comply with the requirements of the Occupational Health and Safety Act 85 of 1993 and the Construction Regulations of February 2014, and accept that my Bid will be rejected.

Duly signed at on this the day of 20.....

.....

Full name of Signatory

.....

Name of Bidding Entity

.....

Capacity of Signatory

.....

Signature of authorised representative of Bidder

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 6 partners

Section 5: Particulars of companies and close corporations

Company registration number		
Close corporation number		
Tax reference number		

Section 6: Record of 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:

<input type="checkbox"/> a member of any municipal council	<input type="checkbox"/> 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)
<input type="checkbox"/> a member of any provincial legislature	<input type="checkbox"/> a member of an accounting authority of any national or provincial public entity
<input type="checkbox"/> a member of the National Assembly or the National Council of Province	<input type="checkbox"/> an employee of Parliament or a provincial legislature
<input type="checkbox"/> a member of the board of directors of any municipal entity	
<input type="checkbox"/> an official of any municipality or municipal entity	

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

*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:

<input type="checkbox"/> a member of any municipal council	<input type="checkbox"/> 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)
<input type="checkbox"/> a member of any provincial legislature	<input type="checkbox"/> a member of an accounting authority of any national or provincial public entity
<input type="checkbox"/> a member of the National Assembly or the National Council of Province	<input type="checkbox"/> an employee of Parliament or a provincial legislature
<input type="checkbox"/> a member of the board of directors of any municipal entity	
<input type="checkbox"/> an official of any municipality or municipal entity	

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 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 Bid 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 Bidding entities submitting Bid offers and have no other relationship with any of the Bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed		Date	
Name		Position	
Enterprise Name			

AUTHORITY TO SIGN A TENDER

A. COMPANIES

ZNT55G/66W 2016

If a tenderer is a company, a certified copy of the resolution by the board of directors, personally signed by the chairperson of the board, authorising the person who signs this tender to do so, as well as to sign any contract resulting from this tender and any other documents and correspondence in connection with this tender and/or contract on behalf of the company must be submitted with this tender, that is before the closing time and date of the tender

AUTHORITY BY BOARD OF DIRECTORS

Resolution passed by the Board of Directors on20....., Mr/Ms (whose signature appears below) has been duly authorised to sign all documents in connection with tender/ contract on behalf of (Name of Company)

SIGNED ON BEHALF OF COMPANY:

IN HIS/HER CAPACITY AS:

SIGNATURE OF SIGNATORY:

DATE:

WITNESSES: 1

2

B. SOLE PROPRIETOR (ONE - MAN BUSINESS)

I, the undersigned hereby confirm that I am the sole owner of the business trading as

.....
SIGNATURE

.....
DATE

C. PARTNERSHIP / JOINT VENTURES

The following particulars in respect of every partner / Joint Venture Member must be furnished and signed by every partner / Joint Venture Member:

Full name of partner	Residential address	Signature
.....
.....
.....
.....
.....

We, the undersigned partners / Joint Venture Member in the business trading as, hereby authorise to sign this tender as well as any contract resulting from the tender and any other documents and correspondence in connection with this tender and /or contract on behalf of

.....
SIGNATURE

.....
SIGNATURE

.....
SIGNATURE

.....
DATE

.....
DATE

.....
DATE

D. CLOSE CORPORATION

In the case of a close corporation submitting a tender, a certified copy of the Founding Statement of such corporation shall be included with the tender, together with the resolution by its members authoring a member or other official of the corporation to sign the documents on their behalf.

By resolution of members at a meeting on 20..... at

Mr/Ms....., whose signature appears below, has been authorised to sign all documents in connection with this tender on behalf of (Name of close corporation)

.....

SIGNED ON BEHALF OF CLOSE CORPORATION

.....

IN HIS/HER CAPACITY AS: DATE:

SIGNATURE OF SIGNATORY:

WITNESSES: 1

2

COMPULSORY PRE-TENDER MEETING ATTENDANCE CERTIFICATE

Tender Number: ZNT55G/66W 2016

Works Description:

**SERVICING, MAINTENANCE, REPAIR, UPGRADING, REPLACEMENT AND
NEW WORKS FOR ELECTRICAL, MECHANICAL AND PLUMBING
INSTALLATIONS, PLANT AND EQUIPMENT INSTALLED IN KWA-ZULU
NATAL PROVINCIAL ADMINISTRATION BUILDINGS AND INSTITUTIONS**

WORKS NOT EXCEEDING R1 000 000.00 INCLUDING VALUE-ADDED TAX

STATE FULL TRADING NAME OF TENDERING BUSINESS CONCERN:

VISITED AND INSPECTED THE SITE ON _____ (DATE)

AND IS THEREFORE FAMILIAR WITH THE CIRCUMSTANCES AND THE SCOPE OF THE SERVICE TO BE RENDERED.

SIGNATURE OF TENDERER
OR AUTHORISED REPRESENTATIVE

DATE

SIGNATURE OF DEPARTMENTAL
REPRESENTATIVE

RANK

DATE

PART T4

Additional Documents to be Submitted with this Tender by the Tenderer, not Included with this Tender Document

The following documents are to be attached to the tender upon submission:

DESCRIPTION	PAGE NUMBER
Copy of Tax Compliance Status (TCS) PIN Certificate	80 to 81
Copy of Proof of Good Standing with the Compensation Commissioner	82
Copy of CIDB Registration Certificate	N/A
Proof of Qualifications of Personnel Employed (Certified Copies)	N/A
BBBEE Certificate (Certified Copy)	N/A
Certified Copy of Registration as an Electrical Contractor with Department of Labour (for CIDB category EB and EP)	N/A
Proof of Registration on the Central Suppliers Database (CSD)	N/A
Copy of CIPC Certificate	N/A
All Bid Documents on Compact Disc (CD)	N/A

TAX CLEARANCE REQUIREMENTS

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with the South African Revenue Service (SARS) to meet the bidder's tax obligations. It is a condition of this Offer of Commission that your practice remains in good standing with SARS (the South African Revenue Service) in terms of its tax clearance, during the project, which is required to process your payment certificates.

In order to meet this requirement bidders are required to apply via e-filing at any SARS branch office nationally. The Tax Compliance Status (TCS) requirements are also applicable to foreign bidders / individuals who wish to submit bids.

SARS will then furnish the bidder with a Tax Compliance Status (TCS) **PIN** that will be valid for a period of 1 (one) year from date of approval.

In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Compliance Status (TCS) PIN.

Applications for Tax Compliance Status (TCS) PIN can be done via e-filing at any SARS branch office nationally or on the website: www.sars.gov.za

Tax Clearance Certificates may be printed via e-filing. In order to use this provision, taxpayers will need to register with SARS as efilers through the website: www.sars.gov.za

Please submit the printed certificate from SARS, as per the attached copy, in addition to filling in the details below:

Tax Compliance Status PIN Number:

--

and

Tax Reference Number of the Bidding Enterprise

--

NAME OF BIDDING ENTERPRISE
(COMPANY)

NAME OF BIDDING ENTERPRISE'S
AUTHORISED REPRESENTATIVE

SIGNATURE OF BIDDER

DATE



SAMPLE

[Redacted]

TAX COMPLIANCE STATUS

PIN Issued

Enquiries should be addressed to SARS:

Contact Detail

SARS
Alberton
1528

Contact Centre Tel: 0800 00 SARS (7277)
SARS online: www.sars.gov.za

Details

Taxpayer Reference Number: [Redacted]

Case Number:

Issue Date:

Always quote this reference
number when contacting SARS

Dear Taxpayer

TAX COMPLIANCE STATUS PIN ISSUED

The South African Revenue Service (SARS) has issued your tax compliance status (TCS) PIN as indicated below.

TCS Details:	
Taxpayer Name	[Redacted]
Trading Name	[Redacted]
Tax Reference Number(s)	[Redacted]
Purpose of Request	Good Standing
Request Reference Number	[Redacted]
PIN	[Redacted]
PIN Expiry Date	13/09/2017

You may authorise a third party to view your TCS by providing them the PIN. The PIN only allows the third party access to your TCS. All other tax information remains secure.

Your TCS displayed is based on your compliance as at the date and time the PIN is used.

You may cancel this PIN at any time before the expiry date reflected above. Once cancelled, a third party will not be able to verify your TCS.

SARS reserves the right to cancel this PIN in the event that it was fraudulently issued or obtained.

Should you have any other queries please call the SARS Contact Centre on 0800 00 SARS (7277). Remember to have your taxpayer reference number at hand when you call to enable us to assist you promptly.

Sincerely

ISSUED ON BEHALF OF THE SOUTH AFRICAN REVENUE SERVICE



Name: [Redacted]
Tax reference No: [Redacted]
Form ID: [Redacted]
Content Version: [Redacted]

Timestamp: [Redacted]
Year: [Redacted]
Page of Page: [Redacted]
Template version: [Redacted]

2016-11-10 2013.01.01 TCR00_RO

Page: 01/01

COMPENSATION FOR OCCUPATIONAL INJURIES, ETC., INSURANCE

ATTACH A COPY OF PROOF THAT THE TENDERER IS IN GOOD STANDING WITH THE
COMPENSATION COMMISSIONER

FAILURE TO DO SO MAY INVALIDATE THE TENDER

Annexure A1: SANS Typical Specifications for Mechanical and Plumbing Works

1. GENERAL REQUIREMENTS FOR MECHANICAL INSTALLATIONS IN KWAZULU-NATAL PROVINCIAL ADMINISTRATION BUILDINGS

Where SABS specifications are referred to herein they shall be deemed to be replaced by the redesigned and renumbered "SANS" Reference (i.e. South African National Standards) as applicable.

All materials, equipment, operational methods and workmanship shall comply with the following, all as amended:

- 1.1. The relevant South African Bureau of Standard Specifications (SANS) or the British Standard Specification, wherever such Specifications exist, the SANS Specifications taking preference where both such specifications exist.
- 1.2. Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)
- 1.3. The General Electrical Specification for the Provincial Administration of the Republic of South Africa, Part 2E.
 - 1.3.1. SANS 10142 Code of Practice for Wiring of Premises, SANS 10140-1978 TO SANS 10140-4 2003: Identification colour marking. (This must be read together with the KwaZulu-Natal Provincial Department of Public Works Standard Colour Coding for Piped Services.)
 - 1.3.2. SANS 60335-2-40: Electrical Safety
 - 1.3.3. SABS 60947-1:2005/IEC 60947-1: 2004 to SANS 60947-8:2004/IEC 60947- 8:2004: Low Voltage Switchgear and Control gear
 - 1.3.4. SANS 61084 Parts 1 to Part 2: Electrical Installation Ducting and Trunking Systems.
 - 1.3.5. SANS 10292:2001. Earthing of Low Voltage Distribution Systems
 - 1.3.6. SANS IEC 61084-1:1991/IEC 61084-1:1991 and SANS 61084-2-1:1996/IEC 61074-2-1:1996: Specification for cable trunking and ducting systems for electrical installations.
 - 1.3.7. SANS 60614-1:1994/IEC 60614-1:1994 to SANS 61035-2-4: 1995 IEC 60614-2-7:1995: Specification for conduit fittings for electrical installations.
 - 1.3.8. SANS IEC 61035-1: 1990/IEC 61035-1:1990 to SANS 61035-2-4: 1995/IEC 61035-2-4:1995. Specification for conduit fittings, for electrical installations.

1.3.9. SANS 767-1:1982 and SANS 767-2:1993: Earth leakage protection units

1.3.10. SABS IEC 60099-1: 1999/IEC 60099-1: 1999: Surge Arrestors

1.3.11. The Municipal by-laws and any special requirements of the Supply Authorities, of the area or district concerned.

1.3.12. Labelling:

All circuits, apparatus, switchgears, equipment, etc. shall be suitably and correctly labeled by means of engraved plastic labels which are to be either bolted or screwed to the equipment panel.

1.4. Automatic Fire Detection

1.4.1. SANS 50054-1:1976/EN 54-1: 1976 and SANS 50054-2:1997/EN 54-2:1997 to SANS 50054-11:2001/EN 54-11:2001: Components of automatic fire detection systems: Fire detection and fire alarm systems.

1.4.2. SANS 10139:2005 Fire detection and alarm systems for buildings – System design installation and servicing.

1.5. The KwaZulu-Natal Provincial Department of Public Works Technical Specification for Air conditioning and Ventilation Installations, M-ACV Issue 2, Jan 2004.

1.5.1. SANS 10173:2003 The Installation, Testing and Balancing of Air Conditioning Duct Work.

1.5.2. SANS 1238:2005 Air Conditioning Duct Work

1.5.3. SANS 1424:1997 Filters for use in Air conditioning and General Ventilation

1.5.4. SANS 1125:2004 Room air conditioners and heat pumps

1.5.5. SANS 5151:1994/ISO 5151:1994: Non-ducted air conditioners and heat pumps: Testing

1.5.6. SANS 14644-1 1999:/ISO 146445-1:1999: Clean rooms and associated controlled environments. Classification of air cleanliness. SANS 14644-2: 2003/ISO 146445-2:2000: Clean rooms and associated controlled environments Part 2; Specifications for testing and monitoring to prove continued compliance. SANS 14644-4:2003/ISO 14644-4:2001 Clean rooms and associated controlled environments: Part 4 Design, construction and start-up.

1.6. The KwaZulu-Natal Provincial Department of Public Works Technical Specification for Refrigeration Services, M-RCFM Issue 2, Jan 2004.

1.6.1. SANS 10147: Refrigeration Systems Including Plants associated with Air Conditioning Systems.

- 1.7. The KwaZulu-Natal Provincial Department of Health Standard Specification for Diesel Driven Generator Sets
- 1.8. The KwaZulu-Natal Department of Public Works Standard Specification for Steam, Condensate and Hot Water Reticulation, ME-SCR_HWB Issue III 1994.
- 1.9. The KwaZulu-Natal Provincial Department of Public Works Technical Specification for Steam Boiler Installations, M-SB.
- 1.10. The KwaZulu-Natal Provincial Department of Health Standard Specification and Drawings for Medical Gas and Vacuum Services. REV 1 – June 2002.
- 1.11. The KwaZulu-Natal Provincial Department of Public Works Technical Specification for Hot and Cold Water Services. Issue 2 Jan 2004
- 1.12. The KwaZulu-Natal Provincial Department of Public Works Standard Colour Coding for Piped Services.
- 1.13. SABS 10400 The application of the National Building Regulations
- 1.14. SANS 10287 – Automatic Sprinkler Installations for Fire Fighting Purposes.
- 1.15. SANS 14713: 1999/ISO 14713:1990: Protection against corrosion of iron and steel in structures- Zinc and aluminium coatings.
 - 1.15.1. SANS 121:2000/ISO 1461:1999: Hot dip galvanized coatings on fabricated iron and steel articles; Specifications and Test Methods
 - 1.15.2. SANS 32:1997/EN 10240:1997 Internal and/or External protective coatings for steel tubes- Specification for hot dip galvanized coatings applied in automatic plants.
 - 1.15.3. SABS ISO 4998:1996: Continuous hot dip zinc coated carbon steel sheet of structural quality
 - 1.15.4. And as specified in the Project Specifications issued under cover of this contract.

2. GENERAL REQUIREMENTS FOR PLUMBING INSTALLATIONS IN KWAZULU-NATAL PROVINCIAL ADMINISTRATION BUILDINGS

2.1. Sheet Metal

Sheet zinc	BS 849
Sheet aluminium	BS 1470
Sheet copper	BS 2870

2.2. Rainwater Systems

Pipe systems	SANS 966-1
Steel stall urinals	SANS 924
Acrylic sanitary ware: Baths	SANS 1402-1
Glazed ceramic sanitary ware	SANS 497
WC flushing cisterns	SANS 821
Flushing valves for WC flushing cisterns	SANS 1509
Un-plasticised Poly (vinyl chloride) components for external rainwater systems	SANS 511

2.3. Taps, valves etc.

Water taps (metallic bodies)	SANS 226
Water taps (plastic bodies)	SANS 1021
Single control mixer taps	SANS 1480
Float valves	SANS 752
Plastic floats for ball valves	SANS 1006
Functional control valves and safety valves for Domestic hot and cold water supply system	SANS 198
Cast iron gate valves for waterworks	SANS 664
Automatic shut-off flush valves for water	
Closets and urinals	SANS 1240
Check valves (flanged and wafer types)	SANS 1551-1&2

2.4. Fire Related Installations

Fixed electric storage water heaters	SANS 151
Reticulation to fire hose reels (with semi-rigid hose)	SANS 543

2.5. Drainage Covers, Gratings, etc.

Cast iron surface boxes and manhole and inspection covers and frames	SANS 558
Cast iron gratings for gullies and storm water drains	SANS 1115
The installation of polyethylene and poly (vinyl chloride) (PVC-U and PVC-M) pipes	SANS 10112
Water supply and drainage for buildings	SANS 10252-1&2
Cast iron step icons	BS 1247

2.6. Pipes and Fittings

Steel Pipes: Pipes suitable for threading and of normal size not exceeding 150mm	SANS 62
Plain-ended solid drawn copper tubes for Portable water	SANS 460
Malleable cast iron fittings threaded to ISO 7-1	SANS 4
Polyethylene (PE) pipes for water supply – specification	SANS 4427
Cast iron fittings for asbestos cement pressure pipes	SANS 546
Vitrified clay sewer pipes and fittings	SANS 559
Reinforced concrete pressure pipes	SANS 676
Concrete non-pressure pipes	SANS 677
Cast iron pipes and pipe fittings for use above ground in drainage installations	SANS 746
Un-plasticised poly (vinyl chloride) (PVC-U) sewer and drain pipes and pipe fittings	SANS 791
Fibre-cement pipes, couplings and fitting for sewerage, drainage and low pressure irrigation	SANS 819
Pitch-impregnated fibre pipes and fittings and jointing	SANS 921
Un-plasticised poly (vinyl chloride) (PVC-U) pressure pipe systems	SANS 966-1
Un-plasticised poly (vinyl chloride) (PVC-U) soil, waste and vent pipes and pipe fittings	SANS 967
Rubber joint rings (non-cellular)	SANS 974-1
Copper-based fitting for copper tubes	SANS 1067-1&2
Fibre-cement pressure pipes and couplings	SANS 1223
Polypropylene pressure pipes	SANS 1315
Non-metallic waste traps	SANS 1321-1&2
Vent valves for drainage installations	SANS 1532
Heavy duty cast iron pipe fittings for drainage and gas and water supplies	BS 78
Lead Pipes	BS 602
Cast iron pressure pipes for use in drainage and gas and water supplies	BS 1211
Stainless steel pipes for use with compression fittings	BS 4127

Annexure A2: General Electrical Specifications

3. GENERAL REQUIREMENTS FOR ELECTRICAL INSTALLATIONS IN KWAZULU-NATAL PROVINCIAL ADMINISTRATION BUILDINGS

3.1. Occupational Health and Safety Act, 1993 (Act No.5 of 1993)

- (a) The latest issue of the SANS 10142-1 April 2003 “Code of Practice for the Wiring of Premises”, hereafter called the “Wiring Code”.
- (b) The Municipal By-laws and any special requirements of the local supply Authorities.
- (c) The local Fire Office Regulations
- (d) National Building Regulations SANS 10400 as amended

3.2. Notices and Fees

The contractor must give notices required and pay all necessary fees, including any inspection fees, which may be claimed by the local Supply Authorities.

On production of the official receipted account, the nett amount of the fee charged by the supply authorities for connecting the installation to the supply mains will be refunded to the Contractor by the Department.

3.3. Schedules of Fittings

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

3.4. Quality of Materials

Only materials of first class quality must be used and all materials will be subject to the approval of the Department. Departmental specifications for various materials are contained in the Quality Specification for Electrical Materials used in KwaZulu-Natal Provincial Administration Installations, in conjunction with which this specification is to be read.

Where applicable, the materials must comply with the relevant specifications of the South African Bureau of Standards, or, where no such specification exists, with the relevant specifications of the British Standards Institution.

Materials where possible must be of South African manufacture.

Where the work “approved” appears in any specification it will mean “approved” by the Engineer of the Department of Works or his Representative.

3.5. Conduit and Accessories

Unless otherwise stated in the Project Specification and except where other methods of installation are specified for certain conduits, the installation will be conduit throughout. Open wiring will not be allowed in roof spaces.

For light and socket outlet circuits, the conduit must have an external diameter of 20mm. In all other instances the sizes of conduit must be in accordance with Standard Regulations for the specified number and size of conductors, unless otherwise directed in the Project Specification or indicated on the drawings.

Except where agreed to, or otherwise specified or indicated on the drawings, all conduit to points will be run via the ceiling slab or roof space.

Whether conduit will be PVC, galvanised or enamelled is specified in the Project Specification. However, in damp situations and where exposed to weather, the conduit, accessories and fittings must be galvanised or PVC in all cases.

Mechanical and electrical continuity must be maintained throughout the installation, but conduit must not be relied upon alone for earth continuity.

Conduit and conduit fittings must be thoroughly inspected for defects before installation, and all sharp edges and burrs removed.

Running joints are to be avoided as far as possible and conduit is to be set to the required angles; normal bends will be acceptable, except as may be permitted in large diameters.

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

Bushes must be of brass only for metal conduit.

Bushes and locknuts are to be used where conduit enters switch boxes. Draw boxes are to be provided in accordance with the Standard Regulations and wherever necessary to facilitate easy wiring.

3.6. Conduit in Roof Spaces

Conduit in roof spaces must be installed parallel or at right angles to the roof members and must be secured at intervals not exceeding 1,5m by means of saddles screwed to the roof trusses. Where conduit have to be replaced in ceiling voids with steel trusses, suitable components must be installed to which the conduit can be fastened.

Nails or crampets will not be allowed.

Under flat roof, in false ceiling or where there is less than 0,9m of clearance, or should the ceilings be insulated with glass wool or other insulating material, the conduit must be installed in such a manner as to allow for all wiring to be executed from below the ceilings.

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

3.7. Surface Mounted Conduit

Wherever possible, the conduit installation is to be concealed in the building work, however, where unavoidable or otherwise specified in the Project Specification, conduit installed on the surface must be plumbed or levelled and only straight lengths must be used that will follow the horizontal and vertical lines of the building.

PVC conduit will not be allowed for surface-mounted installations or if exposed to direct sunlight.

The use of inspection bends is to be avoided and instead the conduit must be set uniformly and inspection couplings used where necessary. No thread will be permitted to show when the conduit installation is complete, except where running coupling have been employed.

Running couplings are only to be used where avoidable, and must be fitted with a slide coupling as a locknut.

Conduit is to be run on approved saddles rigidly secured to the walls, spacer saddles will not be allowed.

Alternatively, fittings, tees, boxes, couplings, etc. are to be cut into the surface to allow the conduit to fit flush against the surface. Conduits is to be bedded into any wall irregularities to avoid gaps between the surface and the conduit.

Couplings of conduit is to be avoid, however, should it be necessary, purpose made metal boxes are to be provided at the junction. The finish of the boxes and positioning must be in keeping with the general layout.

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

Distribution boards, draw boxes, industrial switches and plugs, etc. must be neatly recessed into the surface to avoid off sets in the conduit and to allow for conduit to be mounted tightly against the wall without any space between the wall and conduit.

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

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

In all other instances the electrical contractor must allow for painting of surface conduit with a primer, undercoat and two coats of good quality enamel paint, and the final colour must match the surrounding building finishes.

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

3.8. Conduit in Concrete Slabs

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

The contractor must have a representative in attendance at all times when the casting of concrete takes place. Draw boxes, expansion joint boxes and round conduit boxes are to be provided where necessary. Sharp bends of any nature will not be allowed in concrete slabs.

Ceiling boxes must consist of the standard type box with extension ring (50mm deep).

Draw and/or inspection boxes must be grouped under one common cover plate, and must preferably be installed in passage or male lavatories.

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

Before any concrete slab is cast, all conduit droppers to switchboards must be neatly spaced and rigidly fixed.

3.9. Flexible Connections for Stoves, Machines etc.

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

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

NOTE: Aluminium and zinc alloy connectors will not be acceptable.

3.10. Wiring

Except where otherwise specified in the project specification, wiring must be carried out in conduit throughout. Only one circuit per conduit will be permitted.

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

Unless otherwise directed in the Project Specification or indicated on the drawings, all wiring for lighting circuits is to be carried out with 1,5mm² conductors with 2,5mm² earth conductors and for socket outlet circuits the wiring must consist of 2,5mm² conductors with 2,5mm² earth conductors. In all other instances, the number and size of cables drawn into any conduit will be as specified or shown on the drawings. Sizes and numbers of cables not specified must be determined in accordance with the Standard Regulations.

THE LOOP-IN SYSTEM MUST BE FOLLOWED THROUGHOUT, AND NO JOINTS OF ANY DESCRIPTION SHALL BE PERMITTED.

The wiring must be done in PVC insulated 600/1000V grade cables to SANS 1507.

Where cable ends connect on to switches, fittings, etc. the end stands must be neatly and tightly twisted together and firmly secured. Cutting away of wire strands of any cable will not be allowed.

3.11. Switches and Socket Outlets

All switches and switch-plug combination units must conform to the Department Quality Specifications which form part of this Specification.

All light switches must have a current rating of 16A.

None other than 15A 3 pin sockets are to be used, unless other special purpose types are distinctly specified or shown on the drawings.

All light switches must be installed at 1,4m above finished floor level and all socket outlets at 300mm above finished floor level. Alternatively, the height of socket outlets may be indicated on the drawings.

3.12. Switchgear

Switchgear, which includes circuit breakers, iron-clad switches, interlocked switch-plug units, contractors, time switches, etc. is to be in accordance with the Departmental Quality Specifications which form part of this specification and must be equal and similar in quality to such brands as may be specified.

For uniform appearance of switchboards, only one approved make of each of the different classes of switchgear mentioned must be used throughout the installation.

3.13. Switchboards

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

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

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

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

Clearly engraved labels are to be mounted on or below every switch. The wording of the labels, in English, is to be according to the layout drawing or as directed by the Department's representative and must be confirmed on site. Flush mounted boards must be installed with the top of the board in line with the top of the doorframes. All switchboards must comply with the regulations as stipulated in SANS 10142-1 as amended.

3.14. Workmanship and Staff

All staff employed on the service must work under the direct supervision of an accredited person as defined in the Occupational Health and Safety Act, Regulation 4(2).

The workmanship must be of the highest grade to the satisfaction of the Department.

All inferior work must, on indication by the Department's inspecting officers, immediately be removed and rectified by and at the expense of the electrical contractor.

3.15. Earthing Installation

The type of main earthing must be as required by the supply authority, if other than the Department's representative, who may require additional earthing to meet test standards.

Where required an earth mat must be provided, the minimum size, unless otherwise specified, being 1,0 x 1,0m and consisting of 4mm diameter hard-drawn bare copper wires at 250mm centres, brazed at all intersections.

Alternatively or additionally earth rods or trench earths may be required as specified or directed by the Department's authorised representative.

Installations must be effectively earthed in accordance with the "Standard Regulations" and to the requirements of the supply authority. All hot and cold water and waste pipes when galvanised or copper are to be effectively bonded by means of 12,5mm x 1,60mm solid or perforated copper tape (not wire), clamped by means of brass bolts and nuts. This tape is to be fixed to walls by means of rounded brass screws at intervals not exceeding 150mm.

Main earth copper tapes where installed below 3m from ground level, must be run in 20mm conduit securely fixed to the walls. Corrugated iron roofs and guttering must be effectively earthed with copper tape and brass bolts with nuts at intervals not exceeding 18m. Self-tapping screws are not acceptable as a means of securing earth conductors.

Connecting from the main earth bar on the main board must be made to the cold water main, the incoming service earth conductor, if any, and the earth mat or other local electrode by means of 12,5mm x 1,60mm solid copper tape of 16mm² stranded (not solid) bare copper wire or such conductor as the Department's representative may direct.

(a) Roofs

All metal parts of roofs, gutters and down pipes must be earthed. One bare 50mm² copper conductor must 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 must be connected at 15m intervals to this conductor by means of 12mm x 0.8mm copper strapping (not conductors) and galvanised bolts and nuts. Self-tapping screws are not acceptable.

(b) Connections

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

(c) Ring Mains

Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SANS 10142-1. In such instances the sizes of earth conductors must be equivalent to that of the largest current carrying conductor installed in the wire way alternatively the size of the conductor must be as directed by the branching from the ring main and must be connected to the common earth conductor with T-ferrules or soldered. The common earth must not be broken.

(d) Sub-Distribution Boards

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

(e) Sub-Circuits

The earth conductors of all sub-circuits must be connected to the earth busbar in the supply board in accordance with SANS 10142 April 2003.

(f) Non-Metallic Conduit

Where non-metallic conduit is specified or allowed, the installation must comply with the Department's standard quality specification for "CONDUIT AND CONDUIT ACCESSORIES". Standard copper earth conductors must be installed in the conduits and fixed securely to all metal appliances and equipment, including metal 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 must be installed in all non-metallic flexible conduit. This earth conductor must not be installed externally to the flexible conduit but within the conduit with the other conductors. The earth conductor must be connected to the earth terminals at both ends of the circuit.

3.16. Mounting and Positioning of Light Fittings

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

The layout of the fittings as indicated on the drawings must be adhered to as far as possible, but the exact positions must be confirmed with the Department's representative.

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

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

In addition to the above, an earth conductor is to be taken from the earthing terminal on all fluorescent fittings and solidly bonded onto the conduit installations.

Incandescent fittings are to be screwed directly to outlet boxes in concrete slabs. Against board ceilings, the fittings must be secured to the bracking or joints by means of two 40mm x No.8 round screws.

3.17. Test and Inspections

After completion of the installation, the contractor must test the entire wiring system as prescribed with “Megger” type instrument and a certificate of compliance by an accredited person must be filled in and issued for the electrical work being performed.

The contractor must then give notice that the installation is ready for final test by the Department or the Engineer. If the results of the final tests are favourable and the installation is found in order, there will be no charge for the test. If the test is found unfavourable, a levy determined by the Department will be charged to the contractor for each subsequent test.

3.18. Electrical cables

(a) PVC Sheathed Underground Cable LV

The conductors are to be of high conductivity copper, insulated with one layer of PVC.

The colour of the cores must be as follows:

Twin core	:	one red and one black
Three core	:	one red, one white and one blue
Four core	:	one red, one white, one blue and one black

The cores are to be twisted together, sheathed with PVC (preferably black), armoured with a layer of galvanised steel wire, bedded and served with PVC (preferably black).

All insulation must be for general service 660/1000 V grade.

The cable is to be in accordance with SANS 1507 in all respects.

(b) Glands for PVC SWA cables

The glands must be of the adjustable type, and must be suitable for PVC SWA cables up to 600/1000 V. The non-watertight glands must be easily converted to watertight glands by means of waterproofing shroud and inner seal kit. The glands are to be made of copper-plated or heavily cadmium-plated bronze or brass, and must consist of a barrel with a cone nut (carrying a cone bush) screwed into one end, and a cadmium-plated bronze nipple carrying a heavy galvanised steel lock nut screwed into the other end.

On one cable entrance side of the barrel, a round groove must be provided for taking the top rim of the waterproofing shroud.

The shrouds are to be made of non-deteriorating neoprene or synthetic rubber, and must be resistant to water, oil and sunlight. The shrouds must tightly fit around the glands and cable.

All glands must be provided with ISO thread and must be suitable for the cable sizes specified.

(c) PVC single core cable (600/1000V)

The conductor is to be of high conductivity copper wire (strand type 3), insulated with polyvinyl chloride and will be 600/1000 V grade.

The cable must be finished either red or black and is to be in accordance with the SANS Specification 1507.

The conductor must be made up of the number and diameter of wires as specified in the **SABS** Specification. The smaller sizes up to and including 4mm² are to be supplied in 100m reels, while large sizes from 6mm² upwards may be supplied on 100m coils.

The following are the sizes of cable covered by this Specification, giving the rated area of conductors:

Black)	Black)
Red) 1,5mm ²	Red) 10mm ²
Black)	Black)
Red) 2,5mm ²	Red) 16mm ²
Black)	Black)
Red) 4mm ²	Red) 25mm ²
Black)	Black)
Red) 6mm ²	Red) 35mm ²

(d) Epoxy-resin jointing material

The materials are to be “Scotchcast” splicing kits or other approved and are to be used strictly in accordance with the instructions and recommendations of the supplier.

3.19. LV Distribution kiosks

(a) Construction

Kiosks must be 3CR12 weatherproof IP 65 rating. To prevent the ingress of water onto live equipment, the door entry surround must have a channel shape, at least 12mm deep, to accommodate the door edge.

The roof must be constructed with an overhang above non-continuous panelling and must be provided with a drip-edge.

Where specified the canopy and doors must be manufactured of steel to the following requirements:

- (i) A metal framework must be manufactured from sold angle iron, channel iron or 2,5mm minimum folded sheet steel.

- (ii) Joints must be non-continuously butt welded. Welds must be ground smooth and the joint wiped with plumber's metal in order to provide a smooth finish.
- (iii) Side panels, door and the roof must be manufactured from 2mm minimum sheet steel. The panels must have upturned edges which are recessed in the frame or which fit over lips on the frame. The side panels may be either bolted or welded to the frame or from part of the folded metal frame.
- (iv) The roof of the cubicle must be removable and must be fitted by means of bolts which will be accessible from inside the cubicle only.
- (v) All panels and doors must be suitable braced and stiffened to ensure rigidly and to prevent warping.
- (vi) The colour must be "light stone" C37 to SANS 1091
- (vii) All doors must be fitted with 40mm VIRO A82 type padlocks.

(b) Notices

At least one skull and crossbones notice with the word "GEVAAR/DANGER/ INGOZI" must be mounted outside on the front of the kiosk. This notice will be riveted to the steel door so that it cannot easily be removed. Brass rivets must be used.

(c) Instrumentation

All metering instruments must be flush mounted in the front panel. Current transformers for metering must be mounted so that the rating plate is clearly visible. Fuses for instrumentation must be mounted in an easily accessible position and clearly marked.

(d) Wiring

Standard 600V grade PVC-insulated stranded annealed copper conductors to SANS 1507 must be used for the internal wiring.

Wiring must be installed away from terminals, clamps or other current carrying parts. Wiring must also be kept away from exposed metal edges or must be protected where they cross metal edges.

(e) Cabling

Incoming and outgoing cables must be terminated on the gland plate. Cables up to 70mm² may terminate on clamp type terminals where the clamping screws are not in direct contact with the conductor. All cable sizes larger than 70mm² must terminate on busbar stubs which must be connected to the associated equipment. Parallel incoming or outgoing cables must be connected to a collector busbar without crossing the conductors.

(f) Concrete Base and Base Frame

To ensure stability of the kiosk after installation, it must be mounted on a base frame which, in turn, must be bolted to a concrete base cast into the bottom of the cable trench.

The base frame must be constructed of angle iron, at least 50 x 4mm thick and must be of welded construction hot-dip galvanised and coated with epoxy resin tar.

The vertical height of the box frame must be at least 900mm and the construction must be such as to provide a rigid support for the kiosk.

The base frame must protrude to a maximum height of 200mm above ground level. Provision must be made for the protection and concealing of the cables entering the kiosk and to prevent access of animals and vermin.

The base frame must be secured by at least four M16 bolts to the support frame of the kiosk and four M16 anchor bolts and nuts to the concrete base. The bolts, nuts and washers must be galvanised and supplied with the kiosk.

All galvanising must be to SANS 10214.

The kiosk manufacturer must supply a detailed drawing of the base frame and the concrete base required.

(g) Drawing for Approval

A set of three prints of the shop drawings of the cubicles must be submitted to the Engineer for approval before the cubicles are manufactured. The following information must be presented:

- (i) Schematic wiring diagram of the cubicles.
- (ii) A complete layout of the arrangement of the cubicles showing all equipment dimensions and constructional details. The positions and method of fixing of busbars must be shown.
- (iii) All labelling information in both the official languages on a separate sheet.
- (iv) The makes, catalogue numbers and capacities of all equipment.
- (v) A detail drawing of the concrete plinth, showing concrete mixes, dimensions, opening sizes, steel reinforcing details and holding-down bolt fixing details.
- (vi) A schematic wiring diagram of each cubicle/kiosk must be housed on the inside of the door of the kiosk behind Perspex for reference purposes and must be numbered according to the layout of the kiosk.

The approval of drawings will not relieve the contractor of his responsibility to the Department to supply the cubicles according to the requirements of this specification.

3.20. LV switchboards and equipment

(a) General

The switchboard must be of the metal enclosed, indoor type, installed in a cupboard with doors which will be provided by the main contractor. Only front access to cable and equipment must be available.

The front panels must be of the hinged type held with approved type torpedo chrome or brass hinges. All equipment must be flush-mounted on this panel.

Suitable busbars of adequate rating must be run the whole length of the board. Busbars must be so arranged that multiple cable ends can be connected to the bars without crossing of cores.

Solid copper busbars must run continuously from the load side of the "Main" circuit breaker. The maximum current density of the busbars must not exceed $1,5A/mm^2$.

Connections onto busbars are to be made by means of crimped lugs suitably bolted and locked. Cable tails must be adequately sized to carry at least twice the load of the switchgear being fed.

All accessible current carrying parts, busbars, connecting strips and collector bars, etc., are to be adequately insulated in phase colours. Connecting strips, etc., must be adequate to carry the full rated current of the switches, irrespective of the fuse trip rating.

Internal wiring must be neat and securely laced together and must be finished in the respective phase colours.

Where provision has been made for future equipment on the front panels, the spaces must be filled in with removable blank covers or dummy circuit breakers.

Clearly engraved screwed-on labels must be provided on or below the corresponding switchgear and instruments on the front of the switchboard, so as to identify the equipment. The wording of the labels must be in English according to the wording instructions that will be given by the Department's representative on site. (Mere circuit numbers as shown on the drawings will not be acceptable). The inscriptions must be in 5mm (minimum) high lettering on black-white-black ivory labels. Larger lettering must, however, be provided where space permits.

Cable gland support plates must be placed at suitable heights having regard to the bending radius of cables concerned and convenience of making off.

A solid copper earth bar must be provided inside the board and along the entire length at a suitable height above floor level. The earth bar must have a cross sectional area of approximately $600mm^2$ and must be provided with the requisite number of earthing connections, and fitted with 10mm diameter brass bolts, nuts and washers for securing earth conductors.

All metalwork must be thoroughly derusted and degreased, primed with zinc chromate and finished with 2 coats of grey enamel. Distribution Boards must be painted in the following colours:

Normal Power Distribution Boards – Electric Orange or as otherwise indicated on the drawings or Project Specification

Essential Power Distribution Boards – Signal Red

Uninterruptible power supply, Distribution Boards – Dark Blue.

(b) Distribution Boards: Flush and Semi-Flush Type

The distribution board must consist of a sheet bonding tray fitted with a removable circuit breaker chassis and a door unit as detailed below:

(i) Bonding Tray

The bonding tray must be of pressed and welded construction using 1,6mm galvanised sheet steel. The outside lip must be flanged out for 6mm and knock-outs which will mainly be 20mm Ø but 25mm dia must be provided at each end. The total number of 20mm knock-outs on each must not be less than the number of circuit breakers (including spares) carried on the board. The back of the tray must be fitted with galvanised steel diamond mesh spot welded to the tray to facilitate plastering. Extra space of at least 30% spare capacity must be allowed per board and conduits for such spare capacity must be installed.

An architrave frame formed with bevelled edges must accommodate panel, chassis and door(s). Frame to be fixed to tray in a suitable manner as to allow for adjustment for depth, out of plumb, and for wall finish inequalities, and must overlap the tray by not less than 25mm all round.

Chassis for mounting of equipment fixed to architrave frame, must be of rigid construction made of 2mm sheet steel and provided with the necessary means for fixing of circuit breakers, isolators, etc.

Semi-flush boards must be provided with 40mm architrave extension frames.

(ii) Doors

Doors of smooth flat finish suitably braced to ensure stiffness and recessed flush in the architrave. Catches must be flush mounted.

Single doors must not exceed the width of 0,6m.

All steelwork must be rust-proofed, smooth finished and covered with hard baked enamel battleship grey paint, unless an alternative colour is specified.

Refer also to Clause 13 of the General requirements for electrical Installations in KwaZulu-Natal Provincial Administration Building (PI).

(iii) Busbars

Copper busbars, provided for each phase and neutral must be mounted on insulators or fixed directly to the terminals of single pole miniature circuit breakers only. Boards must be suitably sized to accommodate, without undue cramping, the equipment.

A substantial brass earth bar, solidly bonded to the metal-work of the board, is to be provided with connectors for the incoming earth conductor and the earth wires of outgoing circuits.

(iv) Labelling of Circuits

Channelling to be supplied below all switchgear for labelling/identification purposes.

Labelling must be done on ivorene engrave labels, black letter on white background with minimum letter size of 5mm.

Each distribution board must also be labelled with a main label indicating the identification number of the distribution board. Letter size must be minimum 5mm in height. The main switch on the distribution board must also be labelled with a label identifying the size of the incomer feed cable as well as the origin of the feed of the cable. Minimum letter size 3mm height.

Labelling must also be installed on both ends of power cables where entering or leaving distribution boards or electric panels. Labels to cable must include the size of the cable and the origin of the feed of the cable and must be strapped to the cable with cable ties. Minimum letter size 3mm height.

(c) Busbar Copper

The busbars must be of high conductivity copper and must conform to SANS IEC 60947-7.

(d) Busbar Insulators

All busbar insulators must be of PVC suitable for voltages up to 600V. (Porcelain insulators are not acceptable).

The insulators with U-clamps must be approximately 75mm in diameter by 70mm high and are to be carried by a 12mm galvanised iron spindle screwed 12mm Whitworth thread and fitted with a hexagon nut.

The top of the insulator is to be fitted with a U-type holder with clamping bolt, suitable for taking busbars up to 16mm thickness edgewise.

The insulators with bolts must be approximately 75mm in diameter by 75mm high and will have flats on each end drilled and tapped 10mm Whitworth thread. Two 10mm x 25mm long bolts must be supplied with each insulator.

(e) Moulded Case Circuit Breakers

The circuit breakers must comply with SANS IEC 60947-2, as amended.

The overload and short circuit trips in the circuit breakers may be of the following type to suit the application:

- (i) Combined thermal/magnetic trips with interchangeable trip units, the magnetic trip setting being adjustable.
- (ii) Combined thermal/magnetic trips with fixed and sealed trip units, the magnetic trip setting being adjustable.
- (iii) Combined thermal/magnetic trips with fixed and non-adjustable units.
- (iv) Hydraulic/magnetic trips and fixed and non-adjustable units.
- (v) Solid state controlled trips with interchangeable fixed rating plugs for overload tripping and adjustable magnetic trip settings incorporating a short time delay.
- (vi) Solid state controlled strips with interchangeable adjustable rating plugs for overload tripping and adjustable magnetic trip settings incorporating a short time delay.

The continuous current rating trip and rupturing capacity must be as specified in the Project Specification/Price Schedule.

(f) Earth Leakage Relay (30MA) : Single or Three Phase

(i) *With Associated Circuit Breaker*

The relay is to operate on the core balance (current balance) principle.

The sensitivity and operating response of the relay must be such that instantaneous tripping will occur at a total earth leakage current of 30 milliamperes. The unit must have compensation for ambient temperature variations, and the sensitivity and operating response time must be maintained over the range of normal frequency variations. Stability of operation, long life and retention of characteristics are essential.

The unit must be provided with integral test facilities by means of which the correct functioning of the unit may be tested.

The unit must withstand fault currents (in accordance with SANS IEC 60947-2) of 2,5kA or 5kA, between phase and earth, between phase and phase, or between phase and neutral without sustaining damage.

The single phase unit must be complete with an associated double pole circuit breaker and the three phase unit complete with an associated triple pole circuit breaker.

The circuit breakers must be provided with overload trip coils and must have a rupturing capacity of 2,5kA or 5kA, when tested in accordance with SANS IEC 60947-2.

The Three Phase earth leakage unit and circuit breaker are to be suitable for operation on a 380/440V, 50Hz supply and the single phase earth leakage unit and circuit breaker for a 220-250V, to Hz supply.

The earth leakage unit must comply fully with SANS IEC 60947-6, as revised, and bear the SANS mark.

When specified, the circuit breaker and earth leakage relay are to be mounted in a substantial sheet metal case with anti-corrosion treatment and baked enamel finish for wall mounting.

(ii) With Associated On-Load Switch

The relay must comply with the requirements given under (a) above, except that the circuit breaker with trip coils will be replaced by a switch which will have a short time rating of 2,5kA or 5kA, for 40 milliseconds.

(g) Triple Pole On-Load Isolators Without Trip

The switches must be of the triple pole, hand operated, panel mounting, air break type, having continuous current ratings as indicated below, and suitable for operation on 380-440V, 50Hz systems.

The contacts are to be of silver alloy, and the switch mechanism must be of the quick- make-quick break type.

The switches are required to open and close circuits carrying currents up to the full current rating of the switch.

The switches must further be capable of being closed against faults and must temporarily withstand the following system fault currents, until the associated circuit breakers operate:

Isolator rating	Fault current
60A	5 000A
100A	10 000A
100A	15 000A
150A	15 000A
250A	25 000A
450A	25 000A
600A	25 000A
800A	25 000A

The switches are to be housed in moulded Bakelite cases, and are to be suitable for back of panel mounting.

To distinguish the switches from circuit breakers, the operating handles must have a distinctive colour, preferably red and must be indelibly marked "Isolator".

(h) Contactors

The contactor must be of the open or totally enclosed, triple pole air break general purpose and magnetically operated type, suitable for a 380-440V or 220-250V supply.

The contactor must be fitted with silver or silver alloy contacts and will be fully in accordance with SANS IEC 60947-4.

The current range and coil voltage must be as required for the service.

3.21. Switches

(a) Microgap Switches

The switches must be of the triple pole or double pole (as required) microgap type, for use on AC only. Triple pole switches are to be suitable for supply voltages up to 500V and double pole switches for voltages up to 250V.

The body and the cover of the switch must be of strong brown Bakelite. Heavy brass terminals, each with two grip screws, must be provided for incoming and outgoing cables, and the terminals must be arranged for easy wiring.

The switch must have solid silver contacts with large contact surfaces, and be capable of carrying, making and breaking its rated current.

The "ON" and "OFF" positions of the switch must be clearly marked.

The switches must comply with SANS IEC 60947-3.

(b) Flush Switches

The switch must have a single, vertically acting, rocker type actuating lever, must be suitable for mounting in a standard 100mm x 50mm x 50mm pressed steel wall box and must comply with SANS 163. Wall outlet boxes must comply to SANS 1085.

The switch must be of the short break type, suitable for operation on 250V AC systems only, and must consist of a base of non-tracking Bakelite, with a heavy gauge steel mounting strap, substantial contacts and terminals, and a plain white lever. The terminals of the switch must be suitable for back connection.

The screw fixing holes of the mounting strap are to be at 82mm centres, and tapped holes at 60mm centres must be provided for attaching the cover plate.

The metal cover plates required for the switches must be constructed of steel, with the edges turned down to form a bevelled finish. The opening(s) in the cover plate must suit the operating lever of the switch. The cover plates are to have a baked enamel finish and must comply fully with SANS 518. All cover plates must be supplied with fixing screws.

Where otherwise stated in the project specification or measured in the bills of quantities, cover plates may also be of the PVC type screwed on with metallic screws or clip on as per the "Clipsal" or Crabtree "Diamond" range.

Cover plates must be suitable for 15A flush switches with rocker type actuating lever, mounted in a 100mm x 50mm x 50mm pressed steel wall box.

(c) Watertight Switches

The watertight switches must be a single pole, suitable for surface mounting.

The unit is to be made of a circular or square galvanised cast iron or cast aluminum box with watertight lid and handle.

The handle is to be either on the front or on the side of the box and the "ON" and "OFF" positions are to be clearly indicated. Entry must be through holes drilled and tapped 20mm electrical thread.

The switch interior must be a 5A switch with either porcelain or non-tracking Bakelite base, and strong quick acting spring mechanism and heavy gauge brass contacts.

(d) Photo-Electric Cell

The unit must comprise a photo cell, thermal actuator and change-over switch. The cover of the unit must be manufactured from a tough, destruction resistant material for protection against tampering. The cover must have good weathering properties, be ultra violet resistant and must not deteriorate when exposed to sunlight for prolonged periods.

The operational level must be factory preset for “ON” at a light level of approximately 54 lux and “OFF” at approximately 108 lux.

Voltage variations must not materially affect the operational levels.

A time delay of not less than 15 seconds must be provided to prevent the unit from functioning due to lightning or other short period changes in illumination.

The unit must be effectively safeguarded against surges by means of a suitable surge protector which must preferably form an integral part of the unit.

The unit must be of the wall mounting type and must be supplied complete with a suitable backing plate.

3.22. Socket outlets

Flush socket outlets

The unit is to consist of a combined switch and plug socket, rated at 16A, 250V and must be suitable for mounting in a standard 100mm x 100mm x 50mm pressed steel wall box.

Wall outlet boxes must comply to SANS 1085.

The switch and plug socket are to be assembled on a common base of non-tracking Bakelite. The base must be provided with a heavy steel mounting strap, having two sets of fixing holes and the necessary tapped holes for fixing the cover plates. The fixing holes of each set must be at 83mm centres, and the spacing between the sets of fixing holes is to be 44mm centres.

The single pole switch must have heavy contact and must be operated by a vertically acting rocker type actuating lever. The switch is to be of the short break type for AC only, and must comply with SANS IEC 60884. The colour of the lever must be white.

The plug base must be of the two pin and earthing socket type, having substantial contact sockets. The colour of the plug base must be white, and a shutter must be provided.

All terminals are to be suitable for back connection and terminal screws must be easily accessible. The “line” “neutral” and “earth” positions must be clearly and indelibly marked.

The unit must be supplied complete with metal cover plates and with the necessary countersunk cover fixing screws. The cover plate must be constructed of steel, with the edges turned down to form a bevelled finish. The openings in the cover plate must suit the rocker type operating lever and plug sockets. The cover plate must be suitable for a standard 100mm x 100mm x 50mm pressed steel wall box. The finish of the plate is to be white baked enamel.

Where otherwise stated in the project specification or bills of quantities, cover plates may also be of the PVC type screwed on with metallic screws or clip on as per the "Clipsal" or Crabtree "Diamond" Range.

3.23. Conduit and accessories

3.23.1. Screwed conduit

The conduit must be steel, either solid drawn or welded, with all the rough edges removed, and with each end of each length threaded. All tube ends are to be reamed. One thread is to be fitted with a coupling and the other end is to be protected against damage.

Black conduit must be stove enamelled jet black on the inside as well as on the outside and must be in accordance with SANS 1065-2.

Galvanised conduit must be covered on the inside as well as on the outside by the hot process and must be in accordance with SANS 0214.

The type of conduit to be used is as stated in the Project specification/Price Schedule.

3.23.2. Plain-end metallic conduit

As an alternative to the screwed conduit type of installation, unscrewed conduit with Bosal or Easylock type conduit fittings will also be acceptable to the Department. The use of this alternative system is, however, subject to the following conditions:

- (a) The unscrewed conduit must be manufactured of mild steel having a minimum thickness of 0,9mm (20 gauge) and will be in accordance with SANS 1007. Conduit manufactured of lighter gauge material, i.e. 0,7mm (22 gauge) will not be permitted.
- (b) Bending and setting of unscrewed conduit must be done with special benders and apparatus manufactured for the purpose and which are obtainable from the suppliers of the Bosal or Easylock type system. Damage to the conduit resulting from the use of incorrect bending apparatus or methods must on indication by the Department's inspectorate staff, be completely removed and rectified and any wiring already drawn into such damaged conduits must also be completely renewed at the contractor's expense.
- (c) Conduit and accessories used for flame-proof installations and for the suspension of light fittings as well as all load bearing conduit must in all instances be of the screwed type.

3.23.3. PVC conduit

PVC conduit must comply with SANS IEC 60614-1 and must be installed strictly in compliance with the manufacturer's recommendations.

All PVC conduit and accessories must be of the same manufacturer.

3.23.4. Conduit accessories

All conduit accessories must be fully in accordance with SANS 1065-2 (metric units).

All cast conduit fittings must be of malleable cast iron.

Zinc base alloy fittings are not acceptable.

3.23.5. Circular Conduit Boxes

The boxes are to be of the long spout pattern manufactured from malleable cast iron or PVC when used with PVC conduit. The two cover fixing holes must be diagonally opposite each other. Drilled and tapped at 60mm centres.

The internal dimensions are to be approximately 60mm diameter by 60mm deep and the thread cut in the spouts must be suitable for 20mm electrical conduit. Boxes are to be supplied without covers.

The boxes must be in accordance with SANS 1065-2.

3.24. Pressed Steel Switch Boxes

All switch boxes are to be manufactured from heavy gauge sheet metal and must be galvanised. The boxes are to fitted with the necessary number of lugs to suit the number of switch units for which the box is intended.

Lugs are to be drilled and tapped at 82mm centres suitable for fixing either flush switch or standard flush plug units. Fixing screws must be provided.

The dimensions of the single gang boxes are to be approximately 50mm wide by 50mm deep by 100mm long, with one knock out at each end and at the back, and at least two knock-outs in each side.

The dimensions of double gang boxes are to be approximately 50mm deep by 100mm long by 100mm wide, with two knock-outs in each end and at least two knock-outs in the back and in each side.

The boxes must comply with SANS 1065-2.

All knock-outs are to be 20mm in diameter, suitable for 20mm electrical conduit.

3.25. Earth Clips

The earthing clips are to be made of 0,9mm strips not less than 12mm wide, to be complete with 25mm x 4mm brass bolt, washer and nut and must be constructed so that the clip will fit firmly to the conduit without any additional packing.

3.26. Luminaires

Switch start fluorescent luminaires with one or two tubes for ceiling mountings

NOTE: This specification is to be read in conjunction with clause 7.2 "Treatment and Enamelling of Fluorescent Luminaires".

The luminaires must be of the switch start, ceiling mounting, commercial type and must be provided with suitable arrangements to attach reflectors so that the luminaires can be converted to industrial type luminaires when required. It must be possible for one man to easily fix the reflectors to a luminaire mounted against a ceiling.

The luminaire must consist mainly of a well ventilated wiring channel accommodating the ballast and wiring, be provided with an easily detachable reflector, and with telescopic lamp holders.

The latching device, by means of which the reflector is attached to the luminaire housing, must be so designed and constructed that the reflector may be removed, and that the reflector is positively and safely secured in position so as to prevent inadvertent detachment in normal use.

The luminaire must be manufactured of cold rolled steel, 0,8mm thick, and must be of first class workmanship, robust construction and attractive appearance.

The channel must be sufficiently stiffened to prevent distortion. The lamp holders must be rigidly fixed to the channel to ensure a proper contact for the lamp terminals.

Three reinforced suspension holes, spaced at + 400mm centres, suitable for fixing the luminaires to standard 60mm dia conduit boxes, or for 20mm Ø suspension rods, must be provided at each end of the channel to facilitate wiring when luminaires are mounted end to end.

3.26.1. Ballasts

The ballasts must be suitable for single lamp operation, are to be of the totally enclosed metal-clad type, must comply with SANS IEC 60920, and must carry the SANS mark.

The efficiency must be at least 72% and the overall power factor must be corrected to at least 0,85 by means of a single capacitor. The capacitor must be a separate component, viz will not be an integral part of the ballast.

The ballasts must easily start the lamps under cold winter conditions.

Ballasts must be designed for silent operation and must be suitable for operation on voltages of either 220-230V or 240-250V. The voltage required must be as stated in the service instructions.

Ballasts incorporating starters are not acceptable. Electronic Ballasts will be the preferred type, suitable for single or more lamp operations and must comply to SANS IEC 61347-2-3.

3.26.2. Capacitors

The capacitor must be enclosed in a container that is durable and non-flammable.

Capacitors must be clearly marked with the capacitance, working voltage, operating temperature and the presence of an internal resistor.

The capacitor must be fitted with a discharge resistor such that, a minute after disconnection from the mains supply, the voltage across the capacitor will not exceed 50V.

Capacitors must comply with requirements of SANS IEC 61049.

Capacitors must be rated for a minimum working voltage of 250V AC.

3.26.3. Starters

The starters must be enclosed and contained in a durable and non-flammable housing.

All starters must be provided with a radio interference suppression capacitor.

The starters must comply with the requirements of SANS 890-1, and are to be suitable for a 220-250V AC supply.

The lifespan of starters must be double that of the lamps, and must be easily and safely replaceable.

3.26.4. Lamps

The lamps must be of the switch types, as specified in the Project Specification and must comply with SANS IEC 60081.

The light colour must correspond to Colour 2 (4 300°K) of the SANS specification.

Lamps bearing the SANS mark are preferred.

3.26.5. SANS Specification

The complete luminaire must comply with SANS 1119, where applicable.

luminaires bearing the SANS mark are preferred.

3.26.6. Treatment of enamelling of fluorescent luminaires

(a) Dry Film Thickness

The dry film thickness of the enamel must not be less than 0,038mm.

(b) Appearance

The finish must be smooth, glossy, and free from grit or any other surface imperfections.

(c) Scratch and Impact Resistance, Reflectance and Colour

The finish of the luminaire or any test specimens cut from the luminaire where necessary, must comply with the requirements of SANS 783 "Standard Specification for Baking Enamel" in respect of:

- (i) scratch resistance
- (ii) impact resistance (type III enamel)
- (iii) daylight 45°, 0° luminous directional reflectance of white enamel
- (iv) yellowness (type III white enamel); and
- (v) specular reflectance at 20° for high gloss enamel

(d) Corrosion Resistance

The finish must show no blistering, wrinkling or loss of adhesion and not more than 1,6mm rust or blister creep from an X-mark cut through the film when degreased test specimens cut from the luminaire are exposed in a salt spray cabinet, complying and operated in accordance with SABS method 155, for a period of 200 hours.

After stripping the paint, the underlying metal must show no sign of corrosion, except along the X-mark, where rust spots not extending beyond the limit specified above, are permitted.

3.26.7. Bulkhead Fitting (Latent Type)

The bulkhead fitting is to have an oval shaped cast iron base for direct mounting, with a cast iron door with watertight packing hinged to one side of the base and fitted with a shrouded locking bolt on the other side. The glass is to be clear and dome shaped with internal prisms, to be smooth externally and to be fitted with a loose rubber gasket, so that the glass and the gasket may be easily replaced. The approximate overall dimensions of the fitting are 250mm x 150mm x 125mm deep, and the fitting must be large enough to take frosted lamps up to the sizes mentioned in the Project Specification.

The fitting must be complete with reflector and porcelain bayonet cap lampholder mounted on a removable bracket.

3.26.8. Bulkhead Fittings with Unbreakable Polycarbonate Lens

Bulkhead fittings may be either circular or square in shape and must be manufactured to take lamps up to 100W. The base of the fitting must be of die cast, heavy gauge pressed aluminium or polycarbonate. The base must be treated against corrosion and must have a black mat finish.

The lens must be injection moulded, prismatic, clear polycarbonate. The lens must be held in position by two stainless steel screws via reinforced holes in the lens and the screws must be provided with gaskets to prevent the ingress of moisture. The fitting must be provided with either a neoprene or a silicone gasket fitted between the lens and the base.

The internal finish of the fitting must be of high grade heat resistant white enamel and the fitting must be provided with a bayonet cap lampholder mounted on a removable metal lampholder platform. The fitting must also be provided with a reflector between the lamp and the base, and wiring leads to the lampholder must be high heat resisting and preferably covered with silicone.

The overall dimensions must be approximately 200mm x 200mm x 105mm deep for the square and 200mm dia x 105mm deep for the circular in shape fittings.

3.26.9. Watertight with Clear Well Glass

The watertight fitting is to consist of a cast iron base with reflector of approximately 225mm dia and fitted with a screw neck type well glass, rubber washer and porcelain bayonet cap lampholder.

A hole drilled and tapped 20mm ISO thread must be provided in the back of the cast metal base for the conduit entry and the finish of the base must be matt black on the outside and white enamel on the inside.

The porcelain lampholder must be held in position with two brass screws held by holes drilled and tapped into the cast metal base.

The fitting must be guaranteed to take lamps up to 100W without damage due to overheating of the glass.

The fitting must be robust and the finish and construction must be of high quality.

3.27. Four Plate Electric Stove

The stoves are to be of the domestic type with four hot plates, and warming and baking ovens below the plates. The stoves are to be of the plinth type. Stoves with legs are not acceptable.

The stoves must be in accordance with SANS IEC 60335-2.

The clear internal dimensions of the baking oven are to be approximately 410mm wide x 410mm deep by 410mm high and the internal dimensions of the warming oven are to be approximately 410mm wide x 410mm deep x 150mm high. The oven door is to be fitted with a double glass window.

The oven is to be heated by top and bottom elements totalling not less than 3 000 watts, and with independent control for each unit and the warming oven by an element of approximately 400 watts.

All oven elements shall be of the sheath type.

The baking oven must fitted with automatic oven control.

The size and rating of the solid hot plates (enclose type) are to be approximately as follows:

2 x 200mm diameter 1 200W each

2 x 230mm diameter 1 800W each

Each element is to be separately fused and controlled by 3 heat rotary indicating snap switch. The hob and front of the stove are to be of thick sheet steel finished vitreous enamel.

All automatic controls shall be calibrated in °C.

The stove must be required for supply voltages of 220 to 250Volt. The available voltage will be stated for the service.

3.28. Earth Electrodes

Earth electrodes shall comprise one piece, 16mm nominal diameter, 1,8m long copper welded rods made by the molten welding process with a steel core covered by a thick layer of copper thoroughly welded thereto so that an interlocking crystalline union bonds the two metals.

The copper coating shall be continuous over the cylindrical portion of the rods except that the ends need not be covered with copper. The thickness of the copper on the cylindrical portion of the rod shall average not less than 0,5mm. The rods when broken by successive bending shall show no seams, pits, slithers or separation of the copper from the steel.

Conductor clamps shall be made of a strong bronze body to provide a high pressure contact between the earth wire and electrode.

The clamp must be provided with a non-ferrous set screw.

The electrodes shall be supplied with a driving bolt for protecting the ends of the coupling whilst the electrode is being driven into the ground.

3.29. Colour Coding of Switches, Socket Outlets etc.

Normal Supply	-	White
Dedicated Supply	-	Red
UPS Supply	-	Blue

3.30. Labelling of Switches and Socket Outlets etc.

Engraved labelling of all switches and socket outlet covers must be of 3mm letter height.

Engraved labelling of Bedhead Ducting and power structures labels will be of the Ivorine type and must be pop riveted next to the respective switch, socket outlet etc. labelling will be of 3mm letter height.



public works

Department:
Public Works
PROVINCE OF KWAZULU-NATAL

Occupational Health and Safety Specification For Framework Contract

Project Name : _____

WIMS no. : _____

District : _____

Works Inspector/

Project leader : _____

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1. Introduction

The *KwaZulu Natal Provincial Government* is deemed as the “**Employer**” in terms of Section 37 of the Occupational Health & Safety Act, Act 85 of 1993 which requires the Employer to ensure sufficient arrangements and procedures to ensure compliance with the requirements of the aforementioned Act and regulations by Contractors/Mandatories.

The purpose of this Occupational Health and Safety Specification document (which hereinafter will be referred to as OHSE Spec) is to provide the contractor with essential OHS information to ensure effective safety management when work is performed on behalf of the employer.

This OHSE Spec forms an integral part of the contract between the Employer and the Contractor, so as to ensure compliance with the Occupational Health and Safety Act, Act 85 of 1993 and its applicable regulations and must serve as the basis for the Contractor to develop his/her Project/Premises/Plant/Equipment Safety, Health and Environmental Management Plan. As with any other plan for it to be implemented and managed effectively it requires the allocation of sufficient funds to achieve the objectives set out in the plan.

It must be noted that this OHSE Spec as much as it is detailed it is not exhaustive and the onus is on the Principal Contractors to ensure that they comply with Section 8 of the OHS Act, Act 85 of 1993 which states that “*Every Employer shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees.*” this means that Contractors as they are employers in their own right must at all times ensure continuous assessments are done for continued provision and maintenance of a healthy and safe working environment.

2. Definitions

For the purpose of the OHSE Spec, the abbreviations or definitions given hereunder shall apply and the reference to on gender will also apply to the other gender.

"Competent person" means a person who-

- (a) Has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific for that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and
- (b) Is familiar with the OHS Act, Act 85 of 1993 and with the applicable regulations made under the Act;

"Construction Manager (Site Agent)" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"Project/Premises/Plant/Equipment" means a work place where work is being performed;

"Construction Supervisor/Supervisor" means a competent person responsible for supervising construction/work activities on a Project/Premises/Plant/Equipment;

"Construction Vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site/premises for the purposes of performing construction work;

"Construction work" means any work in connection with –

- (a) The construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- (b) the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

"Contractor" means a self-employed person who performs work on behalf of KwaZulu Natal Provincial Government and is remunerated for such work;

"Demolition Work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"Employer" means the KwaZulu Natal Provincial Government;

"Fall Protection Plan" means a documented plan, which includes and provides for-

- (a) All risks relating to working from a fall risk position, considering the nature of work undertaken;
- (b) The procedures and methods to be applied in order to eliminate the risk of falling; and
- (c) A rescue plan and procedures;

"Health and Safety File" means a file, or other record containing the information in writing required by these Regulations;

"Health and Safety Plan" means a site, activity or project specific documented plan in accordance with the client's health and safety specification;

"Health and Safety Specification" means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;

"Medical Certificate of Fitness" means a certificate contemplated in regulation 7(8) of Construction Regulations 2014;

"Safety Officer" – a person deemed competent by SACPCMP under the relevant category of registration.

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

3. Scope of Application

This OHSE Specification document stipulates the minimum Occupational Health, Safety, and Environmental requirements that the Contractor needs to address in his/her OHSE Plan. This Specification also addresses legal compliance, hazard identification, risk assessment, risk control, and the promotion of a Health and Safety culture amongst those working on the Project/Premises/Plant/Equipment.

This Specification also makes provision for the protection of persons other than employees. This OHSE Spec is exclusively applicable to the following Project/Premises/Plant/Equipment pending any change of scope which may necessitate changes to the OHSE Specification;

Project/premises/Plant/Equipment: _____

This OHSE Specification further seeks to achieve the following;

- a) To provide Contractors with the Structure of the Detailed OHSE Plans they will have to prepare and submit for this project/premises/Plant/Equipment. ***See Annexure A***
- b) Provide the overarching framework within which the Contractor is required to demonstrate compliance with certain requirements for occupational health and safety established by the Occupational Health and Safety Act, Act 85 of 1993, all applicable regulations and Employer Specific Requirements. ***See Annexure B***
- c) To bring to the attention of the Contractors that they need to make an undertaking that the costs for executing the work on the Project/Premises/Plant/Equipment includes the costs of complying with the OHS Act, Act 85 of 1993, all applicable regulations including Employer Specific requirements. Such undertaking is made by appending signatures on the OHS Declaration for Tenders. ***See Annexure C***

4. Contractual Issues

Acceptance by the Contractor of the contract with Kwazulu Natal Provincial Government shall constitute acknowledgement that the Contractor has familiarised him/herself with the contents of the OHSE Specification and that he/she will comply with all its obligations in respect thereof.

Due to fact that this document is based on legislative requirements, the Employer requires that all Contractors comply with the requirements of this document and all other relevant legislative requirements not covered by this document.

The Employer or its duly appointed Representative reserves the right to stop any Contractor or Sub-Contractors from working whenever Safety, Health or Environmental requirements are being violated. Any resultant costs of such work stoppages will be for the relevant Contractor's account.

The requirements as specified by the Employer in this document must not be deemed to be exhaustive and the Employer reserves the right to make changes as and when the Employer deems fit to address issue of OHSE Compliance.

The Employer will not entertain any claim of any nature whatsoever which arises as a result of costs incurred or delays being experienced due to the Contractor not complying with the requirements of this document and/or any other applicable legislative requirements imposed on the Contractor.

5. Administrative Requirements

5.1. Notification of Construction Work where applicable

Should the work that would be undertaken fall within the ambit of Construction Work as defined under the Construction Regulations of 2014 the Contractor shall at least 07 working days before commencing with construction work notify the Provincial Director in writing using **Annexure “2”**. A copy of the notification once stamped by a DoL Official must be submitted to the client prior to commencing with construction work.

5.2 Appointment of a Part/Fulltime Safety Officer

Should the Employer or its Representative having considered the risks present and lack of compliance to the Occupational Health and Safety Act, Act 85 of 1993 and its applicable Regulations the Employer or its Representative may issue an instruction that a Part/ Full Time Health and Safety Officer must be appointed, such a requirement will have to be met.

Annexure A

Structure of the Detailed OHSE Plan

A detailed OHSE Plan is to be submitted by the Contractor. The following are the minimum standard legal documentation that must form part of the OHSE Plan based on the risks attached in executing this project –

Project/premises/Plant/Equipment: _____

1. The notification to commence with construction work made to the Provincial Director of Labour using Annexure 2. *(if applicable)*
2. Letter of Good Standing with Compensation Commissioner or Compensation insurer
3. The Contractor's Health, Safety & Environmental Policy, signed by the chief executive officer, which outlines the Contractor's OHSE compliance objectives and how they will be achieved.
4. Pre-Work Risk Assessment
5. Method Statements
6. Relevant checklists and registers.
7. Site specific OHSE Organogram
8. Preliminary Induction Program
9. Demolition Plan *(if applicable)*
10. Environmental Management Plan
11. Proof of competency for the following legal appointees;
 - 11.1. *Construction Work Supervisor - Detailed CV reflecting qualification, relevant experience and references from previous clients. (if applicable)*
 - 11.2. *Risk Assessor – SAMTRAC or equivalent*
 - 11.3. *Fall Protection Planner - SAMTRAC or equivalent (if applicable)*
 - 11.4. *Demolition work inspector – Registered Engineer or Technologist (if applicable)*
 - 11.5. *Electrician – Wireman's Licence (if applicable)*

Legal appointments
To be submitted with the OHSE Plan <u>where applicable</u>
<ul style="list-style-type: none"> • Risk Assessor • Fall Protection Planner • Demolition work inspector • Scaffold Erectors • Scaffold Inspectors • Excavation inspector • Demolition Work Supervisor • Rope Access Supervisor • Material Hoist Inspector • Explosive actuated fastening device controller • First Aider • Emergency co-ordinator • Fire Marshalls • Fire team members • Portable Electrical tool inspector • Hand tools inspector • Housekeeping inspector • Stacking and storage inspector • Temporary electrical installation inspector • Mobile plant Operator • Flammable liquids Storage Inspector • Hazardous substance storage inspector

Annexure B

Employer Specific Requirements

Items	Client Specific Requirements
Material laydown area	<ul style="list-style-type: none"> The location of the Material Laydown Area should be in an area that will not require visitors to pass through or enter area where work is active and will not require the re-location of the equipment/material as the work progresses or pose a risk to the health and safety of persons other than the contractor's employees.
Public Safety	<ul style="list-style-type: none"> When working in a occupied facility the contractors risk assessment and subsequent safe work method statement must take into consideration the negative effect the Contractors activities may have on the health and safety of the occupants of the facility and make provisions for the implementation of all reasonably practicable measures to ensure the health and safety of the occupants of the building.
Medical Certificates	<ul style="list-style-type: none"> In compliance with the requirements of the Construction Regulations 2014 section 7(8) (<i>Where applicable</i>) the Contractor must ensure that all of his employee's onsite have a valid medical certificate of fitness specific to the work to be performed and issued by an Occupational Health Practitioner in the form of Annexure 3.
Extreme weather conditions	<ul style="list-style-type: none"> If the weather condition poses a threat to the health & safety of employees, be it extreme heat, cold, lightning or any adverse weather condition appropriate safety measures have to be taken.
Change to scope of work	<ul style="list-style-type: none"> Should there be changes to the original scope of work, the Contractor must amend his/her Safety Plan accordingly.
Safety Plan Submission	<ul style="list-style-type: none"> The Contractor must submit a copy of the detailed OHSE Plan for approval and keep the original available at all times for inspection purposes. The Contractor will not be allowed to execute any work before his/her SHE Plan has been approved in writing.
Bylaws	<ul style="list-style-type: none"> The Contractor must incorporate any aspects of the Local Municipal bylaws which affect the, Safety and Environmental wellbeing of the employees and the public into his/her OHSE Plan and ensure compliance to such bylaws.
Risk assessment for work being executed	<ul style="list-style-type: none"> To comply with CR (9) (<i>Where applicable</i>) as well as Section 8 of the Act, Act 85 of 1993 and to also address environmental and public safety issues. <i>See the attached baseline risk assessment to be considered by contractor.</i>
Fall protection	<ul style="list-style-type: none"> To comply with CR (10) (<i>Where applicable</i>) as well as Section 8 of the Act, Act 85 of 1993, Edge protection and protection of floor openings need to be of such a manner as to properly protect employees from falling off elevated positions or falling into floor or other openings.
Excavations	<ul style="list-style-type: none"> To comply with CR (13) (<i>Where applicable</i>) as well as Section 8 of the Act, Act 85 of 1993 and the following;

	<ul style="list-style-type: none"> • If the risk exists of a person in an excavation being enclosed in an event of a collapse the following will apply; shoring sufficient to prevent enclosure, any excavated material must be placed at least 1metre from the edge and at the maximum angle of repose to the horizontal. • No excavation may affect the stability of any adjoining structure or road unless steps have been taken as identified by an Engineer or a Technologist. • Adequate provisions must be made to ensure that water is drained from excavations where water may enter such excavations as a result of seepage or rain • All excavations made by the Contractor or Sub Contractors must be barricaded by means of solid barricading and barricading tape may only be used to make such barricading more visible
Demolition work	<ul style="list-style-type: none"> • To comply with CR (14) (<i>Where applicable</i>) as well as Section 8 of the Act, Act 85 of 1993 and the following; • Demolition work may only start upon approval of the Demolition Plan by the employer or its duly appointed Agent • In the event that a structure identified for demolition incorporates substances such as, lead or asbestos it must be performed within the requirements of the applicable legislative requirements
Scaffolding	<ul style="list-style-type: none"> • To comply with CR (16) (<i>Where applicable</i>) and the following; • Scaffolding Inspectors and Scaffolding Erectors must be different individuals. • Scaffold Harness must be used on Scaffolding, normal Harnesses may not be used on scaffolding • Sufficient Scaffolding material e.g., tags, trapdoors etc. need to be on site/premises as determined by the activities on the site/premises • Scaffold bases may not be supported by materials such as bricks and chipboard. Suitable material needs to be used as per SANS 10085
Construction vehicles and mobile plant	<ul style="list-style-type: none"> • To comply with CR (23) (<i>Where applicable</i>)
Electrical installations and machinery on these premises	<ul style="list-style-type: none"> • To comply with CR (24) as well as Electrical Installation Regulations of 2009 (<i>Where applicable</i>)
Use and temporary storage of flammable liquids on the premises	<ul style="list-style-type: none"> • To comply with CR (25) as well Hazardous Chemical Substances Regulations of 1995 (<i>Where applicable</i>)
Water environments	<ul style="list-style-type: none"> • To comply with CR (26) (<i>Where applicable</i>)
Housekeeping and general safeguarding on the premises	<ul style="list-style-type: none"> • To comply with CR (27) (<i>Where applicable</i>) as well as Environmental regulations for Workplaces of 1987, regulation (6) and the following; • Contractor to designate areas for placing refuse and rubble prior to being removed from site

	<ul style="list-style-type: none"> • Contractor must implement a daily task site clean-up for all activities these should cover work areas, stairways, walkways etc. • To be free of any debris or obstruction. • Refuse to be separated for recycling purposes • Hazardous materials such as asbestos may not be included in general rubble and need to be disposed of as per applicable legislative requirements
Stacking and storage on these premises	<ul style="list-style-type: none"> • To comply with CR (28) (<i>Where applicable</i>)
Fire precautions on these premises	<ul style="list-style-type: none"> • To comply with CR (29) (<i>Where applicable</i>), Environmental Regulations for workplaces of 1987, Regulation 9 and the following; • No smoking may be permitted on site except in designated smoking areas
Employees' facilities	<ul style="list-style-type: none"> • To comply with CR (30) (<i>Where applicable</i>) as well as Facilities Regulations of 2004 and the following; • Gender signs to be placed at appropriate locations • All welfare facilities to be kept in a hygienic condition at all times • Employees to be trained in good hygiene practices
Public Safety & Signage	<ul style="list-style-type: none"> • The Contractor must ensure that each person working on or visiting, and the general public in the vicinity of the work being performed, shall be made aware of the dangers likely to arise from the activities being performed and the precautions to be observed to avoid or minimise those dangers. • Appropriate signage shall be posted at conspicuous points within and around the perimeter of the premises. The steps to comply with this requirement must be outlined in the OHSE Plan. • The public or visitors may only be permitted entrance if they go through an appropriate health and safety induction detailing hazards and risks they may be exposed to and what measures are in place to control these hazards and risks • The entire area must be secured against unauthorized access and provided with appropriate warning signage. Where roadways or walkways must be encroached or closed due to work, adequate barriers shall be installed to safely redirect the flow of vehicles and pedestrians and protect them from work being performed. • Whenever it is necessary to maintain public use of work areas (such as sidewalks, ramps, entrances to buildings, corridors, or stairways), the public shall be protected with appropriate guardrails, barricades, temporary fences, overhead protection, or temporary partitions and hoarding. The public must also be adequately protected from any work created hazards, such as excavations. Appropriate warnings, signs, warning lights and instructional safety signs shall be conspicuously posted and placed where necessary. • The public must also be protected from falling debris and objects from these activities. Overhead protection shall be provided that will fully protect the public and be capable of withstanding the maximum forces

	that could be applied from potential falling objects. Special attention shall also be given to developing adequate means to protect against wind-blown debris and construction-related materials.
Health and Safety Training & Induction	<ul style="list-style-type: none"> • The Contractor shall ensure that all personnel and visitors undergo a risk-specific health & safety induction training session before starting work or being permitted to enter the work area. A record of attendance shall be kept in the health & safety file. • The Contractor shall ensure that, periodic toolbox talks take place at least once per week. These talks should deal with risks relevant to the work at hand. A record of attendance shall be kept in the health & safety file. The above should also cover all sub-contractors that are onsite. • All Contractors have to comply with this minimum requirement. Environmental issues to be included in toolbox talks where required.
General Record Keeping	<ul style="list-style-type: none"> • The Contractor and all Sub Contractors must keep and maintain Health and Safety records to demonstrate compliance with this Specification, The OHS Act 85/1993; and applicable regulations. The Contractor shall ensure that all records of incidents/accidents, training, inspections; audits, etc. are kept in a health & safety file, in his/her possession at all times during work being carried out. The Contractor must ensure that every Sub Contractor opens its own health & safety file, maintains the file and makes it available on request.
Health & Safety Audits, Monitoring and reporting	<ul style="list-style-type: none"> • The employer or its duly appointed representative shall conduct health & safety audits. The Contractor is obligated to conduct similar audits on all Sub Contractors appointed by them. Detailed audit reports must be presented and discussed at all levels of project management meetings and a copy of such audit will be provided to the employer or its duly appointed representative within 7 working days of such audit. Copies of the employer's audit reports shall be kept in the Contractors Health & Safety File.
Emergency Procedures	<ul style="list-style-type: none"> • The Contractor shall ensure adequate procedures and training as to enable persons present at the work area to take the appropriate step required in the event of an emergency. The plan shall detail the response procedure including the following key elements: <ol style="list-style-type: none"> 1. List of key competent personnel; 2. Details of emergency services; 3. Actions or steps to be taken in the event of the specific types of emergencies; 4. Information on hazardous material/situations.
First Aid Boxes and First Aid Equipment	<ul style="list-style-type: none"> • The appointed First Aider(s) (<i>Where applicable</i>) to be in possession of a valid first aid training certificate Level 2. Valid certificates are to be kept in the Contractors Health & Safety File. All Sub Contractors with more than 5 employees shall supply their own first aid box, except if otherwise agreed upon between Contractor and Sub- Contractor in writing.
Accident / Incident Reporting and Investigation	<ul style="list-style-type: none"> • Injuries are to be categorised into Near miss, first aid, LTI, fatal etc. Fatal accidents to be reported in addition to applicable legislative requirements to the Employer or its duly appointed representative with immediate effect. The Contractor must stipulate in the OHSE Plan how it will handle each of these categories. When reporting injuries to the Employer, these categories shall be used. The Contractor shall investigate all injuries, with a report being forwarded to the Employer immediately. All Sub- Contractors have to report on the abovementioned

	categories of injuries to the Contractor. All categories of incidents/accidents must be in the Statistics Section of the Audit Reports, submitted to the Employer or it's duly appointed representative.
Hazards and Potential Situations	<ul style="list-style-type: none"> • The Contractor shall immediately notify other Sub Contractors as well as the Employer of any hazardous or potentially hazardous situations that may arise during performance of his/her activities. • Should a hazardous situation require work stoppages, the work must be stopped and corrective steps taken such as the issue of Written Safe Work Procedures and the issue of Personal Protective Equipment.
Personal Protective Equipment (PPE) and Clothing	<ul style="list-style-type: none"> • The Contractor must ensure that all workers are issued with the required PPE as required by the risks associated with the activities they perform. The minimum PPE to be worn on site/premises will be Safety Shoes/Boots, Hard Hats, and Overalls. No Visitors may enter the area without Safety Shoes/Boots and Hard hats. The Contractor and all Sub Contractors shall make provision and keep adequate quantities of SABS approved PPE at all times. All employees issued with PPE to be trained in correct use, records of training and issue to be kept in the Contractors SHE File. Procedure to be in place to deal with: <ul style="list-style-type: none"> • 1 Lost or stolen PPE; • 2 Worn out or damaged PPE replacement. • 3. Employees not utilising PPE as required • The above procedure applies to Contractors and their appointed Sub-Contractors, as they are all employers in their own right.
Permits	<ol style="list-style-type: none"> 1) The Contractor shall prepare and issue the required written permits relating to but not limited to the following: <ul style="list-style-type: none"> • Hot Work • Roof Work; and • Electrical work (both temporary and permanent) • Confined Space Entry 2) The Contractor must ensure that where permits are required that they are properly implemented and adhered to.
Speed Restrictions and Protections	<p>Unless otherwise stipulated, the maximum speed limit on the premises/workplace must be limited to 10 km/h.</p> <ol style="list-style-type: none"> 1) Vehicle movement routes, must be clearly indicated where applicable. 2) Signage to ensure the safe movement of vehicles on the premises/workplace, as well as to ensure the health and safety of all employees and visitors, must be displayed in strategic locations.
Hazardous Chemical Substances (HCS)	<ol style="list-style-type: none"> 1) To comply with Hazardous Chemical Substances Regulations as published in Government Notice No. R. 1179 dated 25 August 1995. 2) In addition to the abovementioned, Material Safety Data Sheets must be kept on file for all materials, which may contain hazardous chemical substances
Asbestos	<ol style="list-style-type: none"> 1) To comply with Asbestos Regulations as published in Government Notice No. R. 155 dated 10 February 2002. 2) Removal/Replacement/ repairs to be conducted as per approved method statement
Fire Extinguishers and Fire Fighting	<ol style="list-style-type: none"> 1) The Contractor and Sub-Contractors must allow for and provide adequate provision of regularly serviced temporary fire fighting

Equipment	<p>equipment located at strategic points, specific for the classes of fire likely to occur.</p> <p>2) The appropriate notices and signs must be allowed for and be erected as required</p> <p>3) Contractors may not utilize fire protection equipment belonging to the Employer without prior consent</p>
Ladders and Ladder Work	<p>1) The Contractor must allow for and ensure that all ladders are inspected at least monthly, are in a good safe working order, are the correct height for the task, extend at least 1m above the landing, are fastened and secured and are placed at a safe angle.</p> <p>2) Records of inspections must be kept in a register on file.</p>
General Machinery	To comply with Driven Machinery Regulations as published in Government Notice No. R. 1010 dated 18 July 2003 (<i>Where applicable</i>)
Portable Electrical Tools and Hand Tools	<p>1) The Contractor shall ensure that all electrical tools, electrical distribution boards, extension leads, and plugs are kept in a safe working order.</p> <p>2.) The Contractor shall ensure that all portable electrical Equipment, is clearly numbered, inspected by a Competent appointed person and records of such inspections to be kept on record in an appropriate register on the contractor SHE file</p> <p>3) The Contractor shall allow for and ensure the following in relation to hand Tools: That a “Competent Person” undertakes routine inspections and records are kept on file. That only authorized trained persons use the tools. That safe working procedures apply. That PPE is provided and used.</p>
High Voltage Electrical Equipment Installations and Equipment	<p>1) All Employees must be made aware of the presence and location of High Voltage Equipment such as underground cables and overhead lines, and ensure that the necessary precautionary steps are taken where work has to be executed in the vicinity of such equipment.</p> <p>2) Precautionary measures such as Isolation and Lock-Out of electrical systems or the use of electrically isolated tools must be used.</p>
Adequate Lighting	<p>1) As per Environmental regulation (3)</p> <p>2) All Contractors must allow for and ensure that adequate lighting is provided to allow for work to be carried out safely.</p>
Transportation of Workers (<i>Where applicable</i>)	<p>1) In addition to CR 23 the following will apply The Contractor and Sub-Contractors shall not:</p> <ul style="list-style-type: none"> • Transport persons together with goods or tools unless there is an appropriate area or section of the vehicle in which to store such goods. • Transport persons on the back of trucks except if a proper canopy (properly covering the sides and top) has been provided with suitable seating areas. • Permit workers to stand or sit on the edge of the transporting vehicle. • Transport workers in LDVs unless they are closed/covered and have the correct number of seats for the passengers

	<ul style="list-style-type: none"> No driver may transport more than six people on the back of a 1 Ton LDV and more than four passengers on the back of a ½ Ton LDV. <ol style="list-style-type: none"> The driver of any LDV may not permit more than two passengers to occupy the cab of any LDV. Drivers of such vehicles must have a valid driver's license for the code of vehicle being driven by them. No servicing of vehicles will be permitted on the premises. No Vehicles or machinery leaking oil will be permitted due to the risk posed to the environment. Any oil or diesel spilled must be cleaned up as per accepted environmental practice <p>In the event that Earth Moving Machinery is present the following must be adhered to:</p> <ul style="list-style-type: none"> Drivers of vehicles must be instructed to avoid parking behind earth moving machinery in order to ensure that their vehicles are visible to the operators of earth moving machinery. Right of way must be afforded to earth moving machinery at all times. Vehicles must only be permitted to park, where possible, in designated areas
Occupational Hygiene	<ol style="list-style-type: none"> Occupational exposure is a major problem and all Contractors must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards. All Contractors must prevent inhalation, ingestion and absorption of any harmful chemical or biological agents Water to be utilized for drinking purposes may only be drawn from taps designated for drinking water purposes. Fire hydrants and fire hose reels may not be utilized for drinking water purposes.
Environmental Management	<ul style="list-style-type: none"> The Contractor and Sub-Contractors must comply with the requirements of NEMA Act..... The Contractor must develop a waste management plan, implement and maintained it. Cement mixing to be done at a predetermined location on the premises/workplace which must include a solid, slab, and bunded edges to prevent runoff Contaminated run off water from the workplace must be treated such as to ensure that it does not pose a risk to the environment Any material which may have a harmful effect when disposed of by normal means must be disposed of in an appropriate manner to eliminate its harmful effect on the environment after disposal. The Contractor must allow for and ensure that adequate procedures are implemented and maintained to ensure that waste generated is placed in suitable receptacles and removed from the workplace promptly. Plans to deal with spillages must be in place and maintained. No waste materials (liquid or solid) may be disposed of in drains.

	<ul style="list-style-type: none"> • No burning of waste material may take place as such material being burned may result in pollution of the air or give off toxic vapours which could be harmful to the health of employees or any other person present on the premises/workplace.
Alcohol and other Drugs	<ul style="list-style-type: none"> • No alcohol and other drugs will be allowed without the express permission of the Contractor • No person may be under the influence of alcohol or any other drugs while on the premises/workplace. • Any person who is on prescription drugs must inform his/her Employer accordingly and the Employer shall in turn report this to the Contractor immediately. • Any person who performs work for the contractor who is suffering from any illness/condition that may have a negative effect on his/her safety performance must report this to his/her Employer, who in turn must report this to the Contractor forthwith. • Any person who performs work for the contractor who is suspected of being under the influence of alcohol or other drugs must be removed from site immediately and be instructed to report back the next day for a preliminary inquiry. A full disciplinary procedure must be followed by the Contractor concerned and a copy of the disciplinary action must be forwarded to the Contractor for his records.

Annexure C

SAFETY, HEALTH AND ENVIRONMENTAL DECLARATION FOR CONTRACTORS

INTRODUCTION

In terms of the Provincial Government's responsibility to ensure that the Contractor who performs work on their behalf provides their employees with a safe working environment and that the Contractor does not pose a risk to the Health and Safety of persons other than those in his/her employment, as well as ensuring that the Contractor has the necessary competencies and resources to perform their work safely in accordance with the *Occupational Health and Safety Act, Act 85 of 1993* and applicable Regulations the Contractor is required to read through this document carefully, sign it and submit it with his/her Tender.

DECLARATION

1. I, the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act 85 of 1993 and the applicable Regulations and the Safety, Health and Environmental Specifications attached to this document.
2. I hereby declare that my company and its employees has the necessary competency and resources to safely carry out the work under this contract in compliance with the Occupational Health and Safety Act, Act 85 of 1993, the and applicable Regulations and the Safety, Health and Environmental Specifications and as per the scope of work that I have tendered for in terms of this contract.
3. I hereby confirm that adequate provisions will be made in my Bid to cover the cost of all Safety, Health and environmental duties and responsibilities imposed on me by the Occupational Health and Safety Act, act 85 of 1993, and applicable Regulations and the Safety, Health and Environmental Specifications when quoting for work in terms of this contract.
4. I hereby undertake that if my Bid is accepted, to provide before commencement of the Works under the contract or as required by the Conditions of the Contract, a suitable and sufficiently documented Health and Safety Plan.
5. I confirm that I may not commence with any part of work under the contract until my Safety Health and Environmental Management Plan and the associated Risk assessments has been approved in writing by the Employer.
6. I hereby undertake to carry out all required risk assessments for each project/activity undertaken under this contract and to amend my OHSE Management plan to accommodate and include such risk assessments and the required risk controls to ensure a safe working environment.

I hereby confirm that copies of the following documentation will be kept on site/premises for viewing and inspection purposes for the duration of time spent on site/premises:

- e) Employer Safety, Health and Environmental Specification
- f) Approved Safety, Health and Environmental Plan with associated risk assessments and current valid letter of Good Standing.

g) Occupational Health and Safety Act, act 85 of 1993

h) Applicable Regulations.

7. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the Occupational Health and Safety Act 85 of 1993 and Applicable Regulations, and accept that my Bid will be rejected.

(Person duly authorised to sign on behalf of Tenderer)

Annexure D
Baseline Risk Assessment

PLEASE NOTE THAT THIS IS A BASELINE RISK ASSESSMENT AND NOT A DETAILED RISK ASSESSMENT OF ALL ANTICIPATED ACTIVITIES ON SITE AND MAY NOT BE IN THE SEQUENCE OF THE WORK PERFORMED

MECHANICAL
Main Activities
<p>Abattoir and Dairy Equipment; Air Conditioning Chiller Plant, Package Plant, Refrigeration Systems and Heat Pumps; Process Control, Electronic and Pneumatic Systems; Particle counting of conditioned air in Operating Theatres (including replacement filters/seals etc. as and when required); Ventilation Plant, , Steam Boilers and associated Ancillary Equipment, including preparation for Statutory Inspection and Testing; Steam Heated Calorifiers, Steam Reticulations and associated Equipment; Central Heating Systems; Coal Fired Hot Water Boilers including preparation for statutory inspections; Coal and Oil Fired Incinerators including Emissions Testing; Industrial Compressed Air: Installations and Reticulations, including preparation for statutory inspections. LP Gas: Installations and Reticulations. Minimum requirement: registered employee with SAQCC Gas: Medical Gas Installations, and Reticulations, including Medical Air and Vacuum Plant and Associated Control systems, including preparation for statutory inspections Autoclaves/Sterilizers, including preparation for statutory inspections; Diesel Engines: Stationary Type; Kitchen Equipment: Steam Operated (including taps and drains up to first external gulley) (electrical and steam operated); Water Pumps, Water Purification Plant, Pump Stations/Houses, Dosing Equipment, Valves, Filters and Associated Controls, Reticulations and Associated Installations, Boiler Plant, Heating and Cooling Systems, Water and Sewerage Treatment Plant; testing of water quality (for A/C Plant, Boiler Plant, Heating and Cooling Systems, Water and Sewerage Treatment Plan; Sewerage Purification Plant, Sewerage Pumps, Dosing Equipment, Valves, Filters and Associated Controls, Reticulations and Associated Installations (Excluding Septic Tanks and Drain Pipes there to); Irrigation pumps, equipment installations & reticulations etc.; Central Vacuum Cleaning Systems; Overhead Cranes, Blocks and Tackle Hoisting Equipment; Air Conditioning Refrigeration units and Heat Pumps Manufacture, supply/installation of protective covers for Piping and Equipment; Portable/Mobile Operating Equipment such as Coal and Ash Handling Trolley's, Stoking and De-Ashing Tools: Security gates and bars for Plant rooms and Store rooms.; Installation and Repair of Ducting Systems; Painting and Colour Coding of Plant and Equipment (Excluding Medical and LP Gas); Industrial Cleaning of Plant, Plant Rooms, Equipment, Extract Canopies and Ventilation Ducting; Cleaning and Repairing of air conditioning and associated ventilation plant ducting (Internal and External); Fixing of Insulation and Cladding to Vessels, Pipe work Reticulations and Equipment; Repair of mobile equipment i.e. hospital trolleys, cabinets, drip stands, beds and cots, bed pan, bin, bowl, bucket and mop stands, material handling equipment/carts, bedside lockers, bassinet stands, cylinder carriers, bed screens linen carriers, operating theatre stools etc.;</p>

Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Isolations/Lockouts	Electrocution, struck by tools, sharp edges,	Burns, respiratory failure, cuts, abrasions, death etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Elevated work	Struck by , falling or flying object etc.	Cuts, abrasions, muscular strain, death	None	Training, PPE, safe systems of work and supervision	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Dismantling of pumps, valves etc.	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	Slips, trips, struck by etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Repairs & components replacements	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	Slips, trips, struck by etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Stripping & Removal of Ducting piping etc.	Sharp edges, caught between , electricity, elevated work etc.	Cuts, abrasions, fractures etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Stripping & Removal of Refrigeration Systems, Heat Pumps etc.	Physical exertion, bump against, caught between, accidental release of stored pressurised substances. etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content) etc.	Slips, trips, struck by etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

Re-gassing of refrigeration equipment	Physical exertion, bump against, caught between, accidental release of stored pressurised substances. etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content) etc.	Slips, trips, struck by etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Lifting plant with mechanical equipment	Struck against, caught between, uncontrolled movement, etc.	Cuts, abrasions, muscular strain, death	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Hammering & Chiselling, Grinding & Cleaning	Noise, flying particles, heated surfaces, caught between, struck by, etc.	Cuts, bruising, burns, etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Removal of filter covers & material	Sharp edges, bacteria, physical exhaustion etc.	Cuts, inhalation of harmful bacteria & Muscular strain etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Refitting of Filter and Covers	Sharp edges, physical exhaustion , bump against etc.	Cuts & Muscular strain etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Soldering/Brazing	Hazardous substances, flammable substance, poor working posture, sharp edges, heat etc.	Muscular strain, inhalations of toxic vapours, skin absorption of hazardous substances, cuts and abrasions, Burns etc.	Contamination of environmental resources, release of toxic vapours etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Compressor, v-belt, electric motor, dismantling & assemble	Electricity, caught between, struck against, etc.	Electrocution, cuts, bruising, etc.	Contamination of resources (oil Spillage)	Slipping	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

Vessel pressure testing	Manual handling, physical exhaustion, stored pressure, etc.	Muscular strain, etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Component refitting & Alignment	Physical exertion, caught between, struck against, electricity, etc.	Cuts, muscular strain electrocution etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Welding,	Electricity; heat radiation; flying particles etc.	Inhalation of toxic vapours; burns; etc.	Contamination of natural resources, air etc.	Arc eyes if viewing arc operations. etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Assembling & Alignment	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content) etc.	Slips, trips, struck by etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Surface Preparation	Repetitive motion, dust, struck against, etc.	Musculoskeletal disorders, dust inhalation, etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Painting	Bumping against, repetitive motion , poor working posture etc.	Inhalation of vapours, paint in eyes , minor abrasions etc.	Contamination of natural resources (spillages) etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

Solvent Cleaning of components & parts	Hazardous chemical; substances, sharp edges, flying particles, etc.	Fire, cuts, dermatitis, etc.	Contamination of natural resources (spillages) & incorrect discarding of solvents.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Pressure Hose Cleaning	Hazardous substance, flying particles, high pressure release etc.	Muscular strains, inhalations, skin absorption of hazardous substances	Contamination of resources, oil fuel, etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Cutting & Remove Existing Cladding	Sharp edges, asbestos, Heated surfaces, elevated work, etc.	Asbestosis, cuts, falls, etc.	Contamination of resources, asbestos, etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Patch & Repair Existing Cladding	Sharp edges, asbestos, Heated surfaces, elevated work, etc.	Asbestosis, cuts, falls, etc.	Contamination of resources, asbestos, etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Handling Plant	Sharp edges, Struck by tools, tripping, carrying heavy objects, etc.	Cuts, abrasions, muscular strain, death etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Installing Plant at heights	Struck by tools material/tools/debris etc.	Cuts, abrasions, muscular strain, death etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

Installing ducting (at heights)	Struck by , sharp edges ,falls, etc.	Cuts, abrasions, death etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Unloading	Struck by tools, hands caught between objects, pinning of employees by the generator against other objects.	Cuts, abrasions,	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Moving into Position	Struck by tools, tripping, flying particles, sharp edges, physical exertion etc.	Cuts, abrasions, fractures	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Testing & commissioning	Electricity, explosion, bump against ,caught between etc.	Cuts, abrasions, electrocution etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor & Consultants

SO/PLUMBING						
Main Activities						
Hot and Cold Water reticulations including final connections to equipment; Solar, Water, Heating Systems including reticulation; Heat Pump Water Heating Systems including reticulation (New Installations Only); Unblocking and rooting of sewer and storm water systems; Plumbing: including Internal and External Plumbing; connections to hot and cold water reticulations; valves; taps; cisterns; showers; sanitary ware; urinals; drainage covers and grates; water supplies; sewage pipes/drains up to main sewer, septic tanks desludging of septic tanks; drainage connections to external main drain; including domestic/industrial hot water storage vessels/geysers.						
Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Saw cutting (machine)	High speed rotation, noise, dust, flying particles, flammable substances, etc.	Noise induce hearing loss, entanglement, burns etc.	Contamination of resources (fuel spillage etc.)	Noise	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor & Consultants
Chiselling	Struck by tools, hands caught between areas, Flying particles etc.	cuts, abrasions, dust inhalation, fractures etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Excavations	Struck by , tripping, Collapse, physical exertion etc.	Back strain, heat exhaustion, bruising,, cuts, abrasions, death etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Pipe Laying & Connections	Noise , dust, sharp edges, bumping against ,physical exertion etc.	Muscular strain, dust inhalation , noise induced hearing loss etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Backfilling	Poor working posture, physical exertion, sharp edges , repetitive motion, etc.	Musculoskeletal disorders, cuts, heat exhaustion etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Compaction	Noise , dust ,Flammable substances ,struck by, vibration etc.	Muscular strain, dust inhalation , noise induced hearing loss etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

Chasing	Electricity, high speed moving part, entanglement, struck by flying items, sparks, noise , dust etc.	Electrocution, cuts abrasions, dust inhalation, noise induced hearing loss etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Drilling	Entanglement, struck by flying objects, electricity, hazardous substance dust , noise etc.	Electrocution, dust inhalation, noise induced hearing loss, muscle strain, foreign objects in eyes etc.	Contamination of natural resources (spillages) etc.	dust , noise	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Soldering	Hazardous substances, heated surface ,toxic vapours etc.	Muscular strain, inhalation of toxic vapours ,burns etc.	Contamination of environmental resources etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Thread Cutting(machine)	Rotating components, sharp edges, hazardous chemical substances etc.	Electrocution, cuts, entanglement, dermatitis, etc.	Contamination of natural resources (spillages) etc.	Slipping & Tripping	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Plastering	Abrasive surfaces, bumping against, hazardous substances etc.	Minor bruising, particles in eyes, dust inhalation, dermatitis etc.	Contamination of natural resources, cement spillage or run off etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Commissioning & Testing	Uncontrolled release of pressure, bump against, sharp edges etc.	Cuts, abrasions, eye etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Elevated Work	Struck by , , falling or flying objects etc.	Cuts, abrasions, muscular strain, death etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Manual Lifting	Struck by ,physical exertion , caught between etc.	Cuts, abrasions, muscular strain, death etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

Lifting & removal of manhole covers	Struck by , caught between, uncontrolled movement etc.	Cuts, abrasions, muscular strain , fractures etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Assembling of rodding equipment & pipe clearing	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	None	Slips, trips, struck by etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Pressure Cleaning of Systems	Hazardous substances, , poor working posture, sharp edges, high pressure release etc.	Cuts , abrasions, foreign material in eyes etc.	Contamination of resources, dislodged hazardous substance in water system etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Cement Mixing	Struck by ,sharp edges, poor working position , hazardous substances	Inhalation of cement dust, back strain , dermatitis	Contamination of natural resources (spillages) or run off etc.	Noise, dust	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Bricklaying	Abrasive surfaces, hazardous substances , muscular strain etc.	Cut and abrasions, brusing etc.	None	dust	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Pipe Laying & Connections	Dust, sharp edges, bumping against ,caught between etc.	Muscular strain, dust inhalation , etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Chiselling	Struck by , caught between , Flying particles etc.	cuts, abrasions, dust inhalation, fractures etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

ELECTRICAL						
Main Activities						
Electrically Heated hot water storage vessels; Ultra-Sonic Cleaners, Instrument Washers and Disinfectors,.; Bottle/Fluid warming cabinets; Operating Theatre Lights including Associated UPS; Operating Theatre tables; Dental Chairs and Dental Suction Equipment; Kitchen Equipment: Electrical and Mechanical, excluding LP Gas Equipment (including taps and drains up to first external gulley); Laundry Equipment (electrical and steam operated) (including taps and drains up to first external gulley); Borehole pumps and associated mechanical, electrical, solar and wind control systems, including water supply reticulation to storage point.; Lawn Mowers; Battery operated tow trucks, battery chargers and associated trolleys; Fixed Wood and Metal Working Machines; Workshop/Garage Roll up Type Doors, Electrically and Mechanically Driven; Rewinding, and Repair of Electric Motors and Alternators (by Armature Winders only); Uninterruptible Power Supplies (UPS); Stripping and Preliminary Assembly of Plant and Equipment (to be supervised by a qualified artisan); LV Electrical Installations in Buildings; Electrical Reticulations within a plot of land (erf) or building site; Verification and issue of Certification of Electrical Installations on Premises; MV Switchgear, Transformers and Installations; Semi-Skilled Electrical Work						
Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Disconnection & Isolation	Electrocution, struck by tools, sharp edges, etc.	Burns, respiratory failure, cuts, abrasions, death etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Stripping & Removing	Struck , falls, tripping; sharp edges , caught between , electricity etc.	Cuts, abrasions, fractures	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Repair/Replacement	Electricity, struck by, bump against, caught between, etc.	Cuts, abrasions, electrocution, etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor & Consultants
Connection/ Energising & Testing	Electricity , struck against, sharp edges, etc.	Cuts, abrasions, burns, fractures, death	None	Fire	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Lifting Mechanically &	Struck , falling or flying object, uncontrolled	Cuts, abrasions, muscular strain, death	None	None	Risk assessment, Safe systems of	Contractor

Manual	movement , caught between etc.	etc.			work, PPE usage, Supervision etc.	
Chasing	Electricity, moving part, struck by ,flying items, sparks, noise , dust etc.	Burns, Electrocution, cuts abrasions, dust inhalation, noise induced hearing loss etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Drilling	Entanglement, struck b, flying objects, electricity, dust , noise etc.	Electrocution, dust inhalation, noise induced hearing loss, muscle strain, foreign objects in eyes etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Chiselling	Struck by tools, caught between, Flying particles etc.	cuts, abrasions, dust inhalation, fractures etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Conduiting	Sharp edges , physical exertion, poor working posture, etc.	Cuts, muscular strain, etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Soldering	Hazardous substances, flammable substance, poor working posture, sharp edges, heat etc.	Muscular strain, inhalation of toxic vapours, skin absorption of hazardous substances, cuts and abrasions, Burns etc.	Contamination of environmental resources-toxic vapours release etc.	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Wiring	Muscular exertion ,bumping against , sharp surfaces etc.	Muscular strain ,cuts and abrasions ,etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Fitting of plug boxes, junction boxes ,Distribution boards etc.	Noise , dust , Electricity ,bumping against, struck by f, entanglement , moving parts etc.	Electrocution ,cuts and abrasions , dust inhalation ,noise induced hearing loss	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

Commissioning & Testing	Electricity, bump against, caught between etc.	Cuts, abrasions, electrocution etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor & Consultants
Saw cutting	High speed rotation, noise, dust, flying particles, flammable substances, etc.	Noise induce hearing loss, entanglement, burns etc.	Contamination of resources (fuel spillage) etc.	Noise	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor & Consultants
Cable Laying	dust, sharp edges, bumping against, poor working posture, etc.	Muscular strain, dust inhalation , etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Backfilling	Poor working posture, physical exertion, material collapse , repetitive motion, etc.	Musculoskeletal disorders, cuts, heat exhaustion etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Compaction	Noise , dust ,Flammable substances ,struck by, vibration etc.	Muscular strain, dust inhalation , noise induced hearing loss etc.	None	None	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Servicing	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content) etc.	Slips, trips, struck by etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor
Oil Change, Servicing & Testing (transformers)	Hazardous chemical substances, accidental energisation, heated substances etc.	Dermatitis electrocution, burns, death, etc.	Contamination of resources, spillage, etc.	Slipping & Tripping on discarded material, spilled substances, etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor & Consultants
Elevated Work	Struck by tools, , falling or flying object etc.	Cuts, abrasions, muscular strain, death	None	None	Risk assessment, Safe systems of work, PPE usage,	Contractor

		etc.			Supervision etc.	
Component Removal & Replacement	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content- oil)	Slips, trips, struck by etc.	Risk assessment, Safe systems of work, PPE usage, Supervision etc.	Contractor

P

Main Activities

Generator Sets (Fixed and Portable) and Associated AMF and Prime Power Control Panels; Street and Area Lighting; Substations and Protection Systems

Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Isolation & Disconnection	Electricity, struck by, sharp edges, caught between, poor working posture etc.	Electrocution, Burns, respiratory failure, cuts, abrasions, death	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Stripping & Dismantling	Struck by , caught between, falls, tripping; sharp edges etc.	Cuts, abrasions, fractures etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Servicing & Components replacements	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content) etc.	Slips, trips, struck by etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Assemble	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous	Slips, trips, struck by etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor

			content) etc.			
Elevated Work	Struck by, falls, falling objects etc.	Cuts, abrasions, muscular strain, death etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Component Removal & Replacement	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content) etc.	Slips, trips, struck by etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Commissioning & Testing	Electricity, bump against, caught between etc.	Cuts, abrasions, electrocution etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor & Consultants
Oil Change, Servicing & Testing	Hazardous chemical substances, accidental energisation, heated substances etc.	Dermatitis electrocution, burns, death, etc.	Contamination of resources, spillage, etc.	Slipping & Tripping on discarded material, spilled substances, etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor & Consultants

SF						
Main Activities						
Fire Booster Pumps, Control Valves and associated controls; Automatic Sprinkler Systems (excluding Fire Extinguishers, Hose Reels and Hydrants; Fire Detection and Evacuation Systems.); Fire Suppression (Gas) Installations.; Fire Hose reels, Fire Hydrants and Fire Extinguishers						
Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Isolation & depressurisation	Elevated work, physical exertion, uncontrolled pressure release; caught between, bump against, etc.	Falls, Fractures, cuts, Death etc.	Contamination of resources; release of fire extinguishing agents, etc.	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Dismantling	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content) etc.	Slips, trips, struck by etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Servicing & Components replacements	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	Slips, trips, struck by etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor

Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Assemble	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	Slips, trips, struck by etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Elevated Work	Struck by , falling objects etc.	Cuts, abrasions, muscular strain, death etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Component Removal & Replacement	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	Slips, trips, struck by etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Commissioning & Testing	Electricity, bump against, caught between etc.	Cuts, abrasions, electrocution etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor & Consultants

SL						
Main Activities						
Steel Structures, Water Tanks and Stands, Fire Escapes, Catwalks, Pipe and Equipment Supports						
Sub Activity	Safety	Health	Environmental	Public Safety	Control Measures	Responsible Person
Isolation & depressurisation	Elevated work, physical exertion, uncontrolled pressure release; caught between, bump against, etc.	Falls, Fractures, cuts, Death etc.	Contamination of resources; release of fire extinguishing agents, etc.	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Dismantling	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	Slips, trips, struck by etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Drilling	Entanglement, struck by flying objects, electricity , noise etc.	Noise induced hearing loss, muscle strain, foreign objects in eyes etc.	Contamination of natural resources (spillages)	dust , noise	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Welding	Electricity; heat radiation; flying particles etc.	Inhalation of toxic vapours; burns; etc.	Contamination of natural resources, air etc.	Arc eyes if viewing arc operations.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor

Grinding	Electrocution, entanglement,, tripping hazards, struck by flying materials etc.	Noise induced hearing loss, cuts, loss of limbs, electrocution etc.	none	Noise, dust etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Lifting & Lowering	Struck by tools, , falling or flying object, uncontrolled movement etc.	Cuts, abrasions, muscular strain, death etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Servicing & Components replacements	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Assemble	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Elevated Work	Struck by , falling or flying objects etc.	Cuts, abrasions, muscular strain, death etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Component Removal & Replacement	Physical exertion, bump against, caught between etc.	Cuts, Abrasions, fractures, Muscular strain etc.	Contamination of natural resources (spillages of hazardous content)	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor

Commissioning & Testing	Electricity, bump against, caught between etc.	Cuts, abrasions, electrocution etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
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Onsite General Construction Activities						
Activity	Risk to safety	Risk to Health	Risk to Environment	Risk to Public Safety	Control Measures	Responsible Person
Sanding	Grazing, wrist strain, bumping etc.	Dust inhalation, dust in eyes, minor abrasions etc.	none	dust nuisance	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Breaking of concrete	Struck by flying particles, impact hazards, vibration, electrocution etc.	Noise induced hearing loss ,dust inhalation , particles in eye, electrocution , etc.	None	Noise, dust etc.	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Cement Mixing	Struck by ,sharp edges, poor working position , hazardous substances etc.	Inhalation of cement dust, back strain , dermatitis	Contamination of natural resources (spillages)	Noise, dust	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
General brickwork	Abrasive surfaces, hazardous substances , straining of muscles etc.	Cut and abrasions, crushing injuries etc.	None	dust	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Compaction of soil	Struck by tools, flammable substances , flying materials	Back strain, heat exhaustion, bruising, dust inhalation, burns etc.	Contamination of resources with fuel	Noise	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Loading and unloading by hand	Bumping against edges , Hands caught between , Sharp edges, muscle strain	Back strain, exhaustion, bruising, hand injuries, etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Ladder use	Incorrect positioning, overreach , Overhead hazards , dropping of tools from ladder , Falls	Broken bones , death, electrocution etc.	None	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Extension cords	Electricity , tripping hazards	Electrocution , fractures etc.	none	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor

Hand tools	Tripping, struck by, bumping against, abrasions, sharp edges, caught between surfaces, flying metal particles etc.	Cuts ,Bruising ,Foreign material in eyes etc.	none	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor
Scaffolding erection, dismantling	Falls from height, dropping of items, sharp edges, scaffolding collapse, etc.	Back strain, bruising, cuts, abrasions, broken bones, death etc.	none	None	Risk assessment ,Safe systems of work , PPE usage, Supervision etc.	Contractor