



# INDEPENDENT DEVELOPMENT TRUST

## VOLUME 1

**TENDERING PROCEDURES, RETURNABLE DOCUMENTS, AGREEMENT AND  
CONTRACT DATA, SCOPE OF WORK AND SITE INFORMATION**

**RESTORATION OF ELECTRICITY TO THE FACILITY AT SPRINGBOKPAN SILOS  
FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT,  
NORTH WEST PROVINCE**

**PHASE 1  
(ELECTRICAL INSTALLATION AND DISTRIBUTION)**

**BID NO: DRD01NWER002**

**CLOSING DATE AND TIME : 13 MARCH 2023 at 12h00**

**Independent Development Trust**  
4071 Jules Street  
Industrial Sites  
**MAHIKENG**  
2745

Telephone: (018) 389 3000

**SCM / Technical Enquiries**  
E-mail: [NWtenders@idt.org.za](mailto:NWtenders@idt.org.za)

**MK & Associates Development  
Consultants Pty (Ltd)**  
7 Gemsbok Street  
Golfview  
**MAHIKENG**  
2745

Tel: 018 011 0024

**Technical Enquiries**  
Email: [admin@mkdc.co.za](mailto:admin@mkdc.co.za)

**Bidder:** .....

**CIDB Registration Number:** ..... 5EB AND 5EP (Electrical Engineering

**Works (Building) and Electrical Engineering Works (Infrastructure) or higher**

**CSD Registration Number:** .....

**COIDA / FEMA Certificate Number:** .....

**Contact Person:** .....

**Contact Details:** .....

# Contents

Number	Heading	Page	Colour
<b>The Bid</b>			
<b>Part T1: Bidding procedures</b>			
T1.1	Bid Notice and Invitation to Bid	3 – 5	Blue
T1.2	Bid Data	7 – 16	Blue
T1.3	Specifications for the Employment of SMME Subcontractors	17 – 39	Blue
<b>Part T2: Returnable documents</b>			
T2.1	List of Returnable Documents	41	Blue
T2.2	Returnable Schedules	43-99	Blue
<b>The Contract</b>			
<b>Part C1: Agreement and Contract Data</b>			
C1.1	Form of Offer and Acceptance	102 – 104	Green
C1.2	Contract Data	106 – 112	Yellow
C1.3	Form of Guarantee	114 – 115	Yellow
C1.4	Adjudicators Agreement	117 – 121	Yellow
C1.5	Agreement in terms of Occupational Health and Safety	120 – 121	Yellow
C1.6	Waiver of Lien	123	Yellow
C1.7	Subcontracting	124	Yellow
<b>Part C2: Pricing Data</b>			
C2.1	Pricing Instructions	126	Yellow
C2.2	Bill of Quantities	127	Yellow
<b>Part C3: Scope of Work</b>			
C3	Scope of Work	128	Pink
<b>Part C4: Site information</b>			
C4	Site Information	129	Pink
<b>Drawings</b>			
<b>Annexure A</b>			
Drawings		130	Pin

## **T1.1 BID NOTICE AND INVITATION TO BID**

## INDEPENDENT DEVELOPMENT TRUST

### PROCUREMENT OF CONTRACTOR FOR ELECTRICAL INSTALLATION AND DISTRIBUTION AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT: AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE

#### T1.1 Bid Notice and Invitation to Bid

The Independent Development Trust, on behalf of the Department: Agriculture and Rural Development, North West Province, invites bidders for the **PROCUREMENT OF CONTRACTOR FOR ELECTRICAL INSTALLATION AND REDISTRIBUTION AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT: AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE**

Only tenders, who have a CIDB contractor grading of Grade 5EB AND 5EP (Electrical Engineering Works (Building) and Electrical Engineering Works (Infrastructure) or higher are eligible to tender.

The evaluation of the tender will be carried out in three (3) phases;

#### **Phase One: Mandatory Requirements**

Only bidders, who meet the following requirements will be eligible for further evaluation.

- The bidder must provide proof of valid CIDB registration or CIDB number– Grade 5EB AND 5EP (Electrical Engineering Works) and Electrical Engineering Works (Infrastructure) or higher
- The bidder must provide a valid COIDA letter or Tender Letter obtainable from Department of Labour or FEMA certificate.
- Attendance to the compulsory site briefing meeting
- The bidder must duly complete and sign SBD 1, 4 and 6.1 in full
- The bidder must complete Form of Offer, fully signed and witnessed in the tender document in full
- The bidder must provide a copy of the Joint Venture (JV) agreement signed by all parties (where JV is used)
- Acknowledgement of Addenda to Tender Documents
- Letter of Authority for signatory and / or Board / company resolution.
- The bidder must provide proof of registration on Central Supplier Database (CSD) and / or CSD Number.

- Note:**
- (i) Failure to submit any of the above documents / requirements shall result in disqualification of the bid.
  - (ii) If any of the Directors are in the Employment of the State shall result in disqualification of the bid.
  - (iii) If the bidder is listed on National Treasury List of Restricted Suppliers
  - (iv) If any of its Directors are Listed on the Register of Defaulters shall result in disqualification of the bid.
  - (v) In the case of a Bidder, who during the last ten (10) years has been Terminated on Previous Contracts with the IDT shall result in disqualification of the bid.

**The IDT will assess all bids received based on its procurement policy in the event that information is required from the bidder/s, the IDT reserves its rights to request the information which shall be submitted within seven (7) working days from request and failure to submit will result in disqualification.**

#### **Non-Compulsory Document:**

- Tax Compliance Letter with a unique pin

## Phase 2: Functionality criteria

Criteria	Points Allocation
Relevant Previous Experience on completed projects of a similar nature and value in the last ten (10) years	25 points
Electrical Engineering projects	10 points
Signed and stamped client references on the same projects listed above (both Client & Client Representative).OR Signed and Contactable reference letters from previous clients.	20 points
Qualifications, Skills and Experience of project key resources	35 points
Locality	10 points
<b>Total</b>	<b>100 points</b>
NB: Minimum qualifying functionality threshold is <b>60 points out 100</b>	

**Similar Nature of work for evaluation** Electrical and Mechanical Engineering work Construction and Renovations Projects (No points will be allocated for other nature and value of works like Civil Engineering projects, Water projects, Transport Projects, Traffic Engineering Projects and all Construction and Renovations Projects works)

### Additional Documents Required

- CIPC Document
- Original certified ID Copies of directors (not older than 6 Months)
- Particulars of Tender's Projects (Appointment letters and completion certificates)
- Schedule of Tenderer's References
- Schedule of Subcontractors
- CV of Key Personnel including the OHS
- Original certified copies of Certificates/qualifications (not older than 6 Months)
- Original certified copies of all Professional Registrations of Staff.

Only bidders who obtain 60 points or higher on the functionality threshold will be evaluated further.

Only bidders who are competent and who have achieved the minimum functionality threshold of 60 points or higher will be evaluated on a 80/20 (Price / Specific Goals) points based on the Preferential Procurement regulation, Government Gazette No 47452 dated 4 November 2022. IDT empowerment strategy allocated the 20 and 10 points respectively.

### Phase 3: Preferential Point System

The 80/20 Preferential Point System will be applied, where 80 points will be allocated for price and 20 points (Price / Specific Goals) points based on the Preferential Procurement regulation, Government Gazette No 47452 dated 4 November 2022. IDT empowerment strategy allocated the 20 and 10 points respectively.

### Phase 3: Preferential Point System

The 80/20 Preferential Point System will be applied, where 80 points will be allocated for price and 20 points for Specific Goals.

The 80/20 Evaluation System will be used for procuring items with values of equal or below R50 000 inclusive of Vat (PPPFA and IDT SCM Policy)

(a) Price (80 points)

And

(b) Specific Goals (20 points)

The specific goals allocated points in terms of this tender Number of points allocated (80/20 system)

Women 100% Ownership	6
Youth 100% Ownership	6
People with Disabilities 100% Ownership	4
Black Male 100% Ownership	4

Source Documents to be submitted with the Tender:

- CIPC Document (Company Registration Document will be required for verification (CIPC DOC))
- Woman (Originally Certified ID Document)
- Youth (Originally Certified ID Document)
- People with Disability (Letter from the Dr. Confirming the Disability)
- Black Ownership (Originally Certified ID Document)

In order to claim and be awarded B-BBEE points bidders must submit a B-BBEE certificate issued by a SANAS accredited agency or certificate issued by the Companies and Intellectual Property Commission or Originally Certified copy of the sworn affidavit in the prescribed format by the National Treasury for EMEs and QSEs or BBBEE will be accepted to score points.

Bidders bidding as Joint Ventures are required to submit an original consolidated B-BBEE certificate from a SANAS accredited verification agency in order to qualify for points for the B-BBEE status level as one entity.

Sworn Affidavits in cases of EME's (Turnover of R10 million or less) and only those QSE's which are at least 51% Black – owned as prescribed in terms of B-BEE Codes of Good Practice and in the format provided by the Department of Trade and Industry will be accepted.:

**A compulsory site briefing / clarification meeting** will be held on **28 February 2023 at 10h00** at the Springbokpan Silos on Springbokpan Road. The GP The GPS coordinates are 26°5'24.56.9890"S and 25°50'28.58256"E

**Note:** Bidders are requested and encouraged to arrive early before the commencement of the briefing session. No late arrivals will be allowed in the briefing meeting. (i.e later than 28 February 2023 at 10h00).

All SCM and Technical enquiries relating to this bid must be directed in writing to [NWTenders@idt.org.za](mailto:NWTenders@idt.org.za) during office hours (08h30 – 17h00) weekdays. Enquiries will be accepted until the 06 March 2023 at 17h00. No Verbal or telephonic queries will be attended to. Any attempt to verbally contact the IDT's Agent or IDT's employee to influence outcome of this tender will lead to disqualification.

**On submission of Tender documents, the bidder must submit a signed original bid document in hard copy.**

Requirements for sealing, addressing, delivery, opening and assessment of bids are stated in the Tender Data. (Refer to Section T1.2)

The bid closing date is **13 March 2023 at 12h00** and bids shall be submitted in the tender box at IDT's North West Regional Office;

**4071 Joules Street  
Industrial Site  
Mahikeng  
2735**

Telegraphic, telephonic, telex, facsimile, e-mail and late bids **WILL NOT** be accepted.

The Independent Development Trust does not bind itself to accept the lowest or any particular bid.

## **T1.2 BID DATA**

## **INDEPENDENT DEVELOPMENT TRUST**

**RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002**

### **T1.2 Bid 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. (See [www.cidb.org.za](http://www.cidb.org.za)) which are reproduced without amendment or alteration for the convenience of tenderers as an Annexure to this Tender Data.

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data 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 additional conditions of bid are:

Clause number	BID DATA FOR RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002
F.1.1	The employer is the <b>Independent Development Trust on behalf of the Department of Agriculture and Rural Development, North West Province</b>
F.1.2	<p>The bid documents issued by the employer comprises:</p> <p><b>THE BID</b></p> <p><b>Part T1: Bidding procedures</b>  T1.1 Bid notice and invitation to bid  T1.2 Bid data  T1.3 Specifications for the Employment of SMME Subcontractors</p> <p><b>Part T2: Returnable documents</b>  T2.1 List of returnable documents  T2.2 Returnable schedules</p> <p><b>THE CONTRACT</b></p> <p><b>Part C1: Agreements and contract data</b>  C1.1 Form of offer and acceptance  C1.2 Contract data  C1.3 Form of Guarantee  C1.4 Adjudicator's appointment  C1.5 Agreement in terms of Occupational Health and Safety  C1.6 Waiver of Lien</p> <p><b>Part C2: Pricing data</b>  C2.1 Pricing instructions  C2.2 Bills of quantities</p> <p><b>Part C3: Scope of work</b>  C3 Scope of work</p> <p><b>Part C4: Site information</b>  C4 Site information</p> <p><b>Annexures</b>  <b>Annexure A: Electrical Specifications &amp; Drawings</b></p>
F.1.4	<p>The employer's agent is:</p> <p><b>MK AND ASSOCIATES DEVELOPMENT CONSULTANTS (Pty) LTD</b></p> <p><b>Mr. T Oageng</b></p> <p>7 Gemsbok Street  Golfview  MAHIKENG  2745</p> <p>Tel: 018 011 0024</p> <p>Technical Enquiries  Email: admin@mkdc.co.za</p>

Clause number	BID DATA FOR RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002
<p><b>F.2.1</b></p> <p><b>F.2.1.1</b></p> <p><b>F.2.1.1.1</b></p> <p><b>F.2.1.1.2</b></p>	<p><b>Eligibility</b></p> <p>Only those bidders who satisfy the following eligibility criteria are eligible to submit tenders:</p> <p><b>CIDB Grading</b></p> <p>In order to be considered for an appointment in terms of this bid, the bidder must be registered with the CIDB, in a contractor grading designation in accordance with the sum tendered for a <b>Grade 5EB AND 5EP</b> class of construction work.</p> <p>Joint ventures are eligible and preferred with particular reference to local participation and as such submit tenders provided that:</p> <ol style="list-style-type: none"> <li>1. every member of the joint venture is registered with the CIDB;</li> <li>2. the lead partner has a contractor grading designation in the <b>Grade 5EB AND 5EP or above</b> class of construction work; and</li> <li>3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to <b>5EB AND 5EP</b> contractor grading designation determined in accordance with the sum tendered for a <b>(EB and EP) General Building</b> class of construction work</li> </ol> <p><b>Key Personnel</b></p> <p>In order to be considered for an appointment in terms of this bid, the bidder must have the following key personnel in its permanent employment at the close of the bid. Alternatively, a signed undertaking from an organisation having the required personnel, stating that they will undertake the necessary work on behalf of the bidder in terms of a sub-consultant agreement, will be acceptable. Such undertaking must be attached to the “Key Personnel” schedule, Part T2.2: Returnable Schedules.</p> <p>Individuals must be identified for each of the key personnel listed on the “Key Personnel” schedule, Part T2.2: Returnable Schedules.</p> <p>Where the key personnel are no longer accessible to undertake the necessary work after the award of the tender, the contractor shall within a period of 5 working days replace the key personnel listed on the “Key Personnel” schedule, Part T2.2: Returnable Schedules with a person with equivalent competencies and subject to approval by the employer.</p> <p>A suitably qualified and experienced construction manager who will be the single-point of accountability and responsibility for the management of the construction works, and who is a fully registered member with SACPCMP and/or ACPM (Pr CPM and/or Pr CM), will be required.</p>
<p><b>F.2.6</b></p>	<p><b>Acknowledge addenda</b></p> <p>Acknowledge receipt of addenda to the bid documents, which the employer may issue, and if necessary apply for an extension to the closing time. If the Addenda has financial implications, failure to acknowledge the addenda may eliminate your bid form evaluation. This is due to incomparability of offers with the rest of the bidders.</p>
<p><b>F.2.7</b></p>	<p><b>Clarification Meeting</b></p> <p>A compulsory site briefing / clarification meeting will be held on 28 February 2023 at 10h00 at the Springbokpan Silos on Springbokpan Road. The GP The GPS coordinates are 26°5'24.56.9890"S and 25°50'28.58256"E</p> <p><b>Note:</b> Bidders are requested and encouraged to arrive early before the commencement of the briefing session. No late arrivals will be allowed in the briefing meeting. (i.e later than 28 February 2023 at 10h00).</p>

<b>Clause number</b>	<b>BID DATA FOR RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002</b>
F.2.8	<p><b>Seek clarification</b></p> <p>Bidders can request clarification of the bid documents, if necessary, by notifying the employer at least 5 (five) working days before the closing time and date stated in F.2.15.</p>
F2.9	<p><b>Insurances</b></p> <p>Refer to contract data for insurance requirements. (Refer to Section C1.2)</p>
F.2.11	<p><b>Alterations to documents</b></p> <p>Do not make any alterations or additions to the bid documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the bidder. All signatories to the bid offer shall initial all such alterations. Erasures and the use of masking fluid are prohibited.</p>
F.2.12	<p><b>Alternative Bid Offers</b></p> <p>No alternative tender offers will be considered.</p>
F.2.13	<p><b>Submitting a Bid Offer</b></p>
F.2.13.4	The bidder will sign the original of the bid offer.
F2.13.5	<p>The bidder must submit tender offer in a sealed envelope. (Clearly marked <b>RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002</b></p> <p>On submission of Tender documents, the bidder must submit a signed original bid document in hard copy and one softcopy of the bid document using USB-memory stick / Disc (read only). The bid document softcopy on the USB-memory stick should be indexed the same way as the original bid hard copy document, which can be returned back to the bidder after the evaluation process is completed.</p>
F.2.13.6	Two-envelope system – not applicable
F.2.13.7	The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are:
	<p>Employer's address: <b>North West Regional Office 4059 Joules Street Industrial Site Mahikeng 2735</b></p>
F.2.13.9	<p>Identification details: <b>Tender No:</b> DRD01NWER002 <b>Description:</b> RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002</p> <p>Tender offers submitted by facsimile, e-mail or reproduced will be rejected by the employer. Tender documents must be submitted in an original format as issued by the employer.</p>
F.2.15	<p><b>Closing Time of Tender</b></p>
F.2.15.1	<p>The closing time for submission of tender offers is by no later than <b>13 March 2023 at 12h00</b></p> <p><b>Location of tender box:</b> <b>North West Regional Office 4059 Joules Street Industrial Site Mahikeng 2735</b></p> <p>Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.</p>

Clause number	BID DATA FOR RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002																														
F.2.16	<b>Tender Offer Validity</b>																														
F.2.16.1	The bidder is required to hold the bid offer valid for a period of <b>90 calendar days</b> (from the bid closing date)																														
F.2.19	<b>Inspections, Tests and Analysis</b>  Access shall be provided for inspections, tests and analysis as may be required by the employer.																														
F.2.23	<b>Certificates</b>  The bidder is required to submit with his tender a Contractor Registration number issued by the Construction Industry Development Board (CIDB).  Where a bidder bids through joint venture formation, such bidder should include a joint venture agreement duly signed by each partner of such joint venture and an original consolidated B-BBEE certificate.																														
F3.5	Two-envelope system – <b>not applicable</b>																														
F.3.1	<b>Evaluation of Tender Offers</b>  The 80/20 Preferential Point System will be applied, where 80 points will be allocated for price and 20 points (Price / Specific Goals) points based on the Preferential Procurement regulation, Government Gazette No 47452 dated 4 November 2022. IDT empowerment strategy allocated the 20 and 10 points respectively.																														
F.3.11.3	The 80/20 Preferential Point System will be applied, where 80 points will be allocated for price and 20 points for Specific Goals  The 80/20 Evaluation System will be used for procuring items with values of equal or below R50 000 000 inclusive of Vat (PPPFA and IDT SCM Policy)  (a) Price (80 points)  And  (b) Specific Goals (20 points)																														
F.3.11.8	<b>Scoring Preference</b>  Score the preference claimed of the remaining responsive bid offers in terms of Regulation 5(2) and 6(2) of the Preferential Procurement Regulations, in accordance with the table below:  <table border="1"> <thead> <tr> <th>B-BBEE Status Level of Contribution</th> <th>Number of points (90/10 system)</th> <th>Number of points (80/20 system)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10</td> <td>20</td> </tr> <tr> <td>2</td> <td>9</td> <td>18</td> </tr> <tr> <td>3</td> <td>7</td> <td>14</td> </tr> <tr> <td>4</td> <td>6</td> <td>12</td> </tr> <tr> <td>5</td> <td>4</td> <td>8</td> </tr> <tr> <td>6</td> <td>3</td> <td>6</td> </tr> <tr> <td>7</td> <td>2</td> <td>4</td> </tr> <tr> <td>8</td> <td>1</td> <td>2</td> </tr> <tr> <td>Non-compliant contributor</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	B-BBEE Status Level of Contribution	Number of points (90/10 system)	Number of points (80/20 system)	1	10	20	2	9	18	3	7	14	4	6	12	5	4	8	6	3	6	7	2	4	8	1	2	Non-compliant contributor	0	0
B-BBEE Status Level of Contribution	Number of points (90/10 system)	Number of points (80/20 system)																													
1	10	20																													
2	9	18																													
3	7	14																													
4	6	12																													
5	4	8																													
6	3	6																													
7	2	4																													
8	1	2																													
Non-compliant contributor	0	0																													

F.3.11.9	The quality criteria and maximum score in respect of each of the criteria are as follows:			
<b>Quality Formula</b>	WQ=W2 x So/Ms		Formula used to calculate Functionality points	
	<b>W2</b> =Total evaluation points for functionality as per Scorecard			
	<b>So = Functionality</b> points allocated to the bidder under consideration			
	<b>Ms</b> =Maximum possible score for functionality in respect of a submission			
<b>Minimum points to be scored for Functionality is 60%</b>				
<b><u>FINANCIAL OFFER/PRICE</u></b>	<b>80/90</b>	Formula 2 Option 1, A=(1- (p- pm/pm))	Formula used to calculate Financial Offer/Price points	
		<b>pm</b> =The comparative Price offer of the mean/average qualifying tenderer		
		<b>p</b> =The comparative offer of the tender under consideration		
	<b>80/90</b>			

**Notes:**

1. Bidders are required to score minimum points of 60% for Functionality as stated in the tender data
2. Bidders who fail to meet the required minimum number of points for functionality as stated in the tender data shall be disqualified
3. Bidders who fail to disclose mandatory required information as per the returnable schedules shall be disqualified

**4. Bidders to submit the following for means of verification:**

- a) Project list of similar completed projects
- b) Performance and quality reports from clients / consultants
- c) Certified certificates of qualification of key staff and CV's including references
- d) Traceable References for projects completed
- e) Traceable references for suppliers

VARIABLES	TOTAL POINTS	CRITERIA	DESCRIPTION OF CRITERIA	POINTS
<b>1. FUNCTIONALITY POINTS (100 Points)</b>				
<b>Relevant Previous Experience on completed projects of a similar nature and value</b>	<b>25</b>	Five (5) Similar completed projects (R ... Million and Above)	Points allocated for proven track record based on previous projects executed to <b>completion</b> by the bidder in consideration. The scoring on this item will be carried out as follows:  (i) The bidder shall submit signed appointment letter(s) in the relevant official Client letterhead clearly showing the project value / amount (ii) The bidder shall submit signed proof of project completion (JBCC Completion certificate etc)  <b>NOTE: Failure to submit any of the above requirements will results in no points being awarded to the bidder.</b>	25
		Five (5) Similar completed projects (R .... Million - R..... Million)		20
		Four (4) Similar completed projects (R ... Million and Above)		16
		Four (4) Similar completed projects (R .... Million - R..... Million)		14
		Three (3) Similar completed projects (R ... Million and Above)		12
		Three (3) Similar completed projects (R .... Million - R..... Million)		10
		Two (2) Similar completed projects (R ....Million and Above)		8
		Two (2) Similar completed projects (R .... Million - R.... Million)		6
		One (1) Similar completed projects (R ....Million and Above)		4
		One (1) Similar completed projects (R .... Million - R.... Million)		2
		Non-Submission, Irrelevant Evidence, Incomplete Evidence		0
		<b>Relevant Previous Experience on above projects completed within the contractual period</b>		<b>10</b>
Five (5) Similar projects completed <u>on</u> time	9			
Four (4) Similar projects completed <u>before</u> time	8			
Four (4) Similar projects completed <u>on</u> time	7			
Three (3) Similar projects completed <u>before</u> time	6			

VARIABLES	TOTAL POINTS	CRITERIA	DESCRIPTION OF CRITERIA	POINTS
		Three (3) Similar projects completed <u>on</u> time		5
		Two (2) Similar projects completed <u>before</u> time		4
		Two (2) Similar projects completed <u>on</u> time		3
		One (1) Similar projects completed <u>before</u> time		2
		One (1) Similar projects completed <u>on</u> time		1
		Non-Submission, Irrelevant Evidence, Incomplete Evidence		0
<b>Client Reference Letters of Similar Completed Projects (Letters to match the above submitted previous experience)</b>	20	Excellent	Points allocated for client reference based on previous completed projects as above executed by the bidder in consideration: Points will be allocated based on; (i) Receipt of signed and/or stamped client references in the forms supplied in this document (ii) Completion of Client references forms which are contained in this document  <b>NOTE: Failure to submit any of the above requirements will results in no points being awarded to the bidder.</b>	20
		Very Good		15
		Good		10
		Fair		5
		Poor		1
		Non-Submission, Irrelevant Evidence, Incomplete Evidence		0
<b>Qualifications, Skills and Experience of Key Project Resources (with relevant experience on completed projects)</b>	35	Points allocated for required (i) competencies, (ii) qualifications (i.e degree or diploma) (iii) submission of CV's (iv) submission of relevant certified (not older than 3 months) evidence of qualifications and certificates of allocated Required Key Project Resources; (v) Professional registration of Construction / Contracts Manager.  (NB: Points allocation with submission of all required documentation and will be rounded off to the nearest lowest number)		
		<b>1. PROFESSIONAL REGISTRATION = 5</b> <b>A - Construction / Contracts Manager (Pr CM / Pr CPM):</b> (i) Pr CPM and / or Pr CM (5) (ii) None (0)		

VARIABLES	TOTAL POINTS	CRITERIA	DESCRIPTION OF CRITERIA	POINTS
		<p><b>2. QUALIFICATIONS = 12</b></p> <p><b>A - Construction / Contracts Manager (Pr CM / Pr CPM):</b></p> <p>(i) Degree or Higher (4)</p> <p>(ii) Diploma (2)</p> <p>(iii) None (0)</p> <p><b>B - Site Agent</b></p> <p>(i) Degree or Higher (4)</p> <p>(ii) Diploma (2)</p> <p>(iii) None (0)</p> <p><b>C - Site Foreman:</b></p> <p>(i) Degree or Higher (4)</p> <p>(ii) Diploma (2)</p> <p>(iii) None (0)</p>		
		<p><b>3. EXPERIENCE = 18</b></p> <p><b>A - Construction / Contracts Manager (Pr CM / Pr CPM):</b></p> <p>(i) 10 or more years experience on projects in relevant category (10)</p> <p>(ii) 5 -10 years experience on projects in relevant category (5)</p> <p>(iii) less than 5 years experience on projects in relevant category (0)</p> <p><b>B - Site Agent</b></p> <p>(i) 10 or more years experience on projects in relevant category (5)</p> <p>(ii) 5 - 10 years experience on projects in relevant category (3)</p> <p>(iii) less than 5 years experience on projects in relevant category(0)</p> <p><b>C - Site Foreman:</b></p> <p>(i) 5 or more years experience on projects in relevant category (3)</p> <p>(ii) 3 -5 years experience on projects in relevant category (1)</p> <p>(iii) less than 3 years experience on projects in relevant category (0)</p>		
<b>Minimum points to be scored for Functionality is 60 of the total Points</b>				

Clause number	BID DATA FOR RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002
<p><b>F.3.13</b></p> <p>F.3.13.1</p>	<p><b>Acceptance of Bid Offers</b></p> <p>Bid offers will only be accepted if:</p> <ul style="list-style-type: none"> <li>a) the bidder has submitted an original valid Tax Clearance Certificate issued by the South African Revenue Services;</li> <li>b) the bidder is registered with the Construction Industry Development Board in an appropriate contractor grading designation;</li> <li>c) the bidder 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;</li> <li>d) the bidder has not: <ul style="list-style-type: none"> <li>i) abused the Employer’s Supply Chain Management System; or</li> <li>ii) failed to perform on any previous contract and has been given a written notice to this effect;</li> </ul> </li> <li>e) the bidder has completed the Declaration of Interest and there are no conflicts of interest which may impact on the bidder’s ability to perform the contract in the best interests of the employer or potentially compromise the bid process and persons in the employ of the state are not permitted to submit tenders;</li> <li>f) if there are no conflicts of interest which may impact on the bidder’s ability to perform the contract in the best interests of the employer or potentially compromise the bid process</li> <li>g) the bidder has submitted the CIPRO documentation and certified copies of ID’s for all directors;</li> <li>h) the bidder completed, signed and witnessed form of offer;</li> <li>i) the bidder is in good standing with Compensation for Occupational Injuries and Disease Act (COIDA);</li> <li>j) the bidder has submitted a fully priced Bill of Quantities;</li> <li>k) The bidder attended a compulsory briefing session and completed attendance register or certificate of attendance is signed by the representative of the Employer.</li> <li>l) The bidder is required to submit with his bid a Certificate of Contractor Registration issued by the Construction Industry Development Board and proof of Registration on the Central Supplier Database (CSD) with a Compliant Tax Status; copy of the tax clearance with Tax Compliance Pin issued by the South African Revenue Services.</li> <li>m) The bidder has a B-BBEE Level of 1-3</li> <li>n) The bidder and all its directors are South African Citizens <b>(For National Key Point Projects)</b>.</li> </ul>
<p>F.3.14</p>	<p><b>Notice to Unsuccessful Bidders</b></p> <p>Should bidders not hear from the IDT within ninety (90) calendar days of closure, they should consider their submission unsuccessful. Award will be posted on e-tender and</p>

	CIDB website within 21 days of award. No written notification directed to each bidder will be issued by the Employer to unsuccessful bidders.
<b>F.2.8</b>	<b>Seek clarification</b> Request clarification of the bid documents if necessary by notifying the employer <b>at least five (5) working days before the closing time and date</b> stated in the bid data
F.3.18	<b>Provide Copies of the Contract</b> The number of paper copies of the signed contract to be provided by the employer is one.
	<b>The additional conditions of bid are:</b>  1       The employer is not obliged to accept the lowest or any bid.

## **ANNEXURE F: STANDARD CONDITIONS OF BID**

*(As contained in ADDENDUM F of the CIDB Standard for Uniformity in Construction Procurement)*

# Standard Conditions of Tender

## F.1 General

### F.1.1 Actions

**F.1.1.1** 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, comply with all legal obligations and not engage in anticompetitive practices.

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

- Note:
- 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.
  - 2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

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

### F.1.2 Tender Documents

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

### F.1.3 Interpretation

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

**F.1.3.2** These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, 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) **Conflict of interest** means any situation in which:
  - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
  - ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
  - iii) Incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.
- b) **Comparative offer** means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to be made between offers on a comparative basis
- c) **Corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process; and
- d) **Fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels
- e) **Organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body
- f) **Quality (functionality)** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs

#### **F.1.4 Communication and employer's agent**

Each communication between the employer and a tenderer shall be to or from the employer's agent only (*i.e post contract award and signing*), 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 written reasons for such action upon written request to do so.

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

#### **F.1.6 Procurement procedures**

##### **F.1.6.1 General**

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

##### **F.1.6.2 Competitive negotiation procedure**

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

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

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

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

##### **F.1.6.3 Proposal procedure using the two stage-system (Not Applicable for this Bid)**

###### **F.1.6.3.1 Option 1**

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

### **F.1.6.3.2 Option 2**

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

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

## **F.2 Tenderer's obligations**

### **F.2.1 Eligibility**

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

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

### **F.2.2 Cost of bidding**

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 demonstrate 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 of documents**

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

### **F.2.5 Reference documents**

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

### **F.2.6 Acknowledge addenda**

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

### **F.2.7 Clarification meeting**

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

In line with the provisions of F.2.3, the tenderer is to ensure that all contents of this bid are well understood for the provision of an accurate and honest bid. If not the tenderer is encouraged to adhere to the provisions of F.2.8. No additional funds shall be provided to the tenderer for errors arising out of this bid document.

### **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.

The tenderer is encouraged to go through all contents of the tender document as seek clarification where applicable. Any assumptions made by the bidder without prior confirmation by the Employer and his agent shall be at the tenderers own risk.

#### **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 the prices.

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

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

#### **F.2.11 Alterations to documents**

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

#### **F.2.12 Alternative bid offers**

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

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

#### **F.2.13 Submitting a bid offer**

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

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

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

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

**F.2.13.8** Accept that the employer 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** Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

**F.2.14 Information and data to be completed in all respects**

Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive and as such be disqualified.

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

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

**F.2.16 Tender offer validity**

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

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

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

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

**F.2.17 Clarification of tender offer after submission**

Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

**Note:** Sub-clause F.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

**F.2.18 Provide other material**

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

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

**F.2.19 Inspections, tests and analysis**

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

**F.2.20 Submit securities, bonds, policies, etc.**

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

#### **F.2.21 Check final draft**

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

#### **F.2.22 Return of other tender documents**

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

#### **F.2.23 Certificates**

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

### **F.3 The employer's undertakings**

#### **F.3.1 Respond to requests from the tenderer**

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

**F.3.1.2** Consider any request to make a material change in the capabilities or formation of the bidding entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:

- a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

#### **F.3.2 Issue Addenda**

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

#### **F.3.3 Return late tender offers**

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

#### **F.3.4 Opening of tender submissions**

**F.3.4.1** Unless the two-envelope system is to be followed, open valid tender submissions by the IDT's SCM Unit. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened publicly.

**F.3.4.2** Announce at the meeting held immediately after the opening of tender submissions the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices for the main tender offer only.

**F.3.4.3** Make available the record outlined in F.3.4.2 on the IDT's website.

#### **F.3.5 Two-envelope system (Not Applicable for this bid)**

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

**F.3.5.2** Evaluate the quality of the technical proposals offered by tenderers, then 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 proposals of tenderers, who score in the quality evaluation more than the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any 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**

**F.3.8.1** Determine, after opening and before detailed evaluation, whether each tender offer properly received:

- a) complies with the requirements of these Conditions of Tender,
- b) has been properly and fully completed and signed, and
- c) is responsive to the other requirements of the tender documents.

**F.3.8.2** A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

- a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
- b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
- c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified.

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

**F.3.9 Arithmetical errors, omissions and discrepancies**

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

**F.3.9.2** Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:

- a) the gross misplacement of the decimal point in any unit rate;
- b) omissions made in completing the pricing schedule or bills of quantities; or
- c) arithmetic errors in:
  - i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
  - ii) the summation of the prices.

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

**F.3.9.4** Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

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

**F.3.10 Clarification of a tender offer**

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

**F.3.11 Evaluation of tender offers**

**F.3.11.1 General**

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

<p><b>F.3.11.2</b> Method 1: Financial offer</p>	<p>In the case of a financial offer:</p> <ul style="list-style-type: none"> <li>a) Rank tender offers from the most favourable to the least favourable comparative offer.</li> <li>b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.</li> <li>c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.</li> </ul>
<p><b>F.3.11.3</b> Method 2: Financial offer and preferences</p>	<p>In the case of a financial offer and preferences:</p> <ul style="list-style-type: none"> <li>a) Score each tender in respect of the financial offer made and preferences claimed, if any, in accordance with the provisions of F.3.11.7 and F.3.11.8.</li> <li>b) Calculate the total number of tender evaluation points (<math>T_{EV}</math>) in accordance with the following formula: <math display="block">T_{EV} = N_{FO} + N_P</math> <p>where: <math>N_{FO}</math> is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7; <math>N_P</math> is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.</p> </li> <li>c) Rank tender offers from the highest number of tender evaluation points to the lowest.</li> <li>d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.</li> <li>e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated</li> </ul>

<p><b>F.3.11.4</b> Method 3: Financial offer and quality</p>	<p>In the case of a financial offer and quality:</p> <p>a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.</p> <p>b) Calculate the total number of tender evaluation points (<math>T_{EV}</math>) in accordance with the following formula:  <math display="block">T_{EV} = N_{FO} + N_Q</math> where: <math>N_{FO}</math> is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;  <math>N_Q</math> is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.</p> <p>c) Rank tender offers from the highest number of tender evaluation points to the lowest.</p> <p>d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.</p> <p>e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated</p>
<p><b>F.3.11.5</b> Method 4: Financial offer, quality and preferences</p>	<p>In the case of a financial offer, quality and preferences:</p> <p>a) Score each tender in respect of the financial offer made, preference claimed, if any, and the quality offered in accordance with the provisions of F.3.11.7 to F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any.</p> <p>b) Calculate the total number of tender evaluation points (<math>T_{EV}</math>) in accordance with the following formula, unless otherwise stated in the Tender Data:  <math display="block">T_{EV} = N_{FO} + N_P + N_Q</math> where: <math>N_{FO}</math> is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;  <math>N_P</math> is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.  <math>N_Q</math> is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9..</p> <p>c) Rank tender offers from the highest number of tender evaluation points to the lowest.</p> <p>d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.</p> <p>e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in this sub-clause is repeated.</p>

### F.3.11.6 Decimal places

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

### F.3.11.7 Scoring Financial Offers

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

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

$N_{FO}$  = 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.

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

Formula	Basis for comparison	Option 1 <sup>a</sup>	Option 2 <sup>a</sup>
1	Highest price or discount	$(1 + \frac{(P - P_m)}{P_m})$	$P/P_m$
2	Lowest price or percentage commission/fee	$(1 - \frac{(P - P_m)}{P_m})$	$P_m/P$
<sup>a</sup> $P_m$ is the comparative offer of the most favourable comparative offer. $P$ is the comparative offer of the tender offer under consideration.			

### F.3.11.8 Scoring preferences

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

### F.3.11.9 Scoring quality

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

$$Nq = W_2 \times S_0 / M_s$$

where:  $S_0$  is the score for quality allocated to the submission under consideration;  
 $M_s$  is the maximum possible score for quality in respect of a submission; and  
 $W_2$  is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

### F.3.12 Insurance provided by the employer

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

### F.3.13 Acceptance of tender offer

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

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

### F.3.14 Prepare contract documents

**F.3.14.1** If necessary, revise documents that 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 tender period,
- b) inclusion of some of the returnable documents, and
- c) other revisions agreed between the employer and the successful tenderer.

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

**F.3.15 Complete adjudicator's contract**

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

**F.3.16 Notice to unsuccessful tenderers**

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

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

**F.3.17 Provide copies of the contracts**

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

**F.3.18 Provide written reasons for actions taken**

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

# SPECIAL CONDITIONS OF TENDER

## F.4 Special Conditions of Tender

### F.4.1 General

The Special Conditions of Principal Contract Tender generally contain clauses that are either deemed to be additions, elaborations or variations to the Standard Conditions of Principal Contract Tender. Accordingly, the Special Conditions of Principal Contract Tender be read in conjunction with the Standard Conditions of Principal Contract Tender and it shall be deemed that the amended meanings and intentions of the clauses shall apply, if applicable.

### F.4.2 Tender Offers

Tenderers are advised that it is compulsory to submit offers for all Tender Options as set - out below and where indicated by a tick.

**Subject To Escalation Price Offer**

Tenderers are advised that this offer shall **be subject to Contract Price Adjustment Formulae based on the Haylett Formulae.**

**Fixed Price Offer**

Tenderers are advised that all rates, amounts, overhead and profit percentage mark-ups and amounts, profit and attendance amounts, prices, etc. submitted, shall **not be subject to any form of Contract Price Adjustment Formulae e.g. Haylett Formulae.** In this regard, it is deemed that the Tenderer has allowed for any potential increases (except any variation in the rate of Value Added Tax) in cost of labour, materials, transport, etc. in the Tender amounts, rates, etc. submitted.

This will only be applicable to the measured work priced by the main contractor and will not apply to the provisional sums or budgetary allowances.

**Key:**   √       - Tender Option Applicable  
          X       - Not Required For This Tender

### F.4.3 Market Related Wage Rates

When pricing this document, respondents are to allow for wages, which are not less than the greater of:

- The statutory wage rates in any labour category; and,
- The SAFCEC recommended minimum rates applicable at any time during the duration of the contract.

In this regard, a Tenderer may be called upon to demonstrate the wage rates utilised in calculating its Tender price.

### F.4.4 Letter of Intent

Tenderers are required to furnish with their tender documents, a letter of intent from a Bank or approved Insurance Company, to indicate that in the event of their tender being successful that a surety / guarantee as required will be provided when asked to do so.

### F.4.5 Information to be Submitted by Tenderers

All Tenderers are instructed to acknowledge that the information to be submitted must be strictly in accordance with the requirements stipulated in 2.3. Therefore, separate brochures, information other than which is specified in 2.3 must not be incorporated in the submission documents. Failure to comply with this instruction may render the submission liable for disqualification.

If the spaces in the Tender Returnables are insufficient, the relevant particulars should be documented on a separate sheet (s) with proper reference to the specific information requested.

#### **F.4.6 Interviews**

All Tenderers are advised that they may be required to attend interviews and / or submit further information; including making their premises, plant, equipment and details of works in progress, available for inspection after the receipt of Tender submissions.

#### **F.4.7 Detailed Construction Programme**

The Principal Contract for the project Commencement and Completion dates and any other relevant dates for this contract are stated in the Preliminaries. The Contractor is referred to Clause B 4.2 Programme for the works on Page 22 & 23.

Time and quality are to be considered the essence of this Contract. Accordingly, it shall be deemed that the Project Programme detailing each activity and duration as well as a detailed Method Statement be submitted by the Tenderer as part of the Tender submission, and shall be the basis of monitoring progress on the project.

The programme should be a detailed double-linked critical path programme preferably in CCS format in both hard copy and electronic format and take into consideration the following;

Dividing the programme into convenient construction zones both horizontally and vertically;  
Linking all activities as 'open ended' or 'open start' activities are not acceptable;  
Detailing all holidays, Christmas/New Year break, etc.;  
Showing both the Date of Practical Completion and the Date of Works Completion given that the Employer will take Occupation of the facility once the Works Completion Certificate has been issued. Penalties will apply for Milestone, Practical and Works Completion dates not being achieved as detailed in the Preliminaries.

The programme must be a fully resourced "double linked" critical path programme clearly showing Start, Finish and any Interim completion dates as well as any Milestone dates for critical activities including;

- Dates for Practical Completion Inspections to be carried out;
- Date of Practical Completion
- Period required for attendance on and completion of the Completion List issued at Practical Completion
- Date of Works Completion ;

The successful tenderer's program is subject to review and mutual acceptance.

Any Queries / clarifications relative to the Programme can be directed to the Employer.

#### **F.4.8 Detailed Cash-flow**

Tenderers are advised that a fully detailed cash-flow based on the tenderers programme is required to be submitted together with their tender document. In this regard, tenderers are advised that the financial year start and end dates are 01 April to 31 March respectively and therefore tenderers are requested to keep sub-totals for each financial year during the duration of the construction programme.

Tenders are advised that the targeted annual maximum percentages per financial year end for the contract duration are as follows and are not to be exceeded:

<b>FINANCIAL YEAR</b>
01 APRIL 2020 TO 31 MARCH 2021
01 APRIL 2021 TO 31 MARCH 2022
01 APRIL 2022 TO 31 MARCH 2023

#### **F.4.9 Detailed Resourcing Schedule**

Tenderers are advised that a detailed resourcing schedule including skilled, unskilled and sub-contractor's staffing histograms is required to be submitted together with their tender document.

#### **F.4.10 Proposed Domestic Sub-Contracts**

The Tenderer shall submit in writing, when requested, a list of proposed domestic sub-contractors that is intended to be utilised on the project, should its offer to be accepted.

Proposed domestic sub-contractors shall not take part in the work set aside for 30% Local Participation in line with National Treasury's PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000: PREFERENTIAL PROCUREMENT REGULATIONS, 2017

#### **F.4.11 Adjudication and Independent Development Trust's Rights**

F.4.11.1 Independent Development Trust reserves the right to visit any Tenderer (without prior notice), to interview any shareholder of the Tenderer and to evaluate such Tenderer in accordance with the criteria as set out in the paragraph 1.11.3 below;

F.4.11.2 All information obtained at such evaluation shall at all times be treated as confidential by Independent Development Trust;

F.4.11.3 Adjudication of a Tender shall be in the discretion of Independent Development Trust and may take into account the following:

- (i) Tender Price;
- (ii) Ability to perform, which may take into account previous experience in the relevant industry;
- (iii) Suitability of employees and suitability of equipment and materials to be used;
- (iv) Black Economic Empowerment;
- (v) Financial viability of the Tenderer;
- (vi) Ownership of the Tenderer;
- (vii) Compliance with all relevant laws; and
- (viii) SCM policy and procedures.

#### **F.4.12 Form of Contract**

**The JBCC Series 2000 Principal Building Agreement (Edition 5.1 Reprint July 2007) as amended in the IDT's SPECIAL CONDITIONS OF PRINCIPAL CONTRACT, shall be applicable to this contract.**

#### **F.4.13 Specialist Selected Sub-contract Procurement Process**

Due to the nature of the project, the procurement process of the following envisaged selected sub-contracts will be done upon appointment of the Principal Building Contractor:

- Ceilings, Partitions and Access Flooring
- Ironmongery
- Plumbing & Drainage
- Paintwork
- Electrical works
- Roadworks

Upon the appointment of a Principal Contractor, the Principal Contractor is to subsequently appoint the **selected** sub-contractors as instructed by the Principal Agent and The Employer.

This is a material condition of appointment and should the Tenderer have any objection to this condition the tenderer is to raise this in their tender submission. The appointment of the selected sub-contractor will be done in consultation with the appointed contractor.

#### **F.4.14 Damage to the Work**

Care shall be taken not to cause any damage to any part of the existing or new work or any adjoining property, if applicable. The Contractor will be held responsible for damage caused to the works by his negligence and shall be liable for all costs incurred in making good any such damage to the satisfaction of the Principal Agent.

#### **F.4.15 Communication, Media Releases, Etc.**

The Contractor shall not in any way communicate with the press, or any representative of the written or electronic media, on a question affecting this contract unless prior approval in writing is received from the **Principal Agent** as authorised by the **Employer**.

All rights of publication of articles in the media, together with any advertising relating to, or in any way concerned with this project shall vest in the Employer.

The Contractor shall not, without the written consent of the Employer, cause any statement or advertisement to be printed, screened or aired by the media.

#### **F.4.16 Copyright**

No part of this document and any document forming part of the contract documents may be copied, photographed or repeated in any manner or by any process without the written consent of the **Principal Agent**. Copyright is reserved on all designs, specifications, patents and patentable designs, systems and processes contained in documents pertaining to this contract. The person, firm, body, supplier, contractor, sub-contractor and any other contracting party is to be responsible jointly and severally, in their personal and corporate capacities for any contravention of this requirement.

#### **F.4.17 Workmanship and Quality Control**

The onus to produce work that conforms in quality and accuracy of detail, to the requirements of the specifications, rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide other technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the works at all times.

The cost of supervision and process control, including testing carried out by the Contractor shall be deemed to be included in the amount quoted for the works.

The Contractor's attention is drawn to the normal standards regarding the minimum frequency of testing required for materials. The Contractor shall, at his own discretion increase this frequency where necessary to ensure adequate control.

The Contractor shall remain solely responsible for the work as defined in this contract document, up to the end of the Defects Liability Period.

The Contractor needs to ensure that daily site diaries are kept on site at all times. These may be required for submission to the Employer as and when needed.

The end-user client and the NDPW may from time to time inspect the quality / workmanship on site and make the necessary comments and/or requirements for correction.

#### **F.4.18 Occupational Health and Safety Act**

The Contractor shall comply with the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

#### **F.4.19 Co-Operation of Contractor for Cost Control**

It is deemed that the Contractor accepts the obligation of assisting the Professional Consultants in implementing proper cost control in ensuring that the final building cost does not exceed the budget.

#### **F.4.20 Application for Payment**

The Contractor shall submit the following information on a monthly basis to the Quantity Surveyor in order to assist with the processing of the Payment Certificate and the preparation of the empowerment report:

- A detailed breakdown of the work done. (The work breakdown must be referenced strictly in accordance with the Contract Document or the detailed priced bills of quantities, as applicable.)

- A detailed breakdown of all Variation Order costs claimed (With specific reference to work done by the Nominated/Selected Subcontractor) in the certificate concerned, together with copies of the relevant Contract instructions.
- An empowerment report which shall contain an affidavit certifying that all information contained in the report as being true and correct and must be authenticated by the sub-contractor and a commissioner of oaths
- EPWP Labour Report showing total work opportunities created on site
- Tax Invoice: The contractor shall attach a tax invoice as prescribed in the Value Added Tax legislation to each payment certificate when presenting the certificate to the Employer for payment. Such tax invoices shall correctly reflect the prescribed information and the amounts shall match precisely the amounts included in the Payment Certificate. Should the contractor fail to comply with these requirements, the date of presentation of the certificate shall be deemed to be delayed at the contractor's default until such time as the requirements are met.

Should anyone or any combination of the above requirements not be complied with, the Principal Agent and/or Contractor reserves the right to exclude any amounts that may have been due for certification from the Payment Certificate concerned and/or delay the issue of Payment Certificates and/or, revise the contractual payment date, as applicable, until such time compliance is achieved.

#### **F.4.21 Identification of Personnel**

All permanent staff that are utilised on the project by the Contractor, Domestic and Selected Sub-contractors are at all times whilst on site, be clad with clothing that clearly identifies each staff member together with an identification document which includes, but not limited to the following:

A photograph of the staff member concerned;  
The identification numbers of the staff member concerned; and,  
The name of company concerned

In addition, to that stated above, the Contractor shall adhere to the premise's security rules and regulations.

No staff member will be permitted to execute the Works if this condition is not adhered to.

#### **F.4.22 Intervention at Manufacture and / or Supplier and / or Contract Level**

The Employer and its Agents reserve the right to discuss and liaise on any issue pertaining to this Contract with the Contractor's service providers i.e. manufacturers and / or suppliers and / or sub-contractors concerned. This right shall not create privity of contract between the Employer and / or its Agents and the said manufacturer and / or supplier and / or sub-contractors.

#### **F.4.23 Cession of Materials Supplied to the Site**

It shall be deemed that the Contractor and its service providers upon delivery of each batch of materials to site, has ceded the said materials to the Employer.

#### **F.4.24 Alterations in the Quantity and Value of Work**

The Employer and / or its Agents shall be permitted to either increase or decrease the quantity and value of work contracted for. In this regard, the Contractor including its service providers shall not be entitled to claim for any additional expense incurred, or for any change in the rates for work done and / or any materials and services supplied. It shall be deemed that all costs associated with this item are included in the Tender Price.

#### **F.4.25 Change in the Scope of Work**

The Contractor acknowledges that whilst drawings have been prepared for the Works, the scope of work and value of the Contract may be substantially altered and that no claims for loss and expense shall be due by the Employer for implementing any changes that may become necessary. It shall be deemed that the Tender Price includes for all costs that may arise due to compliance with this clause.

#### **F.4.26 Treasures, Relics, Etc.**

Any relics, treasure, articles of value or of potential historical or archaeological interest found on the site must be brought to the attention of the Principal Agent. All work at the specific area of the discovery shall stop for a reasonable time period until such time that the Principal Agent instructs continuation of the Works.

Any relics, treasure, articles of value or of potential historical or archaeological interest found on the site shall remain the property of the Employer and shall be handed over to the Principal Agent who shall be the sole arbitrator of what is an article of value.

#### **F.4.27 Priced Bills of Quantities**

The Tenderer shall submit a fully priced Bills of Quantities as well as a detailed breakdown and build-up of all items measured as lump sum items with the Tender Price. Lump sum items shall be measured in accordance with the Standard System of Measuring Building Work (Sixth Edition, including any subsequent amendments thereto), and shall form part of the Contract and shall be used for the purposes of preparing valuations, Payment Certificates, determining the value of Variation Orders, preparation of Final Accounts, etc.

Neither the Employer, nor its Agents shall be liable for any cost incurred for the award and subsequent withdrawal of the award of the Tender in terms of this clause.

#### **F.4.28 Prices and Net Measurements**

Prices throughout these Bills of Quantities shall be deemed to include for all obligations arising out of the Contract and unless otherwise specified, be held to include for making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, cutting and waste, patterns, models and templates, plant, temporary works and return of packaging.

Prices for all items contained in these Bills of Quantities and any additional authorised variations, shall be deemed to exclude all amounts due in terms of the Value Added Taxation legislation. A provision for the addition of VAT shall be made on the Final Summary page of the Bills of Quantities and Final Statement of Accounts, as applicable.

#### **F.4.29 Value Added Tax (V.A.T)**

All prices and or rates tendered shall be deemed to be **exclusive** of Value Added Tax.

Value Added Tax shall be added as a lump sum where provided on the Final Summary page of the Bills of Quantities, and the Tender Price **inclusive** of Value Added Tax will be shown on the Form of Tender.

Value Added Tax shall be calculated at the National going rate at the time of submission of bids.

#### **F.4.30 Site and Information**

Tenderers must acquaint themselves with the conditions of the Site and generally obtain their own information on all matters affecting the submission of Tenders for the Works. Tenderers will be held responsible for any misunderstanding or incorrect information obtained, except information which may have been given in writing over the signature of the Principal Agent.

The contractor is expected to establish a construction camp, office and workshop facility, for the fulfilment of the contract. Site establishment facilities to be removed after the completion of the project.

The contractor must strictly use the working area provided by the Employer.

#### **F.4.31 Noise**

Tenderers must take note that the site is within the SA Navy Base (Durban). As such high noise level shall be restricted to times that will not disrupt the operations of the Navy.. Tenderers are to ensure that they acquaint themselves with these conditions and adequately price for it accordingly as no additional time will be allowed for any delays that may be attributed to such.

The Contractor will be restricted from working evening shifts but may be allowed to work weekend shifts with prior 1 week's notice. Such shall be included in the contractor's pricing as no additional allowance for weekend shifts will be allowed for by the Employer, post tender award.

**F.4.32 Water and Electricity**

The contractor is expected to make means for the provision of water and electricity for construction purposes. The use of such services from the site shall be at the discretion and on agreement with the end user department (i.e Department of Defence)

**F.4.33 Preliminaries Costs**

The Tenderer must allow in his pricing, or where provided for in the Tender Document, for all preliminaries costs deemed necessary for the proper execution and completion of the Works, as no late claims whatsoever for additional costs in this respect will be considered.

**F.4.34 Protection of Existing Work**

The Tenderer shall allow for the protection of all existing work that is liable to be damaged during the execution of this Contract and work that is liable to be damaged once the Contractor completes its Section of the Works.

**F.4.35 Mock-Up / Samples, etc.**

Samples, mock-ups, etc. will be called for by the Principal Agent for approval and shall be provided at no extra cost as rates will be deemed to include for this.

**F.4.36 Substitution of Materials**

No substitution of the articles or materials specified in this Tender Document will be permitted unless the authority of the Principal Agent has been obtained, in writing, before Tender closing. The Tenderer will otherwise be required to provide / or use the specified articles or materials. Approval of any request for the substitution of any article or materials will only be considered when the Principal Agent is satisfied that if the substitution is approved, there is sufficient time remaining before Tender closing to advise all other Tenderers accordingly.

**F.4.37 Restriction on Site Access**

Tenderers are to price any items related to this under Clause 3.1 in the Preliminaries bill. The Principal Agent and /or the Compulsory Tender Briefing will provide further details of the restrictions, if any that will affect the Contractor.

**F.4.38 Security**

The Tenderers are to note that upon award of the contract, they are to furnish the Employer (within 21 days of award), the following:

Construction Guarantee equal in value to **10%** of the Contract Sum valid for the duration of the contract.

**F.4.39 Safety Requirements**

The Contractor is referred to the safety requirements associated with the project. It is of utmost importance that the successful contracting entity abides by the.

The Contractor will comply with all Health and Safety Regulations and the Health and Safety Plan.

Management of safety on site shall remain the sole responsibility of the Contractor.

Disposal of all rubble material and asbestos roof sheetings / materials, to suitable legal dump sites, shall be carried out on a weekly basis. All costs for this exercise shall be included in the bid price (for the duration of the project plus a further 6 months in the event of project overrunning its duration)

**The safety on site, agreement and general information forms included in the Tender Returnables must be agreed and fully completed and submitted with the Tender Submission.**

#### **F.4.40 Budgetary Allowances / Provisional Sums**

Where applicable, these amounts have been included in the Tender Price where the work has not been defined at the date of Tender. It is intended that once the scope is defined, Tenders will be invited with a view to these Works being awarded as Nominated / Selected Subcontract works.

- The Specialist Consultant responsible for the specific work package will prepare documentation which is to include drawings, specification and schedule of quantities that define the scope of works all in accordance with the Nominated / Selected Subcontract Agreement.
- The Quantity Surveyor will prepare the necessary Tender documents.
- The Principal Agent will arrange for inviting / advertising of tenders subject to the payment of a non-refundable document fee, if applicable.
- The Employer will arrange to issue the tender documents from their offices and take receipt of amounts paid.
- The Tenders for the Works will be submitted to the Employer's office in terms of the tender closing times stipulated. Tenders will be opened and tender amounts read out at the time.
- The Quantity Surveyor will make copies of the returned Tender documents for distribution to the Principal Agent.
- The Quantity Surveyor will prepare an initial financial evaluation report of the Tenders, Principal Agent and Engineer will evaluate the Tenderer's technical compliance and capability and circulate to the Employer.
- The Principal Agent will prepare a draft report, discuss with the Contractor to get their approval and finally circulate the draft to the other Consultants for final comment. Thereafter the Tender Report with Recommendations will be finalised by the Principal Agent and circulated to the Employer for approval. On approval, the recommendation together with any instructions of award will be issued to the Contractor who will be responsible for appointing the relevant party as a Sub-contractor.

#### **F.4.41 Community Liaison Officer (CLO)**

The Tenderer shall allow for a CLO who is to be appointed and remunerated by the Contractor following identification and selection by the Ward Councillor.

Purpose of the Job: The primary role of the CLO shall be liaison and facilitation of communication between the Contractor, the Local community and the Ward Councillor.

Job title: Community Liaison Officer (CLO)

Reporting to: The Contracts Manager or other delegated representative of the Contractor. The CLO must report to **the Contractor** and remain on site on a daily.

Experience: Relevant experience and knowledge of building construction, community facilitation and relevant labour legislation.

Remuneration: Rate payable for the CLO will be .....% of the Civil Engineering Industry minimum wage for unskilled labour.

Minimum Skills:

1. Ability to work with others;
2. Ability to communicate in local language of the project location and English;
3. Ability to communicate in writing;
4. Sound Interpretation skill.

The Ward Councillor in whose wards work is to be done will collectively identify 3 (three) CLO candidates for the project and make such persons known to the Contractor within five days of being requested to do so. The Contractor will be required to enter a written contract with the CLO that specifies:

- (a) The hours of work and the wage rate of the CLO which could include:
- (b) The duration of the appointment
- (c) The duties to be undertaken by the CLO which could include:

- Assisting in all respects relating to the recruitment of local labour and advising them of their rights
- Acting as a source of information for the community and councilors on issues related to the contract
- Keeping the contractor advised on community issues and issues pertaining to local security
- Assisting in setting up any meeting or negotiations with affected parties
- Keeping a written record of any labour or community issues that may arise
- The CLO needs to be seen to be neutral by all parties and therefore should endeavour not to take sides should conflict arise.
- Should the CLO function not involve a full days work, the CLO will be expected to undertake other work allocated by the Contractor for the balance of each day

Procedures for local labour recruitment:

- The Contractor submits a list of his/her requirements to the CLO, stating the numbers required in each labour category (general worker, bricklayer, etc.) and a programme that shows when these resources will be required.
- During the construction period, the CLO uses the list to identify candidates for employment, who are interviewed and if successful employed by the contractor.
- The Contractor keeps the CLO informed by providing him/her with employee's details at the start of their employment (name, residential address, ID number, wage, employment, start and finish date, task, etc.) and notify the CLO when their employment ends.

#### **F.4.42 Historical Disadvantaged Individuals or groups Participation Targets**

F.4.42.1 Local participation / sub-contracting shall be 30% of the contract value in line with the PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000: PREFERENTIAL PROCUREMENT REGULATIONS, 2017

F.4.42.2 Penalties:

In the event that the contractor fails to substantiate that any failure to achieve the above condition was due to quantitative under runs, the elimination of items contracted to HDI's, or any other reason beyond the contractors control which may be acceptable to the Employer, the Contractor shall pay to the Employer penalties for an amount equal to one and half times the difference between the minimum and achieved Contract Participation Goal, expressed as a percentage and multiplied by the Award Value.

The Employer will not be liable for any increase in labour costs arising out of the use of selected local domestic sub-contractors and local labour. No Extension of time claims with cost will be entertained due to default by any of the selected domestic sub-contractor or the use of local labour

#### **F.4.43 Skills Development and Training**

The contractor will be expected to make use of the end user client's artisan in the project, manage as well as ensure their development accordingly. 22 Artisan shall be expected to be utilized in the project through its lifecycle. They include the following disciplines, Electrical, plumbing, roof, tiling, painting and carpentry

## **SPECIFICATION FOR THE EMPLOYMENT OF SMME SUBCONTRACTORS:**

### **D1. SCOPE**

This specification governs the employment of all SMME subcontractors. 30% subcontracting shall be applicable and shall be in line with the PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000:PREFERENTIAL PROCUREMENT REGULATIONS, 2017

### **D2. DEFINITIONS**

For the purposes of this section of the Project Specification, the definitions given in the JBCC Conditions of Contract for Construction, the Standard Specifications and the Project Specifications, together with the following additional definitions shall apply:

- (a) **"Contract" and "the contract"**: Shall have the meaning assigned thereto in subclause 1.1 of the JBCC Conditions of Contract.
- (b) **"Contractor" and "the contractor"**: Without further qualification, shall have the meaning assigned thereto in subclause 1.1 of the JBCC Conditions of Contract for Construction.
- (c) **"Main Contract"**: Any contract for the execution of civil engineering or building or similar construction works, in which the liabilities and responsibilities of the two parties thereto are assigned essentially in a manner which is consistent with that set out in the JBCC Conditions of Contract for Construction 1999 or other similar documents.
- (d) **"Management Team (MT)"**: A team that is set up after award of the contract, consisting of the Contractor, the Engineer, a delegated person from the Employer. The function of the MT will be to consult regarding the management of the subcontracts involving SMMEs. The MT will also evaluate the Contractor's performance regarding the goals set for SMME involvements.
- (e) **"SMME Unit"**: Persons provided by the Employer to monitor the procurement and work of SMMEs.

### **D3. USING SMMEs**

#### **D3.1 Contract Process**

After the Award of the Contract the successful Contractor will have to start the process as stipulated in this Project Specification for the involvement of SMMEs to achieve his Tendered SMME Goal. This contract process for subcontracting SMMEs must be completed in accordance of the detailed construction programme of the main contractor for the various works as to ensure momentum of the contract works at all times. The Contractor shall take due cognisance to also programme this SMME contract process in his detailed construction programme. The Contractor, with assistance from the Principal Agent, must undertake the following tasks in approximately the order given below:

- If the SMME has not been identified prior to submission of tender, run a tender or quotation process in consultation with the MT.
- Sign a subcontract agreement for each work activity with the successful SMMEs Tenderer;
- Assist and monitor the SMME Subcontractors and their work output and quality;
- issue a Certificate of Experience to each Subcontractor;
- Go through the tender and appointment phase for new SMMEs upon termination of their contract due to failure by them to perform.

### **D3.2 Extent of the work to be undertaken by SMMEs**

The Contractor shall, when compiling his Tender, identify work to be undertaken by SMMEs to achieve the targets specified for SMME involvement in his tender. The Contractor will note that all work measured in the Bills of Quantities is the Contractor's sole responsibility.

Except for specific Labour Only subcontractors, the SMMEs will be responsible for procuring all required materials, labour, equipment and any other incidentals to undertake the works subcontracted to them.

The Contractor will supervise and manage the SMME work at all times to ensure compliancy with the specifications and drawings.

## **D4. IDENTIFICATION OF WORK TO BE PERFORMED BY SMMEs**

The Contractor shall employ SMME subcontractors to the extent specified in the tender Goal Declaration, or as negotiated with the Contractor upon award. The participation level is determined relative to the value of the Accepted Contract Amount, or as adjusted, excluding Contingencies, Contract Price Adjustment Provisions and Value Added Tax.

During the SMME Tender phase the Contractor in consultation with the SMME Unit shall be responsible for identifying:

- the scope and extent of the works to be included in any particular SMME subcontract;
- the total number of subcontracts to be let;
- the time at which subcontracts will be let; and
- the duration of the subcontract;

in such a manner as will facilitate the achievement of all objectives and principles pertaining to SMMEs use and development as are stated in or as may reasonably be inferred from the conditions of this contract, due cognisance being taken of:

- the prevailing levels, ability, resources and previous experience of the potential candidates available;
- the training and assistance to be provided to the SMMEs in terms of this contract;
- the period allowed in the Appendix to Tender for completion of the contract works and the approved programme of works;
- all constraints and conditions contained in this contract, as may impact upon the subcontract.

## **D5. TENDER PROCESS FOR SMMEs**

Where Provisional Sums have been allowed for SMME participation the tender process for the SMMEs will be conducted in one phase only in line with the applicable JBCC Contract, with the Employer playing an oversight.

SMMEs sourced through a competitive process in conjunction with the Employer's SMME Unit and the MT shall not be considered as Nominated Subcontractors unless specifically directed by the Employer.

### **D5.1 Tender invitation**

A minimum of 3 (three) prices are to be obtained for each subcontract to be performed by SMMEs.

The SMMEs to be used in the project shall be obtained from the list of SMMEs provided in the bid document.

## D5.2 Compilation and issue of enquiry documents

The Contractor with assistance of the SMME Unit, shall compile the enquiry documents in such a manner that it will facilitate the achievement of all objectives and principles pertaining to SMMEs use and development as stated in or as may reasonably be inferred from the conditions of this contract.

All tender documentation shall be issued by the Contractor with all copies of tender documents compiled deemed to be included in the tendered rates under D10.

## D5.3 Assistance to the SMMEs

(a) The Contractor shall be responsible for ensuring that prospective SMME Tenderers fully comprehend the:

- implications of the liabilities and responsibilities inherent in the particular basic level of subcontract applicable;
- implications of the tendered rates;
- scope and extent of the portion of the works included in the subcontract;
- proper procedures for the submission of the tenders;
- procedures and basis on which tenders will be adjudicated and the subcontract awarded.

(b) The Contractor shall, in addition to the requirements of subclause 20-23 of the JBCC Conditions of Contract for Construction, **guide, assist and mentor** all eligible potential SMMEs wishing to submit tenders, in the proper completion and submission of their particular tenders, provided always that such assistance, guidance and mentoring by the Contractor shall:

- (i) be given at a level and to the extent which is commensurate with the particular basic level of subcontract applicable, due cognisance being taken of the capability which could reasonably be expected of potential SMMEs eligible to submit tenders for the particular level of subcontract applicable;
- (ii) be given in a manner which is neither prescriptive, dictatorial, nor coercive towards the party wishing to submit the tender;
- (iii) be given in a manner which does not unfairly prejudice or favour any particular eligible party wishing to submit a tender,

all with the view to enabling all interested SMMEs to submit valid, balanced, rational tenders.

(d) The contractor is to appoint an SMME mentor.  
The mentor is to be a qualified Tradesman – CV to be provided to the to the PA and Health and Safety consultant for approval

The mentor needs to have experience of at least 10 years in the build environment:

- (i) Capable of reading and implementing construction documentation
- (ii) Quality control
- (iii) Programming of works
- (iv) With on-site experience
- (v) Supervisory role / Foreman/ Team leader

#### **D5.4 Adjudication**

- (a) The Contractor shall receive all tenders at a location identified by him with all sealed tender submissions to be placed in a proper tender box for this purpose.
- (b) All tenders received shall be evaluated by the Contractor and MT for final approval.
- (c) The SMME Unit shall have the right to interview any tenderer for the purpose of:
  - clarifying any aspect of the tender;
  - verifying the eligibility of the tenderer;
  - querying abnormally high or low rates and prices, and
  - clarifying rates and prices which are not in balance with other tendered rates and prices.
- (d) The Contractor shall provide all reasonable opportunity to such tenderers who have been interviewed, to correct obvious and patent errors, provided always that this can be achieved without altering the total tendered sum.
- (e) After the Award the Employer reserves the right to review the transparency of the Contractor's SMME subcontracting and award process.

#### **D5.5 Award of Tenders**

The Contractor shall explain his evaluation process of adjudication to all Tenderers and motivate his method of award if it may be necessary at any given time.

The successful Contractor will award the work to the successful SMME Tenderer, where after a subcontract agreement will be signed between the Contractor and the successful SMME Tenderer.

### **D6. TERMS AND CONDITIONS OF SUBCONTRACT AGREEMENTS**

#### **D6.1 Contractual Obligations**

In accordance with the provisions of Sub-Clause 20-23 of the JBCC Conditions of Contract for Construction and subject always to the further provisions of this specification, the terms and conditions of each subcontract agreement shall be as mutually agreed in writing between the Contractor and the SMME.

Each subcontract agreement, which is entered into by the Contractor in accordance with the requirements of this specification, shall contain terms and conditions, which assign the responsibilities and liabilities of the two parties to the subcontract.

The terms and conditions of the subcontract agreement shall further ensure the provisions of this contract pertaining to:

- (a) the allowable sources from which workers may be drawn in terms of the contract;
- (b) the terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract works; and
- (c) any training to be provided to the temporary workforce;

shall apply as is in respect of all workers engaged and employed by any SMME.

#### **D6.2 Compilation**

The Contractor shall be responsible for the compilation of each subcontract agreement and ensuring that the terms and conditions are consistent with all requirements thereof, as are

specified in or reasonably to be inferred from the provisions of this Contract. All costs associated with the tender process including the conclusion of the agreement are for the Contractor's account.

In addition to the provisions of subclause 20-23 of the JBCC Conditions of Contract for Construction, the final terms and conditions of each subcontract agreement shall be subject to the approval of the SMME Unit, which approval shall be obtained by the Contractor prior to entering into the subcontract.

The Contractor may not enter into any subcontract that contains terms more onerous or disproportionate to the risks inherent in the main contract for either the SMME or the Contractor.

The Contractor is required to use a standard form of subcontract and follow recommended practice contained in the CIDB Best Practice Guideline #D1 March 2004 Edition 1 of CIDB Document 1012, or as later amended, where not in conflict with this project documentation.

## **D7. CONTRACTOR'S OBLIGATIONS TO SUBCONTRACTED SMMEs**

The Contractor shall closely manage and supervise all SMMEs and shall manage, guide and assist each SMMEs in all aspects of management, execution and completion of his subcontract. This shall typically include assistance with planning his works, sourcing and ordering of materials, labour relations, monthly measurements and invoicing procedures, etc. The extent and level of such management, guidance and assistance, to be provided by the Contractor shall be commensurate with the basic level of subcontract applicable and shall be directed at enabling the SMMEs to achieve the successful execution and completion of his subcontract. Payment for such on-going assistance is deemed included in the rate tendered for the administrative cost of SMMEs.

### **D7.1 Dispute Avoidance and Resolution Procedures**

The Contractor shall at all times:

- (a) apply the terms and conditions of the subcontract fairly and justly, taking due cognisance of the level of sophistication and experience of the particular SMME concerned, as well as the level of subcontract applicable;
- (b) closely manage and supervise all SMMEs and wherever feasible, shall give reasonable warning to SMMEs when any contravention of the terms of the subcontract has occurred or appears likely to occur. The Contractor shall, whenever feasible, give the SMMEs reasonable opportunity to make good any such contravention, or to avoid such contravention and shall render all reasonable assistance to the SMME in this regard.

When taking any disciplinary actions or imposing any penalties as are provided for in the subcontract, the Contractor shall explain fully to the SMMEs that such actions are provided for in the subcontract.

If any dispute should arise between the Contractor and a SMME such dispute shall be resolved in accordance with the provisions of the subcontract.

### **D7.2 Quality of Work and Performance of the Subcontractor**

If the Subcontractor, in the opinion of the Principal Agent, fails to comply with the criteria as listed below, the Principal Agent shall issue a written warning to the Contractor, stating all the areas of non-compliance. A copy of the letter of warning shall be forwarded to the Employer. These criteria are as follows:

- (a) Acceptable standard of works as set out in the specifications in the subcontract tender document

- (b) Progress in accordance with the time constraints in the Subcontractor's tender document
- (c) Punctual and full payment of the workforce and suppliers
- (d) Site safety
- (e) Environmental impacts.

The Subcontractor shall have 14 days from the date of receipt of the letter of warning by the Contractor to satisfactorily address the issues raised by the Principal Agent, with the exception of point (d), for which the response time shall be 24 hours. Failure to do so, will be sufficient grounds for the Contractor to terminate the contract provided the SMME Unit is satisfied that the Contractor has made every effort to correct the performance by the Subcontractor.

### **D7.3 PAYMENT TO SMMEs**

1. SMME subcontractors are to be invited to submit their payment applications monthly and are to be paid by the Contractor within 14 (fourteen) days of invoice.
2. Payment to SMMEs may not be delayed pending payment of the Contractor by the Employer.
3. Payment to SMMEs may not be subjected to set off costs unless provided for in law, and not exceeding 5% of the payment, unless approved by the Employer.
4. Payment to SMMEs may not be discounted for early payment.
5. The Contractor must acknowledge and honour cessions in favour of recognised financiers or suppliers of the SMME.

### **D8. CONTRACTOR'S DUTIES UPON COMPLETION OF EACH SUBCONTRACT**

The Contractor shall, on the completion of each and every subcontract completed in accordance with the provisions of this specification, issue free of charge to the SMME within 7 days of the completion of the subcontract, a Certificate of Experience on a single A4 page stating:

**(a) Contract data:**

- (i) Contract title;
- (ii) Contractor's full name and address;
- (iii) Principal Agent's name and address;
- (iv) Employer's name;

**(b) Subcontract data:**

- (i) SMME name and address;
- (ii) Scope or extent of the subcontract works;
- (iii) Value of the subcontract works;
- (iv) Applicable level of the subcontract;
- (v) Duration of the subcontract;
- (vi) Date of completion of the subcontract;
- (vii) Description of the training undergone by the SMME;

**(c) Certifying the SMMEs completion of the subcontract.**

The format, layout and appearance of certificates issued shall be at the Contractor's discretion, provided always that they shall be respectable and presentable in accordance with the general standards of normal business practice. All certificates issued shall be co-signed by the Principal Agent and a senior representative of the Contractor, who has been duly authorised thereto.

## **D9. CONTRACTOR'S LIABILITY**

- D9.1** No provision or requirement set out in this specification shall be deemed to relieve the Contractor of any liability or obligation under the contract, and in accordance with the provisions of Clauses of the JBCC Conditions of Contract for Construction, the Contractor shall be fully liable for the acts, defaults and neglects of any SMMEs, his agents or employees, as fully as if they were the acts, defaults and neglects of the Contractor, his agents or employees.
- D9.2** Any failure or neglect by the Contractor to comply with the provision of the specifications, or any omission or neglect by the Contractor in adhering to or applying the principles as are described and inherent in the specifications, shall be deemed to constitute a warrant for the Principal Agent to act in terms of Clause 5 of the JBCC Conditions of Contract for Construction.
- D9.3** The Contractor shall be required to appoint an SMME Construction manager, who will be responsible to assist SMMEs as and when required. The SMME Construction Manager's duties are specified in Project Specifications - PSA 5.9

## **D10. PERFORMANCE GUARANTEE**

- D10.1** Performance guarantees for 10 (ten) percent of the accepted SMME subcontract value will be required from SMME's whose subcontracts exceed R 500 000.00 (excluding VAT). Where such guarantees are provided by SMME subcontractors the return of same will be related to the time when the work carried out by the SMME subcontractor is complete to the satisfaction of the Contractor and the Principal Agent.

## **D11. RETENTION**

- D11.1** Retention on SMME subcontractors, whose subcontract value is less than R 1 000 000.00 (One Million Rand), will be released 3 months after the subcontract work carried out by the SMME is complete to the satisfaction of the Contractor and the Principal Agent.

## **D12. MEASUREMENT AND PAYMENT**

An item has been measured in the Preliminaries allowing the Contractor to price for the cost of the Contractor to manage and supervise the SMMEs during the execution of their works. The price tendered will be deemed to include all incidentals by the Contractor to comply with the conditions of this specification. No other claims will be entertained should SMMEs affect the contract works in any way, and the Contractor shall deem to include such effects in the handling cost percentage for the different SMME work packages above.

## **D13. SUBCONTRACTING BY SUBCONTRACTORS**

The Contractor is not to permit SMME subcontractors to further subcontract on any other conditions than those applying in the project specification to subcontractors or SMME subcontractors

## **SPECIFICATION FOR THE EMPLOYMENT OF SUBCONTRACTORS**

### **E1. SCOPE**

This specification governs the employment of all subcontractors that are not SMMEs, and where not specified elsewhere in the tender documents. 30% subcontracting shall be applicable and shall be in line with the PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000: PREFERENTIAL PROCUREMENT REGULATIONS, 2017

### **E2. TERMS AND CONDITIONS OF SUBCONTRACT AGREEMENTS**

In accordance with the provisions of Sub-Clause 20-23 of the JBCC Conditions of Contract for Construction and subject always to the further provisions of this specification, the terms and conditions of each subcontract agreement shall be as mutually agreed in writing between the Contractor and the subcontractor.

Each subcontract agreement, which is entered into by the Contractor in accordance with the requirements of this specification, shall contain terms and conditions, which assign the responsibilities and liabilities of the two parties to the subcontract.

The terms and conditions of the subcontract agreement shall further ensure the provisions of this contract pertaining to:

- (a) the allowable sources from which workers may be drawn in terms of the contract;
- (b) the terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract works; and
- (d) any training to be provided to the temporary workforce;

shall apply as is in respect of all workers engaged and employed by any subcontractor.

The Contractor shall be responsible for the compilation of each subcontract agreement and ensuring that the terms and conditions are consistent with all requirements thereof, as are specified in or reasonably to be inferred from the provisions of this Contract.

In addition to the provisions of subclause 20-23 of the JBCC Conditions of Contract for Construction, the final terms and conditions of each subcontract agreement shall be subject to the approval of the Employer, which approval shall be obtained by the Contractor prior to entering into the subcontract.

The Contractor may not enter into any subcontract that contains terms more onerous or disproportionate to the risks inherent in the main contract for either the subcontractor or the Contractor.

The Contractor is required to use a standard form of subcontract and follow recommended practice contained in the CIDB Best Practice Guideline #D1 March 2004 Edition 1 of CIDB Document 1012, or as later amended, where not in conflict with this project documentation.

### **E3. CONTRACTOR'S OBLIGATIONS TO SUBCONTRACTORS**

The Contractor shall closely manage and supervise all subcontractors. The Contractor shall ensure that subcontractors are fully aware of the project specifications in respect of Health and Safety, Environmental, and Labour Management matters.

#### **E4. PAYMENT TO SUBCONTRACTORS**

1. Subcontractors are to be invited to submit their payment applications monthly and are to be paid by the Contractor within 30 (thirty) days of invoice.
2. Payment to subcontractors may not be delayed pending payment of the Contractor by the Employer.
3. Payment to subcontractors may not be subjected to set off costs unless provided for in law, and not exceeding 5% of the payment, unless approved by the Employer.
4. Payment to subcontractors may not be discounted for early payment.
5. The Contractor must acknowledge and honour cessions in favour of recognised financiers or suppliers of the subcontractors.

#### **E5. CONTRACTOR'S LIABILITY**

No provision or requirement set out in this specification shall be deemed to relieve the Contractor of any liability or obligation under the contract, and in accordance with the provisions of Clause 20-23 of the JBCC Conditions of Contract for Construction, the Contractor shall be fully liable for the acts, defaults and neglects of any subcontractor, his agents or employees, as fully as if they were the acts, defaults and neglects of the Contractor, his agents or employees.

Any failure or neglect by the Contractor to comply with the provision of the specifications, or any omission or neglect by the Contractor in adhering to or applying the principles as are described and inherent in the specifications, shall be deemed to constitute a warrant for the Principal Agent to act in terms of Clause 36-37 of the JBCC Conditions of Contract for Construction.

#### **E6. PERFORMANCE GUARANTEE**

Performance guarantees for up to 10 (ten) percent of the accepted subcontract value may be required where subcontracts exceed R 500 000.00 (excluding VAT). Where such guarantees are provided by subcontractors the return of same will be related to the time when the work carried out by the subcontractor is complete to the satisfaction of the Contractor and the Principal Agent.

#### **E7. RETENTION**

Retention on subcontractors, whose subcontract value is less than R 1 000 000.00 (One Million Rand), will be released 3 months after the subcontract work carried out by the subcontractor is complete to the satisfaction of the Contractor and the Principal Agent.

#### **E8. SUBCONTRACTING BY SUBCONTRACTORS**

The Contractor is not to permit subcontractors to further subcontract on any other conditions than those applying in the project specification to subcontractors or SMME subcontractors.

## **T2.1 LIST OF RETURNABLE DOCUMENTS**

## T2.1 List of Returnable Documents

List of returnable documents are for ensuring that everything the employer requires a tenderer to submit with his tender is included in, or returned with, his tender submission. Tick below if returnable document is attached or completed properly.

#	LIST OF RETURNABLE DOCUMENTS	TICK IF ATTACHED
T2.1.	Preference Points Claim Form in Terms of The Preferential Procurement Regulations 2011	
T2.1.	B-BBEE Certificate (Original or Originally Certified Copy)	
T2.1.	Joint Venture Agreement Between Parties	
T2.1.	CIDB Registration Number	
T2.1.	Copy of a Letter of Goodstanding with Compansation For Occupational And Injuries Dieses Act (COIDA) Registration Number	
T2.1.	Declaration of Interest	
T2.1.	Certificate of Independent Bid Determination	
T2.1.	Declaration of Bidder's Past Supply Chain Management Practices	
T2.1.	Attendance At Compulsory Briefing	
T2.1.	Certificate of Authority For Signatory	
T2.1.	Record of Addenda to The Tender Documents	
T2.1.	Project Experience	
T2.1.	Letters of Appointment, and Relevant Completion Certificates (Practical Completion, Work Completion & Final Completion)	
T2.1.	Client References	
T2.1.	Key Personnel	
T2.1.	Fully Priced Bill of Quantities	

## **T2.2 RETURNABLE SCHEDULES (ALL COMPULSORY)**

## T2.2 RETURNABLE SCHEDULES

Contains documents that the tenderer is required to complete for the purpose of evaluating tenders and other schedules which upon acceptance become part of the subsequent contract.

#	QUALITY EVALUATION SCHEDULES
T2.1.	Project Experience
T2.1.	Client References
T2.1.	Letters of Appointment, and Relevant Completion Certificates (Practical Completion, Work Completion & Final Completion)
T2.1.	Key Personnel

### RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT (to be attached with submission)

Record of Addenda to Tender Documents
Declaration Concerning Fulfillment of the Construction Regulations, 2003
First Programme and Method Statement
Preliminary Health and Safety Plan 4 completion)
Form of offer and acceptance
Contract data
Forms of securities

## 2.1.2 B-BBEE CERTIFICATE

***Attached hereto is my / our original (original certified copy) B-BBEE Certificate issued by a verification agency accredited by SANAS. My failure to submit the certificate with my / our tender document will lead to the conclusion that I am / we do not wish to claim preference points in terms of my / our B-BBEE status.***

## T2.1. TAX CLEARANCE CERITFICATE

*Tax Clearance Certificate or Unique Pin obtained from SARS to be inserted here]*

**T2.1. JOINT VENTURE AGREEMENT BETWEEN PARTIES**

***Attached hereto is our duly signed, Joint Venture Agreement. Our failure to submit the agreement with our tender document will lead to the conclusion that the joint venture has not been formally formed and all parties were not involved in the tender process.***

**T2.1. CONTRACTOR'S COPY OF REGISTRATION OF INCORPORATION OR COMPANY  
REGISTRATION DOCUMENTS**

*Attached hereto is my / our copies of company registration of incorporation or company registration documents. My failure to submit the copy with my / our tender document will lead to the conclusion that I am / we are not registered as claimed.*

## **T2.1. CIDB REGISTRATION CERTIFICATE**

***Attached hereto is my / our registration certificate with the Construction Industry Development Board. My / our failure to submit the certificate with my / our tender document will lead to the conclusion that my / our company is not registered with CIDB.***

***NOTE: The CIDB can be contacted or visited on [www.cidb.org.za](http://www.cidb.org.za) for more information and registration. Obtain a "Code of Conduct for all parties engaged in construction procurement" for you information.***

**T2.1. COPY OF A LETTER OF GOODSTANDING WITH COMPANSATION FOR OCCUPATIONAL AND INJURIES DIESES ACT (COIDA / FEMA) REGISTRATION CERTIFICATE**

*Attached hereto is my / our certified copy of A LETTER OF goodstanding with the Compensation for Occupational Injuries and Diseases, e.g. letter of good standing. My / our failure to submit the certificate with your tender offer will lead to the conclusion that your entity/ company is not registered with COIDA / FEMA.*



- a member of the board of directors of any municipal entity       a member of an accounting authority of any national or provincial public entity  
 an official of any municipality or municipal entity       an employee of Parliament or a provincial legislature

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

\*insert separate page if necessary

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

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I / we are not associated, linked or involved with any other bidding entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and
- iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Date

Signed

Name

Position

Enterprise  
name

**PART A****INVITATION TO BID**

<b>YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF DEPARTMENT/ PUBLIC ENTITY)</b>					
BID NUMBER:	DRD01NWER002	CLOSING DATE:	22 MARCH 2023	CLOSING TIME:	12h00
DESCRIPTION	PROCUREMENT OF CONTRACTOR FOR ELECTRICAL INSTALLATION AND REDISTRIBUTION AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT: AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE				
<b>BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)</b>					
4071 Joules Street					
Industrial Site					
Mahikeng					
2735					
<b>BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO</b>			<b>TECHNICAL ENQUIRIES MAY BE DIRECTED TO:</b>		
CONTACT PERSON	MARUMO MABASO		CONTACT PERSON	T OAGENG	
TELEPHONE NUMBER	018 389 3000		TELEPHONE NUMBER	018 011 0024	
FACSIMILE NUMBER	086 626 1283		FACSIMILE NUMBER	086 518 5278	
E-MAIL ADDRESS	NWTenders@idt.org.za		E-MAIL ADDRESS	admin@mkdc.co.za	
<b>SUPPLIER INFORMATION</b>					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT	[TICK APPLICABLE BOX] <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES &amp; QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]</b>					

<p><b>a) ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?</b></p>	<p><input type="checkbox"/>Yes                      <input type="checkbox"/>No</p> <p>[IF YES ENCLOSE PROOF]</p>	<p><b>b) ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?</b></p>	<p><input type="checkbox"/>Yes                      <input type="checkbox"/>No</p> <p>[IF YES, ANSWER THE QUESTIONNAIRE BELOW ]</p>
--	--	---	---

**QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS**

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?  YES  NO

DOES THE ENTITY HAVE A BRANCH IN THE RSA?  YES  NO

DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?  YES  NO

NO

DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?  YES  NO

IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?  YES  NO

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

## PART B

### TERMS AND CONDITIONS FOR BIDDING

<b>1. BID SUBMISSION:</b>
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. <b>ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.</b>
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4. <b>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).</b>
<b>2. TAX COMPLIANCE REQUIREMENTS</b>
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

**NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.**

SIGNATURE OF BIDDER: .....

CAPACITY UNDER WHICH THIS BID IS SIGNED: .....  
(Proof of authority must be submitted e.g. company resolution)

DATE: .....

## BIDDER'S DISCLOSURE

### 1. PURPOSE OF THE FORM

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

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

### 2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest<sup>1</sup> in the enterprise, employed by the state? **YES/NO**

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

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

---

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

2.2.1 If so, furnish particulars:

.....  
.....

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

2.3.1 If so, furnish particulars:

.....  
.....

### 3 DECLARATION

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

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>2</sup> will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 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.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 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

---

<sup>2</sup> 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.

No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

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

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

..... Signature	..... Date
..... Position	..... Name of bidder

## PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

**NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022**

---

### 1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

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

#### 1.2 To be completed by the organ of state

*(delete whichever is not applicable for this tender).*

- a) The applicable preference point system for this tender is the 90/10 preference point system.
- b) The applicable preference point system for this tender is the 80/20 preference point system.
- c) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	<b>POINTS</b>	
<b>PRICE</b>	<b>90</b>	<b>80</b>
<b>SPECIFIC GOALS</b>	<b>10</b>	<b>20</b>
<b>TARGETED GROUP</b>		
Women 100% Ownership	3	6
Youth 100% Ownership	3	6
People with Disabilities 100% Ownership	2	4
Black Male 100% Ownership	2	4
<b>Total points for Price and SPECIFIC GOALS</b>	<b>100</b>	<b>100</b>

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

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

## 2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

### 3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

#### 3.1. POINTS AWARDED FOR PRICE

##### 3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

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

Where

Ps	=	Points scored for price of tender under consideration
Pt	=	Price of tender under consideration
Pmin	=	Price of lowest acceptable tender

#### 3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

##### 3.2.1. POINTS AWARDED FOR PRICE

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

$$Ps = 80 \left( 1 + \frac{Pt - P_{max}}{P_{max}} \right) \text{ or } Ps = 90 \left( 1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

Where

Ps	=	Points scored for price of tender under consideration
Pt	=	Price of tender under consideration
Pmax	=	Price of highest acceptable tender

### 4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:
- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

**Table 1: Specific goals for the tender and points claimed are indicated per the table below.**

*(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.*

*Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)*

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Women 100% Ownership	3	6		
Youth 100% Ownership	3	6		
People with Disabilities 100% Ownership	2	4		
Black Male 100% Ownership	2	4		

**Source Documents to be submitted with the Bid or RFQ**

- \*CIPC Document (Company Registration Document will be required for verification (CIPC DOC))
- \*Woman (Originally Certified ID Document)
- \*Youth (Originally Certified ID Document)
- \*People with Disability (Letter from the Dr. Confirming the Disability)
- \*Black Ownership (Originally Certified ID Document)

## DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number: .....

4.5. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
  - One-person business/sole propriety
  - Close corporation
  - Public Company
  - Personal Liability Company
  - (Pty) Limited
  - Non-Profit Company
  - State Owned Company
- [TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct; ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
  - (a) disqualify the person from the tendering process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
  - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted 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, if deemed necessary.

.....  
**SIGNATURE(S) OF TENDERER(S)**

**SURNAME AND NAME:** .....

**DATE:** .....

**ADDRESS:** .....

.....

.....

.....

**T2.1. CERTIFICATE OF ATTENDANCE AT COMPULSORY BRIEFING**

This is to certify that (*tenderer*) .....  
of (*address*) .....  
..... was represented by the person(s)  
named below at the compulsory meeting held for all tenderers at (*location*).....  
..... on (*date*)..... starting at (*time*) .....

I / We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for me / us to take account of everything necessary when compiling our rates and prices included in the tender.

**Particulars of person(s) attending the meeting:**

Name: .... Signature: .....  
Capacity: ..... Identity number: .....

---

**Attendance of the above person(s) at the meeting is confirmed by the Employer's representative, namely:**

Name: .... Signature: .....  
Capacity: ..... Date and Time: .....

**T2.1. CERTIFICATE OF AUTHORITY FOR SIGNATORY**

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for the relevant category, **and attach their Registration Certificates for Companies, Close Corporations and Partnerships, or Agreements and Powers of Attorney for Joint Ventures, or ID documents to the page provided at the end of this form.**

(I) COMPANY	(II) CLOSE CORPORATION	(III) PARTNERSHIP	(IV) JOINT VENTURE	(V) SOLE PROPRIETOR

**(I) CERTIFICATE FOR COMPANY**

I, ....., Id number ..... chairperson of the Board of Directors of ..... hereby confirm that by resolution of the Board (copy attached) taken on ..... 20....., Mr/Ms .....acting in the capacity of ....., was authorised to sign all documents in connection with the tender for Contract No ..... and any contract resulting from it, on behalf of the company.

**Chairman:** .....

**As Witnesses:** 1. ....

2. .... **Date:** .....

**(II) CERTIFICATE FOR CLOSE CORPORATION**

We, the undersigned, being the key members in the business trading as ..... hereby authorise Mr/Ms ....., acting in the capacity of ..... , to sign all documents in connection with the tender for Contract No ..... and any contract resulting from it, on our behalf.

NAME	ADDRESS	SIGNATURE	DATE
ID No.....			

**Note :** *This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.*

**(III). CERTIFICATE FOR PARTNERSHIP**

We, the undersigned, being the key partners in the business trading as, .....  
 ..... hereby authorize Mr/Ms .....  
 acting in the capacity of ....., to sign all  
 documents in connection with the tender for Contract No ..... and any contract resulting  
 from it, on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

**Note :** *This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.*

**(IV) CERTIFICATE FOR JOINT VENTURE**

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize Mr/Ms  
 ....., authorized signatory of the company,.....  
 acting in the capacity of lead partner, to sign all documents in connection with the tender offer for  
 Contract No ..... and any contract resulting from it, on our behalf.

This authorization is evidenced by the attached power of attorney signed by legally authorized signatories of all the partners to the Joint Venture.

NAME OF FIRM	ADDRESS	AUTHORISING SIGNATURE, NAME AND CAPACITY
Lead partner		

**Note :** *This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.*

**(V) CERTIFICATE FOR SOLE PROPRIETOR**

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

Signature of Sole owner: .....

As Witnesses:

1. ....

2. ....

Date: .....

## T2.1. RECORD OF ADDENDA TO THE TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer		
	<b>Date</b>	<b>Title or Details</b>
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Attach additional pages if more space is required.

Signed .....

Date .....

Name .....

ID number .....

Position .....

Tenderer .....

## T2.1. TENDERER'S FINANCIAL STANDING

The Tenderer shall provide information about his commercial position, which includes information necessary for the Employer to evaluate the Tenderer's financial standing.

To that end the Tenderer must provide with his tender a bank rating, certified by his banker, to the effect that he will be able to successfully complete the contract at the tendered amount within the specified time for completion.

However, should the Tenderer be unable to provide a bank rating with his tender, he shall state the reasons as to why he is unable to do so, and in addition provide the following details of his banker and bank account that he intends to use for project:

Name of account holder: \_\_\_\_\_

Name of Bank : \_\_\_\_\_ Branch : \_\_\_\_\_

Account number : \_\_\_\_\_ Type of account : \_\_\_\_\_

Telephone number : \_\_\_\_\_ Facsimile number : \_\_\_\_\_

Name of contact person (at bank : \_\_\_\_\_

***Failure to provide either the required bank details or a certified bank rating with his tender, will lead to the conclusion that the Tenderer does not have the necessary financial resources at his disposal to complete the contract successfully within the specified time for completion.***

The Employer undertakes to treat the information thus obtained as confidential, strictly for the use of evaluation of the tender submitted by the Tenderer.

SIGNATURE: \_\_\_\_\_ IDENTITY NUMBER: \_\_\_\_\_

(of person authorised to sign on behalf of the Tenderer) DATE: \_\_\_\_\_

## T2.1. AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

*(This is not an invitation for amendments, deviations or alternatives but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Employer).*

I / We herewith propose amendments, alternatives and discounts as set out in the tables below:

### (a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

**[Notes: (1) Proposals for amendments to the General and Special Conditions of Contract are not acceptable, and will be ignored;**  
**(2) The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.**

### (b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

**[Notes: (1) Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.**  
**(2) In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.**  
**(3) Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.]**

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

***[Note: The Tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer for a discount may have to be disregarded. Only unconditional discounts will be considered]***

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*

DATE:.....

## T2.1. SOCIO ECONOMIC UPLIFTMENT STRATEGY

***Attached hereto are my / our proposed socio economic upliftment strategy. The strategy will as a minimum address items such as skills upliftment, training, sub contracting, skilled and semi-skilled labour employment, procurement of local labour and materials, employment of woman, youth and disabled, etc.***

Notes:

- a) The developer has a commitment to utilising the local community resources and labour, and as such preference will be shown to bidders who prioritise local employment.
- b) As part of the tender documentation a methodology is to be submitted proposing as to how the main contractor will deal with the social economic expectations of the surrounding community.

The proposal is to allow for a suitable employment ratio of local community members and any additional measures that will enable future local community upliftment.

- c) The main contractor is required to familiarise himself with the community and local authority to ascertain for himself the full extent of the community's requirements and minimum wages.
- d) The contractor shall appoint a community liaison officer and shall be responsible for all community negotiations etc.

**T2.1. PROPOSED SUB-CONTRACTORS (Excludes work identified as 30% Local sub-contracting work)**

I/We hereby notify you that it is my/our intention to employ the following domestic sub-contractors for work on this contract, to be appointed and finalised after the award of the contract, apart from client's identified SMME packages (i.e 30% Local Empowerment Programme),.

If I/we am/are awarded a contract I/we agree that this notification does not change the requirement for me/us to submit the names of proposed subcontractors in accordance with requirements of the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us. I/We confirm that all subcontractors who are contracted to construct a house or building, are registered as home builders with the National Home Builders Registration Council.

NAMES AND ADDRESSES OF PROPOSED SUBCONTRACTORS	COMPANY REGISTRATION No. AND CIDB CLASSIFICATION	DESCRIPTION OF WORK TO BE EXECUTED BY SUBCONTRACTOR	VALUE OF SUBCONTRACT WORK
..... ..... .....			

SIGNATURE: ..... IDENTITY NUMBER: .....

(of person authorised to sign on behalf of the Tenderer) DATE:.....

## T2.1. CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 5(1)(h) of the OHS Act 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction work if the Employer 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 No 85 of 1993 and the OHS Act 1993 Construction Regulations 2014.

To that effect a person duly authorized by the tenderer must complete and sign the declaration hereafter in detail.

### Declaration by Tenderer

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHS Act 1993 Construction Regulations 2014.
2. I hereby declare that my company / enterprise has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
3. I hereby undertake, if my tender is accepted, to provide a sufficiently documented Health and Safety Plan in accordance with Regulation 5(1) of the Construction Regulations, approved by the Employer or his representative, before I could be allowed to commence with construction work under the contract. I hereby agree that my company/enterprise will not have a claim for compensation for delay or extension of time because of my failure to obtain the necessary approval for the said safety plan.
4. I confirm that copies of my company's approved Health and Safety Plan, the Employer's Safety Specifications as well as the OHS Act 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Contractor's personnel, the Employer's personnel, the Engineer, visitors, and officials and inspectors of the Department of Labour.
5. I hereby confirm that adequate provision has been made in my tendered rates and prices in the bill of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHS Act 1993 Construction Regulations 2014, including the cost for specific items that may be scheduled in the bill of quantities.
6. I hereby confirm that I will be liable for any penalties that may be applied by the Employer in terms of the said Regulations for failure on my part to comply with the provisions of the Act and the Regulations as set out in Regulation 33 of the 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 OHS Act 1993 Construction Regulations 2014, and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer.
8. I am aware of the fact that, should I be awarded the contract, I must submit the notification required in terms of Regulation 4 of the OHS Act 1993 Construction Regulations 2014 (*example attached hereafter*) before I could be allowed to proceed with any work under the contract.

SIGNATURE: \_\_\_\_\_ IDENTITY NUMBER: \_\_\_\_\_  
\_\_\_\_\_

(of person authorised to sign on behalf of the Tenderer)  
DATE: \_\_\_\_\_

## **T2.1. EVALUATION SCHEDULE: SAFETY HEALTH ENVIRONMENTAL AND QUALITY MANAGEMENT SYSTEM (SHEQ) PLAN**

**Attached hereto are my / our SHEQ Plan, all in compliance with the Health and Safety Specification – Annexure A or Letter of Undertaking from a Qualified OHS Consultant.(do we need a CV or professional registration attached?)**

**(PLEASE ATTACHED HERE)**

**T2.1. EVALUATION SCHEDULE: PROJECT EXPERIENCE**

The Tenderer shall provide details of his relevant experience on similar large-scale projects completed in the past 10 years. In support tenderes are to complete the “Project Experience” schedule below and attach thereto copies of (a) Letters of Appointment, and (b) all the relevant Completion Certificates (practical completion, work completion & final completion)

PROJECT NAME and CLIENT	BRIEF PROJECT DESCRIPTION	PROJECT VALUE (Incl VAT)	START DATE	COMPLETION DATE
A.				
B.				
C.				

**T2.1. EVALUATION SCHEDULE: LETTERS OF APPOINTMENT, AND RELEVANT COMPLETION CERTIFICATES (PRACTICAL COMPLETION, WORK COMPLETION & FINAL COMPLETION)**

Tenderer is to attach all letter of appointment and completion certificate corresponding to the project listed in T1.2

**T2.1. EVALUATION SCHEDULE: CLIENT REFERENCES**

The Tenderer shall provide details of his performance on each of the previous projects listed in the “Relevant Experience” returnable schedule. “Client Reference Scorecards” will be completed by each of the respective Clients for the projects listed in the “Relevant Experience” returnable schedule.

**REPORT ON CONTRACTOR’S COMPETANCE & PERFORMANCE ON A SIMILAR PROJECT FOR TENDER RECOMMENDATION PURPOSES**

The following are to be completed by the Client and Principal Agent and is to be supported in each case by a letter of award and the works completion certificate. (*Only completed Projects shall be considered*)

<b>PROJECT NAME A:</b>
------------------------

**Principal agent:** .....

**Client:** .....

**Contract Amount:** .....

**Contract Duration:** .....

**Actual Contract Duration:**.....

Description / Performance	Not Acceptable	Poor	Satisfactory	Good	Very Good
Project Performance / Time Management – Project completed before contractual period (time)					
Project Performance / Time Management - Project completed on contractual period (time)					
Quality of site management					
Quality of workmanship					
Quality of materials					
Financial Management – Cashflow Management					
Financial Management – Payment of Subcontractors					
Financial Management – Payment of labour force					
Financial Management – Procurement of Materials					

Any other remarks considered necessary to assist in evaluation of the contractor?  
 .....

**Principal Agent Firm:** .....

**Telephone:**.....

**PA / Client Signature:** .....

**Date:**.....

Stamp
-------

**T2.1. EVALUATION SCHEDULE: CLIENT REFERENCES**

The Tenderer shall provide details of his performance on each of the previous projects listed in the “Relevant Experience” returnable schedule. “Client Reference Scorecards” will be completed by each of the respective Clients for the projects listed in the “Relevant Experience” returnable schedule.

**REPORT ON CONTRACTOR’S COMPETANCE & PERFORMANCE ON A SIMILAR PROJECT FOR TENDER RECOMMENDATION PURPOSES**

The following are to be completed by the Client and Principal Agent and is to be supported in each case by a letter of award and the works completion certificate. (*Only completed Projects shall be considered*)

<b>PROJECT NAME B:</b>
------------------------

**Principal agent:** .....

**Client:** .....

**Contract Amount:** .....

**Contract Duration:** .....

**Actual Contract Duration:**.....

Description / Performance	Not Acceptable	Poor	Satisfactory	Good	Very Good
Project Performance / Time Management – Project completed before contractual period (time)					
Project Performance / Time Management - Project completed on contractual period (time)					
Quality of site management					
Quality of workmanship					
Quality of materials					
Financial Management – Cashflow Management					
Financial Management – Payment of Subcontractors					
Financial Management – Payment of labour force					
Financial Management – Procurement of Materials					

Any other remarks considered necessary to assist in evaluation of the contractor?  
 .....

**Principal Agent Firm:** .....

**Telephone:**.....

**PA / Client Signature:** .....

**Date:**.....

Stamp
-------

**T2.1. EVALUATION SCHEDULE: CLIENT REFERENCES**

The Tenderer shall provide details of his performance on each of the previous projects listed in the “Relevant Experience” returnable schedule. “Client Reference Scorecards” will be completed by each of the respective Clients for the projects listed in the “Relevant Experience” returnable schedule.

**REPORT ON CONTRACTOR’S COMPETANCE & PERFORMANCE ON A SIMILAR PROJECT FOR TENDER RECOMMENDATION PURPOSES**

The following are to be completed by the Client and Principal Agent and is to be supported in each case by a letter of award and the works completion certificate. (*Only completed Projects shall be considered*)

<b>PROJECT NAME C:</b>
------------------------

**Principal agent:** .....

**Client:** .....

**Contract Amount:** .....

**Contract Duration:** .....

**Actual Contract Duration:**.....

Description / Performance	Not Acceptable	Poor	Satisfactory	Good	Very Good
Project Performance / Time Management – Project completed before contractual period (time)					
Project Performance / Time Management - Project completed on contractual period (time)					
Quality of site management					
Quality of workmanship					
Quality of materials					
Financial Management – Cashflow Management					
Financial Management – Payment of Subcontractors					
Financial Management – Payment of labour force					
Financial Management – Procurement of Materials					

Any other remarks considered necessary to assist in evaluation of the contractor?  
 .....

**Principal Agent Firm:** .....

**Telephone:**.....

**PA / Client Signature:** .....

**Date:**.....

Stamp
-------

**T2.1. EVALUATION SCHEDULE: CLIENT REFERENCES**

The Tenderer shall provide details of his performance on each of the previous projects listed in the “Relevant Experience” returnable schedule. “Client Reference Scorecards” will be completed by each of the respective Clients for the projects listed in the “Relevant Experience” returnable schedule.

**REPORT ON CONTRACTOR’S COMPETANCE & PERFORMANCE ON A SIMILAR PROJECT FOR TENDER RECOMMENDATION PURPOSES**

The following are to be completed by the Client and Principal Agent and is to be supported in each case by a letter of award and the works completion certificate. (*Only completed Projects shall be considered*)

**PROJECT NAME D:**

**Principal agent:** .....

**Client:** .....

**Contract Amount:** .....

**Contract Duration:** .....

**Actual Contract Duration:**.....

Description / Performance	Not Acceptable	Poor	Satisfactory	Good	Very Good
Project Performance / Time Management – Project completed before contractual period (time)					
Project Performance / Time Management - Project completed on contractual period (time)					
Quality of site management					
Quality of workmanship					
Quality of materials					
Financial Management – Cashflow Management					
Financial Management – Payment of Subcontractors					
Financial Management – Payment of labour force					
Financial Management – Procurement of Materials					

Any other remarks considered necessary to assist in evaluation of the contractor?  
.....

**Principal Agent Firm:** .....

**Telephone:**.....

**PA / Client Signature:** .....

**Date:**.....

Stamp

**T2.1. EVALUATION SCHEDULE: CLIENT REFERENCES**

The Tenderer shall provide details of his performance on each of the previous projects listed in the “Relevant Experience” returnable schedule. “Client Reference Scorecards” will be completed by each of the respective Clients for the projects listed in the “Relevant Experience” returnable schedule.

**REPORT ON CONTRACTOR’S COMPETANCE & PERFORMANCE ON A SIMILAR PROJECT FOR TENDER RECOMMENDATION PURPOSES**

The following are to be completed by the Client and Principal Agent and is to be supported in each case by a letter of award and the works completion certificate. (*Only completed Projects shall be considered*)

<b>PROJECT NAME E:</b>
------------------------

**Principal agent:** .....

**Client:** .....

**Contract Amount:** .....

**Contract Duration:** .....

**Actual Contract Duration:**.....

Description / Performance	Not Acceptable	Poor	Satisfactory	Good	Very Good
Project Performance / Time Management – Project completed before contractual period (time)					
Project Performance / Time Management - Project completed on contractual period (time)					
Quality of site management					
Quality of workmanship					
Quality of materials					
Financial Management – Cashflow Management					
Financial Management – Payment of Subcontractors					
Financial Management – Payment of labour force					
Financial Management – Procurement of Materials					

Any other remarks considered necessary to assist in evaluation of the contractor?  
 .....

**Principal Agent Firm:** .....

**Telephone:**.....

**PA / Client Signature:** .....

**Date:**.....

Stamp
-------

**T2.1. EVALUATION SCHEDULE: KEY PERSONNEL**

In terms of the Project Specification and the Conditions of Tender, unskilled workers may only be brought in from outside the local community if such personnel are not available locally.

**The Tenderer shall list below the personnel that he intends to utilize on the Works, including key personnel that may have to be brought in from outside if not available locally. (definition of local)**

CATEGORY OF EMPLOYEE	NUMBER OF PERSONS					
	KEY PERSONNEL, PART OF THE CONTRACTOR'S ORGANISATION		KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY		UNSKILLED PERSONNEL TO BE RECRUITED FROM LOCAL COMMUNITY	
	HDI	NON-HDI	HDI	NON-HDI	HDI	NON-HDI
Construction Manager, Site Agent, Project Managers						
Foremen, Quality Control and Safety Personnel						
Technicians, Surveyors, etc						
Artisans and other Skilled workers						
Plant Operators						
Others:..... ..... ..... ..... ..... .....						

The Tenderer is referred to Clause F.2.1.1.2 of the Tender Data and shall insert in the spaces provided on the following pages details of the key personnel required to be in the employment of the tenderer or other organization, in order for the tenderer to be eligible to submit a tender for this project. Proof of professional registration must be appended to these schedules, together with the Curriculum Vitae of each individual.

SIGNATURE: ..... IDENTITY NUMBER: .....

(of person authorised to sign on behalf of the Tenderer)

DATE:.....

**EVALUATION SCHEDULE: CURRICULUM VITAE OF KEY PERSONNEL  
(COMPULSORY)**

*(CVs are required only for site agent, contract or project manager and technician and foreman)*

**CV FOR CONTRACTS OR PROJECT MANAGER**

<b>Name:</b>		<b>Date of birth:</b>
<b>Profession:</b>		<b>Nationality:</b>
<b>Qualifications:</b>		
<b>Professional Body:</b>	<b>Category of Registration:</b>	<b>Registration Number:</b>
<b>Professional Body:</b>	<b>Category of Registration:</b>	<b>Registration Number:</b>
<b>Professional Body:</b>	<b>Category of Registration:</b>	<b>Registration Number:</b>
<b>Name of Employer (firm):</b>		
<b>Current position:</b>		<b>Years of Experience:</b>
<b><u>Employment Record:</u></b>		
.....		
.....		
.....		
.....		
.....		
<b><u>Experience Record Pertinent to Required Service:</u></b>		
.....		
.....		
.....		
.....		
.....		

**Certification:**

I, the undersigned, certify that, to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.

SIGNATURE: ..... IDENTITY NUMBER: .....

*(of person authorised to sign on behalf of the Tenderer)*  
**(OWNER OF THE CV)**

DATE:.....









**T2.1. EVALUATION SCHEDULE: SCHEDULE OF PLANT AND EQUIPMENT**

The following are lists of major items of relevant equipment that I / we presently own or lease and will have available for this contract if my / our tender is accepted. (will be hired)

**(a) Details of major equipment owned by me / us and are immediately available for this contract.**

DESCRIPTION (type, size, capacity etc)	QUANTITY	YEAR OF MANUFACTURE

*Attach additional pages if more space is required*

**(b) Details of major equipment that will be hired, or acquired for this contract if my / our tender is accepted**

DESCRIPTION (type, size, capacity etc)	QUANTITY	HOW ACQUIRED	
		HIRE/ BUY	SOURCE

*Attach additional pages if more space is required*

The Tenderer undertakes to bring onto site without additional cost to the Employer any additional plant not listed but which may be necessary to complete the contract within the specified contract period.

**Failure to complete this form properly and correctly, will lead to the conclusion that the tenderer does not have the necessary plant and equipment resources at his disposal, and will prejudice his tender.**

SIGNATURE: ..... IDENTITY NUMBER: .....

(of person authorised to sign on behalf of the Tenderer)

DATE:.....



## **PART C1 : AGREEMENT AND CONTRACT DATA**

**C1.1 Form of Offer and Acceptance**

**C1.2 Contract Data**

**C1.3 Form of Guarantee (Pro Forma as per specific contract)**

**C.1.4 Adjudicators Agreement**

## **C1.1 FORM OF OFFER AND ACCEPTANCE**

## **C1.1 Form of Offer and Acceptance**

### **A. Offer [Failure of a Tenderer to sign this form will invalidate the tender]**

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

**RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION)  
AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT,  
NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002**

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

**The offered total of the prices inclusive of Value Added Tax is:.....**

**Amount in Words:**

.....  
.....

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

..... SIGNATURE(S) OF AUTHORISED BIDDERS(S)	
NAME:	.....
CAPACITY:	.....
DATE:	.....
ADDRESS	..... ..... ..... .....
CONTACT::	.....

WITNESSES	
1.	.....
2.	.....

**B. ACCEPTANCE**

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

The terms of the contract are contained in

- Part C1 Agreements and Contract Data (which includes this Agreement)
- Part C2 Pricing Data, including the Schedule of Quantities
- Part C3 Scope of Work

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

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representatives of both parties.

The Tenderer shall deliver the Guarantee in terms of Clause 7 of the General Conditions of Contract 2004 within the period stated in the Contract Data, and he shall, immediately after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any other bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data, within 14 days of the date on which this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect 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 Contractor) within five 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 ..... Date .....

Name .....

Capacity .....

**for the Employer** Independent Development trust

**4071 Joules Street  
Industrial Site  
Mahikeng  
2735**

Name and Signature

Of witness .....

Date .....

### C. SCHEDULE OF DEVIATIONS

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

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

1 Subject .....

.  
Details .....

..  
.....

.  
.....

.  
.....

.  
2 Subject .....

.  
Details .....

..  
.....

.  
.....

.  
.....

.  
3 Subject .....

.  
Details .....

..  
.....

.  
.....

.  
.....

.....  
.  
4 Subject .....

..  
Details .....

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

5 Subject .....

..  
Details .....

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

## **C1.2 CONTRACT DATA**

## INDEPENDENT DEVELOPMENT TRUST

**RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION)  
AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT,  
NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002**

### **C1.2 Contract Data for BID NO: DRD01NWER002**

The Conditions of Contract are clauses 1 to 41 of the **JBCC Series 2000 Principal Building Agreement (Edition 5.1 Reprint July 2007)** published by the Joint Building Contracts Committee together with IDT's Special Conditions of Contract.

Copies of these conditions of contract may be obtained from the Association of South African Quantity Surveyors (011 315-4140), Master Builders Association (011 205-9000; 057 352-6269) South African Association of Consulting Engineers (011 463-2022) or South African Institute of Architects (051 447-4909; 011 486-0684; 053 831-2003;)

The JBCC Principal Building Agreement makes several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the JBCC Principal Building Agreement. (Check item 1.0 below)

Each item of data given below is cross-referenced to the clause in the JBCC Principal Building Agreement to which it mainly applies.

**The additions, deletions and alterations to the JBCC Principal Agreement are:**

Clause Number	Contract Data for BID NO: DRD01NWER002
1.0	<p><b>DEFINITIONS AND INTERPRETATION</b></p> <p>Clause 1.1 is deemed to be amended by the addition and amendments of the following:</p> <p>Change the Definition of "<b>AGREEMENT</b>" to read as follows: This <b>JBCC</b> Principal Building Agreement, the <b>contractor's</b> tender document accepted by the <b>employer</b>, the form of offer signed by the <b>contractor</b>, <b>special conditions of contract</b> and other <b>contract documents</b>.</p> <p>Change the Definition of "<b>BILLS OF QUANTITIES</b>" to read as follows: The document drawn up in accordance with the pricing instructions contained in the pricing data.</p> <p>Change the Definition of "<b>CONSTRUCTION PERIOD</b>" to read as follows: The period commencing on the date of <b>site</b> hand over and ending on the date of <b>practical completion</b>.</p> <p>Change the Definition of "<b>CONTRACT DOCUMENTS</b>" to read as follows: The <b>agreement</b> and all documents referenced therein. The <b>contract documents</b> shall be taken to be mutually explanatory of one another but in the event of ambiguity, discrepancy, divergence or inconsistency in or between them, the <b>JBCC</b> Principal Building Agreement as amended by Preliminaries Section A of these <b>bills of quantities</b> shall prevail over all other <b>contract documents</b>.(see C1.2 above)</p> <p>Change the Definition of "<b>PRACTICAL COMPLETION</b>" to read as follows: The stage of completion where the <b>works</b> or a section thereof, in the opinion of the <b>principal agent</b>, has been reached in accordance with C28 &amp; C29 of the specific preliminaries and where the work on the practical completion list (and tenant's list if applicable) has been completed and certified as complete by the <b>principal agent</b>.</p> <p>Change the Definition of "<b>CONTRACT DRAWINGS</b>" to read as follows: The drawings listed in the Scope of Works.</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>Change the Definition of "<b>CONTRACT SUM</b>" to read as follows: The total of prices in the Form of Offer and Acceptance.</p> <p>Change the Definition of "<b>INTEREST</b>" to read as follows: The interest rates applicable to this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999).</p> <p>Change the Definition of "<b>SECURITY</b>" to read as follows: The form of security provided by the <b>employer</b> or <b>contractor</b>, as stated in the <b>schedule</b>, from which the <b>contractor</b> or <b>employer</b> may recover expense or loss.</p> <p>Add the following to the list of definitions:</p> <p><b>SCHEDULE</b> means the variables listed in the Contract Data.</p> <p><b>EXCEPTIONALLY INCLEMENT WEATHER</b> means weather which is not only extreme or severe but exceeding that which, on the evidence of the past ten years, could reasonably been expected.</p> <p><b>TENANT LIST</b> means a list compiled by the tenant or in his absence the <b>principal agent</b> defining the incomplete or defective work to be rectified to achieve <b>practical completion</b>. Such list shall be scrutinised and endorsed by the <b>principal agent</b> and shall not be unreasonable in the context of his contract.</p> <p><b>CORRUPT PRACTICE</b> means the offering, giving, receiving and soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution</p> <p><b>FRAUDULENT PRACTICE</b> means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer, and includes collusive practice among tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition.</p>
3.0	<p><b>DOCUMENTS</b></p> <p>Clause 3.1 is deleted.</p> <p>Clause 3.2.1 is deleted and replaced with the following:</p> <p>3.2.1 "A <b>construction guarantee</b> in terms of sub-clause 14.3 as elected in the <b>contract data</b>"</p> <p>Clause 3.3 is deleted and replaced with the following:</p> <p>3.3 The <b>contractor</b> hereby, waives his lien or right of continuing possession of the <b>works</b>.</p> <p>Clause 3.5 is amended by deleting the following:</p> <p>"Formal signatures are not required to render this <b>agreement</b> binding"</p> <p>Clause 3.6 is amended by deleting the last sentence and replace it with the following:</p> <p>"The original signed set of <b>contract documents</b> shall be held by the <b>employer</b> or such other party as stated in the <b>contract data</b>"</p> <p>Clause 3.7 is amended by adding the following to the end thereof:</p> <p>The <b>contractor</b> shall supply and keep a copy of the <b>JBCC Series 2000 Edition 5.0 Principal Building Agreement and Preliminaries</b> applicable to this contract on the site, to which the <b>employer, principal agent and agents</b> shall have access at all times.</p> <p>The <b>contractor</b> is to note that no hard copy drawings will be provided and as such suitable printing facilities are to be provided for.</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>Clause 3.10 is amended by replacing the reference to “<b>principal agent</b>” with the word “<b>employer</b>”.</p> <p>Clause 3.11 is deleted and replaced with the following:</p> <p>3.11 For details of changes made to the provisions of the <b>JBCC</b> standard documentation refer to Preliminaries, Section A of the <b>Bills of Quantities</b> which shall be deemed to have been identified and notified to the <b>contractor</b> by the <b>principal agent</b> thereby fully complying with clause 6.0 of the Contract data EC</p>
4.0	<p><b>DESIGN RESPONSIBILITY</b></p> <p>Clause 4.0 is amended by the addition of the following clauses to the end thereof:</p> <p>4.4 Notwithstanding the provisions of clause 4.2, the <b>contractor</b> is to ensure that <b>nominated</b> or <b>selected subcontractor</b> shall simultaneously with the signing of the relevant nominated or selected sub-contract sign and deliver to the <b>employer</b> a design materials and workmanship warranty and undertaking in favour of the <b>employer</b> in accordance with the annexure attached hereto.</p> <p>4.5 Any subcontractor whose subcontract involves design work will be required to provide to the <b>employer</b> evidence of "professional indemnity" insurance for such design work.</p> <p>If the <b>contractor</b> fails to obtain the necessary design warranties and / or indemnities from the subcontractors, the design responsibility shall be deemed to devolve upon the <b>contractor</b>"</p>
5.0	<p><b>EMPLOYER’S AGENTS</b></p> <p>Clause 5.4 is deleted and replaced with the following:</p> <p>5.4 “Should the <b>principal agent</b> or any <b>agent</b> be unable to act or cease to be an agent, the <b>employer</b> shall inform the <b>contractor</b> of the new <b>principal agent</b> or <b>agent</b> appointed.</p> <p>Clause 5.6 is deleted.</p>
6.0	<p><b>CONTRACTOR’S SITE REPRESENTATIVE</b></p> <p>Clause 6.0 is amended by the addition of the following clauses to the end thereof:</p> <p>6.3 The <b>contractor</b> should identify a suitably qualified and experienced construction manager who will be the single-point accountability and responsibility for the management of the construction <b>works</b>, and who is registered with The South African Council for Project and Construction Management Professionals (SACPCMP). (what about for small projects?)</p> <p>6.4 Where the key personnel are no longer accessible to undertake the necessary work after the award of the tender, the <b>contractor</b> shall within a period of 5 working days replace the key personnel listed in <b>Schedule</b> with a person with equivalent competencies and subject to approval by the <b>employer</b>.</p> <p>6.5 The <b>contractor</b> shall submit a full organogram of the site personnel with the names of the management team which will be allocated to the project for the construction of the <b>works</b>,</p> <p>6.6 The <b>contractor's</b> representative shall not be a person against whom the <b>principal agent</b> shall make a reasonable objection.</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>6.7 On instruction from the <b>principal agent</b> the <b>contractor's</b> representative shall be replaced by a person approved by the <b>principal agent</b>.</p> <p>6.8 The <b>contractor</b> shall not make any changes to the management and site personnel relative to the project without prior approval of the <b>principal agent</b>.</p>
<b>7.0</b>	<p><b>COMPLIANCE WITH LAWS AND REGULATIONS</b></p> <p>Clause 7.0 is amended by the addition of the following clause to the end thereof:</p> <p>7.2 The <b>employer</b> reserves the right to pay direct (i.e. not through the <b>contractor</b> ) for all or any permanent connections to local or other authority services for which provisional amounts have been included within these <b>bills of quantities</b> or within any <b>selected sub-contract</b> documents. In the event of the <b>employer</b> paying direct for these charges, the <b>contractor</b> will not be entitled to the applicable and agreed mark-up in terms of clause 32.4. All such provisional amounts included in the contract sum will be omitted.</p>
<b>9.0</b>	<p><b>INDEMNITIES</b></p> <p>Clause 9.1 is amended by the addition of the following clause to the end thereof:</p> <p>9.1.4 The <b>contractor</b> indemnifies and holds harmless the <b>employer</b> against all liability, losses, claims, damages, penalties, actions, proceedings or judgments (collectively referred to as "Losses") arising from any infringement of letters, patent design, trademark, name, copyright or other protected rights in respect of any machine, plant, work, materials, thing, system or method of using, fixing, working or arrangement used or fixed or supplied by the <b>contractor</b>, but such indemnity shall not cover any use of the equipment of part thereof otherwise than in accordance with the provisions of the specification. All payments and royalties payable in one sum or by instalments or otherwise shall be included by the <b>contractor</b> in the price and shall be paid by him to those to whom they may be payable. The <b>contractor</b> shall reimburse the <b>employer</b> for all legal and other costs and expenses, including without limitation attorney's fees on attorney-client scale incurred by the <b>employer</b> in connection with investigation, defending or settling any Losses in connection with pending or threatening litigation in which the <b>employer</b> is a party.</p>
<b>10.0</b>	<p><b>GENERAL INSURANCE</b></p> <p>Clause 10 is amended by the addition of the following clauses to the end thereof:</p> <p>10.5 Damage to the works</p> <p>(a) Without any way limiting the <b>contractor's</b> obligations in terms of the contract, the <b>contractor</b> shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the <b>employer</b> against any such damage. The <b>contractor</b> shall take such precautions and security measures and other steps for the protection and security of the <b>works</b> as the <b>contractor</b> may deem necessary.</p> <p>(b) The <b>contractor</b> shall at all times proceed immediately to remove or dispose of any debris arising from damage or destruction of the <b>works</b> and to rebuild, restore, replace and/or repair the <b>works</b>.</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>(c) Where the <b>employer</b> bears the risk in terms of this contract, the <b>contractor</b> shall, if requested to do so, reinstate any damage or destroyed portions of the <b>works</b> and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof.</p> <p>10.6 Injury to Persons or loss of or damage to Properties</p> <p>(a) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the works unless due to any act or negligence of any person for whose actions the employer is legally liable</p> <p>(b) The <b>contractor</b> shall be liable for and hereby indemnifies the <b>employer</b> against any liability, loss, claim or proceeding consequent upon loss of or damage or to any moveable, or immovable property or personal property or property contiguous to the <b>site</b>, whether belonging to or under the control of the <b>employer</b> or any other body or person, arising out of or in the course of or by reason of the execution of the <b>works</b> unless due to any act or negligence of any person for whose actions the <b>employer</b> is legally liable.</p> <p>(c) The <b>contractor</b> shall upon receiving a <b>contract instruction</b> from the <b>principal agent</b> cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the <b>employer</b> shall be entitled to cause it to be made good and to recover the cost therefore from the <b>contractor</b> or to deduct the same from amounts due to the <b>contractor</b>.</p> <p>(d) The <b>contractor</b> shall be responsible for the protection and safety of such portions of the premises placed under his control by the <b>employer</b> for the purpose of executing the <b>works</b> until the issue of the <b>certificate of practical completion</b>.</p> <p>(e) Where the execution of the <b>works</b> involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the <b>contractor</b> shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the <b>works</b> has been completed.</p> <p>(f) The <b>contractor</b> shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and / or repair such property and to execute the <b>works</b>.</p> <p>10.7 High Risk Insurance</p> <p>In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions which might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:</p> <p>10.7.1 Damage to the works</p> <p>The <b>contractor</b> shall, from the <b>commencement date</b> of the <b>works</b> until the date of the <b>certificate of practical completion</b>, bear the full risk of and hereby indemnifies and hold harmless the <b>employer</b> against any damage to and/or destruction of the <b>works</b> consequent upon a catastrophic ground movement as mentioned above. The <b>contractor</b> shall take such precautions and security measures and other steps for the protection of the <b>works</b> as he may deem necessary.</p> <p>When so instructed to do so by the <b>principal agent</b>, the <b>contractor</b> shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the <b>works</b> and to rebuild, replace and/or repair the <b>works</b>, at the <b>contractor's</b> own costs.</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>10.7.2 Injury to persons or loss of or damage to property</p> <p>The <b>contractor</b> shall be liable for and hereby indemnifies and holds harmless the <b>employer</b> against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above.</p> <p>The <b>contractor</b> shall be liable for and hereby indemnifies the <b>employer</b> against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable property or property contiguous to the <b>site</b>, whether belonging to or under the control of the <b>employer</b> or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of construction.</p> <p>10.7.3 It is the responsibility of the <b>contractor</b> to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the <b>contractor's</b> obligations in terms of the contract, the <b>contractor</b> shall, within twenty one (21) <b>calendar days</b> of the <b>commencement date</b>, but before commencement of the <b>works</b> submit to the <b>employer</b> proof of such insurance policy, if requested to do so.</p> <p>10.7.4 The <b>employer</b> shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred subsequent upon the <b>contractor's</b> default of his obligations as set out in 10.7.1, 10.7.2 and 10.7.3. Such losses or damages may be recovered from the <b>contractor</b> or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the <b>employer</b> and the <b>contractor</b> and for this purpose all these contracts shall be considered on indivisible whole.</p>
14.0	<p><b>SECURITY</b></p> <p>Clause 14.3 is deleted and replaced with the following clauses:</p> <p>14.3 The <b>employer</b> has selected the <b>security</b> in terms of clause 14.0, which is a variable <b>construction guarantee</b>. This guarantee is to be issued by the <b>contractor</b>:</p> <p>14.3.1 The <b>contractor</b> shall furnish the <b>employer</b> with a variable <b>construction guarantee</b> equal in value to ten per cent (10%) of the <b>contract sum</b> within twenty-one (21) <b>calendar days</b> from the offer of appointment <b>date</b>.</p> <p>14.3.2 Within twenty-one (21) <b>calendar days</b> of the date of <b>practical completion</b> of the <b>works</b> the <b>employer</b> shall reduce the variable <b>construction guarantee</b> to an amount equal to two per cent (2%) of the <b>contract value</b></p> <p>14.3.3 Within twenty-one (21) <b>calendar days</b> of the date of <b>final completion</b> of the <b>works</b> the <b>employer</b> shall release the variable <b>construction guarantee</b> to the <b>contractor</b>.</p> <p>14.3.4 Where the <b>employer</b> has a right of recovery against the <b>contractor</b> [33.0], the <b>employer</b> may issue a written demand in terms of the variable <b>construction guarantee</b>.</p> <p>14.3.5 A variable <b>construction guarantee</b> shall only expire at <b>final completion</b> date.</p> <p>14.3.5 In the event that the value of the <b>works</b> were to increase during the course of the contract by an amount of 15% or more of the <b>contract sum</b>, upon written request from the <b>principal agent</b>, the <b>contractor</b> shall immediately arrange to have the <b>construction guarantee</b> guaranteed sum increased accordingly, the verified cost of which shall be added to the <b>contract sum</b>.</p> <p>Clause 14.4 is deleted.</p> <p>Clause 14.5 is deleted.</p>

<b>Clause Number</b>	<b>Contract Data for BID NO: DRD01NWER002</b>
	Clause 14.6 is deleted.
<b>15.0</b>	<p><b>PREPARATION FOR AND EXECUTION OF THE WORKS</b></p> <p>Clause 15.1 is amended by the following:</p> <p>15.1.2 is replaced by the following:</p> <p>15.1.2 The fully signed Contract document and its Addendums with all applicable returnables and annexures</p> <p>15.1.3 is added:</p> <p>15.1.3 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within twenty-one (21) <b>calendar days</b> of date of acceptance of the tender. (add environmental management plan)</p> <p>Clause 15.2 is amended by deleting 15.2.1 and replacing with the following clause:</p> <p>15.2.1 Give the <b>contractor</b> possession of the <b>site</b> within ten (10) <b>working days</b> of the <b>contractor</b> complying with the terms of 15.1.</p> <p>Clause 15.2.2 is deleted.</p> <p>Clause 15.2.3 is deleted.</p> <p>Clause 15.5 is amended by the addition of the following clauses to the end thereof:</p> <p>15.5.1 The <b>contractor</b> shall furnish samples of materials and specimens of finishes as may be called for by the <b>principal agent</b> for his approval.</p> <p>15.5.2 The <b>principal agent</b> may instruct the <b>contractor</b> to furnish samples of workmanship for his approval. Where the <b>principal agent</b> requires an assembly of various elements of the building or installation which is not incorporated in the <b>works</b>, the <b>contractor</b> shall arrange such an assembly at the <b>employer's</b> expense and the <b>contract value</b> shall be adjusted accordingly.</p> <p>Clause 15.6 is deleted and replaced with the following clauses:</p> <p>15.6 The <b>contractor</b> shall:</p> <p>15.6.1 Immediately on award of the contract and prior to the commencement on <b>site</b>, the <b>contractor</b> shall prepare a working <b>programme</b> covering the first month of the construction period. This working <b>programme</b> shall be prepared in conjunction with the <b>principal agent</b> and shall be subject to his approval.</p> <p>During the first month of the construction period the <b>contractor</b> shall prepare and draw up the <b>programme</b> for the balance of the <b>works</b> in accordance with the conditions of this clause 15.6.</p> <p>15.6.2 This <b>programme</b> shall be drawn up in accordance with the dates in the <b>agreement</b> for possession, sectional completion and <b>practical completion</b> and shall be in sufficient and approved detail to ensure control over the <b>works</b>.</p> <p>15.6.3 The <b>programme</b> shall be compiled based on the Critical Path Method of Programming with the critical activities clearly highlighted. It shall be compiled in such a way that logic is not constrained by resource limitations unless specifically approved by the <b>principal agent</b>.</p> <p>15.6.4 Documentation will not be available in complete detail at the commencement stage. However the <b>contractor</b>, in conjunction with the <b>principal agent</b>, shall progressively plan the <b>works</b> on provisional information available and with sufficient scope to include future detail without disrupting the basic logic initially approved by the <b>principal agent</b>.</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>The quantities contained in these <b>bills of quantities</b> are provisional and shall be utilized as a guide only for the drawing up of the <b>programme</b>.</p> <p>Where assumptions are made in regard to programming aspects, such assumptions shall be recorded in the <b>programme</b>.</p> <p>15.6.5 The <b>programme</b> shall be updated and modified to accommodate a material change in circumstances or whenever reasonably required by the <b>principal agent</b>.</p> <p>Any acceleration and/or special measures sanctioned by the <b>principal agent</b> together with associated effects shall be incorporated in a revision to the <b>programme</b>.</p> <p>15.6.6 The <b>programme</b> (including each revision thereof) shall be prepared in conjunction with the <b>principal agent</b> and shall be subject to his approval. The approval of the <b>principal agent</b> shall be deemed to be given on the basis that the <b>contractor</b> represents that the <b>programme</b> complies with the requirements of clause 15.6.</p> <p>The <b>contractor</b> shall be responsible at all times for maintaining the accuracy, validity and reasonableness of the <b>programme</b> and the implementation thereof. The fact that a <b>programme</b> has been prepared in conjunction with the <b>principal agent</b> or approved by him shall not release or relieve the <b>contractor</b> from any of his obligation or responsibilities under this <b>agreement</b>. Without derogating from the foregoing, the <b>contractor</b> shall at all times bear the onus to demonstrate that the <b>programme</b> complies with the requirement of this <b>agreement</b> and, where applicable constitute an appropriate baseline <b>programme</b> for any purpose in connection with this <b>agreement</b>.</p> <p>15.6.7 The <b>contractor</b> and the <b>principal agent</b> shall, at regular intervals not exceeding one month, assess the state of progress of the <b>works</b> relative to the latest agreed revision of the <b>programme</b>. Such agreement shall include the recording of actual commencement and completion dates for each activity and shall constitute the official record of the progress at such point in time.</p>
16.0	<p><b>SITE AND ACCESS</b></p> <p>Clause 16.4 is deleted in its entirety and replaced with the following:</p> <p>16.4 The geotechnical report is available for inspection at the office of the structural engineer.</p> <p>Clause 16.7 is amended by the addition of the following:</p> <p>The <b>contractor</b> shall be deemed to have familiarized himself with all known services, servitudes, etc. Any queries relating to information regarding all known existing services, servitudes, etc. should be directed to the <b>principal agent</b>.</p> <p>The <b>contractor</b> shall be held responsible for damage to existing services caused or arising out of the <b>contractor's</b> operations. Wherever a service is damaged it shall be replaced at the expense of the <b>contractor</b>.</p>
17.0	<p><b>CONTRACT INSTRUCTIONS</b></p> <p>Clause 17.0 is amended by the addition of the following clause:</p> <p>17.1.21 Acceleration</p>
18.0	<p><b>SETTING OUT OF THE WORKS</b></p> <p>Clause 18.1 is amended by replacing "<b>employer</b>" in the first sentence with "<b>contractor</b>".</p> <p>Cause 18.0 is amended by the addition of the following clauses at the end thereof:</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>18.5 The <b>contractor</b> shall continuously perform tolerance control checks throughout the contract period and report on these at regular intervals to the <b>principal agent</b> in a format approved by the <b>principal agent</b>.</p> <p>Should the <b>contractor</b> fail to comply with this requirement to the satisfaction of the <b>principal agent</b>, progressively as the structure is constructed, the <b>employer</b> shall be entitled to commission a registered land surveyor to do so on the <b>contractor's</b> behalf and at the <b>contractor's</b> expense.</p> <p>18.6 The <b>contractor</b> shall provide general attendance and all reasonable assistance to the abovementioned or any other land surveyor who may be appointed by the <b>employer</b>.</p>
19.0	<p><b>TEMPORARY WORKS AND PLANT</b></p> <p>Clause 19.0 is amended by the addition of the following clauses:</p> <p>19.3 ...including but not limited to fencing off the site</p> <p>19.4 The <b>contractor</b> shall provide air conditioned office accommodation for meetings suitable for 20 persons as well as additional air conditioned office space for four workstations complete with desks, telephone and internet data connection and chairs. The office accommodation is to be kept clean and fit for use at all times by the <b>contractor</b>.</p> <p>19.5 The <b>contractor</b> shall provide 1No main notice board of an approved design with the title of the project and the names of the <b>employer</b>, the <b>principal agent</b>, the <b>agents</b> and the <b>contractor</b> sign written thereon. The <b>principal agent</b> shall instruct the <b>contractor</b> where the board is to be erected".</p>
24.0	<p><b>PRACTICAL COMPLETION</b></p> <p>Clause 24.1 is amended by the addition of the following clauses to the end thereof:</p> <p>24.1.4 In order to achieve <b>practical completion</b> of the various sections of <b>works</b> and without derogating from the generality of the term <b>practical completion</b>, the <b>contractor</b> shall, as a minimum comply with the basic criteria as defined in clauses C28 &amp; C29 in the Preliminaries, Section C.</p> <p>Clause 24.4 is amended by replacement of seven (7) <b>calender days</b> with fourteen (14) <b>calender days</b>.</p> <p>Clause 24.0 is amended by replacing the word list with lists.</p> <p>Clause 24.0 is amended by the addition of the following clauses to the end thereof:</p> <p>24.11 Without derogating from the generality of the requirements for <b>practical completion</b> the following specific requirements shall apply:</p> <p>24.11.1 <b>Defects</b> occurring after the issue of the <b>practical completion</b> list requiring remedial work that will in the opinion of the <b>principal agent</b> cause disruption, will cause the issue of the certificate of <b>practical completion</b> to be withheld until such <b>defects</b> have been rectified to the satisfaction of the <b>principal agent</b>.</p> <p>24.11.2 The following certificates of compliance shall be required (excluding others that may be required by the local/national authority) from the contractor to achieve <b>practical completion</b>:</p> <p>a) A certificate from the <b>contractor</b> that all aspects of the construction regulations of 2003 have been complied with.</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>a) A certificate from the <b>contractor</b> that the National Building Regulations have been complied with</p> <p>c) A certificate of compliance with respect to plumbing and drainage</p> <p>d) An electrical certificate of compliance</p> <p>e) A certificate of compliance with respect to all glazing</p> <p>f) A certificate of compliance and fire clearance certificate from the contractor and fire chief respectively.</p> <p>g) A galvanizing and painting guarantee.</p> <p>h) A mechanical certificate of compliance.</p> <p>i) A structural certificate of compliance.</p> <p>j) A palisade certificate of compliance.</p> <p>k) A smoke extraction certificate of compliance.</p> <p>l) A fire signage certificate of compliance.</p> <p>m) A tiling certificate of compliance.</p> <p>n) A waterproofing certificate of compliance.</p> <p>o) A generator guarantee.</p> <p>p) Any other applicable guarantees.</p> <p>24.11.3 A complete set of maintenance and operating manuals together with all workmanship and material warranties and guarantees are to be compiled and issued to the <b>principal agent</b> prior to <b>practical completion</b> being granted. In addition to the abovementioned documentation a formal "on site" handover will be required to be conducted with every discipline in the presence of the <b>contractor</b> as well as the applicable services subcontractor.</p> <p>24.12 Notwithstanding anything to the contrary contained in the contract, should the <b>contractor</b> in the opinion of the <b>principal agent</b> not have achieved <b>practical completion</b> of any area of the <b>works</b>, the <b>employer</b> may, notwithstanding the <b>contractor's</b> ongoing responsibilities, take possession of any such area and such possession by the <b>employer</b> shall not in any way be construed that <b>practical completion</b> has been achieved.</p> <p>In such event, the <b>principal agent</b> shall give written notice to the <b>contractor</b> that the <b>employer</b> is taking immediate possession of any particular area/s without <b>practical completion</b> having been achieved in order to mitigate the <b>employer's</b> damages and exposure to loss or expense.</p> <p>24.12.1 In the event of the <b>Employer</b> taking occupation of the <b>works</b> or part thereof prior to <b>practical completion</b> being achieved, but on or after the date for <b>practical completion</b>, the <b>employer</b> shall:</p> <p>(a) Have the <b>principal agent</b> issue a <b>practical completion</b> list(s) prior to such occupation</p> <p>(b) Grant the <b>contractor</b> thereafter all reasonable access to expeditiously attend to the items on the <b>practical completion</b> list(s)</p> <p>24.13 After the issue of the <b>certificate of practical completion</b>, entry upon the <b>works</b> to make good <b>defects</b> shall be at such reasonable times as shall be agreed by the <b>principal agent</b>.</p>

<b>Clause Number</b>	<b>Contract Data for BID NO: DRD01NWER002</b>
	The <b>contractor</b> shall not receive any mark-up for overheads and profit on any omission of tenant installation work or tenant installation work by others. Claims of loss of profit shall not be entertained.
<b>25.0</b>	<p><b>WORKS COMPLETION</b></p> <p>Clause 25.0 is amended by changing the word list to lists.</p> <p>Clause 25.0 is amended by adding the following clauses to the end thereof:</p> <p>25.6 The <b>contractor</b> shall generally attend to <b>defects</b> during the <b>defects</b> liability period on a progressive basis and will not be permitted to wait until the end of the patent <b>defects</b> liability period or until the amount of <b>defects</b> accumulates in order to attend to a comprehensive list of <b>defects</b>.</p> <p>25.7 Should the <b>defect</b> be deemed by the <b>principal agent</b> to be urgent he shall notify the <b>contractor</b> in writing to attend to such <b>defect</b>. The <b>contractor</b> shall immediately on receipt of this notice give the <b>principal agent</b> a definite time and date on which he will start the rectification of the said <b>defect</b>.</p> <p>Should the time and date be unacceptable in the opinion of the <b>principal agent</b> or should the <b>contractor</b> not start at this agreed time and date and complete the rectification in a diligent manner, the <b>employer</b> reserves the right to complete the outstanding works and deduct the cost of such work as certified by the <b>principal agent</b> from amounts owing to the <b>contractor</b>.</p>
<b>29.0</b>	<p><b>REVISION OF DATE OF PRACTICAL COMPLETION</b></p> <p>Clause 29.0 is amended by replacing “<b>principal agent</b>” with “<b>employer</b>”</p> <p>Clause 29.1.1 shall be deleted and replaced with the following:</p> <p>29.1.1 Exceptionally inclement weather</p> <p>"Exceptionally inclement weather" shall be defined as weather conditions in excess of the monthly average recorded for the past 10 (ten) years by the nearest commonly recognised weather bureau in the region of the project.</p> <p>The <b>contractor</b> shall be deemed to have allowed in his <b>programme</b> for the <b>works</b> and opposite this item or in his rates, for the cost of all delays as a result of weather conditions which are average.</p> <p>Clause 29.2 Replace <b>Principal Agent</b> for <b>Employer</b>.</p> <p>Clause 29.3 is amended as follows – principal agent recommends (refer 32.1)</p> <p>Clause 29.0 is amended by the addition of the following clauses to the end thereof:</p> <p>29.9 Revision to the date for <b>practical completion</b> shall only be considered when work on the critical path of the agreed <b>programme</b> for the <b>works</b> is delayed.</p> <p>29.9 The Revision to the date for practical completion and the adjustment of the contract value (if applicable) shall be managed by the <b>Principal Agent</b> and only approved by <b>the Employer</b>.</p> <p>29.10 Acceleration of the <b>works</b></p> <p>29.10.1 Irrespective of whether or not the <b>principal agent</b> rules that the <b>contractor</b> is entitled to a revision of the date for <b>practical completion</b>, the <b>principal agent</b> shall nevertheless at any time, be entitled to instruct the <b>contractor</b>, in writing, to accelerate the progress of the remaining <b>works</b>, to ensure that the <b>works</b> are completed by the original date for <b>practical completion</b> or revised date as the case may be.</p>
	29.10.2 Upon receipt of such instruction, the <b>contractor</b> shall take all necessary steps to ensure that the <b>works</b> are completed timeously, including the provision by him of additional resources, plant, manpower, etc. and the working of overtime or additional overtime beyond that contemplated at the time of tender (at all times adhering to the regulations and

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>requirements of all authorities) and by all other adequate and proper means and methods. The <b>contractor</b> shall prove that such steps are being taken if called upon to do so.</p> <p>29.10.3 Should the <b>principal agent</b> instruct the <b>contractor</b> to accelerate, the <b>contractor's</b> entitlement shall be calculated by adding to the entitlement to which he would otherwise have become due should the contract period have been extended, a further 30% to the value thereof.</p> <p>For the purpose of this calculation the 30% acceleration entitlement relating to an extension of contract period granted in terms of clause 29.1, shall be calculated as if the extension was granted in terms of 29.2.</p> <p>The above amounts shall be deemed to fully reimburse the <b>contractor</b> for any additional expenses and loss beyond that contemplated by the <b>contractor</b> at time of tender including the under utilisation of any resources and the like due to the <b>contractor</b> having been instructed by the <b>principal agent</b> to accelerate.</p> <p>29.11 It is recorded that the bulk of the information required for tenant installation and fit out will not be available on the commencement of the contract. This information will be available progressively during the course of the contract. The <b>contractor</b> is to take cognisance of this fact and is to allow in his <b>programme</b> for the flow of the majority of the tenant information in the latter part of the contract.</p> <p>No claim by the <b>contractor</b> for a revision of the <b>practical completion</b> date as defined above will be considered due to the <b>contractor</b> not having provided for the above in his <b>programme</b>.</p>
31.0	<p><b>INTERIM PAYMENT</b></p> <p>Clause 31.1 is amended by the addition of the following:</p> <p>The <b>contractor</b> is to issue his claim to the quantity surveyor by the 20th of each month in preparation for the quantity surveyor to issue a valuation to the <b>principal agent</b> by the 30th of each month, failure to submit a claim will entitle the quantity surveyor to submit a reasonable value for the <b>works</b> done.</p> <p>Clause 31.6 is amended by the deletion of the first sentence and replaced with the following:</p> <p>Materials and goods shall not, as a general rule, be included in the value certified. Should the <b>principal agent</b> agree, such materials and goods shall be included in the value certified only where, to the satisfaction of the <b>principal agent</b>, the <b>contractor</b> has issued a bank guarantee to the <b>employer</b> in a format to be approved by the <b>principal agent</b>.</p> <p>Clause 31.9 is deleted and replaced with the following:</p> <p>31.9 The <b>employer</b> shall pay to the <b>contractor</b> the amount certified in an <b>interim payment certificate</b> within thirty (30) calendar days of the date of receipt(check 34.10) of the <b>contractor's tax invoice</b> for the amount certified.</p>
32.0	<p><b>ADJUSTMENT OF THE CONTRACT VALUE</b></p> <p>Clause 32.1 is deleted and replaced with the following clause:</p>
	<p>32.1 The <b>employer</b> in consultation with the <b>principal agent</b> shall determine the value of adjustments to the <b>contract value</b> according to the <b>priced document</b>. Where items of additional work are required the <b>employer</b> in consultation with the <b>principal agent</b> and the <b>contractor</b> may agree on the adjustment before the commencement of such work.</p>

Clause Number	Contract Data for BID NO: DRD01NWER002
	<p>Clause 32.2.3 is amended by the replacement of ten percent (10%) mark up with five point five percent (5.5%) mark up.</p> <p>Clause 32.4 is amended by the replacement of ten percent (10%) mark up with five point five percent (5.5%) mark up.</p> <p>Clause 32.12 Delete this clause.</p>
<b>34.0</b>	<p><b>FINAL ACCOUNT AND FINAL PAYMENT</b></p> <p>Clause 34.1 is deleted and replaced with the following clause:</p> <p>34.1 The <b>contractor</b> shall cooperate with and assist the <b>principal agent</b> in the preparation of the <b>final account</b> by timeously providing all relevant documents on request. The <b>principal agent</b> shall issue the final account to the <b>contractor</b> within ninety (90) <b>calendar days</b> of the date of <b>practical completion</b>.</p> <p>Clause 34.3 is deleted and replaced with the following clause:</p> <p>34.3 The <b>contractor</b> shall accept or object to the <b>final account</b> within forty-five (45) <b>calendar days</b> of receipt thereof. On acceptance, or should the <b>contractor</b> not object with reasons to the <b>final account</b> within such period, the <b>principal agent</b> shall issue the final <b>payment certificate</b> [34.5].</p> <p>Clause 34.10 is deleted and replaced with the following clause:</p> <p>34.10 The <b>employer</b> shall pay the <b>contractor</b> the amount certified in the final <b>payment certificate</b> within thirty (30) <b>calendar days</b> of the date of issue (check 31.9) of the final <b>payment certificate</b> subject to the <b>contractor</b> giving the <b>employer</b> a tax invoice for the amount due.</p>
<b>36.0</b>	<p><b>TERMINATION BY THE EMPLOYER – CONTRACTOR’S DEFAULT</b></p> <p>Clause 36.1 is amended by the addition of the following clauses to the end thereof:</p> <p>36.1.3 The <b>contractor’s</b> refusal or neglect to comply strictly with any of the conditions of contract.</p> <p>36.1.4 The <b>contractor’s</b> estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force with the Republic of South Africa.</p> <p>36.1.5 The <b>contractor</b>, in the judgment of the <b>employer</b>, has engaged in <b>corrupt</b> or <b>fraudulent practices</b> in competing for or in executing the contract.</p> <p>36.1.6 The <b>contractor</b> fails to perform in terms of the <b>agreement</b> or the <b>employer</b> on reasonable ground believe that the <b>contractor</b> may not be able to comply with his obligation.</p>
<b>40.0</b>	<p><b>SETTLEMENT OF DISPUTES</b></p> <p>Clause 40.2.1 is deleted.</p> <p>Clause 40.3 is deleted.</p>

## Contract Agreement

Clause Number	Contract Agreement
41.0	<p><b>41.0 POST TENDER PROVISIONS</b></p> <p>41.1 All information provided in this section requires consultation with the <b>parties</b> to the <b>agreement</b>.</p> <p>41.2 The completed <b>Contract Data - Employer</b> and <b>Contractor data - Contractor</b> addenda and such other pertinent documents as listed below shall form part of this <b>agreement</b>:</p> <p>41.3 The dispute resolution body selected by the <b>parties</b> is:</p> <p style="text-align: center;"><b><u>THE ASSOCIATION OF SOUTH AFRICAN ARBITRATORS</u></b></p> <p>41.4 The <b>employer</b> shall provide a <b>Payment Guarantee</b> (amount) <input style="width: 150px;" type="text" value="N/A"/></p> <p>41.5 An annual building industry holiday period is applicable (yes/no) <input style="width: 80px;" type="text" value="YES"/></p> <p>41.6 Further provisions and information agreed by the parties:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
42.0	<p><b>42.0 CONTRACTUAL AGREEMENT</b></p> <p>42.1 This <b>agreement</b> is the entire (special conditions?) contract between the <b>parties</b> regarding the matters addressed herein. No representations, terms, conditions or warranties not contained in this <b>agreement</b> shall be binding on the <b>parties</b>. No agreement or addendum varying, adding to, deleting or terminating this <b>agreement</b> including this clause shall be effective unless reduced to writing and signed by the <b>parties</b>.</p> <p>42.2 <b>Contracting Parties</b></p> <p>(1) <b>Employer</b> : <b>THE INDEPENDENT DEVELOPMENT TRUST</b></p> <p>Physical Address : North West Regional Office 4059 Joule Street Industrial Site Mmabatho, 2735</p> <p>Telephone : (018) 389 3000 Fax : (086) 656 4152 E-mail : permyk@idt.org.za</p> <p>TAX / Vat Registration no : 458 014 7876</p>

Clause Number	Contract Agreement
	<p>(2) <b>Contractor</b> :</p> <p>Physical Address :</p> <p>Telephone :</p> <p>Fax :</p> <p>E-mail :</p> <p>TAX / Vat Registration no :</p> <p>42.3 The accepted contract sum (inclusive of tax)</p> <p style="text-align: right;">(amount) <input style="width: 150px; height: 15px;" type="text"/></p> <p>(In words) _____</p> <p>_____</p> <p>_____</p> <p>42.4 Signature of the contracting <b>parties</b>:</p> <p>Thus done and signed at _____ on _____</p> <p>_____ Name of signatory</p> <p>_____ Capacity of signatory</p> <p style="text-align: right;">_____ For and on behalf of the <b>employer</b> who by signature hereof warrants authorisation hereto</p> <p style="text-align: right;">_____ As Witness (1)</p> <p>Thus done and signed at _____ on _____</p> <p>_____ Name of signatory</p> <p>_____ Capacity of signatory</p> <p style="text-align: right;">_____ For and on behalf of the <b>contractor</b> who by signature hereof warrants authorisation hereto</p> <p style="text-align: right;">_____ As Witness (2)</p>

Clause Number	Contract Agreement		
	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Details of Witness (1)</p> <p>Name: _____</p> <p>Address: _____</p> <p>_____</p> <p>_____</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Details of Witness (2)</p> <p>Name: _____</p> <p>Address: _____</p> <p>_____</p> <p>_____</p> </td> </tr> </table>	<p>Details of Witness (1)</p> <p>Name: _____</p> <p>Address: _____</p> <p>_____</p> <p>_____</p>	<p>Details of Witness (2)</p> <p>Name: _____</p> <p>Address: _____</p> <p>_____</p> <p>_____</p>
<p>Details of Witness (1)</p> <p>Name: _____</p> <p>Address: _____</p> <p>_____</p> <p>_____</p>	<p>Details of Witness (2)</p> <p>Name: _____</p> <p>Address: _____</p> <p>_____</p> <p>_____</p>		

## **C1.3 FORM OF GUARANTEE**

**C1.3 FORM OF GUARANTEE**

**PRO FORMA FOR RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE**

Contract No.: .....

WHEREAS **INDEPENDENT DEVELOPMENT TRUST** (hereinafter referred to as "the Employer") entered into, a Contract with \_\_\_\_\_ (hereinafter called "the Contractor") on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ for the construction of \_\_\_\_\_ at \_\_\_\_\_

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

AND WHEREAS

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

NOW THEREFORE WE,

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

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee shall be limited to the payment of a sum of money
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said

Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.

5. Our total liability hereunder shall not exceed the sum of (not exceeding 10% of the Contract Sum) in

\_\_\_\_\_ (R \_\_\_\_\_)

The Guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon the Guarantor's liability hereunder shall cease.

We hereby choose our address for the serving of all notices for all purposes arising here from as

\_\_\_\_\_

IN WITNESS WHEREOF this guarantee has been executed by us at

\_\_\_\_\_

on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

As witnesses:

1. \_\_\_\_\_ Signature \_\_\_\_\_

2. \_\_\_\_\_ Signature \_\_\_\_\_

Duly authorized to sign on behalf of

\_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

**C1.4 ADJUDICATOR'S AGREEMENT**

## C1.4: Adjudicator's Agreement

This agreement is made on the.....day of ..... 20..... between the Employer

(name of company / organisation) .....

of (address) .....

..... and the Contractor

(name of company / organisation) ..... of

(address) .....

..... (hereinafter called **the Parties**)

**and**

(name) .....

of (address) .....

..... (hereinafter called **the Adjudicator**)

Disputes or differences may arise/have arisen\* between the Parties under a Contract No

.....

for (contract title) .....

and these disputes or differences shall be/have been\* referred to adjudication in accordance with the CIDB Adjudication Procedure, (hereinafter called "**the Procedure**") and the Adjudicator may be or has been requested to act.

(\* Delete as necessary)

**IT IS NOW AGREED** as follows:

1. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.
2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.
3. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.
4. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.
5. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

**SIGNED by:**

(Signature): .....(Signature): ..... (Signature): .....

**Name:**.....**Name:**..... **Name:** .....

who warrants that he/ she is  
duly authorized to sign for and  
on behalf of the **First Party** in  
and on behalf of the presence  
of

who warrants that he/ she is  
duly authorized to sign for and  
on behalf of the **Second Party**  
presence of

the **Adjudicator** in the presence  
of

**Witness:** ..... **Witness:** ..... **Witness:** .....  
(Signature): .....(Signature): ..... (Signature): .....

**Name:**.....**Name:**..... **Name:** .....

Address: .....Address: ..... Address: .....

.....

Date:..... Date:..... Date:

## **C1.5: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993**

Refer Overleaf:

**C.1.5 AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993**

THIS AGREEMENT is made between Independent Development trust represented by the Supply Chain Management.

(hereinafter called the EMPLOYER) of the one part, herein represented by:

.....  
in his capacity as: .. .. .;

AND: .. .. .

(hereinafter called the CONTRACTOR) of the other part, herein represented by .. .. .

.....  
in his capacity as: .. .. .

duly authorised to sign on behalf of the Contractor.

**WHEREAS** the CONTRACTOR is the Mandatary of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of:

**TENDER : FOR THE RESTORATION OF ELECTRICITY TO THE FACILITY (ELECTRICAL INSTALLATION AND DISTRIBUTION) AT SPRINGBOKPAN SILOS FOR THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST PROVINCE – BID NUMBER: DRD01NWER002**

**AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHS Act Amendment Act No 181/1993 (hereinafter referred to as the ACT);**

**NOW THEREFORE** the parties agree as follows:

- 1. The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.**
2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
3. The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves the EMPLOYER and the Employer’s CONSULTING ENGINEERS from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.
4. The CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has complied with his undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to take such steps the EMPLOYER may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.
5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and

Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at ..... for and on behalf of the **CONTRACTOR**

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

SIGNATURE:.....

NAME AND SURNAME: .....

CAPACITY: .....

WITNESSES: 1. ....

2. ....

Thus signed at ..... for and on behalf of the **EMPLOYER** on this

the ..... day of ..... 20.....

SIGNATURE:.....

NAME AND SURNAME: .....

CAPACITY: .....

WITNESSES: 1. ....

2. ....

## **C1.6 Waiver of Lien**

Refer Overleaf:



# Waiver of Contractor's Lien

for use with the JBCC Principal Building  
or JBCC Minor Works Agreements

## DEFINITIONS

Contractor \_\_\_\_\_

Employer \_\_\_\_\_

Agreement \_\_\_\_\_  
(Principal Building Agreement  
or Minor Works Agreement)

Works (description) \_\_\_\_\_

Site  
\_\_\_\_\_  
(property title deed description)

## AGREEMENT

The Contractor waives, in favour of the Employer, any lien or right of retention that is or may be held in respect of the Works to be executed on the Site

This waiver shall only come into effect on provision by the Employer of a Payment Guarantee for fulfilment of his obligations in terms of the identified Agreement

Thus done and signed at \_\_\_\_\_ on

\_\_\_\_\_  
Name of signatory

\_\_\_\_\_  
Capacity of signatory

\_\_\_\_\_  
As witness

\_\_\_\_\_  
For and on behalf of the Contractor who by  
signature hereof warrants authorisation hereto

## **C2: PRICING DATA**

## **C2.1 PRICING INSTRUCTIONS**

## C2: PRICING DATA

### C2.1 Pricing Instructions

#### C2.1.1 FIXED PRICE – CPAP APPLICABLE

**Adjustment to the contract value as clause 32.**

**Notwithstanding the provisions of Clause 32.13 or any other clause, no adjustment to the contract sum will be made in terms of the Contract Price Adjustment provisions or any other fluctuation provisions and all such costs shall be for the account of the Contractor.**

**Where the value of additional work cannot be valued in terms of clause 32.2.1 and 32.2.2 such work shall be priced “net” plus the tendered “mark up” thereon.**

#### C2.1.2 GENERAL

The Schedule of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Document, which include the Conditions of Tender, Conditions of Contract, the Specifications and Drawings.

**The document comprises of annexure bills. The main tenderer is to elect a subcontractor from the list provided by the client and issue them with the annexure bill to price and sign. The tenderer is therefore obliged to transfer the price to the main bill and add profit & attendance.**

#### C2.1.3 QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities will be subject to re-measuring during the execution of work.

The validity of Contract will in no way be effected by difference between the quantities in the Bill of Quantities and quantities finally certified for payment.

#### C2.1.4 PROVISIONAL SUMS (PS)

Provisional sums are provided for some items in the Schedule of Quantities. Work done under these items will be at the written direction of the Employer. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the “Amount” column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Any authorized changes made by the Tenderer to provisional items in the schedule, or to the provisional percentages and sums in the Summary of the Bill of Quantities, will be treated as arithmetical errors.

#### C2.1.5 PRICING

All rates in the bills must exclude Value Added Tax (VAT), which the bidder must allow for in the final summary of the Bills of Quantities.

## **C2.2 BILL OF QUANTITIES**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION No.1</u></b></p> <p><b><u>BILL NO. 1 PRELIMINARIES</u></b></p> <p><b><u>BUILDING AGREEMENT AND PRELIMINARIES</u></b></p> <p>The <b>JBCC</b> Principal Building Agreement (March 2014 Edition 6.1) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described</p> <p>The <b>JBCC</b> Principal Building Agreement <b>contract data</b> form an integral part of this <b>agreement</b></p> <p>The Preliminaries revision 1 (February 2016) published by the Association of South African Quantity Surveyors for use with the <b>JBCC</b> Principal Building Agreement Edition 6.1 shall be deemed to be incorporated in these <b>bills of quantities</b>, amended as hereinafter described</p> <p>The <b>contractor</b> is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause</p> <p>The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only</p> <p>Where any item is not relevant to this <b>agreement</b> such item is marked N/A signifying "not applicable"</p> <p><u>User note</u></p> <p><i>A provision/clause in Edition 6.1 of the JBCC Principal Building Agreement may have unintended consequences. The following is relevant:</i></p> <p><i>Within the contract data document there is space to insert changes made to the JBCC documentation. Quantity surveyors have generally up to now merely inserted in this space "Refer to Bill No. 1"</i></p>			
	<b>Carried to Collection</b>		R	
	<p>Section No. 1 Bill No. 1 Bill No.1 : Preliminaries <b>MK &amp; Associates</b></p>			

*Below the abovementioned space the following note has been inserted:*

**"Note : The amendments contained herein or in the single referenced Annexure constitute the only amendments to the standard JBCC Agreement that will apply. No other amendments shall be of any force or effect"**

*Should quantity surveyors wish to adhere to the system of inserting amendments, modifications, corrections or supplements to the JBCC documentation under the listed clause headings in Bill No. 1 (Preliminaries) then it is suggested that the following clause be inserted in the space provided in the contract data where changes made to the JBCC documentation are to be recorded:*

*"It is specifically agreed that the note below calling for amendments to the standard **JBCC** Agreement to be listed in the space provided in the **contract data** or recorded in 'the single referenced Annexure' shall not apply. Where standard clauses or alternatives are not entirely applicable to this **agreement** such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading in Bill No 1 (Preliminaries) and such amendments, modifications, corrections or supplements shall take precedence notwithstanding the note below and notwithstanding the provisions of clause 5.6 of the **JBCC** Principal Building Agreement"*

***Not doing as suggested above when adhering to the system generally used by quantity surveyors up to now may result in any amendments within Bill No. 1 (Preliminaries) being considered null and void, which could then lead to major claims***

*The following paragraph should in addition be inserted*

? Where standard clauses or alternatives are not entirely applicable to this **agreement** such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents ?

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

**PREAMBLES FOR TRADES**

User note

*The Model Preambles for Trades 2008 published by the Association of South African Quantity Surveyors is designed to support and extend the abbreviated descriptions utilised in these bills of quantities by inter alia referring to SANS construction standards. **Where such model preambles are not applicable** (eg where BS or Euro construction standards are applicable or the design consultants provide other preambles/specifications for insertion), users are to ensure that the abbreviated descriptions when read in conjunction with the Standard System of Measuring Building Work (seventh edition) for works within South Africa or the Standard Method of Measuring Building Work for Africa 2015 (first edition) for works elsewhere in Africa, represent the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications*

*Note that the text of the Standard System of Measuring Building Work (seventh edition) and that of the Standard Method of Measuring Building Work for Africa 2015 (first edition) is the same*

The Model Preambles for Trades 2008 as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these **bills of quantities** and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

Supplementary preambles and/or specifications are incorporated in these **bills of quantities** to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the Model Preambles

The **contractor's** prices for all items throughout these **bills of quantities** shall take account of and include for all of the obligations, requirements and specifications given in the Model Preambles and in any supplementary preambles and/or specifications

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

**STRUCTURE OF THIS PRELIMINARIES BILL**

Section A : A recital of the headings of the individual clauses of

the aforementioned **JBCC Principal Building Agreement**

Section B : A recital of the headings of the individual clauses of

the aforementioned Preliminaries document

Section C : Any special clauses to meet the particular circumstances of the project

**PRICING OF PRELIMINARIES**

Should the **contractor** select Option A in the **contract data** for the adjustment of **preliminaries**, the amounts entered against the relevant items in these **preliminaries** are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)

**SECTION A: PRINCIPAL BUILDING AGREEMENT**

**Interpretation (A1-A7)**

1 Clause 1.0 - Definitions and interpretation

**Definition of agreement**

The definition of **agreement** is replaced with the following definition :

**"AGREEMENT** : The **JBCC** Principal Building Agreement, the completed **JBCC** PBA contract data, the **contract drawings**, the **priced documents** and any other documents reduced to writing and signed by the **parties**"

**Pricing of bills of quantities**

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

The **contractor** is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this **agreement**. Value Added Tax (VAT) is to be separately stated on the summary page of these **bills of quantities**

Items left unpriced will be deemed to be covered in prices against other items throughout these **bills of quantities** and no claim for any extras arising out of the **contractor's** omission to price any item will be entertained

Prices for all **construction equipment**, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary

**Abbreviated descriptions**

The items in these **bills of quantities** utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the **contractor** shall, before submission of his tender, call for a written directive from the **principal agent**, failing which it shall be assumed that the **contractor** has allowed in his pricing for materials and workmanship in terms of international best practice

**Legal status of contractor**

If the **contractor** constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then:

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

1. These persons are deemed to be jointly and severally liable to the **employer** for the performance of this agreement
2. These persons shall notify the **employer** of their leader who has authority to bind the **contractor** and each of these persons
3. The **contractor** shall not alter its composition or legal status without the prior written consent of the **employer**

**Errata by JBCC**

Omit from definition of **construction period** the words : "excluding annual holiday periods"  
Omit from definition of **preliminaries** the word : "priced"

F:..... V:.....  
T:.....

- 2 Clause 2.0 - Law, regulations and notices

**User note**

*Insert the following where a health and safety specification is not yet available*

**? Health and safety**

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the **employer** shall prepare a documented health and safety specification for the **works** and that the **employer** shall ensure that the **contractor** has made provision for the cost of health and safety measures during the execution of the **works**. The **contractor** shall price opposite this item for compliance with the act and the regulations and the reasonable provisions of the aforementioned health and safety specification [2.1] ?

User note

*Insert the following where a health and safety specification is available*

**? Health and safety**

Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the **employer** shall prepare a documented health and safety specification for the **works** (refer to Annexure ? for a copy of the relevant specification) and that the **employer** shall ensure that the **contractor** has made provision for the cost of health and safety measures during the execution of the **works**. The **contractor** shall price opposite this item for compliance with the act and the regulations and the provisions of the aforementioned health and safety specification [2.1] ?

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

The **contractor** shall:

1. Comply with the health and safety specification for the **works**
2. Prepare and agree with the health and safety consultant the health and safety plan for the **works**
3. Co-operate with the health and safety consultant in all respects
4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification
5. Conform to the conditions contained in the **employer's** health and safety specification

User note

*Insert one of the following for residential developments only*

**? NHBRC levies**

The **employer** shall allow for and pay any levies required by the National Home Builders Registration Council (NHBRC). The **contractor** warrants that he is registered and will maintain registration with the NHBRC for the duration of this **agreement** [2.1] ?

**? NHBRC levies**

The **contractor** shall allow for and pay any levies required by the National Home Builders Registration Council (NHBRC). The **contractor** warrants that he is registered and will maintain registration with the NHBRC for the duration of this **agreement** [2.1] ?

F:..... V:.....  
T:.....

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

Item

R

3 Clause 3.0 - Offer and acceptance  
F:..... V:.....  
T:.....

Item

4 Clause 4.0 - Assignment and cession  
F:..... V:.....  
T:.....

Item

5 Clause 5.0 - **Contract documents**

**Value Added Tax**

Provision is made in the summary page of these **bills of quantities** for the inclusion of Value Added Tax (VAT)

User note

*The contract drawings are to be listed in the contract data. If insufficient space is available for such listing or for any other reason then reference should be made in the contract data as to where the contract drawings are listed. One of the following clauses may be used*

*Insert the following where only a few **contract drawings** are applicable*

**? Contract drawings**

The **contract drawings** are as listed on the contents page of the **bills of quantities** [5.1] ?

*Insert the following where numerous **contract drawings** are applicable*

**? Contract drawings**

Refer to Annexure ? for a list of the **contract drawings** [5.1] ?

**Priced document as specification**

Clause 5.3 is deemed to be deleted

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

The **principal agent** shall decide which portion of the **priced document** may be used as a specification of **materials and goods** or methods, if any

User note

*Insert the following where applicable*

**? Electronic issue of drawings**

All drawings for this project will be issued electronically and the **contractor** shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically [5.5] ?

**Precedence**

Clause 5.6 is deemed to be deleted. The provisions of this Bill No. 1 (Preliminaries) shall take precedence over any other documents which constitute this **agreement** [5.6]

F:..... V:.....  
T:.....

6 **Clause 6.0 - Employer's agents**

**? Delegated authority**

The authority of the **principal agent** to issue **contract instructions** and perform duties for specific aspects of the **works** is delegated to **agents** as follows [6.2]: ?

User note

*Add delegated authority as may be required for other relevant consultants not listed hereinafter*

**? 1. Architect**

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

Item

R

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

1.1 Duties :

The architect is responsible for the architectural design, functional design and quality inspection of the **works**

1.2 **Contract instructions** [17.0] :

1.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

1.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

1.2.3 The **site** [13.2.4]

1.2.4 Compliance with the **law**, regulations and bylaws [2.1]

1.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**

1.2.6 Opening up of work for inspection, removal or re-execution

1.2.7 Removal or re-execution of work

1.2.8 Removal or substitution of any **materials and goods**

1.2.9 Protection of the **works**

1.2.10 Making good physical loss and repairing damage to the **works** [8.0]

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

- 1.2.11 Rectification of **defects** [21.2]
- 1.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion** and a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**
- 1.2.13 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**
- 1.2.14 Appointment of a **subcontractor** [14.0; 15.0]
- 1.2.15 Termination of a nominated **n/s subcontract agreement** [27.2.8]
- 1.2.16 Work by (a) **direct contractor(s)** [16.0]
- 1.2.17 Access by other or previous contractors to remedy defective work
- 1.2.18 Removal from the **site** of any person employed on the **works**
- 1.2.19 Removal from the **site** of any person not engaged on or connected with the **works**
- 1.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials and goods** [29.0]
- ? 2. Quantity surveyor

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

2.1 Duties :

The quantity surveyor is responsible for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions of the **works**

2.2 **Contract instructions** [17.0] :

2.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

2.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

2.2.3 The **site** [13.2.4]

2.2.4 Compliance with the **law**, regulations and bylaws [2.1]

2.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**

2.2.6 Opening up of work for inspection, removal or re-execution

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

<p>2.2.7 Removal or re-execution of work</p> <p>2.2.8 Removal or substitution of any <b>materials and goods</b></p> <p>2.2.9 Protection of the <b>works</b></p> <p>2.2.10 Making good physical loss and repairing damage to the <b>works</b> [8.0]</p> <p>2.2.11 Rectification of <b>defects</b> [21.2]</p> <p>2.2.12 A <b>list for practical completion</b> specifying outstanding or defective work to be rectified to achieve <b>practical completion</b> and a <b>list for completion</b> and a <b>list for final completion</b> specifying outstanding or defective work to be rectified to achieve <b>final completion</b></p> <p>2.2.13 Expenditure of <b>budgetary allowances, prime cost amounts</b> and <b>provisional sums</b></p> <p>2.2.14 Appointment of a <b>subcontractor</b> [14.0; 15.0]</p> <p>2.2.15 Termination of a nominated <b>n/s subcontract agreement</b> [27.2.8]</p> <p>2.2.16 Work by (a) <b>direct contractor(s)</b> [16.0]</p> <p>2.2.17 Access by other or previous contractors to remedy defective work</p> <p>2.2.18 Removal from the <b>site</b> of any person employed on the <b>works</b></p> <p>2.2.19 Removal from the <b>site</b> of any person not engaged on or connected with the <b>works</b></p>				
<b>Carried to Collection</b>				R
<p>Section No. 1 Bill No. 1 Bill No.1 : Preliminaries <b>MK &amp; Associates</b></p>				

2.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials** and **goods** [29.0]

? 3. Civil and structural engineer

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

3.1 Duties :

The civil and structural engineer is responsible for all aspects of civil and structural engineering design and quality inspection of the **works**

3.2 **Contract instructions** [17.0] :

3.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

3.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

3.2.3 The **site** [13.2.4]

3.2.4 Compliance with the **law**, regulations and bylaws [2.1]

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**



3.2.18 Removal from the **site** of any person employed on the **works**

3.2.19 Removal from the **site** of any person not engaged on or connected with the **works**

3.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials** and **goods** [29.0]

? 4. Mechanical engineer

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

4.1 Duties :

The mechanical engineer is responsible for all aspects of mechanical engineering design and quality inspection of the **works** and, where appointed by the **employer** for quantity surveying services in respect of the mechanical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions?

4.2 **Contract instructions** [17.0] :

4.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

<p>4.2.2 Alteration to design, standards or quantity of the <b>works</b> provided that such <b>contract instructions</b> shall not substantially change the scope of the <b>works</b></p> <p>4.2.3 The <b>site</b> [13.2.4]</p> <p>4.2.4 Compliance with the <b>law</b>, regulations and bylaws [2.1]</p> <p>4.2.5 Provision and testing of samples of <b>materials and goods</b>, of finishes and assemblies of elements of the <b>works</b></p> <p>4.2.6 Opening up of work for inspection, removal or re-execution</p> <p>4.2.7 Removal or re-execution of work</p> <p>4.2.8 Removal or substitution of any <b>materials and goods</b></p> <p>4.2.9 Protection of the <b>works</b></p> <p>4.2.10 Making good physical loss and repairing damage to the <b>works</b> [8.0]</p> <p>4.2.11 Rectification of <b>defects</b> [21.2]</p> <p>4.2.12 A <b>list for practical completion</b> specifying outstanding or defective work to be rectified to achieve <b>practical completion</b> and a <b>list for completion</b> and a <b>list for final completion</b> specifying outstanding or defective work to be rectified to achieve <b>final completion</b></p> <p>4.2.13 Expenditure of <b>budgetary allowances, prime cost amounts</b> and <b>provisional sums</b></p>				
<b>Carried to Collection</b>				R
<p>Section No. 1 Bill No. 1 Bill No.1 : Preliminaries <b>MK &amp; Associates</b></p>				

- 4.2.14 Appointment of a **subcontractor** [14.0; 15.0]
- 4.2.15 Termination of a nominated **n/s subcontract agreement** [27.2.8]
- 4.2.16 Work by (a) **direct contractor(s)** [16.0]
- 4.2.17 Access by other or previous contractors to remedy defective work
- 4.2.18 Removal from the **site** of any person employed on the **works**
- 4.2.19 Removal from the **site** of any person not engaged on or connected with the **works**
- 4.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials and goods** [29.0]

? 5. Electrical engineer

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

5.1 Duties :

The electrical engineer is responsible for all aspects of electrical engineering design and quality inspection of the **works** and, where appointed by the **employer** for quantity surveying services in respect of the electrical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions?

5.2 **Contract instructions** [17.0] :

5.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

5.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

5.2.3 The **site** [13.2.4]

5.2.4 Compliance with the **law**, regulations and bylaws [2.1]

5.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**

5.2.6 Opening up of work for inspection, removal or re-execution

5.2.7 Removal or re-execution of work

5.2.8 Removal or substitution of any **materials and goods**

5.2.9 Protection of the **works**

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

- 5.2.10 Making good physical loss and repairing damage to the **works** [8.0]
- 5.2.11 Rectification of **defects** [21.2]
- 5.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion** and a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**
- 5.2.13 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**
- 5.2.14 Appointment of a **subcontractor** [14.0; 15.0]
- 5.2.15 Termination of a nominated **n/s subcontract agreement** [27.2.8]
- 5.2.16 Work by (a) **direct contractor(s)** [16.0]
- 5.2.17 Access by other or previous contractors to remedy defective work
- 5.2.18 Removal from the **site** of any person employed on the **works**
- 5.2.19 Removal from the **site** of any person not engaged on or connected with the **works**
- 5.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials and goods** [29.0]
- ? 6. Wet services engineer

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

6.1 Duties :

The wet services engineer is responsible for all the aspects of wet services engineering design and quality inspection of the **works**

6.2 **Contract instructions** [17.0] :

6.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

6.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

6.2.3 The **site** [13.2.4]

6.2.4 Compliance with the **law**, regulations and bylaws [2.1]

6.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**

6.2.6 Opening up of work for inspection, removal or re-execution

6.2.7 Removal or re-execution of work

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

6.2.8 Removal or substitution of any **materials and goods**

6.2.9 Protection of the **works**

6.2.10 Making good physical loss and repairing damage to the **works** [8.0]

6.2.11 Rectification of **defects** [21.2]

6.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion** and a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**

6.2.13 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**

6.2.14 Appointment of a **subcontractor** [14.0; 15.0]

6.2.15 Termination of a nominated **n/s subcontract agreement** [27.2.8]

6.2.16 Work by (a) **direct contractor(s)** [16.0]

6.2.17 Access by other or previous contractors to remedy defective work

6.2.18 Removal from the **site** of any person employed on the **works**

6.2.19 Removal from the **site** of any person not engaged on or connected with the **works**

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

6.2.20 On termination, protection of the **works**,  
removal of  
**construction equipment** and surplus **materials**  
**and**  
**goods** [29.0]

? 7. Fire consultant

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

7.1 Duties :

The fire consultant is responsible for all aspects of rational fire design and quality inspection of the **works**

7.2 **Contract instructions** [17.0] :

7.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

7.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

7.2.3 The **site** [13.2.4]

7.2.4 Compliance with the **law**, regulations and bylaws [2.1]

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R



7.2.18 Removal from the **site** of any person employed on the **works**

7.2.19 Removal from the **site** of any person not engaged on or connected with the **works**

7.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials** and **goods** [29.0]

? 8. Health and safety consultant

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

8.1 Duties :

The health and safety consultant is responsible for all aspects of health and safety of the **works**. Without derogating from the generality thereof, the health and safety consultant will perform the following specific functions and duties in respect of the health and safety aspects of the **works**:

8.1.1 Act as the **employer's agent** in terms of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993

8.1.2 Prepare and update the health and safety specification for the **works**

8.1.3 Agree with the **contractor** the health and safety plan for the **works**

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

8.1.4 Carry out regular audits to ensure adherence to the safety plan and compliance with the Act and Regulations

8.1.5 Stop the execution of the **works** where the agreed specification or plan is not adhered to

F:..... V:.....  
T:.....

Item

7 Clause 7.0 - Design responsibility

F:..... V:.....  
T:.....

Item

**Insurance and security (A8-A11)**

8 Clause 8.0 - **Works** risk

F:..... V:.....  
T:.....

Item

9 Clause 9.0 - Indemnities

F:..... V:.....  
T:.....

Item

10 Clause 10.0 - Insurances

F:..... V:.....  
T:.....

Item

11 Clause 11.0 - **Security**

User note

*If it is deemed advisable, the extent of any security for payment may be stated as follows:*

? **Security for payment**

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

The **employer** shall provide to the **contractor** security for payment in the amount of ?

.....  
..... Rand (R.....) ?  
[11.4.1,11.10] ?

User note

*Where it is expected of the contractor to waive his lien in terms of clause 11.10, the waiver of lien may be extended to subcontracts as follows:*

**? Extension of waiver of lien**

The **contractor** shall ensure that a waiver of lien is included in all subcontracts and that the **works** executed on the **site** are kept free of all liens and other encumbrances at all times [11.10] ?

**Errata by JBCC**

Clause 11.5 Replace "ten (10)" with "five (5)"

F:..... V:.....  
T:.....

**Execution (A12 - A17)**

12 Clause 12.0 - Duties of the **parties**

**Provisions of clauses 12.1.2 to 12.1.6 and 12.2.18**

Refer to the **contract data**, the Preliminaries document and "Section B : Preliminaries" of this Bill No. 1 with reference to the provisions of clauses 12.1.2 to 12.1.6 and 12.2.18 of the **JBCC** Principal Building Agreement

**? Office accommodation**

The **contractor** shall provide, maintain and remove on **practical completion** air conditioned office accommodation with suitable tables and chairs for meetings to be held on the **site**. Such offices shall be kept clean and fit for use at all times [12.2.18] ?

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

Item

R

**? Notice board**

The **contractor** shall erect in a position approved by the **principal agent**, maintain and remove on **practical completion** a notice board recommended by the South African Institute of Architects and as approved by the **principal agent** listing the names and logos of the **employer**, the **contractor**, and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the **principal agent** for such notice boards to be erected [12.2.18] ?

User note

*Clause 12.1.5 requires the employer to identify access to water, sewer, stormwater and/or electricity connections to the site. Should such information be available then it is to be stated here or in the contract data in detail with a suitable heading in bold. Reference as [12.1.5]. The user should, however, note that clauses 8.1 and 8.2 of the Preliminaries state that the employer does not warrant that any water or electricity supplies that may exist are adequate for the proper execution of the works. Any ambiguity in this respect is to be dealt with*

*Should access to water, sewer, stormwater and/or electricity connections not be identifiable due to such information not being available or the specific requirements of the contractor cannot be determined, then the following clause may be considered in which event a qualified tender may be expected*

**? Access to water, sewer, stormwater and electricity connections**

The **employer** is not in a position to identify access to water, sewer, stormwater and/or electricity connections to the **site** as may be suitable for the execution of the **works**. The **contractor** is to allow what he considers to be required and is to qualify his tender in detail in this regard, failing which it shall be taken that the **contractor** has allowed what will be required for the execution of the **works**. In such case no claims for additional cost or loss shall be entertained [12.1.5] ?

**Carried to Collection**

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

R

**Statutory and other notices**

User note

*Statutory and other notices which the contractor must submit and/or comply with before possession of the site can be given are to be stated here or in the contract data. Reference [12.1.6]*

*If specific information is not available then the user may consider a clause along the following lines*

? The **contractor** shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the **works** by the **contractor**. The **contractor** shall pay all deposits or fees in this regard [12.1.6]

It is, however, specifically recorded that the **employer** shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto ?

**Errata by JBCC**

Clause 12.2.17 Omit the words "[CD] within ten (10) **working days**"

F:..... V:.....  
T:.....

Item

13 Clause 13.0 - Setting out

F:..... V:.....  
T:.....

Item

14 Clause 14.0 - Nominated **subcontractors**

**Errata by JBCC**

Clause 14.1.4 Reference should read "[17.1.14]"  
 Clause 14.6 Reference should read "[17.1.15; 27.1.8]"  
 Clause 14.7.2 Reference should read "[27.1.8]"  
 Clause 14.7.3 Reference should read "[27.2.8]"

**Carried to Collection**

R

Section No. 1  
 Bill No. 1  
 Bill No.1 : Preliminaries  
**MK & Associates**

	F:..... V:..... T:.....		
15	Clause 15.0 - Selected <b>subcontractors</b>  <b>Errata by JBCC</b>  Clause 15.2 Reference should read "[17.1.14]" Clause 15.7.2 Reference should read "[27.1.8]" Clause 15.7.3 Reference should read "[27.2.8]"  F:..... V:..... T:.....	Item	
16	Clause 16.0 - <b>Direct contractors</b>  <b>Attendance on direct contractors</b>  In respect of <b>direct contractors</b> the <b>contractor</b> shall:  1. Designate an area for the <b>direct contractor</b> to establish a temporary office and workshop and storage of equipment and materials  2. Allow the use of personnel welfare facilities, where provided  3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation  4. Permit the <b>direct contractor</b> to use erected scaffolding, hoisting facilities, etc provided by the <b>contractor</b> , in common with others having the like right, while it remains erected on the <b>site</b> [16.1]  <b>Errata by JBCC</b>  Clause 16.1.3 Reference should read "[26.5]"	Item	
	<b>Carried to Collection</b>		R
	Section No. 1 Bill No. 1 Bill No.1 : Preliminaries <b>MK &amp; Associates</b>		

	F:..... V:..... T:.....		
17	Clause 17.0 - <b>Contract instructions</b>  ? <b>Site instructions</b>  Instructions issued on <b>site</b> are to be recorded in a site instruction book which is to be supplied and maintained on <b>site</b> by the <b>contractor</b> ?  <b>Errata by JBCC</b>  Clause 17.1.3 Reference should read "[13.2.4]"  F:..... V:..... T:.....	Item	
18	Clause 18.0 - Interim completion  F:..... V:..... T:.....	Item	
19	Clause 19.0 - <b>Practical completion</b>  <b>User note</b>  <i>List with a suitable heading in bold any special requirements for practical completion here or in the contract data. Reference as [19.3.1]</i>  F:..... V:..... T:.....	Item	
20	Clause 20.0 - Sectional completion  <b>User note</b>  <i>If sectional completion is applicable, then a clause with a suitable heading in bold should be inserted, or drawing(s) annexed, to define the various sections. Reference as [20.1]</i>		
	<b>Carried to Collection</b>		R
	Section No. 1 Bill No. 1 Bill No.1 : Preliminaries <b>MK &amp; Associates</b>		

	<p><b>Errata by JBCC</b></p> <p>Clause 20.2.2 Reference should read "[21.6.2]"</p> <p>F:..... V:..... T:.....</p>			
21	<p><b>Clause 21.0 - Defects liability period and final completion</b></p> <p><b>Errata by JBCC</b></p> <p>Clause 21.1 Delete the word "final" in the second last line Reference should read "[21.6.1]" Clause 21.9 Reference should read "[21.4 ; 21.6.1]"</p> <p>F:..... V:..... T:.....</p>			Item
22	<p><b>Clause 22.0 - Latent defects liability period</b></p> <p>F:..... V:..... T:.....</p>			Item
23	<p><b>Clause 23.0 - Revision of date for practical completion</b></p> <p><b>Substitution of materials and goods</b></p> <p>The removal or substitution of any <b>materials and goods</b> which do not conform to the specification or the <b>contract drawings</b> shall not constitute grounds for the extension of the <b>construction period</b> nor for the adjustment of the <b>contract value</b> [17.1.8, 23.1 &amp; 2]</p> <p><b>Errata by JBCC</b></p> <p>Clause 23.2 Reference should read "[26.7]" Clause 23.2.1 Reference should read "[12.1.7]"</p> <p>F:..... V:..... T:.....</p>			Item
24	<p><b>Clause 24.0 - Penalty for late or non-completion</b></p> <p>F:..... V:..... T:.....</p>			Item
	<b>Carried to Collection</b>			R
	<p>Section No. 1 Bill No. 1 Bill No.1 : Preliminaries <b>MK &amp; Associates</b></p>			

25	<p><b><u>Payment (A25 - A27)</u></b></p> <p>Clause 25.0 - Payment</p> <p><b>Materials and goods prematurely on site</b></p> <p><b>Materials and goods</b> brought onto the site prematurely shall not be authorised for payment [25.3.2]</p> <p><u>User note</u></p> <p><i>Insert <u>one</u> of the following two clauses</i></p> <p><b>? Materials and goods stored off site</b></p> <p><b>Materials and goods</b> stored off <b>site</b> shall not be authorised for payment [25.3.2] ?</p> <p><b>? Materials and goods stored off site</b></p> <p><b>Materials and goods</b> stored off <b>site</b> shall be authorised for payment subject to a <b>guarantee for advance payment</b> being provided to the <b>employer</b> [25.3.2] ?</p> <p><b>? Fluctuations in costs</b></p> <p>All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the <b>contractor</b> [25.3.4] ?</p> <p><b>Prices submitted</b></p> <p>Where prices are submitted by the <b>contractor</b> or <b>subcontractor</b> during the progress of the <b>works</b> in respect of <b>contract instructions</b> or in regard to a claim under the terms of this <b>agreement</b> and notwithstanding the fact that such prices may be used in an interim <b>payment certificate</b>, there is to be no presumption of acceptance. Should the <b>principal agent</b> wish to accept any such prices prior to the issue of the <b>certificate of final completion</b>, it shall be in writing</p>			
	<b>Carried to Collection</b>		R	
	<p>Section No. 1 Bill No. 1 Bill No.1 : Preliminaries <b>MK &amp; Associates</b></p>			

**Errata by JBCC**

Clause 25.2 The word : "final" in bold in the second line  
 Clause 25.10.3 Reference should read "[25.13 ; 26.10]"  
 New clause 25.12.4 Add the words : "Terminate the **agreement** [29.14.7] where the listed options [25.12.1-3] have failed"

F:..... V:.....  
 T:.....

26 Clause 26.0 - Adjustment of the **contract value** and **final account**

User note

*Insert the following where tenant installations/users requirements may be delayed or omitted*

**? Tenant installations/users requirements delayed**

There is a possibility that certain works related to tenant installations/users requirements may have to be delayed and may consequently not be executed prior to **practical completion**

The **employer** reserves the right to omit such work without compensation to the **contractor** for loss of profit or any other loss which the **contractor** may suffer as a result of such omission

Should the **contractor** be instructed to do so he shall execute this work under the conditions pertaining to this **agreement** on the basis that a separate amount for **preliminaries** appurtenant to this work (if applicable) is agreed to between the **contractor** and the **principal agent** and on condition that instruction to proceed with such work is given to him within a period of three (3) calendar months after the date of **practical completion** of the **works** ?

Item

**Carried to Collection**

R

Section No. 1  
 Bill No. 1  
 Bill No.1 : Preliminaries  
**MK & Associates**

**Cost of claims**

All costs incurred by the **contractor** in the preparation of claims shall be borne by the **contractor**. This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this **agreement** [30.6,7] from making a determination on costs

The **contractor** shall review, assess and adjudicate any claims received by him from any **subcontractor** and thereafter submit same to the **principal agent** with a recommendation in order to assist the **principal agent** in adjudicating the claim [26.6]

**Errata by JBCC**

Clause 26.4.2 Omit the entire clause and renumber thereafter  
New clause 26.4.3 "Other proven or unavoidable costs"

F:..... V:.....  
T:.....

Item

27 Clause 27.0 - Recovery of expense and/or loss

F:..... V:.....  
T:.....

Item

**Suspension and termination (A28 - A29)**

28 Clause 28.0 - Suspension by the **contractor**

**Errata by JBCC**

New clause 28.1.5 and renumber thereafter "Or where an **agent** has failed to act in terms of this **agreement** [6.4]  
Clause 28.2 Replace the word "defect" with "default" in the first line

F:..... V:.....  
T:.....

Item

29 Clause 29.0 - Termination

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**Errata by JBCC**

Clause 29.1.2 Delete the words : "within the period stated [CD]"  
 Clause 29.14.1 Change as follows : "Provide or maintain a **guarantee for payment**.....[11.4 - 5]"  
 Clause 29.14.2 Reference should read "[12.1.7]"  
 New clause 29.14.8 "Or where an **agent** has failed to act in terms of this **agreement** [6.4]"

F:..... V:.....  
 T:.....

Item

**Dispute resolution (A30)**

30 Clause 30.0 - Dispute resolution

F:..... V:.....  
 T:.....

Item

31 **Agreement**

The second sentence of the introduction where the **parties** sign the **agreement**, namely "Any provision in this **agreement**..... acceptance by such **subcontractor** at any time." is deemed to be deleted

The required information of the **parties** and the amount of the **contract sum** shall be inserted in the **agreement** for signature of the **agreement** by the **parties**

F:..... V:.....  
 T:.....

Item

32 **Contract data**

**Payment of preliminaries**

Where Option B is applicable and the initial **construction period** is extended the monthly charge shall be recalculated on the same basis as was initially applied but taking into account the revised **construction period** and the amounts already paid to the **contractor** [CD26.0]

**Carried to Collection**

R

Section No. 1  
 Bill No. 1  
 Bill No.1 : Preliminaries  
**MK & Associates**

**Adjustment of preliminaries**

Where the adjustment of **preliminaries** is in terms of Option A, the **construction period** and the initial **construction period** shall be calculated in **working days** [CD 26.0]

Where the adjustment of **preliminaries** is in terms of Option A and sectional completion is required, the **contractor** shall provide the **principal agent** with the division of the categorised amounts into **sections**. Should the **contractor** fail to provide such information within the period stipulated, the categorised amounts shall be prorated to the value of each **section** [CD 26.0]

Where the adjustment of **preliminaries** is required in terms of Option B and sectional completion is required, the **contractor** shall provide the **principal agent** with details of the resources required for each **section** and those that are common to **sections**. Should the **contractor** fail to provide such information within the period stipulated, Option A shall apply [CD 26.0]

User note

*Where removal of lateral support insurance is required and stated as such in the contract data for the employer to insure, it is to be noted that it may appear under "no" for the employer to insure where the contractor is to take out the other insurances. In such a case the following clause is to be inserted*

**? Removal of lateral support insurance**

Whilst it is stated in clause 10.0 of the **contract data** that the **employer** will not be responsible for **works** and other insurances the **employer** shall nevertheless be responsible for the removal of lateral support insurance in the amount stated ?

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

User note

*Refer to the user note on page 2 of this Bill No 1 (Preliminaries) and insert the proposed clause in the space provided in the contract data where changes made to the JBCC documentation is to be recorded should the user wish to adhere to the system of inserting amendments, modifications, corrections or supplements to the JBCC documentation under the listed clause headings in this Bill No 1 (Preliminaries)*

**Tenderer's selection**

Before submission of his tender the **contractor** is to complete the tenderer's selection in the **contract data**

User note

*All information for the above requires consultation with the contractor. The principal agent should not pre-select any of the alternatives available to the contractor*

**Note 4 on page 10 of the contract data**

Note 4 on page 10 of the **contract data** which relates to any benefit or right in favour of any **subcontractor** shall be deemed to be deleted

F:..... V:.....  
T:.....

Item

**SECTION B: PRELIMINARIES**

**Interpretation (B1)**

33 Clause 1.1 - Definitions

F:..... V:.....  
T:.....

Item

34 Clause 1.2 - Interpretation

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**Documents (B2)**

35 Clause 2.1 - Checking of documents  
F:..... V:.....  
T:.....

Item

36 Clause 2.2 - Provisional **bills of quantities**

User note

*Check "wet trades" included in the bills of quantities and edit the following clause as may be necessary*

**? Multiple procurement**

These **bills of quantities** are in multiple procurement format ie the "wet trades" - earthworks, concrete, formwork and reinforcement, precast concrete, masonry, waterproofing and sub-surface drainage - are provisionally (fully?) measured and the subsequent trades are **budgetary allowances** and/or **provisional sums** ?

F:..... V:.....  
T:.....

Item

37 Clause 2.3 - Availability of **construction information**

**? Budgetary allowances and provisional sums**

The **budgetary allowances** ?and/or **provisional sums**? allocated for subsequent trades included in this **agreement** will be separately procured, based on multiple procurement of **subcontractors** during the **construction period** ?

F:..... V:.....  
T:.....

Item

38 Clause 2.4 - Ordering of **materials and goods**

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**Previous work and adjoining properties (B3)**

39 Clause 3.1 - Previous work - dimensional accuracy

F:..... V:.....  
T:.....

Item

40 Clause 3.2 - Previous work - **defects**

F:..... V:.....  
T:.....

Item

41 Clause 3.3 - Inspection of adjoining properties

F:..... V:.....  
T:.....

Item

**The site (B4)**

42 Clause 4.1 - Defined **works** area

F:..... V:.....  
T:.....

Item

43 Clause 4.2 - Handover of **site** in stages

F:..... V:.....  
T:.....

Item

44 Clause 4.3 - Enclosure of the **works**

F:..... V:.....  
T:.....

Item

45 Clause 4.4 - Geotechnical investigation

F:..... V:.....  
T:.....

Item

46 Clause 4.5 - Encroachments

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

47 Clause 4.6 - Existing premises occupied

F:..... V:.....  
T:.....

Item

48 Clause 4.7 - Services - known

F:..... V:.....  
T:.....

Item

49 Clause 4.8 - Protection of trees and/or relevant natural features

F:..... V:.....  
T:.....

Item

**Management of contract (B5)**

50 Clause 5.1 - Management of the **works**

F:..... V:.....  
T:.....

Item

51 Clause 5.2 - Progress meetings

F:..... V:.....  
T:.....

Item

52 Clause 5.3 - Technical meetings

F:..... V:.....  
T:.....

Item

**Samples, shop drawings and manufacturer's instructions (B6)**

53 Clause 6.1 - Samples of materials

F:..... V:.....  
T:.....

Item

54 Clause 6.2 - Workmanship samples

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

55 Clause 6.3 - Shop drawings  
F:..... V:.....  
T:.....

Item

56 Clause 6.4 - Compliance with manufacturer's instructions  
F:..... V:.....  
T:.....

Item

**Deposits and fees (B7)**

57 Clause 7.1 - Deposits and fees  
F:..... V:.....  
T:.....

Item

**Temporary services (B8)**

58 Clause 8.1 - Water  
F:..... V:.....  
T:.....

Item

59 Clause 8.2 - Electricity  
F:..... V:.....  
T:.....

Item

60 Clause 8.3 - Ablution and welfare facilities  
F:..... V:.....  
T:.....

Item

61 Clause 8.4 - Communication facilities  
F:..... V:.....  
T:.....

Item

**Prime cost amounts (B9)**

62 Clause 9.1 - Responsibility for **prime cost amounts**

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

User note

*Where details of materials included in prime cost amounts are not readily available and it is therefore not possible for the contractor to price for waste, the relevant prime cost amount shall be inserted in the bills of quantities as a lump sum with the contractor being given the opportunity to separately price his overheads and profit and for taking delivery, etc as called for in this clause 9.1 of the preliminaries. In such case the fixing only or installation only of the relevant materials shall be provisionally measured for the contractor to price and shall be re-measured upon completion*

*Where details of materials for which prime cost amounts are to be allowed are readily available, the quantity surveyor may elect to insert the relevant prime cost amounts in measured items, which measured items shall contain sufficient detail for the contractor to price for fixing and installation, waste, etc*

F:..... V:.....  
T:.....

Item

**Attendance on subcontractors (B10)**

63 Clause 10.1 - General attendance

**User note**

*General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement*

F:..... V:.....  
T:.....

Item

64 Clause 10.2 - Special attendance

User note

*Insert details after the provisional sums (nominated or selected subcontract amount) for any special attendance where specifically required for each n/s subcontractor separately*

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

*It is important to note that general attendance only requires the contractor to "permit the subcontractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right while it remains erected on the site" (refer to 12.2.13 of the JBCC n/s subcontract agreement). Many n/s subcontractors qualify their tenders to exclude scaffolding and/or hoisting facilities. Especially scaffolding could be an expensive item and it may be necessary in order to avoid claims to require the contractor to provide for the extended use of scaffolding for specific subcontracts within a description of "special attendance" in the applicable bill*

F:..... V:.....  
T:.....

Item

**General (B11)**

65 Clause 11.1 - Protection of the **works**

F:..... V:.....  
T:.....

Item

66 Clause 11.2 - Protection/isolation of existing/sectionally occupied **works**

F:..... V:.....  
T:.....

Item

67 Clause 11.3 - Security of the **works**

F:..... V:.....  
T:.....

Item

68 Clause 11.4 - Notice before covering work

F:..... V:.....  
T:.....

Item

69 Clause 11.5 - Disturbance

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

	<p>Clause 11.6 - Environmental disturbance</p> <p>F:..... V:..... T:.....</p>			
70	<p>Clause 11.7 - <b>Works</b> cleaning and clearing</p> <p>F:..... V:..... T:.....</p>		Item	
71	<p>Clause 11.8 - Vermin</p> <p>F:..... V:..... T:.....</p>		Item	
72	<p>Clause 11.9 - Overhand work</p> <p>F:..... V:..... T:.....</p>		Item	
73	<p>Clause 11.10 - Tenant installations by <b>direct contractors</b></p> <p>F:..... V:..... T:.....</p>		Item	
74	<p>Clause 11.11 - Advertising</p> <p>F:..... V:..... T:.....</p>		Item	
	<b><u>Preliminaries schedule (B12)</u></b>			
75	<p><b>Information for completion of the preliminaries schedule</b></p> <p>Information necessary for elections and completion of those clauses contained in the <b>preliminaries</b> schedule which are necessary for tender purposes is given hereunder. Where no information is given it shall mean that no specific requirements are expected or that the clause is not relevant to this specific contract</p>			
	<b>Carried to Collection</b>			R
	<p>Section No. 1 Bill No. 1 Bill No.1 : Preliminaries <b>MK &amp; Associates</b></p>			

12.1 - Provisional **bills of quantities** [2.2]

The quantities are provisional ?  
Yes/No ?

12.2 - Availability of **construction information** [2.3]

**Construction documentation** is complete?  
Yes/No ?

12.3 - Previous work - dimensional accuracy [3.1]

12.4 - Previous work - **defects** [3.2]

12.5 - Inspection of adjoining properties [3.3]

12.6 - Defined **works** area [4.1]

User note

*Describe the restrictions to the site or areas that the contractor may not occupy. Reference as [PBA 12.1.4]*

12.7 - Handover of **site** in stages [4.2]

User note

*Describe in detail where handover of the site to the contractor is done in stages*

12.8 - Enclosure of the **works** [4.3]

12.9 - Geotechnical investigation [4.4]

User note

*Insert the following clause should a geotechnical investigation report be available and insert the relevant annexure*

? Refer to Annexure ? for the results of a geotechnical investigation report ?

12.10 - Existing premises occupied [4.6]

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

User note

*If the existing premises are occupied state it here and describe the detail and/or specific requirements. Reference as [PBA 12.1.2]*

12.11 - Services - known [4.7]

User note

*Insert details should the contractor be responsible for the preservation of known services. Reference as [PBA 12.1.3]*

12.12 - Protection of trees and/or relevant natural features  
[4.8]

User note

*Expand clause 4.8 of the Preliminaries should there be specific requirements for the preservation of trees or relevant natural features. Reference as [PBA 12.1.3]*

12.13 - Water [8.1]

- Option A (by **contractor**) ?
- Yes/No ?
- Option B (by **employer** - free of charge) ?
- Yes/No ?
- Option C (by **employer** - metered) ?
- Yes/No ?

12.14 - Electricity [8.2]

- Option A (by **contractor**) ?
- Yes/No ?
- Option B (by **employer** - free of charge) ?
- Yes/No ?
- Option C (by **employer** - metered) ?
- Yes/No ?

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**



The **contractor** is to ensure that all roads which border the **site** and is used by the **contractor** during the execution of the **works** are kept clean and free of any dirt or debris caused by the execution of the **works** ?

**? Environmental management plan**

The **employer** has prepared an environmental management plan (EMP) (refer to Annexure ? for a copy of the relevant plan). The **contractor** shall price opposite this item for compliance with all the requirements of such EMP ?

F:..... V:.....  
T:.....

Item

**SECTION C: SPECIFIC PRELIMINARIES**

User note

*Users shall avoid inserting in Section C items which may be construed as amending, modifying, correcting or supplementing the provisions of the JBCC Principal Building Agreement. Such amendments, modifications, corrections or supplements should be kept to the absolute minimum and should be inserted in the space provided in the contract data or in a single referenced annexure as stipulated in the contract data or, when taking into account the methodology suggested in the user note on page 2 of this Bill No. 1, should be inserted in Section A under the recited clause headings of the JBCC Principal Building Agreement in this Bill No. 1*

User note

*Selected examples of typical clauses are provided to indicate ways of describing such clauses. Users must delete, adapt or add to these examples to suit their particular circumstances*

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

76 Warranties for materials and workmanship

Where warranties for materials and/or workmanship are called for, the **contractor** shall obtain a written warranty, addressed to the **employer**, from the entity supplying the materials and/or doing the work and shall deliver same to the **principal agent** on the **final completion** of the contract

The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of **practical completion** and that any **defects** that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written **notice** to do so

The warranty will not be enforced if the work is damaged by **defects** in the execution of the **works**, in which case the responsibility for replacement shall rest entirely with the **contractor**

F:..... V:.....  
T:.....

Item

77 Overtime

Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the **contractor** unless the **principal agent** has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the **employer**

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

78 Co-operation of the **contractor** for cost management

It is specifically agreed that the **contractor** accepts the obligation of assisting the **principal agent** in implementing proper cost management. The **contractor** will be advised by the **principal agent** of all cost management procedures which will be implemented to ensure that the **contract value** does not exceed the budget

F:..... V:.....  
T:.....

Item

79 Overloading

The **contractor** shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the **works** or temporary works eg scaffolding, etc. The **contractor** shall submit details of his proposed loading, storage, plant erection, etc to the **principal agent** for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the **principal agent's** requirements in connection with the provision of temporary support work, etc. Any damage caused to the **works** by overloading shall be made good by the **contractor** at his sole expense

F:..... V:.....  
T:.....

Item

80 Propping of floors below

The **contractor** is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of **materials and goods** and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the **principal agent** and the cost thereof shall be borne by the **contractor**

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

81 Testing of flat roof waterproofing for watertightness

Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the **principal agent**, flooded with water and kept "ponded" for at least forty (40) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing

F:..... V:.....  
T:.....

Item

82 Green star building certification

User note

*Insert the provisions called for by the relevant green star consultant should it be a requirement that the project be submitted for green star certification*

F:..... V:.....  
T:.....

Item

83 Broad based black economic empowerment (BBBEE)

Tenders submitted will be evaluated taking into account their empowerment rating

The **employer** will be monitoring the broad based black economic empowerment (BBBEE) status of the **contractor** throughout the execution of the **works**

The **contractor** is to submit to the **principal agent** on an annual basis a schedule of spend, split into vendors engaged as **subcontractors** and suppliers indicating their BBBEE rating including proof of the said rating

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

84 Advertising rights

The **employer** may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The **contractor** shall not prevent such an arrangement and will assist in the facilitation of same. Position and type of advertising structure to be agreed with the **principal agent** so as not to hinder the **contractor** in meeting the obligations under this **agreement**

F:..... V:.....  
T:.....

Item

85 Confidentiality

The **contractor** undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all **subcontractors** and suppliers. Such information shall not be used in any way except in connection with the execution of the **works**

No information regarding this project shall be published or disclosed without the prior written consent of the **employer**

F:..... V:.....  
T:.....

Item

86 Media releases

All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the **employer**

The **contractor** together with his **subcontractors** shall not, without the prior written consent of the **employer**, cause any statement or advertisement connected with this project to be printed, screened or aired by the media

F:..... V:.....  
T:.....

Item

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**SUMMARY OF CATEGORIES**

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

**Carried to Collection**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 1

Bill No. 1

Bill No.1 : Preliminaries

**COLLECTION**

Total Brought Forward from Page No.

**Page  
No**

**Amount**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19

**Carried Forward**

R

Section No. 1  
Bill No. 1  
Bill No.1 : Preliminaries  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 1

Bill No. 1

Bill No.1 : Preliminaries

**COLLECTION**

**Brought Forward**

Total Brought Forward from Page No.

**Page  
No**

**Amount**

R

- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37

**Carried Forward**

R

Section No. 1

Bill No. 1

Bill No.1 : Preliminaries

**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 1

Bill No. 1

Bill No.1 : Preliminaries

**COLLECTION**

**Brought Forward**

Total Brought Forward from Page No.

**Page  
No**

**Amount**

R

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

**Carried to Final Summary**

R

Section No. 1

Bill No. 1

Bill No.1 : Preliminaries

**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 1 LV RETICULATION</u></b>				
	<b><u>PROVISIONAL SUMS</u></b>				
1	Provide the sum of R 300 000.00 for Floor mounted 200kVA Transformer @ Substation to be done by service provider in consultation with the Engineer/Consultant		Item		300,000.00
2	Provide the sum of R 400 000.00 for New MCC Board as per SLD by service provider in consultation with the Engineer/Consultant		Item		400,000.00
3	Provide the sum of R 60 000.00 for New Signalling Panel as per SLD by service provider in consultation with the Engineer/Consultant		Item		60,000.00
4	Provide the sum of R 200 000.00 for Unkown works at Sub Sustation by service provider in consultation with the Engineer/Consultant		Item		200,000.00
5	Provide the sum of R 100 000.00 for Eskom Kiosk,connection and Security around Transfomer		Item		100,000.00
	<b><u>TRENCHING</u></b>				
	<b><u>Excavating, bedding, backfilling, consolidating and making good as specified,</u></b>				
6	Pickable soil	m3	35		
7	Hard rock	m3	15		
8	Backfilling and compaction	m3	50		
9	110mm dia PVC sleeves for road crossings/cable entries into the building-rate must include for galv steel draw wires in spare sleeves and sealing of ends	m			<b>Rate Only</b>
	<b>Carried to Collection</b>			R	
	Section No. 2 Bill No. 1 Bill No.1 LV Reticulation <b>MK &amp; Associates</b>				

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

10	Railway Crossing, as indicated per drawing under road Drilling, at a depth of 600mm including 160 mm Black Corrugated PVC road Sleeves. 4 sleeves, must include installation 200mm below existing services	m	6	
11	Cable warning tape, 300mm above cables	m	200	
12	Cable markers, above cables	No	4	
	<b><u>600/1000V PVC SWA cables, in trenches and sleeves, including labels</u></b>			
13	70mm <sup>2</sup> 4core XLPE	m		<b>Rate Only</b>
14	185mm <sup>2</sup> 4core	m		
15	150mm <sup>2</sup> 4core ALU	m	300	
16	70mm <sup>2</sup> 4core	m	60	
17	50mm <sup>2</sup> 4core	m	50	
18	35mm <sup>2</sup> 4core	m	80	
19	25mm <sup>2</sup> 2core	m		<b>Rate Only</b>
20	16mm <sup>2</sup> 4core	m	100	
21	16mm <sup>2</sup> 2core	m		<b>Rate Only</b>
22	10mm <sup>2</sup> 4core	m	60	
23	6mm <sup>2</sup> 4core	m		<b>Rate Only</b>
24	4mm <sup>2</sup> 4core	m	120	
	<b><u>600/1000V Cable terminations, for PVC PVC SWA PVC Cu cables, for indoor or outdoor use, as required</u></b>			
25	Gland no 5 complete with shroud	No	15	
26	Gland no 4 complete with shroud	No	30	
	<b>Carried to Collection</b>			<b>R</b>
	Section No. 2 Bill No. 1 Bill No.1 LV Reticulation <b>MK &amp; Associates</b>			



**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 2

Bill No. 1

Bill No.1 LV Reticulation

**COLLECTION**

Total Brought Forward from Page No.

**Page  
No**

**Amount**

59

60

61

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 1

Bill No.1 LV Reticulation

**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 2 Electrical Installations</u></b>				
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>				
	<u>Preambles</u>				
	General trenching work for sleeves along the routes as pegged out on site after co-ordination with other services				
	Allowance must be made for the sifting of soil when required, removal and carting away of all stones and rocks including dumping off site. Backfilling and compaction shall be carried out as specified for overall siteworks.				
	<b><u>TRENCHING</u></b>				
1	Trenching through floor for sleeves	m3			<b>Rate Only</b>
2	Excavation and backfilling in soft soil	m3			<b>Rate Only</b>
3	Excavation and backfilling in hard rock	m3			<b>Rate Only</b>
	<b><u>Cable and Data Sleeves</u></b>				
	<b><u>Supply and installation of PVC Sleeves through floor construction to power distribution board and communication board complete with standard radius sleeve bends</u></b>				
4	75mm Diameter for Data	m			<b>Rate Only</b>
5	110mm Diameter for power cable	m			<b>Rate Only</b>
	<b><u>Radius Bends</u></b>				
6	75mm Diameter	No			<b>Rate Only</b>
7	110mm Diameter	No			<b>Rate Only</b>
	<b>Carried to Collection</b>				R
	Section No. 2 Bill No. 2 Bill No.2 Electrical Installations <b>MK &amp; Associates</b>				

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

	<b><u>Draw Wires</u></b>			
8	Supply and install a 0,6mm diameter galvanised draw wire in sleeves and conduit for data installation	m	300	
	<b><u>Distribution Boards</u></b>			
	<b><u>Supply, delivery, storage and submission of workshop drawings for the Flush mounted architrave steel type power distribution boards complete with flush trays, doors, switch gear mounting trays, copper busbars, neutral and earth bars, correctly sized internal</u></b>			
9	Distribution Board (DB-internal Existing Equipment		Item	12,200.00
10	Distribution Board (DB-internal Existing Office )		Item	3,600.00
	<b><u>Low Voltage PVC Cables</u></b>			
	<b><u>Supply and installation of PVC SWA PVC cable and Bare Copper Earth Wire in sleeves and in trenches</u></b>			
11	25mm 4 core PVC SWA Cable	m		<b>Rate Only</b>
12	16mm BCEW	m		<b>Rate Only</b>
	<b><u>Conduit Work</u></b>			
	<b><u>Supply, delivery and installation of SABS approved PVC / Galvanised Conduits completed with all required conduit accessories.</u></b>			
	<u>Built or Chase into brick or concrete work:</u>			
13	20mm Galvanised Conduit	m	80	
14	25mm Galvanised Conduit	m	90	
	<u>In Ceiling space and Timber work or along Purlins</u>			
15	20mm Galvanised Conduit	m	40	
16	25mm Galvanised Conduit	m	40	
	<b>Carried to Collection</b>			R
	Section No. 2			
	Bill No. 2			
	Bill No.2 Electrical Installations			
	<b>MK &amp; Associates</b>			

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

17	Hospital saddles	No	600	
	<b><u>Conduit Boxes</u></b>			
	<b><u>Supply and installation of SABS approved conduit boxes, installed in the run of the conduit installation, cast into concrete and built into brickwork or flush inside false ceiling spaces, complete with all required conduit termination accessories.</u></b>			
18	20mm diameter 4 way type(round box)	m	35	
19	450 x 450mm Bonding tray in roof space	No		<b>Rate Only</b>
	<b><u>Wall Boxes</u></b>			
	<b><u>Supply and installation of SABS approved galvanised pressed steel wall boxes for building flush into brickwork or cast into concrete work.</u></b>			
	<u>Flush mounted type:</u>			
20	100 x 50 x 50mm	No	10	
21	100 x 100 x 50mm	No	15	
22	300 x 50 x 50mm	No	4	
	<b><u>PVC Wiring in conduits:</u></b>			
23	2.5mm <sup>2</sup> for lights circuits	m	600	
24	4mm <sup>2</sup> for plug sockets circuits	m	900	
25	6mm <sup>2</sup> for plug sockets circuits	m	400	
	<b><u>Stranded Bare Copper Earth Wire</u></b>			
	<b><u>Supply and installation of stranded bare copper earth wire along with PVC wiring in conduits. Tendered rates shall make provision for wastage.</u></b>			
26	2.5mm <sup>2</sup>	m	600	
	<b>Carried to Collection</b>			R
	Section No. 2			
	Bill No. 2			
	Bill No.2 Electrical Installations			
	<b>MK &amp; Associates</b>			

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

27	2.5mm2	m	900	
28	4mm2	m	400	
<b><u>Light Switches</u></b>				
<b><u>Supply and installation of SABS approved type 16A flush and surface type light switches. Final paint finishes shall be confirmed at a later stage, allowance shall however be made as specified in the general specification. All boxes for flush mounting meas</u></b>				
29	1 Lever 1 way Industrial	No	14	
30	1 Lever 2 way Industrial	No	12	
31	2 Lever 2 way Industrial	No	4	
32	Photo cell in an empty Bulkhead	No	6	
33	Occupancy Sensors	No		<b>Rate Only</b>
<b><u>Socket Outlets</u></b>				
<b><u>Supply and installation of SABS approved switched and unswitched type flush and surface mounted type 16A switched socket outlets suitable for mounting in flush steel wall boxes or in steel pedestal units or on surface. The final colour of the paint finish shall be confirmed at a later stage, allowance shall be made as specified in the specification. All flush type boxes and special pedestals measured elsewhere.</u></b>				
34	16A 3 pin single socket outlets	No	8	
35	16A 3 pin Single and 2 pin socket outlets	No	8	
36	16A Doubles switched Industrial Socket outlets	No	5	
<b><u>Light Fittings</u></b>				
<b>Carried to Collection</b>				R
Section No. 2				
Bill No. 2				
Bill No.2 Electrical Installations				
<b>MK &amp; Associates</b>				

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

**Supply, delivery to site, storage and installation of the below specified light fittings complete with lamps, fixing material, mounting and tubes. Allowance must be made in the rates for all the required fixing materials and accessories.**

**Fittings to be equal and similar approved to the below quoted manufacture.**

37	Type F1: 2x18W 1200mm LED Open Channel Fluorescent Light	No	10
38	Type W: 2x18W 1200mm LED Vapour Proof Fluorescent Light	No	46
39	70W LED Findustrial Bulk head	No	55
40	100W LED industrial Flood light	No	30
41	54W LED High Bay Luminaire	No	8

**Electrical Tests**

**Making provision for the required inspection, tests and the commissioning of the complete installation and the issuing of the required certificate.**

42	Building installation		Item	30,000.00
----	-----------------------	--	------	-----------

**Others**

43	300 x 300mm - Telephone & Data DB	No		<b>Rate Only</b>
44	100 x 100 x 50mm - Draw box for Communication complete with blank cover	No		<b>Rate Only</b>
45	2 compartment power skirting installed in offices	m		<b>Rate Only</b>
46	Three point socket outlet on Powerskirting; must include draw box, blank cover plate, etc,	No		<b>Rate Only</b>
47	Data points on Powerskirting; must include draw box, blank cover plate, etc,	No		<b>Rate Only</b>

**Carried to Collection**

R

Section No. 2  
Bill No. 2  
Bill No.2 Electrical Installations  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

48	Telephone points on Powerskirting; must include draw box, blank cover plate, etc,	No		<b>Rate Only</b>
49	30A 2pole Isolator, in suitable York Box, for HVAC	No	4	
50	Provide the sum of R30000-00 for the supply and installation of rack mounted Cable trays or trunking		Item	30,000.00
51	40A TP Rotary Isolator points with complete and suitable fitting, for mechanical equipment	No	12	
<b>Carried to Collection</b>				
Section No. 2 Bill No. 2 Bill No.2 Electrical Installations <b>MK &amp; Associates</b>				R

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 2

Bill No. 2

Bill No.2 Electrical Installations

**COLLECTION**

Total Brought Forward from Page No.

**Page  
No**

**Amount**

63

64

65

66

67

68

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 2

Bill No.2 Electrical Installations

**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 3 Generator Set</u></b>				
	<b><u>Manufacture, deliver to site, install of a generator silent canopy set for a 300kVA Rates to include for steelwork and powder coated, busbars and drilling, busbar connections internal wiring, earthing for the generator set, etc.</u></b>				
1	Provide Sum of 140 000.00 for a 300kVA, 400V Canopy Silent type with extended exhaust		Item		140,000.00
2	Provide Sum of 60 000.00 for a Automatic change over panel board Deepsea with all automation switchgear and indicators		Item		60,000.00
	<b><u>Electrical reticulation</u></b>				
	<b><u>Supply and installation of PVC Sleeves through floor construction to power distribution board and communication board complete with standard radius sleeve bends</u></b>				
3	Interconnecting control & 150mm 4 core power cabling between genset and alternator and AMF panel	m	15		
	<b><u>General</u></b>				
4	Diesel fuel for full tank	l	200		
5	Laminated plastic framed schematic wiring diagram fixed to the inside of the enclosure adjacent the AMF panel	No	1		
6	A4 size log book on chain in metal envelope in door	No	1		
7	Operational training of Employer's staff			SUM	
8	Manuals - 3 sets			SUM	
	<b>Carried to Collection</b>			R	
	Section No. 2				
	Bill No. 3				
	Bill No.3 Generator Set				
	<b>MK &amp; Associates</b>				

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

9	Allow for crane, rigging and installation of the generator set			SUM	
	<b><u>Maintenance Plan</u></b>				
10	Generator Inspection every quarter + service new fuel filters for 1st year	No	4		
	<b><u>Test and Commissioning</u></b>				
11	Test and Commissioning			SUM	
<b>Carried to Collection</b>				R	
Section No. 2 Bill No. 3 Bill No.3 Generator Set <b>MK &amp; Associates</b>					

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 2

Bill No. 3

Bill No.3 Generator Set

**COLLECTION**

Total Brought Forward from Page No.

**Page  
No**

70

71

**Amount**

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 3

Bill No.3 Generator Set

**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 4 Earthing &amp; Lightning Protection System</u></b>				
	<b><u>Low Voltage Conductor</u></b>				
	<b><u>Supply and installation of Bare Copper Earth Wire for Earthing and Bonding on earth mat with connecting assessories</u></b>				
	<u>Bonding and Earth Conductors</u>				
1	Bonding Conductor 16mm <sup>2</sup> CU conductor & connecting assessories	m	60		
2	Earth Conductor 50mm <sup>2</sup> CU conductor & connecting assessories	m	80		
3	Air terminating Conductor 50mm <sup>2</sup> Al conductor & connecting assessories	m	300		
4	Exometric weld	No	6		
	<b><u>Earth Electrode</u></b>				
	<b><u>Supply and installation of PVC SWA PVC cable and Bare Copper Earth Wire in sleeves and in trenches</u></b>				
5	Earth spikes 1,2m long and assessories	No	8		
	<b><u>Conduit Work</u></b>				
	<b><u>Supply, delivery and installation of SABS approved PVC / Galvanised Conduits completed with all required conduit accessories.</u></b>				
	<u>Built or Chase into brick or concrete work:</u>				
6	25mm PVC Conduit	m	60		
	<b>Carried to Collection</b>				R
	Section No. 2				
	Bill No. 4				
	Bill No.4 Earthing and Lightning Protection System				
	<b>MK &amp; Associates</b>				



**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 2

Bill No. 4

Bill No.4 Earthing and Lightning Protection System

**COLLECTION**

Total Brought Forward from Page No.

**Page  
No**

73

74

**Amount**

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 4

Bill No.4 Earthing and Lightning Protection System

**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Item No		Unit	Quantity	Rate	Amount
<b><u>SECTION No. 2</u></b>					
<b><u>BILL No. 5 Area Lighting</u></b>					
1	6.0m Galvanised Black Streetlight poles complete with circuit breakers and accessories	No	15		
2	Supply and install 55W LED Post Top Fittings complete in each pole above	No	10		
3	Supply and install 4mm 4core swa cable 600/1000V PVC for Streetlights	m	200		
4	2x36W LED 1200mm T8 Vapour proof LED Light	No	12		
5	LED Flood Lights - 100W LED MIDI	No	15		
6	Supply and install 2,5mm Bare Copper Earth Wire for Streetlights	m	200		
7	Supply and install Terminations for above cable	No	10		
<b><u>EXCAVATION AND TRENCHING</u></b>					
<b><u>For the Supply and Labour of the following:</u></b>					
<b><u>Trenching for LV Cable 1000mm x 450mm wide</u></b>					
<b><u>(Including Backfill)</u></b>					
8	Soft ground	m3	39.20		
9	Hard Rock	m3	16.80		
10	Danger Tape installed in Trenches	m	200		
11	Concrete cable markers	No	4		
12	75mm PVC Cable sleeve	m	15		
13	Railway Crossing, as indicated per drawing under road Drilling, at a depth of 600mm including 160 mm Black Corrugated PVC road Sleeves. 4 sleeves	m			<b>Rate Only</b>
<b>Carried to Collection</b>				R	
Section No. 2					
Bill No. 5					
Bill No.5 Area Lighting					
<b>MK &amp; Associates</b>					

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

14 Testing of this section in the presence of the Employer and/or the Engineer, including all equipment, power generator, etc.

No

1

**Carried to Collection**

R

Section No. 2  
Bill No. 5  
Bill No.5 Area Lighting  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 2

Bill No. 5

Bill No.5 Area Lighting

**COLLECTION**

Total Brought Forward from Page No.

**Page  
No**

76

77

**Amount**

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 5

Bill No.5 Area Lighting

**MK & Associates**

PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE

Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 6 CCTV</u></b>				
	<p><b><u>Supply and Installation of a CCTV Camera Surveillance and Recording System with minimum 14 days recording on motion detection. Security • Camera installation shall be done using vandal proof security type screws. The screws should only be taken out or installed using a specialised tool and not an ordinary screwdriver. All cameras must give out alarms (visual &amp; audible) in the event of connection loss, camera malfunctioning, camera vandalism, tempering or camera shock. Outdoor cameras are to be housed in IP66 rated housings. Cameras must be supplied with all mounting accessories, brackets and housings. Bandwidth Control • Cameras must be configured to transmit a unicast stream to the server/s. Servers transmits multicast streams to the rest of the network /clients. Analytics • All cameras are to have inbuilt in analytics - covering video motion detection, active tempering and for indoor cameras they must have an additional analytic feature - audio detection . Power • All cameras are PoE - Type 1 Class 3. Typical: 3,1W and 5,6W (Max). Edge Storage • A 64G Class 10 SD card is standard on all cameras. Notification • The system must be configured to send event notification by email or sms to designated email accounts or cellphones. Remote viewing • The designated accounts must be able to log On (when on / off site), access or view any camera on site from their cellphones and iPads</u></b></p>				
1	Fixed Indoor Dome Camera. Full HD 1080p (1920 x 1080), Built-in IR illumination. Image sensor: 1/3.0" progressive scan RGB CMOS, Varifocal lens (3 - 75mm), Wide Dynamic range (WDR), Horizontal angle				
	<b>Carried to Collection</b>				R
	Section No. 2 Bill No. 6 Bill No.6 CCTV Surveillance & Recording System <b>MK &amp; Associates</b>				

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

of view 100° - 35°: H.264 High, 25/30 fps; Network security: HTTPSa encryption, IEEE 802.1Xa, digest authentication, user access log, centralized certificate management. Network Protocols: IPv4/v6, HTTP, HTTPSa , SSL/TLSa , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP, SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH. Analytics: Video Motion Detection, Active tampering alarm and audio detection. Audio streaming: two-way. Audio compression: AAC LC 8/16/32/44.1/48kHz, G711 PCM 8kHz, G.726 ADPCM 8kHz, Opus 8/16/48 kHz, LPCM 48kHz Configurable bit rate. Audio input/output: External microphone input or line input, line output. Power over Ethernet IEEE 802.3af / 802.3at, 64G Class 10 SD card.

No

4

2 Fixed Outdoor Bullet Network Camera. IP66, Full HD 1080p (1920 x 1080), Built-in IR illumination. Image sensor: 1/2.8" progressive scan RGB CMOS, Varifocal lens (2.8 - 8mm). Auto iris. H.264 High, 30 fps; Network security: HTTPSa encryption, IEEE 802.1Xa, digest authentication, user access log, centralized certificate management. Network Protocols: IPv4/v6, HTTP, HTTPSa , SSL/TLSa , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP, SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH. Analytics: Video Motion Detection, Active tampering alarm.. Event actions Notification: PoE - IEEE 802.3af / 802.3at, 64G Class 10 SD card.

No

15

**Carried to Collection**

R

Section No. 2  
Bill No. 6  
Bill No.6 CCTV Surveillance & Recording System  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

3 Bispectral PTZ Network Camera. IP66, 2MP camera with Image sensor: Visual - Progressive scan, CMOS 1/2.8", Thermal- Uncooled micro bolometer 640x480 pixels, Pixel size: 17µm; Lens: Visual:- Visual: 4.3–129 mm, Autofocus, auto-iris; Athermalized 35-105 mm,F1.6, Near pre-focused distance: 22–195 m, Infrared -cut filter to infrared pass filter in night mode Minimum illuminance: 0.2 (colour), 0.01 (B/W); Thermal Sensitivity:NETD < 50 mK; Video compression:H.264 (MPEG4 Part 10/AVC), Motion JPEG; Resolution: 1920x1080p (HDTV 1080p), Thermal 640x480, scalable up to 800x600 (SVGA); Frame rate: Up to 25/30 fps (50/60 Hz) in HDTV 1080p, Thermal: Up to 8.3 fps and 30 fps, Pan/Tilt/Zoom Pan: 360° endless, 0.05°–120°/s Tilt: -90° to +45°, 0.05°–65°/s; Zoom: Visual: 30x optical zoom and 12x digital zoom, total 360x zoom, Tamper; Security: Multi-level passwords, IP filtering HTTPS, Event triggers: video motion detection, tempering & shock detection,day/night mode. Network security: HTTPSa encryption, IEEE 802.1Xa, digest authentication, user access log, centralized certificate management; Network Protocols: IPv4/v6, HTTP, HTTPSa , SSL/TLSa , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP, SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH. Analytics: Video Motion Detection, Active tampering alarm; Power: POE+ IEEE 802.3at or injector; Vandal resistant; WDR; Memory card slot, with 64GB Class 10 memory card; AVHS; ONVIF; Multi-view Streaming; mounting brackets, power supply. :PoE - IEEE 802.3af / 802.3at, 64G Class 10 SD card.

No 1

4 Three Dimensional Joystick Controller

No 1

**Carried to Collection**

R

Section No. 2  
Bill No. 6  
Bill No.6 CCTV Surveillance & Recording System  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

5 Operators and playback Workstation. Chassis: Mini-Tower. - Processor: Intel® Xeon® Seven Core Processor, - Memory: 8G, - Hard Drive: 500GB, 7200 Rpm, Serial ATA II, HD Controller: Integrated Intel chipset SATA 3.0Gb/s, - HD Configuration: All SATA drives, No RAID, - Network Adapter: Intel, 1Gbps, PCI Express with SNTP and DMI2 support, Microsoft Windows 10, - Ports: 1 x USB 3.0 and 3 x USB 2.0, - Optical Drive: 16X DVD+/-RW Drive. Graphics Adapter: 1.5GB NVIDIA® Quadro® FX 4800, DUAL MON, 2DP & 1DVI,  
Monitor: 32"LED HAS Wide Monitor, keyboard, mouse, speakers, VGA/ DVI Inputs, Res 1680 x 1050 pixels, - Max Images screen: sixteen (16), - Max CPU Usage: 50% with 16 simultaneous Images - Workstations shall support multi-monitor operation, allowing an operator to have up to three monitors (2 x 32" and 1 x 55") for each workstation.

No 1

6 55" LED TFT (Active Matrix), Display Monitor, 1080p, mounting brackets. Input: Analogue (Composite) + Digital (SVGA) + HDMI - Contrast Ratio: 800:1. Minimum Resolution: 1366 x 768, - Pixel pitch: 0.650mm, - Minimum Viewing Angle: 170°/170°, - Scanning Frequency: 30-70kHz Horizontal, 50-85 Vertical, - Brightness: 500 cd/m2, Response Time: 8ms

No 1

7 32" LED Monitor , LED TFT (Active Matrix), - Input: Analogue (Composite) + Digital (SVGA) + HDMI, - Contrast Ratio: 800:1, - Minimum Resolution: 1680 x 1050, - Pixel pitch: 0.255mm, - Minimum Viewing Angle: 160°/160°, - Scanning Frequency: 30-81kHz , - Brightness: 300 cd/m2, - Response Time: 5ms

No 1

**Carried to Collection**

R

Section No. 2  
Bill No. 6  
Bill No.6 CCTV Surveillance & Recording System  
**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

8	32Channels Embedded Network Video Server and Recorder, complete with Video Management Software. Intel Core i7, Embedded Windows Server, , Flash - 128GB mSATA, RAM 8GB, ONVIF/PSIA, eSATA, HDMI/VGA/BNC. Video Compression - H.264+, H.264, H.265, Network Functions - IPv4/6, TCP/IP, HTTP, HTTPS, UPnP, RTSP/RTP/ RTCP, SMTP, FTP, DHCP, NTP, DNS, DDNS, IP Filter. video formaty. • Backup Modes - USB Device / Network / eSATA Device. Bit Rate - 48~ 8192kbps. RS485 1 port for PTZ control. Search Modes - Time/Date, Alarm, MD & Exact search (accurate to second. Trigger Events - Recording, PTZ, Tour, Alarm, Video Push. Video Detection - Motion Detection, MD Zones: 396(22× 18), Video Loss & Camera Blank. Email, FTP, Buzzer & Screen tip. Smart search. Remote View - iOS (iPhone, iPad) / Android devices / Windows Phone. Video outputs at up to 4K (4096*2160) resolution. • VCA detection alarm and VCA search. • Storage - 80TB total . Hot-Swappable. Direct Attached - RAID (0,1, 5 ,10). - iSCSI. Rack mount, 10GbE				
		No	1		
9	19" 24 Port Patch Panel - loaded	No	4		
10	19" rack mount, 1U Brush Panels	No	4		
11	24 Port Patch Panel Lead: CAT 6a	No	42		
12	utp Cat6a Data Cables	m	900		
13	CAT 6a UTP Fly Leads, 2m	No	6		
14	CAT 6a UTP RJ45 connectors and boots	No	48		
15	Single port CAT6a RJ45 network faceplate and back box	No	12		
	<b><u>Testing and Commissioning</u></b>				
16	Commissioning of installation	No	1		
17	Training of Personnel	No	2		
18	Manuals, Documentation, AS Builts	No	3		
	<b>Carried to Collection</b>				
	Section No. 2				
	Bill No. 6				
	Bill No.6 CCTV Surveillance & Recording System				
	<b>MK &amp; Associates</b>				
					R

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Section No. 2

Bill No. 6

Bill No.6 CCTV Surveillance & Recording System

**COLLECTION**

Total Brought Forward from Page No.

**Page  
No**

**Amount**

79

80

81

82

83

**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 6

Bill No.6 CCTV Surveillance & Recording System

**MK & Associates**

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Item No	Unit	Quantity	Rate	Amount
<b><u>SECTION No. 2</u></b>				
<b><u>BILL No. 7 PROVISIONAL AMOUNTS</u></b>				
<b><u>GRAIN PROCESSING &amp; MONITORING SYSTEM</u></b>				
1				
		Item		1,600,000.00
2		Item		
<b><u>COMMUNITY LIAISON OFFICER</u></b>				
3		Item		29,600.00
4		Item		
<b>Carried Forward to Summary of Section No. 2</b>				R
Section No. 2				
Bill No. 7				
Bill No.7 Provisional Amounts				
<b>MK &amp; Associates</b>				

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

**SECTION SUMMARY - Section No.2 Electrical Installations**

<b>Bill No</b>		<b>Page No</b>	<b>Amount</b>
1	Bill No.1 LV Reticulation	62	
2	Bill No.2 Electrical Installations	69	
3	Bill No.3 Generator Set	72	
4	Bill No.4 Earthing and Lightning Protection System	75	
5	Bill No.5 Area Lighting	78	
6	Bill No.6 CCTV Surveillance & Recording System	84	
7	Bill No.7 Provisional Amounts	85	
	<b>Carried to Final Summary</b>		R
	Section No. 2 <b>MK &amp; Associates</b>		

**PROPOSED ELECTRICAL & ELECTRONICS WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

<b>Section No</b>	<b><u>FINAL SUMMARY</u></b>	<b>Page No</b>		<b>Amount</b>
1	Section No.1 Preliminaries	58		
2	Section No.2 Electrical Installations	86		
	SUB-TOTAL			R
	OHS (Carried over from attached BOQ)	Item		
	SUB-TOTAL			R
	CONTINGENCY AT 5%			R
	SUB-TOTAL			R
	Add: VAT at 15%			R
	TOTAL			R
	<b>Carried to Form of Tender</b>			R
	<b>MK &amp; Associates</b>			

## **C3 SCOPE OF WORKS**

## CONTENTS

### SPECIFICATION FOR ELECTRICAL INSTALLATION:

- |    |        |   |
|----|--------|---|
| 1. | PART 1 | GENERAL   |
| 2. | PART 2 | ELECTRICAL INSTALLATION DETAILS   |
| 3. | PART 3 | QUALITY SPECIFICATIONS FOR MATERIAL AND EQUIPMENT OF ELECTRICAL INSTALLATIONS |
| 4. | PART 4 | BILLS OF QUANTITIES   |
| 5. | PART 5 | SCHEDULE OF MATERIAL  |
| 6. | PART 6 | DRAWINGS  |

## SPECIFICATION FOR ELECTRICAL INSTALLATIONS

## PART 1: GENERAL

## CONTENTS

CLAUSE	DESCRIPTION	PAGE
1	SCOPE OF WORKS	3
2	DRAWINGS	3
3	REGULATIONS	4
4	NOTICES AND FEES	4
5	SCHEDULE OF FITTINGS	4
6	QUALITY OF MATERIALS	5
7	CONDUIT AND ACCESSORIES	5-6
8	CONDUIT IN ROOF SPACES	6
9	SURFACE MOUNTED CONDUIT	6-7
10	CONDUIT IN CONCRETE SLABS	7
11	FLEXIBLE CONNECTIONS FOR CONNECTING UP OF STOVES, MACHINES, ETC	7
12	WIRING	8
13	SWITCHES AND SOCKET OUTLETS	8
14	SWITCHGEAR	8
15	SWITCHBOARDS	9
16	WORKMANSHIP AND STAFF	9
17	CERTIFICATE OF COMPLIANCE	9
18	EARTHING OF INSTALLATION	9-11
19	MOUNTING AND POSITIONING OF LUMINAIRES	11

**GENERAL SPECIFICATION FOR ELECTRICAL WORK**

**PART 1**

**1 SCOPE OF WORKS**

This quality specification describes the standards of the materials required for the electrical installation and general methods of installing these materials and is the basis of quality control requirements. It compliments the bill of quantities, the drawings and the detailed specification for the specific contract. Where the detailed specification and/ or the drawings differ from this quality technical specification the detailed specification and the drawings shall take precedence.

This contract shall allow for the complete supply, delivery on site, complete installation, testing and handing over in complete working order of the electrical installation as specified further herein.

- a) Supply and installation of low voltage supply cables from the nearest existing mini substation / overhead transformer to the internal main distribution board.
- b). Supply and installation of energy saving light fittings
- c). Supply and installation of power sockets outlets
- d). Supply and installation of data networks wire ways
- e). Supply and installation of indoor distribution boards

**2 DRAWINGS**

The Engineer's drawings covering the various sections of the installation are as stipulated below form part of this contract. The working drawings applicable to this contract shall generally consist of:

ID	DRAWING NO	TITLE	SIZE	REV	REV DATE
	SBS-C-BE-TCS-TDW-000-TD	Site Power Reticulation	A1	0	10-02-23
	SBS-C-BE-TCS-TDW-005-TD	Site Area Lighting	A1	0	10-02-23
	SBS-C-BE-TCS-TDW-002/1-TD	Delivery Bay - Lights Layout	A1	0	10-02-23
	SBS-C-BE-TCS-TDW-002/1-TD	Rail way Bay - Lights Layout	A1	0	10-02-23
	SBS-C-BE-TCS-TDW-002/1-TD	Weighbridge - Lights Layout	A1	0	10-02-23
	SBS-C-BE-TCS-TDW-003/2-TD	Site Plan MCC Panel - SLD Layout	A1	0	10-02-23
	SBS-C-BE-TCS-TDW-003/2-TD	Site Plan Signaling Panel - SLD Layout	A1	0	10-02-23
	SBS-C-BE-TCS-TDW-003/2-TD	Site Plan DB Office - SLD Layout	A1	0	10-02-23

### **3 REGULATIONS**

The installation shall be constructed and tested in accordance with the following Acts and regulations:

- a) The latest issue of SABS 0142: "Code of Practice for the Wiring of Premises",
- b) The Occupational Health and Safety Act, 1993 (Act 85 of 1993) ,
- c) The Local Government Act 1998 (Act 10 of 1998 municipal by-laws and any special requirements of the local supply authority,
- d) The Fire Brigade Services Act 1993 Act 2000 (Act 14 of 2000),
- e) The National Building Regulations and Building Standards Act 1996 (Act 29 of 1996),
- f) The Post Office Act 1998 (Act 14 of 1998),
- g) The Electricity Act 1996 (Act 88 of 1996) and
- h) The Regulations of the local Gas Board where applicable.

### **4 NOTICES AND FEES**

The successful tenderer for this contract shall, immediately after he has been officially notified that his tender has been accepted, and at any time thereafter as may be necessary, notify the Supply Authority, pay fees and take any other steps which may be required or prescribed for the power

Supply connection and/ or temporary connection by the Supply Authority, to this project.

### **5 SCHEDULE OF FITTINGS**

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

### **6 QUALITY OF MATERIALS**

Only materials of first class quality shall be used and all materials shall be subject to the approval of the Engineer. Wherever applicable the material is to comply with the relevant South African Bureau of Standards, specifications, or to British Standard Specifications, where no SABS Specifications exist.

Materials wherever possible, must be of South African manufacture.

### **7 CONDUIT AND ACCESSORIES**

The type of conduit and accessories required for the service, i.e. whether the conduit and accessories shall be of the screwed type, plain-end type or of the non-metallic type and whether metallic conduit shall be black enamelled or galvanised, is specified in Part 2 of this specification.

Unless other methods of installation are specified for certain circuits, the installation shall be in conduit throughout. No open wiring in roof spaces or elsewhere will be permitted.

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

- a) Screwed metallic conduit and accessories: SABS 1065, parts 1 and 2.
- b) Plain-end metallic conduit and accessories: SABS 1065, parts 1 and 2.
- c) Non-metallic conduit and accessories: SABS 950

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

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

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

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

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

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

All metallic conduit shall be manufactured of mild steel with a minimum thickness of 1,2mm for plain-end conduit and 1,6mm in respect of screwed conduit.

Under no circumstances will conduit having a wall thickness of less than 1,6 mm be allowed in screeding laid on top of concrete slabs.

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

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

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

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

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

## **8 CONDUIT IN ROOF SPACES**

Conduit in roof spaces shall be installed parallel or at right angles to the roof members and

shall be secured at intervals not exceeding 1,5m by means of saddles screwed to the roof timbers.

Nail or crampets will not be allowed.

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

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

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

## **9 SURFACE MOUNTED CONDUIT**

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

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

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

Running couplings are only to be used where unavoidable, and shall be fitted with a sliced coupling as a lock-nut.

Conduit is to be run on approved spaced saddles rigidly secured to the walls.

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

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

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

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

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

Painting of surface conduit shall match the colour of the adjacent wall 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, socket outlets, etc., to walls, wood plugs and the plugging in joints in brick walls are not acceptable.

## **10 CONDUIT IN CONCRETE SLABS**

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

The Contractor shall 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.

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

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

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

## 11 FLEXIBLE CONNECTIONS FOR CONNECTING UP OF STOVES, MACHINES, ETC.

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

Connectors for coupling onto the flexible tubing shall be of the gland or screw-in types, manufactured of either brass or cadmium or zinc plated mild steel, and the connectors after having been fixed onto the tubing, shall be durable and mechanically sound.  
Aluminium and zinc alloy connectors will not be acceptable.

## 12 WIRING:

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

No wiring shall be drawn into conduit until the conduit installation has been completed and all conduit ends provided with bushes. All conduit to be clear of moisture and debris before wiring is commenced. Unless otherwise specified in Part 2 of this specification or indicated on the service drawings, the wiring of the installation shall be carried out in accordance with the "Wiring Code". Further to the requirements concerning the installation of earth conductors to certain light points as set out in the "Wiring Code", it is a specific requirement of this document that where plain-end

Metallic conduit or non-metallic conduit has been used, earth conductors must be provided and drawn into the conduit with the main conductors to all points, including all luminaires and switches throughout the installation.

Wiring for lighting circuits is to be carried out with 2,5mm<sup>2</sup> conductors and a 2,5mm<sup>2</sup> earth conductor. For socket outlet circuits the wiring shall comprise 4mm<sup>2</sup> conductors and a 2,5mm<sup>2</sup> earth conductor. In certain instances, as will be directed in Part 2 of this specification, the sizes of the aforementioned conductors may be increased for specified circuits. Sizes of conductors to be drawn into conduit in all other instances, such as feeders to distribution boards, power points etc., shall be as specified elsewhere in this specification or indicated on the drawings. Sizes of conductors not specified must be

determined in accordance with the "Wiring Code".

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

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

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

### **13 SWITCHES AND SOCKET OUTLETS**

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

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

All light switches shall be installed at 1,4m above finished floor level and all socket outlets as directed in the Schedule of Fittings which forms part of this specification or alternatively the height of socket outlets may be indicated on the drawings.

### **14 SWITCHGEAR**

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

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

### **15 SWITCHBOARDS**

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

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

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

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

Clearly engraved labels are to be mounted on or below every switch. The working of the labels in English is to be according to the lay-out drawings or as directed by the Engineer's representative and must be confirmed on site. Flush mounted boards to be installed with the top of the board 2,0m above the finished floor level.

### **16 WORKMANSHIP AND STAFF**

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

The workmanship shall be of the highest grade and to the satisfaction of the Engineer. All inferior work shall, on indication by the Engineer's inspecting officers, immediately be removed and rectified by and at the expense of the Contractor.

## 17 CERTIFICATE OF COMPLIANCE

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

## 18 EARTHING OF INSTALLATION

### Main Earthing

The type of main earthing must be as required by the supply authority if other than the Specialist, and in any event as directed by the electrical engineer, who may require additional earthing to meet test standards.

Where required an earth mat shall be provided, the minimum size, unless otherwise specified, being 1,0m 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 Engineer's authorised representative.

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

Connection from the main earth bar on the main board must be made to the cold water main, the incoming service earth conductor, if any and the earth mat or other local

electrode by means of 12mm x 1,60 mm solid copper strapping or 16 mm<sup>2</sup> stranded (not solid) bare copper wire or such conductor as the Engineer's representative may direct. Main earth copper strapping where installed below 3m from ground level, must be run in 20 mm diameter conduit securely fixed to the walls.

All other hot and cold water pipes shall be connected with 12mm x 0,8mm perforated for solid copper strapping (not conductors) to the nearest switchboard. The strapping shall be fixed to the pipework with brass nuts and bolts and against walls with brass screws at 150 mm centres. In all cases where metal water pipes, down pipes, flues, etc., are positioned within 1,6m of switchboards an earth connection consisting of copper strapping shall be installed between the pipework and the board. In vertical building ducts accommodating both metal water pipes and electrical cables, all the pipes shall be earthed at each distribution board.

### Roofs, gutters and down pipes

Where service connections consist of overhead conductors, all metal parts of roofs, gutters and down pipes shall be earthed. One bare 10mm<sup>2</sup> copper conductor shall be installed over the full length of the ceiling void, fixed to the top purlin and connected to the main earth conductor and each switchboard. The roof and gutters shall be connected at 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. Where service connections consist of underground supplies, the above requirements are not applicable.

### **Sub-distribution boards**

A separate earth connection shall be supplied between the earth bus-bar in each sub-distribution board and the earth bus-bar in the Main Switchboard.

These connections shall consist of a bare or insulated stranded copper conductor installed along the same routes as the supply cables or in the same conduit as the supply conductors. Alternatively armoured cables with earth continuity conductors included in the armouring may be utilised where specified or approved.

### **Sub-circuits**

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

### **Ring Mains**

Common earth conductors may be used where various circuits are installed in the same wire way in accordance with SABS 0142. In such instances the sizes of earth conductors shall be equivalent to that of the largest current carrying conductor installed in the wire way, alternatively the size of the conductor shall be as directed by the Engineer. Earth conductors for individual circuits branching from the ring main shall be connected to the common earth conductor with T-ferrules or soldered. The common earth shall not be broken.

### **Non-metallic Conduit**

Where non-metallic conduit is specified or allowed, the installation shall comply with the Engineer's standard quality specification for "conduit and conduit accessories".

Standard copper earth conductors shall be installed in the conduits and fixed securely to all metal appliances and equipment, including metal switch boxes, socket-outlet boxes, draw-boxes, switchboards, luminaires, etc. The securing of earth conductors by means of self-threading screws will not be permitted.

### **Flexible Conduit**

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

### **Connection**

Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided.

Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

## **19 MOUNTING AND POSITIONING OF LUMINAIRES**

The 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 the building contractor is necessary to ensure that as far as possible the luminaires are symmetrically positioned with regard to the ceiling pattern.

The lay-out of the luminaires as indicated on the drawings must be adhered to as far as possible and must be confirmed with the Engineer's representative.

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

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

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

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

## **PART 2**

### **DETAILED SPECIFICATION**

### **ELECTRICAL INSTALLATIONS**

## DETAIL SPECIFICATION

## PART 2

## TABLE OF CONTENTS

CLAUSE	DESCRIPTION	PAGE
1	CABLE SLEEVE PIPES	14
2	NOTICES	14
3	ELECTRICAL EQUIPMENT	14
4	DRAWINGS	14
5	BALANCING OF LOAD	14
6	SERVICE CONDITIONS	14
7	SWITCHES AND SOCKET OUTLETS	14
8	LIGHT FITTINGS AND LAMPS	14
9	EARTHING AND BONDING	15
10	MAINTENANCE OF ELECTRICAL SUPPLY	15
11	EXTENT OF WORK	15
12	SUPPLY AND CONNECTION	15
13	CONDUIT AND WIRING	15-16
14	POWER POINTS	15
15	CABLES	16-19
16	DISTRIBUTION BOARDS	19
17	SCHEDULE OF LIGHT FITTINGS	19
18	SCHEDULE OF DISTRIBUTION BOARDS	19

**DETAIL SPECIFICATION****1 CABLE SLEEVE PIPES**

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

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

**2 NOTICES**

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

**3 ELECTRICAL EQUIPMENT**

All equipment and fittings supplied must be in accordance with the attached quality specification (Part 3 of this document), suitable for the relevant supply voltage, and frequency and must be approved by the Engineer's representative.

**4 DRAWINGS**

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

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

**5 BALANCING OF LOAD**

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

**6 SERVICE CONDITIONS**

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

**7 SWITCHES AND SOCKET OUTLETS**

The installation of switches and socket outlets must conform to clause 13 of Part 1 of this specification.

**8 LIGHT FITTINGS AND LAMPS**

The installation and mounting of luminaires must conform with clause 19 of Part 1 of this specification.

All fittings to be supplied by the Contractor shall have the approval of the Engineer illumination lamps shall bear the approved mark of the S.A.B.S. and shall have the British light centre length.

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

**9 EARTHING AND BONDING**

The tenderer will be responsible for all earthing and bonding of the building and installation. The earthing and bonding is to be carried out strictly as described in clause 18 of Part 1 of this specification and to the satisfaction of the Engineer's representative.

**10 MAINTENANCE OF ELECTRICAL SUPPLY**

All interruptions of the electrical supply that may be necessary for the execution of the work, will be subject to prior arrangement between the Contractor and the user Engineer and the Engineer's representative.

**11 EXTENT OF WORK**

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

**12 SUPPLY AND CONNECTION**

The supply will be at 400/220 Volt 50Hz.

The Contractor must arrange in good time with the local Authority for the low tension meter point and submit the account to the Engineer's Regional Office for payment.

The Contractor will be responsible for the supply and installation of the supply cable (from the supply authority's supply point) to the main low tension distribution kiosk (MAIN-KIOSK). The size and length of the cable is listed in the Schedule of Cables and provisionally measured in the Bills of Quantities.

**13. CONDUIT AND WIRING**

Conduit and conduit accessories shall be black enameled/galvanized screwed conduit or black enameled/galvanized plain end conduit in accordance with LATEST SABS 162, 763 and 1007 respectively.

All conduit, regardless of the system employed, shall be installed strictly as described in the applicable paragraphs of clauses 4 to 8 of Part 1 of the specification. Wiring of the installation shall be carried out as directed in clause 9 part 1 of this specification.

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

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

**13.1 TELEPHONE, DATA, ACCESS CONTROL AND CCTV SYSTEM INSTALLATION**

Tenderers shall allow for the supply, delivery and installation of all telephone, data, access control and CCTV systems conduits, draw boxes, outlets, draw-wires, etc. as specified and as indicated on the drawings.

**Draw-wires**

All conduits, sleeves, etc. required for the telephone, data, access control and CCTV systems installation shall be fitted with galvanised steel draw-wires.

### Outlets/Data

All telephone, data, access control and CCTV system outlets shown shall consist of 100 x 100 x 50mm boxes, complete with cover.

## 13.2 POWER TRUNKING

The Contractor shall be responsible for the supply and installation of all power trunking complete with corner pieces, end pieces, junction pieces, supply conduits, cover plates and power outlets as specified and indicated on the drawings.

The power trunking must comply with SABS 1197. The Contractor must ensure that the power trunking is installed to satisfaction of the Engineer's representative before commencing with the wiring of the power trunking.

## 14. POWER POINTS

Allow for the installation of power points and equipment as listed in the schedule, indicated on the drawings.

### 14.1 Geysers

The electrical contractor must electrically connect all geysers as specified and shown on the drawings OR as instructed on site by the Electrical Engineer.

## 15. CABLES

The Contractor shall supply and completely install all distribution cables as indicated on the drawings, and listed in the Schedule of Cables.

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

The cable-trenches shall be excavated to a minimum depth of **0,7m** deep below ground level and shall be 450mm wide for one to three cables, and the width shall be increased where more than three cables are laid together so that the cables may be placed at least two cable diameters apart throughout the run. The bottom of the trench shall be level and clean and the bottom and sites free from rocks or stones liable to cause damage to the cable.

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

In the trenches the cables shall be laid on a 75mm thick bed of earth and be covered with a 150 mm layer of earth before the trench is filled in.

All joints in underground cables and terminations shall be made either by means of compound filled boxes according to the best established practice by competent cable jointers using first class materials or by means of approved epoxy-resin pressure type jointing kits such as "Scotchcast". Epoxy-resin joints must be made entirely in accordance with the manufacturer's instructions and with materials stipulated in such instructions. Low tension PVCA cables are to be made off with sealing glands and materials designed for this purpose which must be of an approved make. Where cables are cut and not immediately made off, the ends are to be sealed without delay.

The laying of cables shall not be commenced until the trenches have been inspected and approved. The cable shall be removed from the drum in such a way that no twisting,

tension or mechanical damage is caused and must be adequately supported at intervals during the whole operation. Particular care must be exercised where it is necessary to draw cables through pipes and ducts to avoid abrasion, elongation or distortion of any kind. The ends of such pipes and ducts shall be sealed to approval after drawing in of the cables.

Backfilling (after bedding) of the trenches is to be carried out with a proper grading of the material to ensure settling without voids, and the material is to be tamped down after the addition of every 150mm. The surface is to be made good as required.

On each completed section of the laid and jointed cable, the insulation resistance shall be tested to approval with an approved "Megger" type instrument of not less than 500 V for low tension cables.

Earth continuity conductors are to be run with all underground cables constituting part of a low tension distribution system. Such continuity conductors are to be stranded bare copper of a cross-sectional area equal to at least half that of one live conductor of the cable, but shall not be less than

4mm<sup>2</sup> or more than 70mm<sup>2</sup>. A single earth wire may be used as earth continuity conductor for two or more cables run together, branch earth wires being brazed on where required.

### 15.1 LAYING, JOINTING AND MAKING OFF OF ELECTRICAL CABLES

1. The use of the term "Inspector", includes the engineer or inspector of the Engineer or an empowered person of the concerned supervising consulting engineer's firm.
2. No cable is to be laid before the cable trench is approved and the soil qualification of the excavation is agreed upon by the Contractor and inspector.
3. After the cable has been laid and before the cable trench is back-filled the inspector must ensure that the cable is properly bedded and that there is no undesirable material included in the bedding layer.
4. All cable jointing and the making off of the cables must only be carried out by qualified experienced cable jointers. Helpers of the jointers may not saw, strip, cut, solder, etc. The cable and other work undertaken by them must be carried out under the strict and constant supervision of the jointer.
5. Before the Contractor allows the jointer to commence with the jointing work or making off of the cable (making off is recognised as half a joint) he must take care and ensure:
  - 5.1 That he has adequate and suitable material available to complete the joint properly and efficiently. Special attention must be given to ensure the cable ferrules and cable lugs are of tinned copper and of sufficient size. The length of the jointing lugs must be at least six times the diameter of the conductor,
  - 5.2 That the joint pit is dry and that all loose stones and material are removed,
  - 5.3 That the walls and banks of the joint pit are reasonable firm and free from loose material which can fall into the pit,
  - 5.4 That the necessary coffer-dams or retaining walls are made to stop the flow of water into the joint pit,
  - 5.5 That the joint pit is provided with suitable groundsheets so that the jointing

work is carried out in clean conditions,

- 5.6 That the necessary tents or sails are installed over the joint pit to effectively avert unexpected rainfall and that sufficient light or lighting is provided,
- 5.7 That the necessary means are available to efficiently seal the jointing or cable end when an unexpected storm or cloudburst occurs, regardless of how far the work has progressed,
- 5.8 That the cables and other materials are dry, undamaged and in all respects are suitable for the joint work or making off,
- 5.9 that the heating of cable oil, cable compound, plumbers metal and solder is arranged that they are at the correct temperature when required so that the cable is not unnecessarily exposed to the atmosphere and consequently the ingress of moisture (care must be taken of overheating)

Flow temperatures of cable oil and compound must be determined with suitable thermometers. Cable oil and compound must not be heated to exceed the temperatures given on the containers and precaution must be taken to ensure that the tin is not overheated in one position. The whole mass must be evenly and proportionally heated.

(Temperatures of solder and plumbers metal may be tested with brown paper (testing time: 3 seconds). The paper must colour slightly - not black or burnt).

- 6. Before the paper insulated cables are joined, they must be tested for the presence of moisture by the cable jointers test. This consists of the insertion of a piece of unhandled insulated impregnated paper tape in warm cable oil heated to a temperature of  $130 \pm 5^{\circ}\text{C}$ .  
Froth on the surface of the oil is an indication that moisture is present in the impregnated insulation and the amount of the froth gives an indication of the moisture present.
- 7. If the cable contains moisture or is found to be otherwise unsuitable for jointing or making of the inspector is to be notified immediately and he will issue the necessary instruction to cope with the situation.
- 8. The joint or making off of paper insulated cables must not be commenced during rainy weather.
- 9. Once a joint is in progress the jointer must proceed with the joint until it is complete and before he leaves the site.
- 10. The jointer must ensure that the material and his tools are dry at all times, reasonably clean and absolutely free from soil.
- 11. Relating to the jointing of the cable the following requirements apply:
  - 11.1 All jointing must be carried out in accordance with recognised and tried techniques and comply strictly with the instructions given by the supplier of the jointing kit.
  - 11.2 The cables must be twisted by hand so that the cores can be joined according to the core numbers. If necessary the cable is to be exposed for a short distance to accomplish this. Under no circumstances may the cores in a joint be crossed so as to enable cores to be joined according to the core numbers. If it is not possible to twist the cables so that the preceding requirements can be met, then cores are to be joined in the normal way without any consideration of the core numbers.

- 11.3 Normally the cables will have profile conductors. The conductors shall be pinched with gas pliers to form a circular section, bound with binding wire so that they do not spread, and then tinned before jointing.
- 11.4 Jointing ferrules, the length of which are at least 6 times the diameter of the conductors, must be slid over the conductor ends to be joined and pinched tightly. Then they are soldered by means of the ladle process whilst being pinched further closed.  
Use resin only as a flux. The slot opening in the ferrule must be completely filled, including all depressions.
- Remove all superfluous metal with a cloth dipped in tallow. Work during the soldering process must be from top to bottom. Rub the ferrule smooth and clean with aluminum oxide tape after it has cooled down to ensure that there are not any sharp points or edges.
- NB:** The spaces between the conductor strands must be completely filled by soldering process and must be carried out quick enough to prevent the paper insulation from burning or drying out unnecessarily.
- 11.5 After the ferrules have been rubbed smooth and clean, they and the exposed cores must be treated with hot cable oil (110°C) to remove all dust and moisture. These parts are to be thoroughly basted with the oil.
- 11.6 The joiner must take care that his hands are dry and clean before the joint is insulated. Also the insulating tape which is to be used must first be immersed in warm cable oil (110°C) for a sufficient period to ensure that no moisture is present.
- 11.7 After the individual cores have been installed they must be well basted with hot cable oil and again after the applicable separator and/or belt insulation tape is applied before the lead joint sleeve is placed in position.
- 11.8 The lead joint sleeve must be thoroughly cleaned and prepared before it is placed on the cable and must be kept clean during the whole jointing process. Seal the filling apertures of the sleeve with tape until the sleeve is ready for compound filling.
- 11.9 The plumbing joints employed to solder the joint sleeve to the cable sheath, must be cooled off with tallow and the joint sleeve is to be filled with compound while it is still warm. Top up continuously until the joint is completely filled to compensate for the compound shrinkage.
- 11.10 The outer joint box must be clean and free from corrosion. After it has been placed in position it must be slightly heated before being filled with compound. Top up until completely full.
12. As far as cable end boxes are concerned the requirements as set out above are valid where applicable.

## 16. DISTRIBUTION BOARDS

In addition to clause 14 and clause 15 of Part 1 of this specification the following shall also be applicable to switchboards required for this service.

The electrical contractor shall supply and install the distribution boards as indicated on the drawings and listed in the distribution Board Schedule. All distribution boards shall comply with the quality specification in Part 3 of this specification, and be approved by the Engineer's representative.

**17. SCHEDULE OF LIGHT FITINGS**

The light fittings and accessories are to be according to the quality specifications in Part 3 and shall be approved by the Engineer / Engineer representative.

**18. SCHEDULE OF DISTRIBUTION BOARDS**

Refer to schematic drawing for Distribution boards drawing no GP/18008/03/003/1 & 2.

The front panels of normal supply sections shall be painted in distinctive colours as follows:  
Normal supply : Electric Orange, IP65 and powder coated.

Indicated is the probable fault level rating (kA) of the busbars.

**Erupting capacity** 5kA

**PART 3**

**QUALITY SPECIFICATION FOR MATERIAL**

**AND**

**ELECTRICAL INSTALLATIONS**

**QUALITY SPECIFICATION FOR MATERIAL AND EQUIPMENT OF ELECTRICAL RENOVATION AND NEW INSTALLATIONS**

**PART 3**

**TABLE OF CONTENTS**

<b>CLAUSE</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
1	CONDUIT AND CONDUIT ACCESSORIES	23-25
2	PVC- INSULATED CABLES –600/1000V GRADE	25-26
3	GLANDS FOR PVC INSULATED CABLES	26-27
4	LIGHT SWITCHES	27-28
5	UNSWITCHED AND SWITCHED SOCKET OUTLETS	29-29
6	TUBULAR FLUORESCENT LAMPS LUMINAIRES FOR INTERIOR APPLICATIONS	29-34
7	AIR CONDITION UNITS	34
8	EARTHING ELECTRODES	34-35
9	SWITCHBOARDS (UP TO 1KV)	35-48
10	MOULDED-CASE CIRCUIT- BREAKERS	48
11	EARTH LEAKAGE RELAYS	49
12	MICRO-GAP SWITCHES	49
13	INDICATOR LIGHTS	49-50
14	TRIPLE POLE ON LOAD ISOLATORS	50
15	TIME SWITCHES	50-51
16	CONTACTORS	51-52
17	STANDARD PAINT SPECIFICATION	52-53

**SPECIFICATION FOR ELECTRICAL INSTALLATIONS  
PART 3**

**QUALITY SPECIFICATION FOR MATERIAL AND EQUIPMENT OF ELECTRICAL INSTALLATIONS:**

1. **CONDUIT AND ACCESSORIES.**

The type of conduit and accessories required for the service, i.e. whether the conduit and accessories shall be of the screwed type, plain-end type or of the non-metallic type and whether metallic conduit shall be black enamelled or galvanised, is specified in Part 2 of this specification. Unless other methods of installation are specified for certain circuits, the installation shall be in conduit throughout. NO OPEN WIRING IN ROOF SPACES OR ELSEWHERE WILL BE PERMITTED.

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

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

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

Bushes used for metallic conduit shall be brass and shall be provided in addition to lock nuts at all points where the conduit terminates at switchboards, switch-boxes, draw-boxes, etc.

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

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

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

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

All metallic conduits shall be manufactured of mild steel with a minimum thickness of 1,2mm for plain-end conduit and 1.6mm in respect of screwed conduit.

**NOTE**

Under no circumstances will conduit having a wall thickness of less than 1,6mm be allowed in screeding laid on top of concrete slabs.

Bending and setting of conduit must be done with special bending apparatus manufactured for the purpose and which are obtainable from the manufacturers of the conduit systems. Damage to conduit resulting from the use of incorrect bending apparatus

or methods applied must on indication by the Engineer's inspectorate staff, be completely removed and rectified and any wiring already drawn into such damaged conduits must be completely renewed at the contractor's expense.

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

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

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

## 1.2 **CONDUIT IN ROOF SPACES.**

Conduit in roof spaces shall be installed parallel or at right angles to the roof members and shall be secured at intervals not exceeding 1,5m by means of saddles screwed to the roof timbers.

Nail or crumpets will not be allowed.

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

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

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

## 1.3 **SURFACE MOUNTED CONDUIT.**

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

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

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

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

Conduit is to be run on approved spaced saddles rigidly secured to the walls.

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

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

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

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

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

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 shall allow for painting of surface conduit with two coats of good quality enamel paint, and the colour shall match the surrounding building finish.

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

#### 1.4 **CONDUIT IN CONCRETE SLABS.**

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

The contractor shall 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.

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

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

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

## 2. **PVC-INSULATED CABLES - 600/1 000 V GRADE**

### 2.1 GENERAL

This section covers the requirements for PVC-insulated cables for general installations under normal environmental conditions.

### 2.2 CONSTRUCTION

2.2.1 Cables shall be manufactured in accordance with SABS 150, shall come only from fresh stocks, and shall be constructed as follows:

- (a) Unarmoured cables PVC-insulated/PVC-sheathed

(b)	Armoured cables	PVC-insulated/PVC-bedded/ armoured/black extruded PVC outer sheath
(c)	Single core cables	PVC-insulated/unsheathed

2.2.2 The conductors shall be of high conductivity annealed stranded copper and the cores may be shaped or circular.

2.2.3 The insulation shall be general purpose PVC, 600/1 000V Grade.

2.2.4 The bedding shall consist of a continuous impermeable sheath of PVC extruded to fit the core or cores closely and in the case of multi-core cables, to fill the interstices between the cores.

2.2.5 Where armouring is specified it shall consist of one layer of galvanised steel wire in the case of multi-core cables and nonmagnetic metallic wire in the case of single core cables. Aluminium strip or tape armouring is not acceptable.

2.2.6 Where specified, an earth continuity conductor shall be provided in the armouring in accordance with SABS 150.

### 2.3 PVC-SHEATHED ALUMINIUM-COVERED CABLES

2.3.1 Aluminium-covered cables shall comprise PVC-insulated copper conductors protected by an aluminium foil tape screen and a PVC sheath.

2.3.2 Cable ends shall be made off with compression glands fitted with a neoprene ring to seal the end.

2.3.3 Aluminium sheathed cable shall be installed on surface only using matching saddles installed at suitable intervals to prevent sagging.

2.3.4 Where exposed to sunlight, the cable shall have a stabilised black outer sheath.

### 2.4 LENGTHS

Cable shall be manufactured and supplied in one length to the lengths specified unless these lengths exceed a standard drum length in which case a ruling shall be obtained from the Engineer.

### 2.5 TESTS

At the option of the Engineer, acceptance tests shall be carried out on production runs of the cable in accordance with SABS 150.

## 3. GLANDS FOR PVC-INSULATED CABLES

3.1 Glands to be used for terminating PVC/PVC/SWA/PVC cables shall be of the adjustable type.

3.2 Glands shall be suitable for general purpose 600/1 000 V Grade cable with steel armouring.

3.3 The glands shall be made of nickel-plated cadmium plated or in coastal area bronze or brass.

3.4 The glands shall consist of a barrel carrying a cone bush screwed into one end and a nickel-plated brass nipple carrying a nickel-plated brass or a heavy galvanised steel

locknut screwed into the other end. The galvanising shall comply with SABS 763.

- 3.5 Non-watertight glands must be easily converted to watertight glands by means of a waterproofing shroud and inner seal kit. On the cable entry side of the barrel a concave groove shall be provided to accommodate the top rim of the waterproofing shroud.
- 3.6 The shrouds shall be made of non-deteriorating neoprene or other synthetic rubber, and shall be resistant to water, oil and sunlight. The shrouds shall fit tightly around the glands and cable.
- 3.7 Glands shall be provided with ISO threads and shall be suitable for the specified cable sizes.
- 3.8 Flameproof glands shall comply with SABS 808, Groups 1, 2a and 2b.
- 3.9 Suitable accessories shall be provided with glands to be used on ECC armoured cables to facilitate a bolted lug connection of the earth continuity conductors. Grooves cut into the barrel or cone bush to accommodate the earth continuity conductors are not acceptable.
- 3.10 For unarmoured cables the cone bush and compression ring of the gland shall be replaced with a synthetic rubber compression bush and ring to provide the required grip on the outer sheath of the cable.

#### **4. LIGHT SWITCHES**

##### **4.1 GENERAL**

This section covers the requirements for switches for use in general installations under normal environmental conditions.

##### **4.2. FLUSH AND SURFACE MOUNTED SWITCHES**

- 4.2.1 All switches shall be suitable for mounting in 100 x 50 x 50mm boxes shall comply with SABS 163 and shall bear the SABS mark.
- 4.2.2 Switches shall be of tumbler operated microgap type rated at 16A, 220/250V.
- 4.2.3 Switches shall have protected terminals for safe wiring.
- 4.2.4 Contacts shall be of silver material.
- 4.2.5 On multi-lever switches, it shall be possible to individually change any of its switches.
- 4.2.6 The yoke strap shall be slotted to allow for easy alignment.
- 4.2.7 The covers of surface mounted switches shall have toggle protectors.
- 4.2.8 Where light switches are installed in partitions, they shall, where possible, be of the special narrow type intended for installation into the mullions.

##### **4.3. WATERTIGHT SWITCHES**

- 4.3.1 Watertight switches shall be of the microgap type suitable for surface mounting and shall bear the SABS mark.
- 4.3.2 The housing shall be of galvanised cast iron or die cast aluminium with watertight cover plate and toggle.
- 4.3.3 The switch shall have a porcelain base and a quick acting spring mechanism and shall be

rated at 16A, 220/250V.

4.3.4 The ON/OFF position shall be clearly marked on the switch housing.

#### 4. CEILING SWITCHES

4.4.1 Ceiling switches shall be rated at 10A, 220/250V and shall be suitable for ceiling mounting on a round conduit box.

4.4.2 The switch shall be made of high impact strength nylon material.

4.4.3 Adequate space shall be provided within the unit for ease of wiring.

4.4.4 The switch colour shall be white and shall be fitted with a nylon cord 1,25m long.

#### 4.5. COVER PLATES

4.5.1 Cover plates shall be finished in ivory coloured baked enamel, anodised bronze or aluminium unless otherwise specified.

4.5.2 Cover plates shall overlap the outlet to cover wall imperfections.

4.5.3 Cover plates shall comply with SABS 1084.

### 5. UNSWITCHED AND SWITCHED SOCKET-OUTLETS

#### 5.1. GENERAL

This section covers the requirements for unswitched and switched socket-outlets for use in general installations under normal environmental conditions.

#### 5.2. FLUSH AND SURFACE MOUNTED SWITCHED SOCKETS

5.2.1 All switched socket-outlets shall be suitable for mounting in 100 x 100 x 50mm or 100 x 50 x 50mm boxes, shall comply with SABS 164.

5.2.2 Switches shall be of the tumbler operated microgap type rated at 16A, 220/250V.

5.2.3 Terminals shall be enclosed for safe wiring.

5.2.4 Contacts shall be of silver material.

5.2.5 Safety shutters shall be provided on live and neutral openings.

5.2.6 The yoke strap shall be slotted to allow for easy alignment.

5.2.7 The covers of surface mounted switched socket shall have toggle protectors.

5.2.8 Miniature circuit-breakers shall be used in lieu of a switch where specified.

5.2.9 Where 13A flat pin switched socket-outlets are specified, these shall comply with BS 1363.

#### 5.3. WATERTIGHT SWITCHED SOCKETS

5.3.1 The housing of watertight switched sockets shall be of galvanised cast iron or die cast aluminium with watertight machined joints.

5.3.2 The switch shall have a porcelain base and a quick-acting spring mechanism and shall be rated at 16A, 220/250V.

5.3.3 The ON/OFF positions shall be clearly marked on the switch housing.

5.3.4 The socket openings shall be rendered watertight by means of a gasketed cover plate which is screwed onto the body of the unit. The cover plate shall be secured to the body of the unit by means of a chain.

#### 5.4. UNSWITCHED SOCKET-OUTLETS

5.4.1 Unswitched socket-outlets shall only be used in the case of 5A, 220/250V, 3-pin socket-outlets intended for the connection of recessed light fittings installed in false ceilings.

5.4.2 The socket-outlets shall have shuttered live and neutral openings.

5.4.3 The socket-outlets shall be suitable for installation in pre-punched wiring channels, deep round conduit boxes, 100 x 50 x 50mm or 100 x 100 x 50mm boxes.

#### 5.5. THREE-PHASE SWITCHED SOCKET-OUTLETS

5.5.1 Three-phase switched socket-outlets shall have 5 pins, one for each phase, neutral and earth. The current rating shall be as specified in the Detail Technical Specification.

5.5.2 The units shall be interlocked to prevent switching on if the plug top is not installed.

5.5.3 The units shall be supplied complete with plug top.

5.5.4 The live terminals shall be shrouded and shall be completely safe when the plug top is removed.

5.5.5 Samples shall be submitted to the Engineer for approval prior to the installation.

#### 5.6. SHAVER SOCKETS

Not part of this contract

### **6. TUBULAR FLUORESCENT LAMP LUMINAIRES FOR INTERIOR APPLICATIONS**

#### 6.2. GENERAL

6.2.1 To promote work creation in South Africa, the luminaire should preferably be manufactured within the Republic of South Africa and should have a local content of at least 50%.

6.2.2 If the luminaire offered is of foreign origin, full specifications on technical performance and quality must be submitted and full reasons shall be given why the unit had to be imported.

6.2.3 **A sample luminaire shall be provided for evaluation and approval by the Electrical Engineer prior to installation.**

6.2.4 Luminaires, associated equipment and control gear shall be new and unused and shall be supplied complete with lamps, control gear, diffusers, mounting brackets, etc. and shall be delivered to site in a protective covering.

6.2.5 Lamps shall be delivered separately.

### 6.3. STANDARDS

The following latest edition standard specifications of the South-African Bureau of Standards shall apply to this luminaire specification:

#### 6.3.1

NRS 098:2008	Guidelines for the Installation and safe use of standby / portable generators on utilities networks
SANS 204	Energy efficiency in buildings
SANS 1973	Low-voltage switchgear and control gear assemblies
SANS 10114-1	Code of practice for interior lighting - Part 1: Artificial lighting
SANS 10114-2	Code of practice for interior lighting - Part 2: Emergency lighting
SANS 10389-1	Exterior lighting Part 1: Artificial lighting of exterior areas for work and safety
SANS 10389-2	Exterior lighting Part 2: Exterior security lighting
SANS 10139	Fire detection and alarm systems for buildings - System design, installation and servicing
SANS 10142-1	The wiring of premises - Part 1: Low-voltage installations
SANS 10142-2	The wiring of premises - Part 1: Medium-voltage installation
SANS 10313	Protection against lightning - Physical damage to structures and life Hazard
SANS 10400-O	Code of practice for the application of the National Building Regulations - Part O: Lighting and ventilation
SANS/ IEC 61639	Low-voltage switchgear and control gear assemblies
SANS/IEC 62305	Protection against lightning

### 6.4. PHYSICAL AND ENVIRONMENTAL REQUIREMENTS

6.4.1 AREAS OF APPLICATION: The luminaires are intended for standard indoor use in buildings under the control of the Engineer of Public Works.

6.4.2 FIXING: The luminaires shall be suitable for mounting in or against ceilings as described in the project specification.

6.4.3 ENVIRONMENTAL: Unless otherwise specified in the detail specification the luminaires shall be suitable for operation in ambient temperatures between -10°C and +25°C.

6.4.4 SAFETY: The luminaire shall bear the SABS 1464 safety mark.

- i. NOISE: Noisy ballasts will not be accepted and shall be replaced at no cost to the Engineer. All ballasts shall comply with the requirements of the latest edition of SABS 890, Part 1.

### 6.5. GENERAL TECHNICAL REQUIREMENTS

### 6.5.1 GENERAL

- 6.5.1.1 Tubular fluorescent lamp luminaires shall comply fully with SABS 1119 and all amendments as well as the additional requirements of this specification. Luminaires shall bear the SABS mark, or at least have a SABS Certificate of Compliance.
- 6.5.1.2 The Engineer reserves the right to have samples of luminaires offered tested by the SABS for compliance with SABS 1119. If a sample luminaire is found not to comply with SABS 1119 the cost of such tests shall be borne by the Tenderer.

### 6.5.2 CONSTRUCTION

- 6.5.2.1 A luminaire shall consist of a ventilated body manufactured of cold rolled sheet steel not less than 0,8mm thick, suitably braced or stiffened to prevent distortion. The body shall be of sufficient strength for the mounting of the entire luminaire.
- 6.5.2.2 The luminaire shall be designed to accommodate the control gear, wiring, lamp holders and, where applicable, the diffuser and reflectors. It shall be possible to reach the control gear without disconnecting wiring or removing the luminaire.
- 6.5.2.3 Except for mounting holes and/or slots and the required openings in air-return luminaires, the back of the body channel shall be closed over the full length of the luminaire.
- 6.5.2.4 Suitable knockouts shall be provided in the rear of the luminaire body for wire entry.
- 6.5.2.5 All components, including screws, bolts and nuts utilised in the construction of the luminaire or fixing of its components, shall be corrosion proof. Cadmium plated or stainless steel materials are preferred.

### 6.5.3 INTERNAL WIRING

- 6.5.3.1 Luminaires shall be completely wired internally. Conductors shall be protected with grommets where they pass through holes in the body.
- 6.5.3.2 The wiring shall be totally metal enclosed to prevent any possible contact with live components while changing lamps.
- 6.5.3.3 The conductor insulation shall be rated to withstand the temperature inside the luminaire body without deterioration.
- 6.5.3.4 The wiring shall terminate on a suitable terminal block having screw down plates bearing on the wires. Terminals where screws bear down directly on wires will not be acceptable.
- 6.5.3.5 An earth terminal, welded to the luminaire body, shall be provided. To ensure good earth continuity the earth terminal shall not be spray painted. The earth conductor shall be connected to this terminal by means of a crimped lug.

### 6.5.4 LAMP HOLDERS

Lamp holders shall preferably be of the telescopic spring-loaded type. Where twist-lock type lamp holders are provided, the mounting of the holders shall be able to accommodate the tolerances experienced in the length of lamps and in the manufacture of luminaires.

### 6.5.5 CONTROL GEAR

- 6.5.5.1 The control gear, ballasts, capacitors and starters shall be designed and manufactured to suit the control circuitry adopted. All luminaires shall operate on a switch-start basis.
- 6.5.5.2 Ballasts shall comply with SABS 890 and SABS 891, suitable for operation on 220V to 250V, 50Hz supplies.
- 6.5.5.3 Ballasts shall further be suitable for the particular luminaire to ensure that the thermal limits specified in paragraph 3.5 of SABS 1119 are not exceeded.
- 6.5.5.4 Starters shall comply with SABS 1479 or with BS 3772 if it is not covered by SABS 1479. Starters with metal cans shall contain integral earthing facilities to earth the can upon insertion.
- 6.5.5.5 Starters shall be accessible from the outside of the luminaire, and the replacement of the starter shall not necessitate the removal of lamps.
- 6.5.6 CAPACITORS
- Capacitors shall comply with SABS 1250. The power factor of each complete fitting shall be corrected to at least 0,85.
- 6.5.7 LAMPS
- 6.5.7.1 Fluorescent lamps shall be suitable for the control circuitry used. Lamps shall comply with SABS 1041.
- 6.5.7.2 If no colour is specified in the Detail Technical Specification, the light colour shall correspond to colour 2 (4 300K) of SABS 1041.
- 6.5.7.3 Lamps of the same colour (Cool White) shall be provided for an entire installation unless specified to the contrary.
- 6.5.7.4 There shall be no visible flicker in the lamps and lamps shall readily strike when switched on. Faulty lamps or ballasts shall be replaced at no cost to the Engineer.
- 6.6. PHOTOMETRIC DATA
- Photometric data sheets of the luminaire as prepared by a laboratory that complies with SABS requirements, shall be submitted with the luminaire.
- 6.7. TECHNICAL INFORMATION
- The Tenderer shall include full technical particulars regarding the luminaire offered with the tender.
- 6.8. CHANNEL LUMINAIRE
- 6.8.1 Channel luminaires shall consist of a ventilated, enclosed channel body with one or more lamps as specified in the project specification. The channel body shall house the ballast, capacitor, terminals and internal wiring.
- 6.8.2 Provision shall be made for the addition of reflector wings and/or diffusers.
- 6.8.3 Three sets of mounting slots and knock-outs suitable for mounting onto standard round conduit boxes and/or 20mm diameter conduit pendant rods, shall be provided in the rear of the channel, one in the centre and one approximately one sixth from each end.

- 6.8.4 A knockout suitable for a 20mm diameter conduit entry shall be provided at each end of the channel. The distance between the back of the luminaire and centre of the knockout shall be approximately 25mm.
- 6.8.5 The knockouts shall be positioned on the centre line of the channel.
- 6.8.6 The body channel shall incorporate a removable cover acting as a reflector, manufactured of cold rolled steel, not less than 0,8mm thick, designed and mounted to completely cover the interior of the body channel and its contents and extending over the full length of the luminaire up to the lamp holders.
- 6.8.7 The reflector shall be firmly held in position with a latching device consisting of knurled, coin slot, captive screws. Plastic, used as a spring mechanism, is not acceptable as a fixing device for reflectors. The action of the latching device shall not deteriorate due to use and/or ageing.
- 6.9. INDUSTRIAL LUMINAIRES
- 6.9.1 Industrial type luminaires shall consist of a basic channel luminaire fitted with detachable side reflectors.
- 6.9.2 The reflectors shall be manufactured of cold rolled steel, not less than 0,8mm thick.
- 6.9.3 The reflectors shall be designed to improve the downward light output ratio and decrease the upward light output ratio to a value of less than 2%.
- 6.10. DECORATIVE LUMINAIRES
- 6.10.1 Decorative luminaires shall incorporate an injection moulded prismatic acrylic diffuser or a high-grade optical reflector covering the entire reflecting surface of the luminaire.
- 6.10.2 The diffuser shall be hinged or easily removable for maintenance and lamp replacement. Optical reflectors shall be hinged.
- 6.10.3 Decorative luminaires with diffusers shall be constructed and so installed to prevent the ingress of dust and insects.
- 6.10.4 Highly polished reflectors shall be protected and carefully handled and to prevent fingerprints showing on the surface.
- 6.10.5 Surface mounted luminaires on suspended ceilings shall be arranged to suit the grid and shall fit tightly against the ceiling.
- 6.11. RECESSED LUMINAIRES
- 6.11.1 Recessed luminaires shall be suitable for mounting in the ceiling structure specified in the project specification.
- 6.11.2 The attachment of the prismatic diffuser or reflector shall be similar to that specified in paragraph 10 above.
- 6.11.3 The diffuser or reflector shall fit flush with the ceiling and the only visible portion shall be the reflector or diffuser.
- 6.11.4 Should the luminaire be so designed that a surrounding frame is visible, then this frame shall be manufactured of anodised aluminium. The frame shall form a neat trim with the ceiling. The corners of the surrounding frame shall be mitred and reinforced.
- 6.12. LOW-BRIGHTNESS LUMINAIRES

- 6.12.1 The luminaire shall be provided with an aluminium louver with V-shaped longitudinal vanes and extruded stepped cross-shielding plates.
- 6.12.2 Louvers shall be constructed from high purity aluminium (99,98%), chemically brightened and anodised.
- 6.12.3 The total Light Output Ratio (LOR) shall be 62% or better. In the plane between 60( and 90( from the vertical, the LOR shall be below 3%.
- 6.13. LOW GLARE LUMINAIRES
- 6.13.1 The luminaire shall be provided with a die-formed, bright anodised high-purity aluminium (99,98%) louver with parabolic reflecting surfaces in both directions.
- 6.13.2 The total LOR shall be 62% or better. In the plane between 60 and 90(from the vertical), the LOR shall be less than 1,3%
- 6.14. LUMINAIRES FOR USE IN AREAS WITH VISUAL DISPLAY TERMINALS
- 6.14.1 The luminaire shall have anodised specular louvers to provide the brightness control required for this type of application.
- 6.14.2 At angles between 60 and 90(from the vertical) the luminance shall not exceed 200cd/m2.
- 6.14.3 At the above angles the LOR shall be less than 0,6%. At angle between the vertical and 60 the LOR shall be 61% or better

## 7. AIR CONDITIONING UNITS

- 7.1. The installation of Air Conditioning Units shall comply with the relevant SABS regulations .All environmental regulations and relevant standards must be adhered to.
- 7.2. The contractor shall supply all the air conditioning units and all necessary material to complete the installation.

## 8. EARTHING ELECTRODES

### 8.1. GENERAL

This section covers uncoated, coated and metal clad circular rod electrodes intended to provide an earth in soil for electrical and lightning arrestor systems.

### 8.2. CATEGORY AND TYPE

- 8.2.1 Only the following type of earth rods shall be used:

- 1(a) - Solid copper.
- 1(b) - Solid stainless steel.
- 2(a) - Solid steel with bonded copper protection.
- 2(b) - Solid steel with plated copper protection.
- 2(c) - Solid steel with a shrunk-on copper jacket.

- 3 - Solid steel with a shrunk-on stainless steel jacket.
- 4 - Galvanised steel.

8.2.2 Bare aluminium is not acceptable as an electrode material.

8.2.3 All rods shall be solid and of circular cross section with length as specified in the Detail Technical Specification.

8.2.4 The nominal diameter of the earthing rods shall not be less than 16mm unless the rods are specified for placing in pre-drilled holes in which event the minimum nominal diameter shall not be less than 12 mm.

### 8.3. COUPLINGS AND CONDUCTOR CLAMPS

8.3.1 Earthing electrodes shall be provided with (n-1) couplings where n = number of rods supplied.

8.3.2 Rods designed for coupling by means of external sleeves shall be provided with an adequate quantity of hydrocarbon or silicon grease to be applied to the coupling before the joint is made.

8.3.3 Rods designed for coupling by means of internal pins or splines shall be provided with thin-walled tubes and hydrocarbon or silicon grease to seal the joint.

8.3.4 Conductor clamps shall be provided to suit the type and size of rods provided and the type and size of conductor specified in the Detail Technical Specification.

8.3.5 The material of the clamps shall be electrolytic compatible with the rod and conductor materials.

8.3.6 Where brazed or welded connections are specified, the supplier of the rods shall stipulate at least two types of metals which are compatible with the rod and conductor materials.

8.3.7 An adequate number of driving caps or bolts shall be supplied with the rods to protect the ends of the earthing rods whilst being driven into hard soil.

## 9. SWITCHBOARDS (Up to 1 kV)

### 9.1. GENERAL

#### 1.1 Scope

This section covers the manufacturing and testing of flush mounted, surface mounted and floor standing switchboards for general installations in normal environmental conditions and for system voltages up to 1 kV.

#### 9.1.2 Size

All switchboards shall be of ample size to accommodate the specified switchgear and provide space for future switchgear. For every 4 (or part of 4) 5kA circuit-breakers on a switchboard, space for an additional 5kA circuit breaker shall be allowed unless future space requirements are clearly specified. For circuit breakers above 5kA, this factor shall be 15 %. The clearance between adjoining switchgear openings shall be as specified in par. 6.2.

#### 9.1.3 External Dimensions

The maximum allowable height of free standing switchboards is 2,2 m. Cubicle type boards

may be up to 2,4 in height if they can be fully dismantled into individual cubicles. Where, due to space restrictions, a board exceeds 2,4m in height, equipment not normally requiring access, shall be installed in the top section, enabling equipment normally requiring access to be installed lower down in the board. All other specified external dimensions for switchboards shall be strictly adhered to. If the clearances specified in par. 6.2 cannot be adhered to as a result of restricting external dimensions, the Contractor shall obtain the approval of the Engineer before manufacturing the switchboards.

#### 9.1.4 Moisture and Vermin

All switchboards shall be rendered moisture proof and vermin proof and shall be adequately ventilated. Refer to par. 4.10 and 4.11.

#### 9.1.5 Load Balance

The load shall be balanced as equally as possible across multiphase supplies.

### 9.2. CONSTRUCTION OF FLUSH MOUNTED SWITCHBOARDS

#### 9.2.1 Standard

Flush mounted switchboards shall comply fully with SABS 1180, part I unless the depths of the switchboards are specified, the depths shall be determined in accordance with par. 6.

#### 9.2.2 Expanded Metal

Where switchboards are to be built into 115 mm thick walls, expanded metal shall be spot-welded to the rear of the bonding trays. The expanded metal shall protrude at least 75 mm on each tray side to prevent plaster from cracking.

#### 9.2.3 Knock-outs

Knock-outs shall be provided in the top and bottom ends of each switchboard tray to allow for the installation of conduits for the specified and future circuits. Knock-outs shall be provided for an equal number of 20 mm and 25 mm dia. conduits.

#### 9.2.4 Panel

Front panels shall have machine punched slots for housing the specified and future flush mounted

Switch gear. The distance between the inside of the closed doors and the panel shall not be less than 20 mm. No equipment may be mounted on the panel unless the panel is permanently hinged to the switchboard frame.

#### 9.2.5 Fixing of Front Panels

The front panel shall be secured to the architrave frame by means of 6mm studs and chromium-plated hexagonal domed nuts, hank nuts or captive fasteners. Alternatively the panel may be secured to the architrave frame by means of two pins at the bottom and a latch or lock at the top of the panel. Self-tapping screws will not be allowed. All front panels shall be provided with a minimum of one chrome plated handle.

#### 9.2.6 Door Handles and Catches

Switchboard doors shall be equipped with handles and catches. Locks shall only be provided when specified. In all cases where lockable doors are required and in all cases where the switchboard doors are higher or wider than 450 mm, handles consisting of a push-button-and-handle combination with spring loaded catch or rotary handle-and-catch combination shall be installed. Switchboard doors smaller than 450 mm in height and width may be equipped with spring loaded flush mounted ring type latches. Square key operated catches are not acceptable unless specified.

### 9.3. CONSTRUCTION OF SURFACE MOUNTED SWITCHBOARDS

#### 9.3.1 Standard

Surface mounted switchboards shall comply with SABS 1180, Part II.

#### 9.3.2 Switchboard Tray

Surface mounted switchboards shall be equipped with a 1,6mm minimum sheet steel reinforced tray, suitably braced and stiffened to carry the chassis, door and equipment. Lugs to secure the switchboard to a vertical surface shall be provided.

#### 9.3.3 Construction

All joints shall be welded or securely bolted. The tray shall be square and neatly finished without protrusions. The front tray sides shall be rounded with an edge of at least 20mm to accommodate flush doors.

#### 9.3.4 Chassis

A sheet steel chassis for the mounting of equipment shall be bolted to the tray and shall comply with the requirements of par. 6.1 and 6.3.

#### 9.3.5 Front Panel and Door

The front panel and door shall comply with par. 2.4 to 2.6 above. Doors shall fit flush in the tray when closed.

#### 9.3.6 Dimensions

Unless the depth of the switchboards is specified, the dimensions shall be determined in accordance with the requirements of par. 6.2 and 6.3.

### 9.4. CONSTRUCTION OF FREE STANDING SWITCH BOARDS

#### 9.4.1 Framework

A metal framework for free standing switchboards shall be manufactured from angle iron, channel iron or 2mm minimum folded metal. A solid U-channel base frame, sufficiently braced to support all equipment and span floor trenches and access holes shall be provided. Switchboards shall be of cubicle design with 2mm side panels forming divisions between cubicles. The maximum allowable cubicle width is 1,5m. (Refer also to par. 4.7). Joints shall be non-continuously butt-welded. Welds shall be ground smooth and the joint wiped with plumber's metal in order to provide a smooth finish. Switchboards wider than 2m shall be fitted with screwed eye-bolts attached to the framework to facilitate loading and transportation of the board.

#### 9.4.2 Rear and Side Panels

The rear panels shall be removable and shall be manufactured from 2mm minimum sheet

steel. The panels shall have returned edges which are recessed in the frame or which fit over lips on the switchboard frame. The panels shall be secured to the frame by means of studs and chromium-plated hexagonal domed brass nuts or hank nuts or captive fasteners equal or similar to "DZUS" or "CAMLOC". Where switchboards are intended for installation in vertical building ducts or against walls, the rear and side panels may consist of a single folded sheet which is either bolted or welded to the frame or which forms part of the folded metal frame.

#### 9.4.3 Front Panels

9.4.3.1 The front panels of floor standing switchboards shall preferably be hinged except where flush mounted equipment prevents this. Alternatively, panels shall be secured by means of the methods described in par. 2.5. The panels shall be arranged in multi-tiered fashion to allow for the logical grouping of equipment in accordance with par. 6.

9.4.3.2 The hinged front panels shall have a dished appearance with 20mm upturns which fit over a lip on the switchboard frame. Alternatively the hinged panels shall have folded edges and shall be fitted flush or slightly recessed in the switchboard frame. The latter method shall be used where doors are required. (Also refer to par. 4.6). Corners shall be welded and smoothed.

9.4.3.3 The panels shall be of 2mm minimum sheet steel with machine punched slots to allow for the flush mounting of instrumentation, switchgear toggles and operating handles. A minimum clearance of 50mm shall be maintained between the rear of equipment mounted on the panels (taking into account terminals or other projections) and the frame and chassis of the switchboard. Separate panels shall preferably be provided for the mounting of instrumentation and for covering flush mounted switchgear. Enclosed switchgear with front panels e.g. combination fuse-switch units, may be flush mounted in the board in lieu of separate hinged panels.

9.4.3.4 Hinged panels shall be suitably braced and stiffened to carry the weight of flush mounted equipment and to prevent warping.

9.4.3.5 Hinged panels with flush mounted equipment and hinges of adequate strength to ensure smooth and reliable operation shall support panels higher than 600mm. 16mm pedestal or similar heavy duty hinges with single fixing bolts may be used on panels smaller than 600mm. On the larger panels long pedestal type hinges with two fixing bolts per hinge are preferred. Piano hinges are not acceptable for this application.

9.4.3.6 A tubular chromium-plated handle shall be fitted on each panel. The handle may be omitted if "DZUS" or "CAMLOC" fasteners are used.

9.4.3.7 Blanking plates shall be fitted over slots intended for future equipment. These plates shall be fixed in a manner which does not require the drilling of holes through the front panel. Dummy circuit-breakers may be fitted where applicable.

9.4.3.8 Front panels containing live equipment such as instrumentation or control switches, shall be bonded to the switchboard frame with a braided copper earth trap with an equivalent cross-sectional area of at least 4mm<sup>2</sup>.

#### 9.4.4 Securing of Front Panels

Hinged panels shall be secured in position by means of square key operated non-ferrous fasteners designed to draw the panels closed or similar quick-release fasteners. Self-tapping screws are not acceptable. Where non-hinged removable panels are specified, they shall be secured in position by means of 6mm studs and hexagonal chromed brass dome nuts and washers or hank nuts. Non-hinged removable panels may alternatively be secured in position by means of two pins at the bottom and a latch or lock at the top.

#### 9.4.5 Chassis

A suitably braced chassis for the mounting of switchgear and equipment shall be firmly secured to the frame of the switchboard. The chassis shall be designed so that the switchgear can be installed in accordance with par. 6. Circuit-breakers and isolating switches which are not of the moulded-case air-break type and the insulators of busbars for ratings of 200 A and more may be secured directly to the framework. (Refer to par. 6.1).

#### 9.4.6 Doors

- (a) Doors need only be provided when specified. Doors shall be arranged in multi-tiered fashion to allow for the logical grouping of equipment in accordance with par. 6.
- (b) Doors shall have a dished appearance with a minimum of 20 mm upturns which fit over a lip on the switchboard frame or shall fit flush in the switchboard frame. Corners shall be welded and smoothed.
- (c) Doors shall be of aluminium sheet steel with machine punched slots to allow for the flush mounting of instrumentation, control and protection equipment. Switchgear shall be flush mounted in the front panels behind the doors unless specified to the contrary. A minimum clearance of 50mm shall be allowed between the rear of equipment mounted on doors (including terminals and projections) and the frame, front panel and chassis).
- (d) Doors shall be suitably braced and stiffened to carry the weight of the equipment and to prevent warping.
- (e) Hinges for doors shall be provided as described in par. 4.3.5. At least three hinges shall be provided on doors higher than 1,2m.
- (f) Doors shall be fitted with handles consisting of a pushbutton-and-handle combination with spring loaded catch or a rotary handle-and-catch combination. Flush mounted ring type handles or square key operated latches are not acceptable. The same key shall fit all locks on the switchboard in cases where locks are required.
- (g) Doors shall be fitted with hypalon or neoprene seals.
- (h) Doors containing any electrical equipment shall be bonded to the switchboard frame with a braided copper earth wire with an equivalent cross-sectional area of at least 4mm<sup>2</sup>.

#### 9.4.7 Sections

For ease of transportation and to facilitate access to the allocated accommodation, switchboards may be dismantled into cubicles or sections. Each section shall be rigidly manufactured to ensure that damage to the switchgear will not occur during transportation and handling. Where required, switchboards shall have temporary wood or steel bracing to protect switchgear and facilitate handling.

#### 9.4.8 Grouping of Switchgear

The switchgear shall be logically arranged and grouped as described in par. 6. Depending upon the number and size of components, a common front panel may be installed over one or more groups of equipment. All equipment shall be installed in accordance with the requirements of par. 6.

#### 9.4.9 Cable Gland Plate

A cable gland plate shall be installed across the full width of each power cubicle at a

minimum height of 300mm above the bottom of the switchboard to house the cable glands. A Steel cable channel or other approved support shall be provided to carry the weight of the cable and remove mechanical stress from the cable glands. A minimum distance as required by the bending radius of outgoing cables shall be provided between the lowest terminals of major equipment and the gland plate.

#### 9.4.10 Ventilation

Switchboards shall be properly ventilated, especially cubicles containing contactors, transformers, motor starters, lighting dimmers and other heat producing equipment. Louvres shall be fitted to provide adequate upward or cross ventilation. All louvres shall be vermin proofed with 1,5mm brass mesh or perforated steel plate internally spot welded over the louvres. The internal ambient temperature shall not exceed 40 C.

#### 9.4.11 Vermin Proofing

Free standing boards shall be protected against vermin, especially from below- Where cables have to pass through the gland plate, rubber grommets shall be provided and enough non-hardening compound shall be delivered with the board so that these holes can be sealed properly after installation of the cables.

### 9.5. CONSTRUCTION OF MAIN LOW TENSION SWITCHBOARDS

Main low tension switchboards and sub-main low tension switchboards heavily equipped shall comply with par. 4.1 to 4.11 as well as the following exceptions or additions:

- (a) These boards shall be fully extensible with removable busbar cover plates in the side panels.
- (b) Doors shall not be supplied unless specifically called for.
- (c) Switchgear and equipment shall be installed in accordance with the requirements of par. 6.
- (d) Provision for metering equipment shall be made in accordance with requirements of local authorities where applicable.

### 9.6. MOUNTING OF EQUIPMENT

9.6.1 The mounting of equipment shall comply with SABS 1180 where applicable. Equipment to be mounted on the chassis shall be mounted by bolts, washers and nuts or by bolts screwed into tapped holes in the chassis plate. In the latter case the minimum thickness of the chassis plate shall be 2,5 mm. The latter method shall not be used where boards will be subject to vibration or mechanical shocks. Self-tapping screws will not be accepted.

#### 9.6.2 Space Requirements

In designing the switchboards the following requirements shall be strictly adhered to:-

- (a) A minimum of 50 mm between any piece of equipment and the frame or internal partitioning. This minimum space is required on all sides of the equipment. In the case of a single row of single-pole circuit-breakers the spacing on one side of the row may be reduced to 25 mm if the incoming side of the circuit-breakers is busbar connected.
- (b) A minimum of 75 mm between horizontal rows of equipment. The maximum outside dimensions of equipment shall be considered.
- (c) Circuit-breakers up to a fault rating of 10 kA may be installed adjacent to each other.

For higher ratings a minimum of 40 mm shall be allowed between circuit-breakers or isolators.

- (d) Sufficient space shall be provided for wiring allowing for the appropriate bending radius.
- (e) Space for future equipment shall be allowed as described in par. 1.2.

### 9.6.3 Mounting of Chassis

The chassis of flush mounted and smaller surface mounted boards shall be mounted in accordance with SABS 1180. For all free standing switchboards and surface mounted switchboards where the main switch rating exceeds 100 A (triple-pole), space for wiring shall be provided between the chassis and tray. This space shall be adequate to install the supply cable behind the chassis and terminate on the main switch without sharp bends in the cable cores.

### 9.6.4 Grouping of equipment

9.6.4.1 Equipment shall be arranged and grouped in logical fashion as follows:

- (a) Main switch - to be installed either at the top or bottom of the board.
- (b) Short circuit protection equipment - fuse gear or fuse-switches.
- (c) Change-over contactors or other contactors controlling the supply.
- (d) Motor supplies.
- (e) Fuse-switches for outgoing circuits.
- (f) Other circuits and equipment.

9.6.4.2 Where a portion of the equipment on the switchboard is supplied from a standby power source, the change-over contactor and the associated equipment shall be grouped in a separate compartment.

9.6.4.3 Where earth leakage units are required, the associated circuit-breakers shall be installed adjacent to the unit.

### 9.6.5 Mounting of Circuit-Breakers

All moulded-case circuit-breakers shall be flush mounted with only the toggles protruding. Miniature circuit-breakers may be installed in clip-in trays mounted on the frame. All other circuit-breakers shall be bolted to the chassis. Special provision shall be made for large main switches when designing the framework. Care shall be exercised that the rear studs of circuit-breakers are properly insulated from the steel chassis. Where necessary, insulating material shall be installed between the rear studs and the chassis. Circuit-breakers shall be installed so that the toggles are in the up position when "ON" and down when "OFF".

### 9.6.6 Instrumentation

All metering instruments shall be flush mounted in the front panel or door. The rear terminals of instruments mounted on doors shall be covered with an insulating material to prevent accidental contact. Current transformers for metering shall be mounted so that the rating plate is clearly visible. Fuses for instrumentation shall be mounted in an easily accessible position and clearly marked.

### 9.6.7 Mounting of Fuses

9.6.7.1 Fuse holders shall be mounted semi-recessed in the front panel so that fuses can readily be changed without removing the front panel. Busbar mounted fuses for instrumentation shall

be used as far as possible.

9.6.7.2 Where equipment requiring fuses is specified on a board (fuse switches etc), a ruling shall be obtained from the Engineer on the quantity of spare fuses to be provided.

#### 9.6.8 Equipment in Main Boards

Equipment in main low tension switchboards and sub-main boards shall be grouped in individual compartments. Equipment shall be installed as follows:

9.6.8.1 Rack-out type air circuit-breakers shall be mounted in the bottom section, flush behind the panel with the handle only protruding. If this is not possible, the panel shall be omitted and the air circuit-breakers installed behind a door.

9.6.8.2 If the main switch is a moulded-case circuit-breaker or isolator it shall be flush mounted.

9.6.8.3 Contactors controlling the supply shall be installed behind separate front panels.

9.6.8.4 All metering, protection and indicating equipment shall be clearly visible from the front of the board. Current transformer ratios and multiplication factors shall be clearly marked. Where doors are specified the equipment shall be installed flush in the doors and covered as described in par. 6.6.

9.6.8.5 All circuit-breakers and fuses (with the exception of fuse-switches) may be grouped together behind one or more panels as described in par. 4.8.

9.6.8.6 Fuses or fuse-switches providing back-up protection for circuit breakers, shall be grouped with the associated circuit-breakers. Exposed surfaces of fuse-switches shall be of the same finish and colour as the rest of the board where practical.

#### 9.7. BUSBARS IN SWITCHBOARDS

##### 9.7.1 Application

9.7.1.1 Busbars shall be manufactured of solid drawn high conductivity copper with a rectangular cross-section in accordance with the latest edition of SABS 784, SABS 1195 and BS 159 and BS 1433, where applicable.

9.7.1.2 Although SABS 784 refers only to overhead or rising busbars, busbars in switchboards shall comply with applicable sections of this specification especially as far as insulation and clearance values, creepage distance, joints, insulation resistance, dielectric strength, deflection test, absorption resistance and rated short time withstand current are concerned.

9.7.1.3 Busbars shall be supplied for the following applications:

- (a) Distribution of supply voltage.
- (b) Connection of equipment with ratings exceeding the current rating of 70mm<sup>2</sup> conductors (par. 8.6).
- (c) Connection of outgoing circuits with current ratings in excess of that allowed for 70mm<sup>2</sup> conductors (par. 7.8).
- (d) Collector bars for parallel cables (par. 8.1).
- (e) Connection bars for neutral conductors (par. 7.9).
- (f) Earth busbars (par. 7.10).

(g) Connections to miniature circuit-breakers (par. 8.6).

9.7.2 See Part C15 for further details.

9.8. WIRING

9.8.1 Cabling

Cables connected to incoming or outgoing circuits shall be terminated on the gland plate supplied for this purpose. (Refer to par. 4.9). Power cables up to and including 70 mm<sup>2</sup> may terminate on clamp type terminals where the clamping screws are not in direct contact with the conductor. Connection to the equipment can then be made with cables that are similarly connected to the clamp terminal. All power cables larger than 70mm<sup>2</sup> terminate on busbars that are connected to the associated equipment. Parallel incoming or outgoing cables shall be connected to a collector busbar without crossing the conductors.

9.8.2 Terminal Strips

External wiring for low voltage, control, interlocking, alarm, measuring and DC circuits shall terminate on numbered wiring terminals complying the with Engineer's standard specification for "WIRING TERMINALS", Section C9. The correct terminal size as recommended by the manufacturer for each conductor to be connected shall be used

throughout. The terminal numbers shall appear on the wiring diagrams of the switchboard. Terminals for power wiring shall be separated from other terminals. Terminals for internal wiring shall not be interposed with terminals for external circuits. All connections to terminals shall be identified as described in par. 8.8. Where switchboards consist of separate sections, the control wiring passing between sections shall be terminated on strips in each section so that control wiring can be readily re-instated when reassembling the board.

9.8.3 Current Ratings

The current rating of conductors for the internal wiring shall be sufficient for the maximum continuous current that can occur in the circuit. This value shall be determined from the circuit-breaker or fuse protection of the circuit.

TABLE 17.3

CURRENT RATING FOR INTERNAL WIRING

Nominal cross-section mm <sup>2</sup>	CONDUCTOR RATING (A)				
	Number of conductors in bunch				
	1	2 - 3	4 - 5	6 - 9	10 and more
2,5	28	25	22	19	16
4	37	33	30	26	22
6	47	42	38	33	28
10	64	54	51	44	38
16	85	76	68	59	51
25	112	101	89	78	67
35	138	124	110	96	88
50	172	154	137	120	103
70	213	191	170	149	127

The above table shall be applied for ambient temperatures up to 30 C. (Refer to table 41.2 in VDE 0100). For higher ambient temperatures the values shall be derated as prescribed by SABS 0142, Table 10.

9.8.4 Internal Wiring

- (a) Standard 600/1 000 V grade PVC-insulated stranded annealed copper conductors to SABS 150 shall be employed for the internal power wiring of switchboards. The smallest conductor size to be used for power wiring in switchboards shall be 2,5mm<sup>2</sup>. Flexible cord of minimum size 1,0mm<sup>2</sup> may be used for control wiring.
- (b) Where heat generating equipment is present and the internal temperature of the board is likely to exceed 50 C, silicon-rubber insulated stranded conductors shall be used.
- (c) Wiring shall be arranged in horizontal and vertical rows and shall be bound with suitable plastic straps or installed in PVC wiring channels. Under no circumstances may PVC adhesive tape be used for the bunching of conductors or for the colour identification of conductors.
- (d) Bunched conductors shall be neatly formed to present a uniform appearance without twisting or crossing the conductors. Conductors leaving the harnesses shall be so arranged that they are adjacent to the chassis.
- (e) Conductors to hinged panels and doors shall be secured on both the door and the frame and shall be looped between the two points. The loop shall be arranged to produce a twisting motion when the door is opened or closed. A flexible protection sleeve shall be installed over the conductors.
- (f) Where wiring channels are used, they shall be installed horizontally and vertically. Under no circumstances may power and control circuit wiring be installed in the same wiring channels.

Channel shall not be more than 40% full.

- (g) All wiring between different Panels within the same switchboard shall be installed in wiring channels.
- (h) Grommets shall be installed in each hole in the metalwork through which conductors pass.
- (i) All wiring shall be installed away from terminals, clamps or other current carrying parts. Wiring shall also be kept away from exposed metal edges or shall be protected where they cross metal edges.
- (j) Conductors may be jointed at equipment terminals or numbered terminal strips only. No other connections are allowed.
- (k) Where conductors change direction, smooth bends shall be formed with a radius of at least 5 times the outside diameter of the conductor or harness.
- (l) Where screened cables are specified, the screening shall be earthed in the switchboard or control board only unless clearly specified to the contrary, Screened cables entering control boxes through pressed knock-outs, shall terminate in compression glands. Conductors shall as far as possible remain inside the screening at terminations. Where conductors have to separate from the screen, the braiding shall be separated and the conductors drawn through the braid without damaging the braiding. The conductors shall then be connected to their respective terminals and the screening smoothed and connected to the earth terminal.
- (m) Where neutral connections are looped between the terminals of instruments, it is essential that the two conductor ends be inserted into a common lug or ferrule and are crimped or soldered together in order that the neutral connection is not broken when

the conductors are removed from one of the instruments.

- (n) Wiring should as far as possible be confined to the front portions of switchboards for ease of access. This requirement is important for wiring between smaller circuit-breakers and the associated main circuit-breaker as well as the wiring from circuit-breakers to lighting and socket-outlet circuits.
- (o) A maximum of two conductors will be allowed per equipment terminal. Where more conductors must be connected to the same equipment terminal (e.g. a main circuit-breaker feeding other circuit-breakers), stub busbars shall be provided for the various conductors. Refer also to par. 8.6.

#### 9.8.5 Load End Connections

The supply end connections to all equipment shall under all circumstances be at the top and the load end connections at the bottom.

#### 9.8.6 Wiring to Circuit-breakers

Equipment with a rating exceeding the current rating of 70mm<sup>2</sup> conductors shall be connected by means of busbars to the main busbars. Looped connections may only be

installed for a maximum of two outgoing circuits. Where there are more than two outgoing circuits, busbars shall be used and equipment connected individually to the busbars. Where miniature circuit-breakers are mounted in continuous rows and supplied by busbars connected to each MCB, each busbar shall be supplied by a separate conductor. This conductor shall be connected to the busbar by means of a separate lug and not via an MCB terminal.

#### 9.8.7 Conductor Terminations

Conductors connected to terminals complying with the Engineer's standard specification for "WIRING TERMINALS", Section C9, need not be soldered or ferruled. Connections to circuit-breakers, isolators or contactors shall be made by one of the following methods:

- (a) A ferrule of the correct size,
- (b) soldering the end of the conductor, or
- (c) winding a conductor strand tightly around the end to totally cover the end.

All conductors terminating on meters, fuse holders and other equipment with screwed terminals shall be fitted with lugs. The lugs shall be soldered or crimped to the end of the conductor. The correct amount of insulation shall be stripped from the end to fit into the terminal. Strands may not be cut from the end of the conductor.

#### 9.8.8 Identification

9.8.8.1 The colour of the conductors for all 220/250 V circuits shall correspond to the colour of the supply phase for that circuit. Neutral conductors shall be black.

9.8.8.2 All other conductors in the board, supplying control circuits, etc. shall be coded in colours other than those specified above. A colour code shall be devised for each board and the colour code shall be shown on the wiring diagrams.

9.8.8.3 All conductors that terminate at wiring terminals and all conductors used for the internal

wiring of the switchboard, shall further be identified at both ends by means of durable cable marking ferrules. PVC or other tape is not acceptable.

9.8.8.4 The numbers on the markers shall be shown on the wiring diagrams.

#### 9.9. PAINT FINISH

Metal components of the framework, panels and chassis shall be painted in accordance with the Engineer's "STANDARD PAINT SPECIFICATION", Section C39.

#### 9.10. LABELLING

9.10.1 Care shall be taken to ensure that all equipment is fully labelled and that accurate descriptions and safety warning notices appear in three official languages (English, Afrikaans and SeTswana).

##### 9.10.2 Material

Engraved plastic or ivory sandwiched strips shall be used throughout. The strips shall bear white lettering on a black background for normal labels and red letters on a white or yellow background for danger notices.

##### 9.10.3 Main Switchboards

Main switchboards and sub-main switchboards shall be supplied with the following bilingual labels:

(a) Number and allocation of switchboard.

Example:

CONTROL BOARD A4  
BEHEERBORD A4

Lettering: at least 10 mm high prominent position. Label on the outside in a prominent position.

(b) Designation of busbar sections.

Example:

BUSBAR SECTION 2  
GELEISTAMSEKSIE 2

Lettering: at least 10mm high. Label on the outside in a prominent position.

(c) Designation of all switchgear including circuit-breakers, isolators, contactors, etc. If the current rating of circuit-breakers is not clearly marked on the equipment, the value shall be indicated on the engraved label.

Example:

SUPPLY TO BOARD C3  
TOEVOER NA BORD C3  
PUMP SUPPLY  
POMPTOEVOER

Letters at least 5mm high. Label on the outside of the switchboard.

- (d) All other equipment including meters, instruments, indicator lights, switches, push-buttons, circuit-breakers, fuses, contactors, control relays, protection relays, etc. shall be identified. The function of the equipment and circuits shall be clearly indicated. The main switch shall be labelled as such and designated:

"SWITCH OFF IN CASE OF EMERGENCY"  
 "SKAKEL AF IN NOODGEVAL"

Flush mounted equipment within doors or front panels shall be identified with labels fixed to the doors or front panels respectively. The labels for equipment installed behind panels, shall be fixed to the chassis close to the equipment. If this equipment is positioned too close together to accommodate descriptive engraved labels, the equipment may be identified by a code or number on an engraved label which shall be fixed close to the equipment. The code number shall be identified on a legend card which shall be installed on the switchboard behind a plastic or other protective cover.

#### 9.10.4 Other Switchboards

All equipment on switchboards shall be identified with the necessary bilingual labels. The circuit numbers shall appear at grouped single-pole circuit-breakers. The circuit numbers shall correspond to the circuit numbers on the final installation drawings. The above-mentioned circuits shall be identified on a legend card, which shall be installed on the inside of the switchboard door, or in any other position where it can conveniently be observed. All fuses, including instrument fuses, shall have labels stating function, fuse rating and duty or type where applicable. All other equipment shall be identified separately and their functions shall be clearly indicated.

#### 9.10.5 Fixing of Labels

- 9.10.5.1. Labels shall not be fixed to components or trunking but to doors, panels, chassis or other permanent structures of the switchboard.
- 9.10.5.2. Engraved strips shall be secured to facilitate a neat alteration of the designation of the labels. Sufficient fixing points shall be provided to prevent labels from warping. Labels in slotted holders shall be secured in position to prevent unauthorised removal. Labels may be secured by the use of brass bolts and nuts, self-tapping screws, slotted label holders or pop-rivets.

#### 9.11. TESTS

- 11.1 The Engineer shall be notified when the mechanical construction of the switchboard, i.e. frame, panels and base frame, is complete in order that it may be inspected at the factory.
- 11.2 Function tests of all equipment, control and interlocking circuits shall be conducted to the satisfaction of the Engineer. Testing equipment and facilities including instruments, dummy loads and additional switchgear and cables shall be provided by the Contractor at no extra cost. The Engineer shall be notified in writing two weeks in advance of any test to be conducted, to allow its representative to be present at such tests. A complete report on the tests shall be handed to the Engineer.

#### 9.12. DRAWINGS

##### 9.12.1 Drawings for Approval

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

- (a) A complete wiring diagram of the equipment on the boards.
- (b) A complete layout of the arrangement of the switchboards indicating all equipment dimensions and the construction of the boards. The positions and method of fixing and sizes of busbars shall be shown.
- (c) All labelling information in both the official languages on a separate sheet.
- (d) The make, catalogue number and capacity of all equipment such as isolators, circuit-breakers, fuses, contactors, etc.

The approval of drawings shall not relieve the Contractor of his responsibility to the Engineer to supply the switchboards according to the requirements of this Specification.

#### 9.12.2 Final Drawings

A complete set of "as-built" transparent drawings of all switchboards shall be submitted to the Engineer within two weeks after delivery of the boards. The following information shall be presented:

- (a) Item (a) to (d) of the previous paragraph.
- (b) Terminal strip numbers, numbers and colours of conductors connected to the terminal strips and numbers and colours of the conductors utilised for the internal wiring.
- (c) A separate schedule of all equipment.

#### 9.12.3 Manuals

Three sets of manuals for all specified main and sub-main switchboards shall be supplied to the Engineer at no extra cost. These manuals shall include the following information :

- (a) Complete information on the operation of the equipment.
- (b) Complete information for maintenance of the equipment.
- (c) Brochures and ordering information.

- (d) A complete equipment list indicating quantities and relevant catalogue numbers.

#### 9.12.4 Completion

The supply contract shall be regarded as incomplete until all tests have been conducted successfully and all drawings and manuals have been handed to the Engineer

### 10. **MOULDED-CASE CIRCUIT-BREAKERS**

10.1. This section covers single or multi pole moulded case circuit breakers for use in power distribution systems, suitable for panel mounting, for ratings up to 1 000 A, 600 V, 50 Hz.

10.2. The circuit breakers shall comply with SABS 156.

- 10.3. The continuous current rating, trip rating and rupturing capacity shall be as specified.
- 10.4. The contacts shall be silver alloy and shall close with a high pressure wiping action.
- 10.5. Where specified, the circuit breaker shall be capable of accommodating factory fitted shunt trip or auxiliary contact units or similar equipment.
- 10.6. The operating handle shall provide clear indication of "ON", "OFF" and "TRIP" positions.
- 10.7. The mechanism shall be of the TRIP-FREE type preventing the unit from being held in the ON position under overload conditions.
- 10.8. All moulded case circuit breakers in a particular installation shall as far as is practical be supplied by a single manufacturer.
- 10.9. The incoming terminals of single pole miniature circuit breakers shall be suitable for connection to a common busbar.
- 10.10. The circuit breaker shall have a rating plate indicating the current rating, voltage rating and breaking capacity.
- 10.11. Extension type operating handles shall be provided for units of 600 A rating and above.

## **11. EARTH LEAKAGE RELAYS**

- 11.1. Earth leakage relays shall be single or three-phase units with a sensitivity of 30mA, with associated circuit breaker or on-load switch for use on 220/250V single phase or 380/433 V three phase, 50 Hz, supplies.
- 11.2. The units shall be suitable for installation in switchboards in clip-in trays or bolted to the chassis.
- 11.3. The earth leakage relay shall function on the current balance principle and shall comply with SABS 767 as amended, and shall bear the SABS mark. Integral test facilities shall be incorporated in the unit.
- 11.4. Circuit breakers with trip coils used integrally with earth leakage units (two pole for single phase units and three pole for three phase units) shall comply with SABS 156.
- 11.5. On-load switches used integrally with earth leakage units (two pole for single-phase units and three pole for three phase units) shall comply with SABS 152.
- 11.6.1. The fault current rating of the unit shall be 2,5kA or 5kA as required, when tested in accordance with SABS 156.

## **12. MICRO-GAP SWITCHES**

- 12.1. Micro-gap switches shall be suitable for ratings up to 400 A at 660 V (triple pole) and may be used for main and distribution switches in domestic applications, offices, small factories and similar applications.
- 12.2. Double pole switches shall be suitable for voltages up to 230V  $\pm$  10%.
- 12.3. The switches shall comply with SABS 152.
- 12.4. Micro-gap switches may be used on AC circuits only.
- 12.5. Metal clad and moulded casings are acceptable.

- 12.6. Micro-gap switches shall be capable of carrying rated current continuously and making and breaking rated current.
- 12.7. Heavy, fully accessible, brass terminals with two screws each shall be provided to facilitate easy wiring. Contacts shall have large contact surfaces, made from high quality material such as solid silver.
- 12.8. The "ON" and "OFF" positions and the rating of the switch shall be clearly and indelibly marked.

### 13. INDICATOR LIGHTS

- 13.1. Indicator lights shall be of neon, incandescent (filament) or LED types. Lamp voltages shall suit the supply or control voltage. Lamps shall be derated for continuous duty by using economy resistors or using input voltages at least 20 % lower than the rated lamp voltages.
- 13.2. Where LED's are used as indicators on main supply voltages a suitable current limiting capacitor and reverse voltage protection diode shall be used. For low AC or DC voltages (+ 24 V) a current limiting resistor will suffice.
- 13.3. Indicator lights shall comply with BS 1050 where applicable.
- 13.4. Indicator lights shall be suitable for installation in switchboard panels and doors and shall consist of interchangeable lenses, lamp base, suitably rated and accessible terminals and a chromed screw-on retaining ring or other suitable means to secure the units.
- 13.5. It shall be possible to replace lamps from the front of the panel without the use of tools.
- 13.6. Surface mounted indicator lights shall be housed in purpose-made boxes with suitable cover plates.
- 13.7. Indicator lights shall be equipped with standard removable legend plates. Alternatively, the function shall be clearly indicated by means of labels or by engraving on the lenses.
- 13.8. All indicator lights for a specific application or switchboard shall be from the range of one manufacturer and shall preferably be of the same size and shall use the same lamp types.
- 13.9. The following are the preferred colours for indicator lights:
- |     |        |   |
|-----|--------|---|
| (a) | RED    | : Abnormal state.                                       |
| (b) | YELLOW | : Attention or caution. (or amber)                      |
| (c) | GREEN  | : Ready for operation.                                  |
| (d) | WHITE  | : Circuit live or circuit operating (or clear) normally |
| (e) | BLUE   | : Any function not covered by the above colours.        |

### 14. TRIPLE POLE ON-LOAD ISOLATORS

- 14.1. This section covers switches suitable for panel mounting for use in power distribution systems up to 600 V, 50 Hz. Switches for motor isolation are included.
- 14.2. The switches shall be of the triple pole, hand operated type complying with SABS 152.
- 14.3. The switches shall have a high speed closing and opening feature.

- 14.4 The switches shall be suitably rated for the continuous carrying, making and breaking of the rated current specified as well as the through-fault current capacity as specified.
- 14.5. To distinguish the switches from circuit breakers the operating handles shall have a distinctive colour and/or the switch shall be clearly and indelibly labelled "ISOLATOR".

## 15. TIME SWITCHES

- 15.1. Time switches shall be of single-pole type, suitable for 220/250 V systems, with contacts rated for the duty to be performed with a minimum rating of 15A. Contacts shall be of high quality material, e.g. silver-plated or solid silver.
- 15.2. The clock shall be driven by a self-starting, hysteresis synchronous motor, keeping accurate mains time. All clocks shall be controlled by an electrically wound escapement providing the main spring with a minimum of 15 hours reserve in case of a power failure. The main spring shall be kept fully wound without the use of slipping clutch devices that may wear and fall out of adjustment.
- 15.3. The main spring shall have a minimum of 15 hours reserve under full load and if fully discharged, shall be completely rewound within 15 minutes of the restoration of power.
- 15.4. An external manual bypass switch shall be provided to permit the circuit to be switched "ON" or "OFF" manually without affecting the operation of the time switch.
- 15.5. The time switch shall have a 24 hour dial, with day and night indication, that can be set to switch in 30 minute steps. The dial shall be fitted with 48 tappets corresponding to 48 change-over operations in a 24 hour period.
- 15.6. The time switch shall be fitted with a day omission dial comprising a total of 14 tappets which can be set to switch in 12 hour steps.
- 15.7. The time switch shall be housed in a dust-tight moulded plastic or metal case, consisting of a plastic clip-on front cover and a moulded plastic or metal base. Time switches to be used for surface mounting on walls shall be provided with a suitably positioned 20mm conduit knock-out.

## 16. CONTACTORS

- 16.1. Contactors shall be of the open or totally enclosed, triple- or double-pole, electromechanically operated, air-break type suitable for 380/433 V or 220/250 V supplies and shall comply with SABS 1092.
- 16.2. Contactors shall have the following characteristics:
- (a) Enclosed coil easily replaceable.
  - (b) A permanent air gap in the magnetic circuit to prevent sticky operation.
  - (c) Provision for quick and simple inspection of contacts.
  - (d) Clearly marked main and auxiliary terminals.
- 16.3. All parts shall be accessible from the front.
- 16.4. Contactors which are not located in switchboards shall be housed in enclosures which comply with IP 54 of IEC 144.
- 16.5. The current rating of the contactor shall be as specified for the circuit with a switching duty

in accordance with the SABS 1092 or IEC 158-1, utilisation category ACI for lighting and power circuits and utilisation category AC3 for motor starting.

- 16.6. In addition to the required current carrying capacity and switching duty of a contactor, the contactor chosen for a particular application shall be rated for the maximum through fault current allowed by the back-up protection devices at the point where the contactor is installed. Careful co-ordination of short circuit devices shall take place.
- 16.7. All laminations of the magnetic system of the contactor shall be tightly clamped. Noisy contactors will not be accepted.
- 16.8. Non-current-carrying metallic parts shall be solidly interconnected and a common screwed earth terminal shall be provided. The contactor shall be earthed to the switchboard earth bar.
- 16.9. Latched contactors shall be provided with a trip coil and a closing coil. The contactor shall remain closed after de-energising the closing coil and shall only trip on energising the trip coil.
- 16.10. Contactor operating coils shall have a voltage rating as required by the control circuitry and shall have limits of operation and temperature rise as specified in Clause 7.5 and Table IV of IEC 158-1. Latched contactors shall be capable of being tripped at 50 % of the rated coil voltage.
- 16.11. Contactors for normal/standby changeover circuits shall be electrically and mechanically interlocked. Contactors in star-delta starters shall be electrically interlocked.
- 16.12. Contactors with provision to add auxiliary contacts and convert auxiliary contacts on site are preferred. Contactors with permanently fixed auxiliary contacts shall have at least 1 x N/O and 1 x N/C spare auxiliary contacts in addition to the contacts specified for control purposes and in addition to contacts required for self-holding operations or economy resistances. Where the number of auxiliary contacts required is greater than the number of contacts that can be accommodated on the contactor, an auxiliary relay or additional contactor shall be provided to supply the additional contacts.
- 16.13. It shall be possible to replace main contacts without disconnecting wiring.
- 16.14. Auxiliary contacts shall be capable of making, carrying continuously and breaking 6A at 230V AC, unity power factor for contactors used on 380-433/220-250 V systems.
- 16.15. Auxiliary contact functions required e.g. "lazy" contacts, late-make, late-break, make-before-break, etc. shall be inherent in the contact design. Under no circumstances may these functions be improvised by bending contacts, loading contacts, etc. These functions shall be available in all contactors.
- 16.16. Spare auxiliary contacts shall be wired to numbered terminal strips in the switchboard and shall appear on the switchboard drawings.
- 16.17. All contactors on a specific project shall be from a standard range of one single manufacturer, unless specified to the contrary.

## **17. STANDARD PAINT SPECIFICATION**

### **17.1. FINISH REQUIRED**

Metalwork of electrical equipment such as switchboards, equipment enclosures, sheet steel luminaire components, purpose-made boxes, etc. shall be finished with a high quality paint applied according to the best available method. Baked enamel,

electrostatically applied powder coating or similar proven methods shall be used.

17.2. CORROSION RESISTANCE

Painted metal shall be corrosion resistant for a period of at least 168 hours when tested in accordance with SABS Method 155.

17.3. EDGES

Care shall be taken to ensure that all edges and corners are properly covered.

17.4. SURFACE PREPARATION

Surface preparation shall comply with SABS 064. Prior to painting, all metal parts shall be thoroughly cleaned of rust, mill scale, grease and foreign matter to a continuous metallic finish. Sand or shot blasting or acid pickling and washing shall be employed for this purpose.

17.5. BAKED ENAMEL FINISH

17.5.1 Immediately after cleaning all surfaces shall be covered by a rust inhibiting, tough, unbroken metal-phosphate film and then thoroughly dried.

17.5.2 Within forty eight (48) hours after phosphatising, a passivating layer consisting of a high quality zinc chromate primer shall be applied, followed by two coats of high quality alkyd-based baked enamel.

17.5.3 The enamel finish on metal luminaire components shall comply with SABS 783, Type III.

17.5.4 Other metal parts e.g. switchboard panels, etc., shall comply with SABS 783, Type IV with a minimum paint thickness after painting of 0,06mm. In coastal areas, the dry film thickness shall be increased to at least 0,1 mm.

17.5.5 The paint shall have an impact resistance of 5,65 J on cold-rolled steel plate and a scratch resistance of 2 kg.

17.6. POWDER COATED FINISH (NOT TO BE USED LESS THAN 50km FROM SEASIDE)

17.6.1 Immediately after cleaning the metal parts shall be pre-heated and then covered by a microstructure paint powder applied electrostatically.

17.6.2 The paint shall be baked on and shall harden within 10 minutes at a temperature of 190 C.

17.6.3 The minimum paint thickness after baking shall be 0,05 mm. The dry film thickness shall be increased in coastal areas. The paint cover shall have an impact resistance of 5,65 J on cold-rolled steel plate and a scratch resistance of 2kg.

17.7. TOUCH-UP PAINT

In the case of switchboards and larger equipment enclosures, a tin of matching touch-up paint not smaller than 1 litre shall be provided.

17.8. COLOURS

17.8.1 The colour of HV switchboards and HV switchgear enclosures shall be "DARK ADMIRALTY GREY", colour G12 of SABS 1091.

17.8.2 The colour of LV switchboards and equipment enclosures in buildings shall be "LIGHT ORANGE", colour B26 of SABS 1091 as recommended in SABS 0140, Part II unless specified to the contrary.

**SPRINGBOKPAN SILOS****ELECTRICAL INSTALLATIONS**

- 17.8.3 The colour of LV distribution kiosks and miniature substations shall be "AVOCADO GREEN", colour C17 or "LIGHT STONE", colour C37 of SABS 1091.
- 17.8.4 The standby power section of LV switchboards in buildings shall be coloured "SIGNAL RED", colour All of SABS 1091.
- 17.8.5 Switchboards for No-Break Power Supplies or sections of switchboards containing No-break power supplies, shall be coloured "DARK VIOLET", colour FO6 or "OLIVE GREEN", colour HO5 of SABS 1091**

## **PART 4: BILLS OF QUANTITIES**

### **SPRINGBOKPAN SILOS**

### **ELECTRICAL WORKS**

**GENERAL NOTES**

1. This Bill of Quantities forms part of, and must be read in conjunction with the specification.
2. The Electrical Engineer will check the completed bill of Quantities and reserves the right to adjust any individual price and to rectify any discrepancy whilst the total tender price as quoted remains unaltered.
3. The unit rate for each item in the Bills of Quantities shall include for all materials, labour, profit, transport, etc., everything necessary for the execution and complete installation of the work in accordance with the description.
4. The Bills of Quantities shall not be used for ordering purposes. The Contractor shall check the lengths of cables and overhead conductors on site before ordering any of the cables. Any allowance for off-cuts shall be made in the unit rates.
5. No alterations, erasure or addition is to be made in the text of the Bill of Quantities. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Bill of Quantities will be adhered to.
6. The rates shall exclude Value-Added Tax and the total carried over to the final summary in PART A which is the main contract document.
7. All material covered by this Specification shall, wherever possible, be of South African manufacture.

**PART 5**  
**SCHEDULE OF MATERIAL**

**PART 5: MATERIAL SCHEDULE ELECTRICAL & MECHANICAL INSTALLATIONS**

The contractor shall complete the following schedules and submit them to the Representative/Agent within 21 days of the date of the acceptance of the tender.

The schedules will be scrutinised by the Representative/Agent and should any material offered not comply with the requirements contained in the specification, the Contractor will be required to supply material in accordance with the contract at no additional cost.

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

Item	Material	Make or trade name	Country of origin
1.	Distribution boards		
2.	Circuit breakers 1P, 2P, 3P		
3.	On load isolators without trips		
4.	Contactors 1P, 2P, 3P		
5.	Earth leakage relays 1 phase		
6	Daylight sensitive switch		
7	Conduit		
8	Conduit boxes		
9	Surface switches		
10	Watertight switches		
11.	16A flush socket outlets		
12.	16A surface socket outlets		
13.	16A watertight socket outlets		
14	Light fittings to be listed below		
15			
16			
17			
18			
19			
20			
21			
22			

**NOTE:**

Should the contractor wish to supply materials other than that originally offered, prior written approval must be obtained from the Representative/Agent before any orders are placed.

CONTRACTOR:

\_\_\_\_\_

SIGNED: \_\_\_\_\_

DATE: \_\_\_\_\_

**PART 6**

**DRAWINGS**

**VOLUME 02**  
**OCCUPATIONAL HEALTH AND SAFETY**  
**BILL OF QUANTITIES**



# BID DOCUMENT

VOLUME 2

## SPRINGBOKPAN SILO

RESTORATION OF ELECTRICITY TO THE FACILITY AT SPRINGBOKPAN SILOS FOR  
THE DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT, NORTH WEST  
PROVINCE (PHASE 1)

OCCUPATIONAL HEALTH AND SAFETY BILL OF QUANTITY

BID NO: DRD01NWER002

CLOSING DATE AND TIME: 13 MARCH 2023 at 12h00

BID PROPOSAL SUBMITTED BY:

Name of Company : .....

Contact Name : .....

Contact No. : .....

Address : .....

: .....

Amount carried to  
Final Summary (VAT Excl.): .....

**Issued by:**

**Independent Development Trust – North West  
Province**  
4059 Jules Street  
Industrial Sites  
**MAHIKENG**  
2745

Contact:  
Ms Marumo Mabaso  
Telephone: (018) 389 3000

**Compiled by:**



MK & Associates Development Consultants Pty (Ltd)  
7 Gembok Street  
Golfview  
**MAHIKENG**  
2745

Tel: 018 011 0024  
Email: [admin@mkdc.co.za](mailto:admin@mkdc.co.za)

ELECTRICAL INSTALLATION & DISTRIBUTION PROJECT AT SPRINBOKPAN SILO					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	<b>BILL No. 1 OCCUPATIONAL HEALTH &amp; SAFETY</b>				
1	The Contractor shall comply with all the requirements set out in the Construction Regulations, 2014, issued under Occupational Health and Safety Act (Act 85 of 1993) It is required of the Contractor to thoroughly study these Regulations and Health and Safety Specification that must be read together with and is deemed to be to be incorporated under this Section of the Bill of quantities. It is required of the Contractor to thoroughly study these Regulations and Health and Safety Specification that must be read together with and is deemed to be to be incorporated under this Section of the Bill of quantities.				
1	The Contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or non-compliance, the Principal Agent, reserve the right to delay issuing of any progress payment certificate payment until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest due to such delay of payment				
1	Provision of pricing of the Occupational Health and Safety Specification is made under this bill and it explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claim in this regard shall be entertained.				
	Note: The file shall be a lever arch with original color document of acceptable standards. The file will be expanded during the project as and when required by the client				
1	<b>OCCOPATIONAL HEALTH &amp; SAFETY</b>				
1	<b>PROGRAMME</b>				
1	<b><u>Set up a site and job specific Health and Safety Plan, including a Safety File on site to contain the following:</u></b>				
1	<b>HEALTH AND SAFETYPERSONNEL</b>				
1,1	Safety Officer ( <b>SACPCMP Registered</b> )	Mths	8		
	<b>Carried to Collction</b>				R

ELECTRICAL INSTALLATION & DISTRIBUTION PROJECT AT SPRINBOKPAN SILO					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>2</b>	<b>HEALTH AND SAFETY AMINISTRATION</b>				
2,1	Copy of Occupational Health and Safety Act (Act 85 of 1993 – 24th version/edition) including Construction Regulations August 2014	No	1		
2,2	Induction Training/ Re-induction/Re-fresher	Item			
2,3	Health and Safty File (PRINCIPAL & SUBCONTRACTORS)	No	1		
2,4	Medicals (Entry & EXit)	No.	20		
2,5	Health and Safety Administration, implemantation and maintenance on site including the copies of DSTI, Toolbox Talks, Checklist/Inspection/Internal Audits, Reports, Munites of the Safety Committee Meetings, Printer/photocoping macine & toner/ink/catrages	Mths	8		
<b>2,3</b>	<b>OCCUPATIONAL HEALTH AND SAFETY TRAINIG</b>				
2.3.1	Construction Health and Safety Supervision	Item			
2.3.2	Health and Safety Representative Training	Item			
2.3.3	First Aid Training	Item			
2.3.4	Fire Fighting Trainng	Item			
2.3.4	Incident Investigation/ Incident Management	Item			
2.3.5	Hazard Identification Risk Assessment (HIRA)	Item			
	<b>Carried to Collction</b>				
					R

ELECTRICAL INSTALLATION & DISTRIBUTION PROJECT AT SPRINBOKPAN SILO					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>3</b>	<b>FIRST AID/ EMERGENCY</b>				
3.1	First Aid box/kit	Item			
3.2	First Aid box refilling during the project	Mnth	8		
3.3	Airtime/ Data (Communication)	Item			
3.4	Identification Signage	NO	6		
3.5	Rescue Equipment and Strechers				
<b>3.6</b>	<b>FIRE PROTECTION</b>				
3.6.1	Fire Extinguishers	No	6		
3.6.2	Fire Extinguishers Maintanace	Item			
<b>3.7</b>	<b>FLAMMABLE LIQUIDS STORAGE</b>				
3.7.1	Storage facilities (steel frame, lockable gate, drip trays)	Item			
<b>3.8</b>	<b>DIESEL STORAGE</b>				
3.8.1	Diesel storage	Item			
<b>3.9</b>	<b>SIGNAGE</b>				
3.9.1	Mandatory - Blue	Item			
3.9.2	Information - Green	Item			
3.9.3	Hazard Warning - Yellow	Item			
3.9.4	Prohibition - Red	Item			
	<b>Carried to Collction</b>				R

ELECTRICAL INSTALLATION & DISTRIBUTION PROJECT AT SPRINBOKPAN SILO					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>4</b>	<b>PERAONAL PROTECTIVE EQUIPMENT (PRINCIPAL &amp; SUB-CONTRACTOR)</b>				
4.1	Overalls with reflective stripe	No	20		
4.2	Steel-cap safety boots	No	20		
4.3	Safety goggles	No	20		
4.4	Hard Hat	No	20		
<b>4.5</b>	<b><u>Hearing Protection</u></b>				
4.5.1	Ear plugs	Item	20		
4.5.2	Ear Muffs	Item			
<b>4.6</b>	<b><u>Respiratory Protection</u></b>				
4.6.1	FFP 2 Dust mucks (Box)	No.	24		
4.6.1	Respirators	Item			
<b>4.7</b>	<b><u>Hand Protection</u></b>				
4.7.1	Suprlight Leather gloves	No	20		
<b>4.8</b>	<b><u>Hot-work PPE</u></b>				
4.8.1	Leather Aprons	No	3		
4.8.2	Leather Spats	No	3		
4.8.3	Long leather gloves	No	3		
4.8.4	Face shield	No	3		
4.8.5	Weldingspctecles	No	3		
	<b>Carried to Collction</b>				R

ELECTRICAL INSTALLATION & DISTRIBUTION PROJECT AT SPRINBOKPAN SILO					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>5</b>	<b><u>SPECIAL EQUIPMENT</u></b>				
5.1	Working on heights including scaffolding and roof work	Item			
5.2	Machine guarding	Item			
5.3	Temporary storage of flammable liquids/ hazardous chemical substances including diesel and petrol (concrete floor/drip try/spillage containment (bund wall)	Item			
5.4	Commissioning safety precautions	Item			
<b>5.5</b>	<b><u>Specific Requirement of Covird 19 (Corona Virus)</u></b>				
5.5.1	Covid Screening Area & Covid Isolation Room	Mnths			
5.5.2	Infrared Non Contact Thermometer	No	1		
5.5.3	Disposable masks (box)	No	1		
5.5.4	70% Alcohol hand sanitizor 5L	Mnth	3		
5.5.5	Sanitizor stand	No	1		
5.5.6	Hand Soap 5L	No	4		
5.5.7	Multipurpose Cleaning Detergent 5L	Mnths	4		
5.5.8	Paper Towels - Box of 2000	Mnths	8		
5.5.9	Training on Corvid 19 (Compliance Officer)	Item			
5.5.10	High Pressure Mobile Disinfection Kit (Mobile plants and vehicles)	No			
5.5.11	Covid 19 Warning/Information Signs	No	4		
<b>5.6</b>	<b><u>FALL PROTECTION /PREVENTION EQUIPMENT</u></b>				
5.6.1	Safety Harness with double Lanyards	Item			
5.6.2	Lifelines and Vertical Fall Arrest System	Item			
5.6.3	In-house training for erectors	Item			
5.6.4	Safety Nets/Temporary Horizontal Lifeline	Item			
5.6.5	Drop zone	Item			
5.6.6	Warning signage	Item			
	<b>Carried to Collction</b>				
					R

**OCCUPATIONAL HEALTH & SAFETY**

**COLLECTIONS**

Total Brought Forward From Page No.

**Occupational Health and Safety Personnel**

**Occupational Health and safety Administration**

**Emergency & First Aid Provisions**

**Personal Protective Equipment**

**Special Equioment/Requirements**

Page  
No.

Amount

1

2

3

4

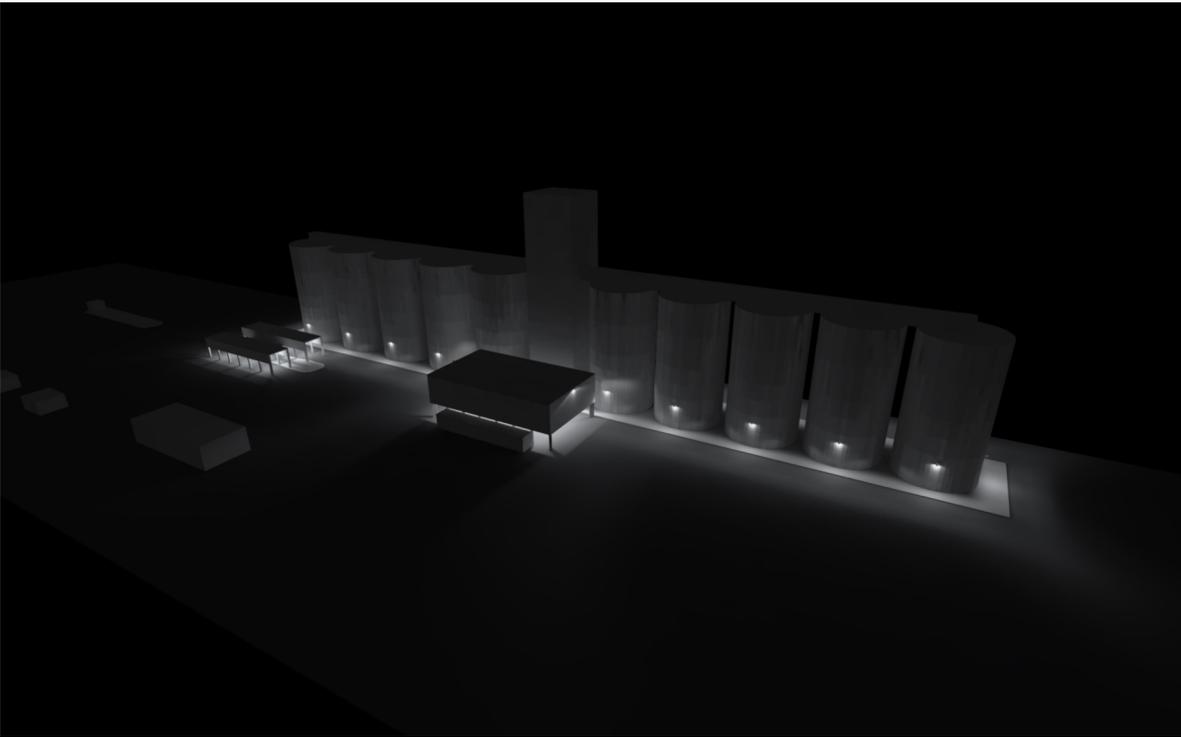
5

**Carried Forward to Final Summary**

R

# **ANNEXURE A**

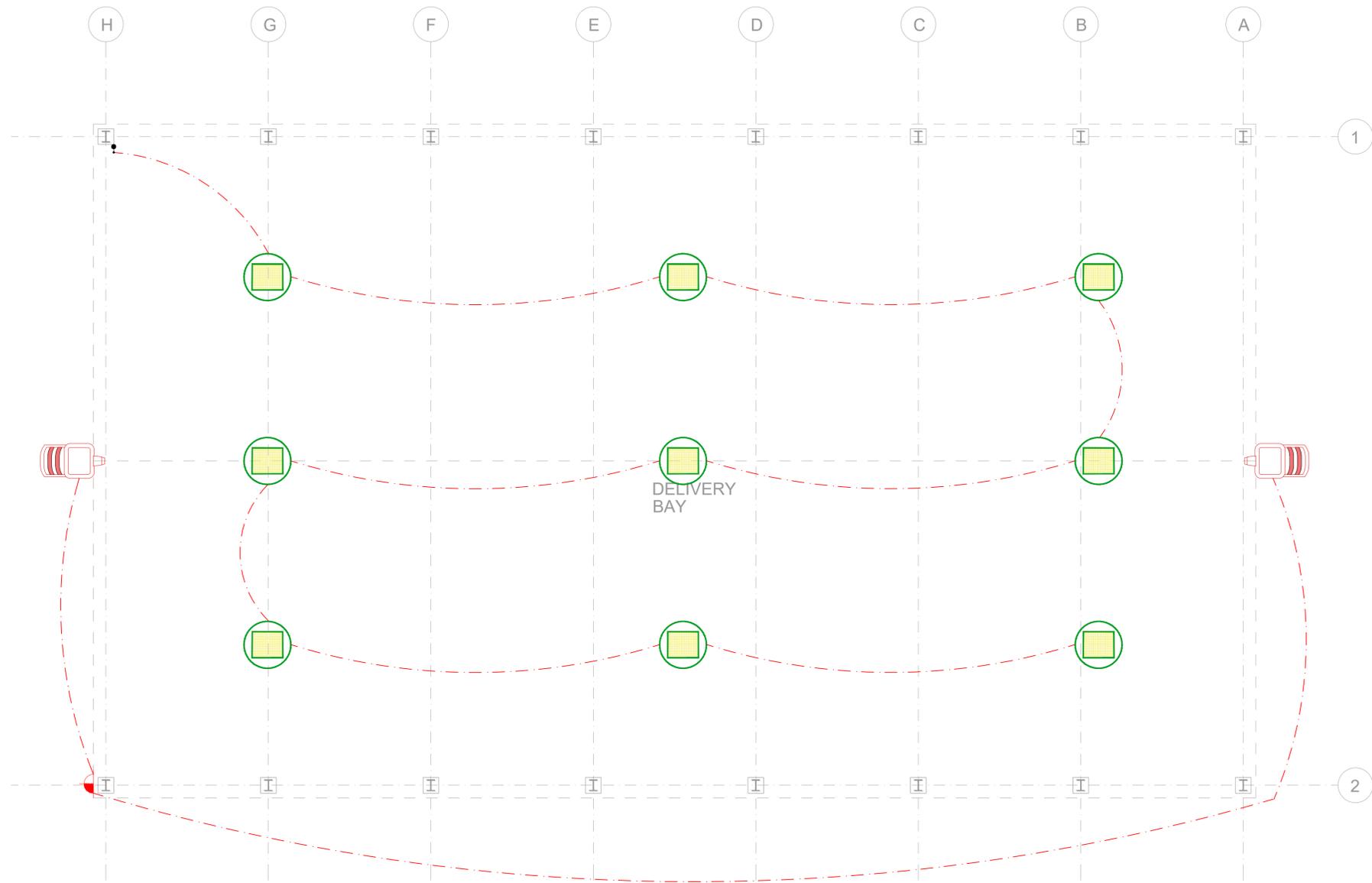
## **DRAWINGS**



## 0338 - Springbokpan Silos Project

SANS 10114-1

SANS 10389-1



Luminaire Schedule						
Symbol	Gly	Total Lamp Lumens	LLF	Description	Lum. Watts	Total Watts
	02	8083	0.800	OMNISTAR-MINI 20LED/59W 900mA OPTIC 5366 - WALL MOUNTED	59	118
	09	18266	0.800	ECOBAY-MIDI 160LED/132W 520mA SUSPENDED LED HI-BAY OPTIC 4130	132	1188

STATUS CODE	Group Codes BUILDINGS
0 - Pre - Feasibility study	BP - Building IT
1 - Feasibility study	BP - Building Public Address
A - Preliminary Design	BS - Building Service
B - Design Review	BA - Building Architectural
C - Tender Design	BE - Building Electrical
D - Detailed Design	BF - Building Fire Service
E - For Construction	BM - Building Mechanical
F - As Built	BT - Building Public Telecoms
G - For Information Only	BU - Building Public Utilities

DRAWING STATUS		
<b>FOR TENDER</b>		
PROJECT NUMBER		
<b>0338 - SBS - TCS</b>		
Drawn By	Designed By	Reviewed/Approved By
M CHABALALA	N NTUTA	E MENSAH 20100414
Name	S.A.I.D Number	Name Pr Number
		Name Pr Number Signature

No	Date	chkd	Details
TD	10.02.2023	EM	FOR TENDER

CLIENT

CONSULTANT

FOURWAYS OFFICE PARK,  
BLOCK 5, GROUND FLOOR  
Cnr. CEDAR ROAD AND  
FOURWAYS BOULEVARD,  
FOURWAYS,  
2191  
Tel: (+27) 10 110 8724  
Fax: (+27) 86 659 2099

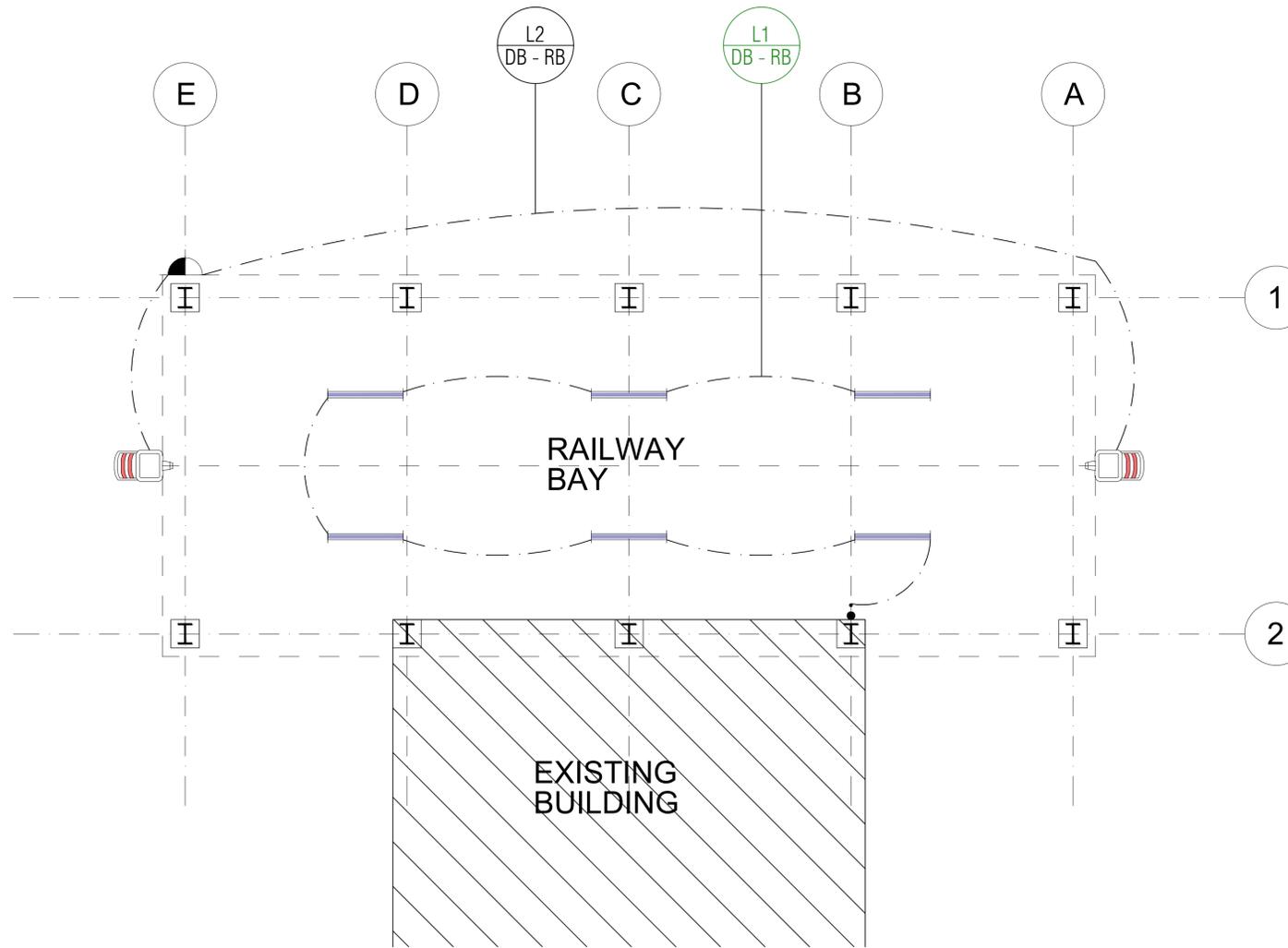
PROJECT

SILOS SPRINGBOKPAN  
PROJECT, NORTH WEST PROVINCE

DRAWING TITLE

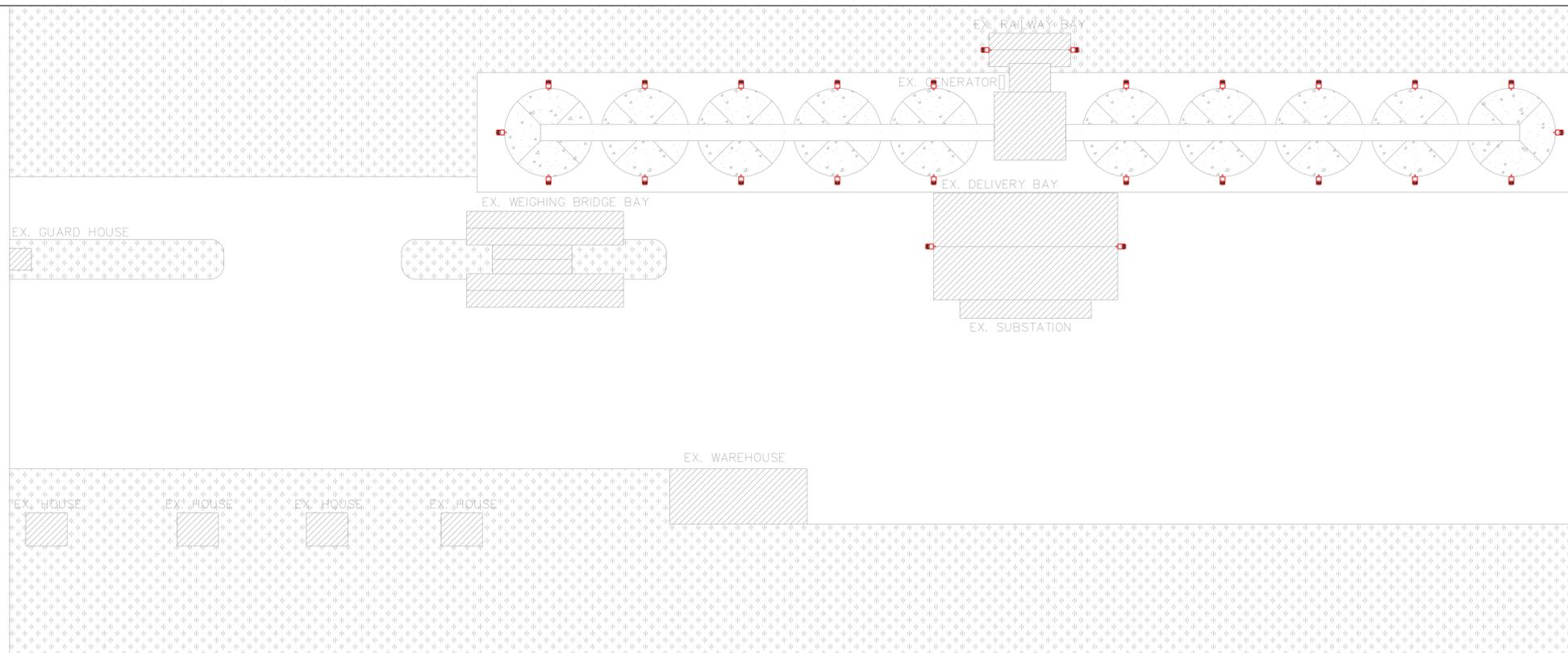
**DELIVERY BAY FLOOR PLAN  
LIGHTING LAYOUT**

Project code	Status	Group	Consultant	Doc Type	Seq No	Rev
SBS - C - BE - TCS - TDW - 002/3 - TD						
SCALE						1:75
CHECKED						TD
REV: No						
DATE						10.02.2023



Luminaire Schedule						
Symbol	Qty	Total Lamp Lumens	LLF	Description	Lum. Watts	Total Watts
	26	8083	0.800	OMNISTAR-MINI 20LED/5PW 900mA OPTIC S366 - WALL MOUNTED	59	1534
	06	7746	0.800	VAPOURPROOF LED LUMINAIRE WITH 2x 18W T8 LED TUBES	36	216

STATUS CODE 0 - Pre - Feasibility study 1 - Feasibility study A - Preliminary Design B - Design Review C - Tender Design D - Detailed Design E - For Construction F - As Built G - For Information Only	Group Codes BUILDINGS BP - Building IT BP - Building Public Address BS - Building Service BA - Building Architectural BE - Building Electrical BF - Building Fire Service BM - Building Mechanical BT - Building Public Telecoms BU - Building Public Utilities	DRAWING STATUS <b>FOR TENDER</b>		No	Date	chkd	Details	CLIENT 	CONSULTANT 	PROJECT SILOS SPRINGBOKPAN PROJECT, NORTH WEST PROVINCE DRAWING TITLE <b>RAILWAY BAY FLOOR PLAN LIGHTING LAYOUT</b>	Project code Status Group Consultant Doc Type Seq No Rev <b>SBS - C - BE - TCS - TDW - 002/1 - TD</b>	SCALE 1:500 CHECKED REV: No <b>TD</b> DATE 10.02.2023
		PROJECT NUMBER <b>0338 - SBS - TCS</b>		TD	10.02.2023	EM	FOR TENDER					



Symbol	Qty	Total Lamp Lumens	LLF	Description	Lum. Watts	Total Watts
☐	26	8083	0.800	OMNISTAR-MINI 20LED/59W 900mA OPTIC 5366 - WALL MOUNTED	59	1534

STATUS CODE	Group Codes BUILDINGS
0 - Pre - Feasibility study	BP - Building IT
1 - Feasibility study	BP - Building Public Address
A - Preliminary Design	BS - Building Service
B - Design Review	BA - Building Architectural
C - Tender Design	BE - Building Electrical
D - Detailed Design	BF - Building Fire Service
E - For Construction	BM - Building Mechanical
F - As Built	BT - Building Public Telecoms
G - For Information Only	BU - Building Public Utilities

DRAWING STATUS	
<b>FOR TENDER</b>	
PROJECT NUMBER <b>0338 - SBS - TCS</b>	
Drawn By M CHABALALA	Designed By N NTUTA
Name	S.A.I.D Number
Name	Pr Number
Name	Pr Number
Name	Pr Number
Signature	

No	Date	chkd	Details
TD	10.02.2023	EM	FOR TENDER

CLIENT



CONSULTANT



FOURWAYS OFFICE PARK,  
BLOCK 5, GROUND FLOOR  
Cnr. CEDAR ROAD AND  
FOURWAYS BOULEVARD,  
FOURWAYS,  
2191  
Tel: (+27) 10 110 8724  
Fax: (+27) 86 659 2099

PROJECT

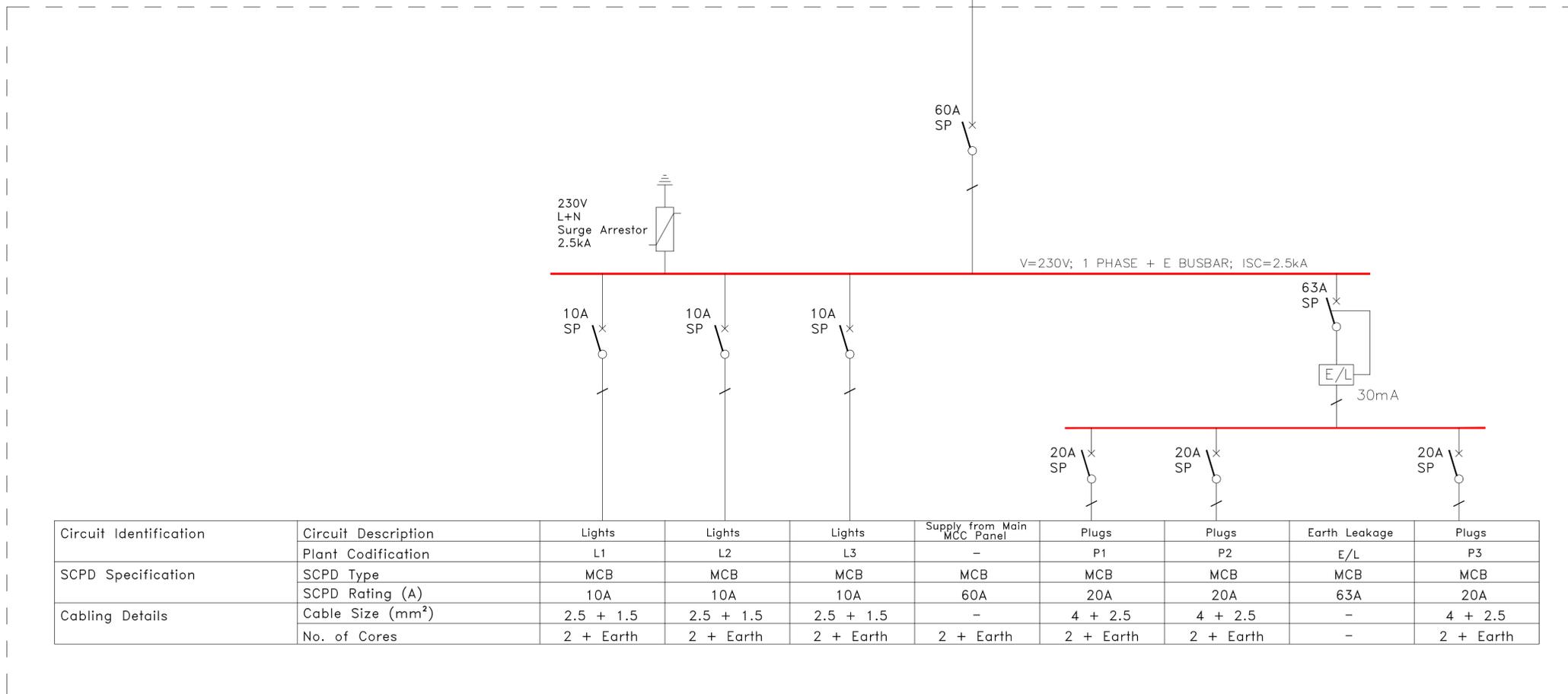
**SILOS SPRINGBOKPAN  
PROJECT, NORTH WEST PROVINCE**

DRAWING TITLE

**SITE PLAN  
AREA LIGHTING LAYOUT**

Project code	Status	Group	Consultant	Doc Type	Seq No	Rev
SBS - C - BE - TCS - TDW - 005 - TD						
SCALE						1:500
CHECKED						TD
REV: No						
DATE						10.02.2023

DB-OFFICE

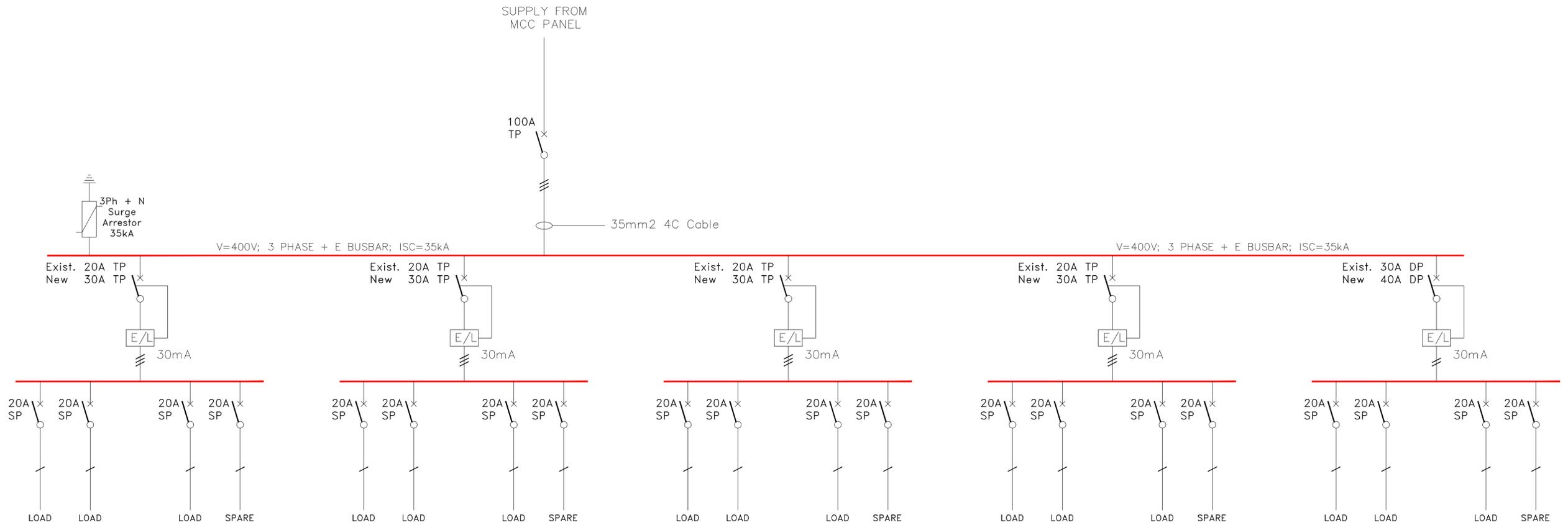


Circuit Identification	Circuit Description	Lights	Lights	Lights	Supply from Main MCC Panel	Plugs	Plugs	Earth Leakage	Plugs
	Plant Codification	L1	L2	L3	-	P1	P2	E/L	P3
SCPD Specification	SCPD Type	MCB	MCB	MCB	MCB	MCB	MCB	MCB	MCB
	SCPD Rating (A)	10A	10A	10A	60A	20A	20A	63A	20A
Cabling Details	Cable Size (mm <sup>2</sup> )	2.5 + 1.5	2.5 + 1.5	2.5 + 1.5	-	4 + 2.5	4 + 2.5	-	4 + 2.5
	No. of Cores	2 + Earth	2 + Earth	2 + Earth	2 + Earth	2 + Earth	2 + Earth	-	2 + Earth

STATUS CODE 0 - Pre - Feasibility study 1 - Feasibility study A - Preliminary Design B - Design Review C - Tender Design D - Detailed Design E - For Construction F - As Built G - For Information Only	Group Codes BUILDINGS BP - Building IT BP - Building Public Address BS - Building Service BA - Building Architectural BE - Building Electrical BF - Building Fire Service BM - Building Mechanical BT - Building Public Telecoms BU - Building Public Utilities	DRAWING STATUS <b>FOR TENDER</b> PROJECT NUMBER <b>0338 - SBS - TCS</b> Drawn By N NGCEMU A13204 Designed By N NTUTA Reviewed/Approved By E MENSAH 20100414	No Date 10.02.2023 chkd EM Details FOR TENDER	CLIENT 	CONSULTANT  FOURWAYS OFFICE PARK, BLOCK 5, GROUND FLOOR Cnr. CEDAR ROAD AND FOURWAYS BOULEVARD, FOURWAYS, 2191 Tel: (+27) 10 110 8724 Fax: (+27) 86 659 2099	PROJECT <b>SILOS SPRINGBOKPAN          PROJECT, NORTH WEST PROVINCE</b> DRAWING TITLE <b>DB OFFICE          SINGLE LINE DIAGRAM LAYOUT</b>	Copyright Reserved Project code Status Group Consultant Doc Type Seq No Rev <b>SBS - C - BE - TCS - TDW - 003/3 - TD</b> SCALE NTS CHECKED REV. No <b>TD</b> DATE 10.02.2023







STATUS CODE	Group Codes BUILDINGS
0 - Pre - Feasibility study	BP - Building IT
1 - Feasibility study	BP - Building Public Address
A - Preliminary Design	BS - Building Service
B - Design Review	BA - Building Architectural
C - Tender Design	BE - Building Electrical
D - Detailed Design	BF - Building Fire Service
E - For Construction	BM - Building Mechanical
F - As Built	BT - Building Public Telecoms
G - For Information Only	BU - Building Public Utilities

DRAWING STATUS		
<b>FOR TENDER</b>		
PROJECT NUMBER		
<b>0338 - SBS - TCS</b>		
Drawn By	Designed By	Reviewed/Approved By
N NGCEMU A13204	N NTUTA	E MENSAH 20100414
Name	S.A.I.D Number	Name Pr Number Signature

No	Date	chkd	Details
TD	10.02.2023	EM	FOR TENDER

CLIENT

CONSULTANT

FOURWAYS OFFICE PARK,  
BLOCK 5, GROUND FLOOR  
Cnr. CEDAR ROAD AND  
FOURWAYS BOULEVARD,  
FOURWAYS,  
2191  
Tel: (+27) 10 110 8724  
Fax: (+27) 86 659 2099

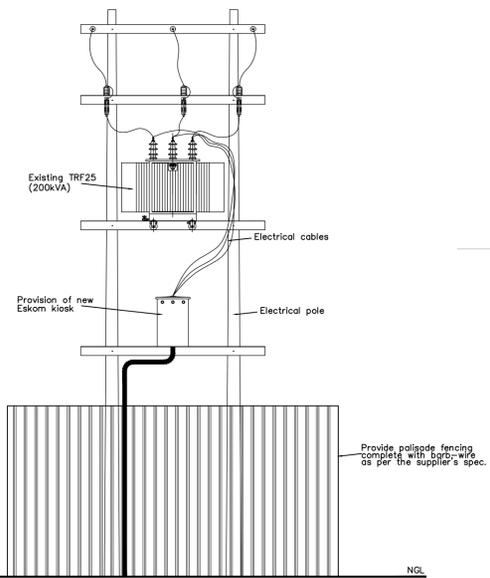
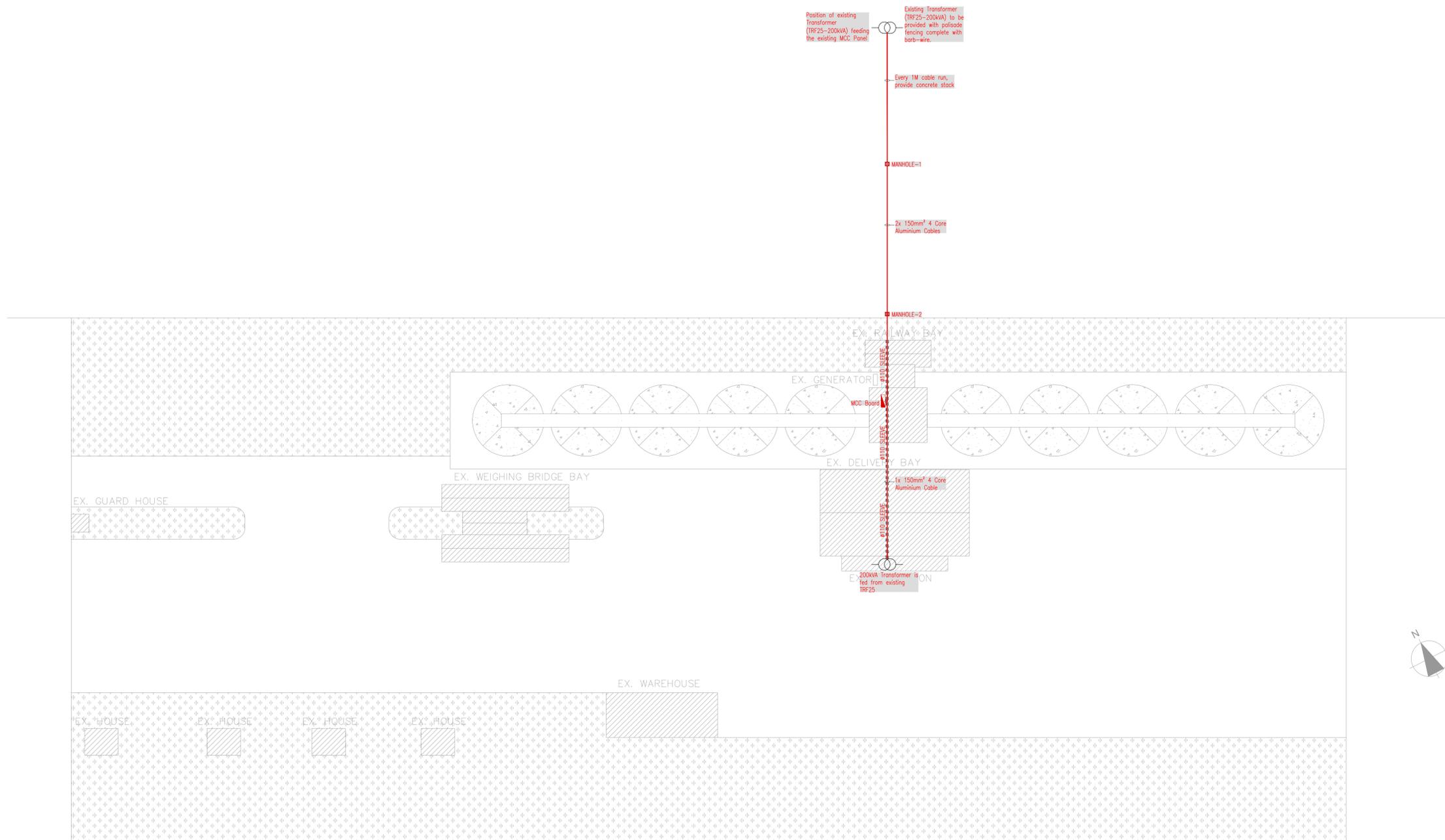
PROJECT

SILOS SPRINGBOKPAN  
PROJECT, NORTH WEST PROVINCE

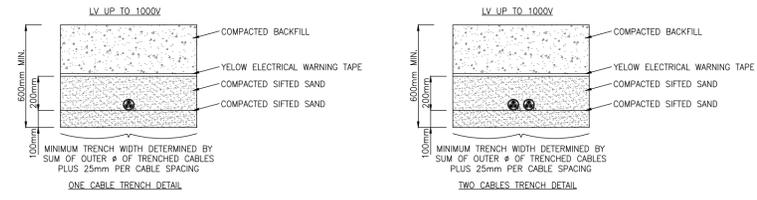
DRAWING TITLE

SIGNALING PANEL  
SINGLE LINE DIAGRAM LAYOUT

Project code	Status	Group	Consultant	Doc Type	Seq No	Rev
Copyright Reserved						
SBS - C - BE - TCS - TDW - 003/2 - TD						
SCALE						NTS
CHECKED						TD
REV. No						
DATE						10.02.2023



TYPICAL VIEW – TRF25



LEGEND		
SYMBOL	DESCRIPTION	QTY
====	Ø110mm CORRUGATED/PVC SLEEVE	LOT
—	NEW ALUMINIUM CABLE	LOT
○	No. OF FEEDERS	-
⊖	EXISTING TRANSFORMER	02
▭	ELECTRICAL DISTRIBUTION BOARD	01
▭	ELECTRICAL DISTRIBUTION BOARD	00
▭	NEW MAIN POWER SUPPLY (KIOSK)	00
⊕	ELECTRICAL MANHOLE	02

STATUS CODE 0 - Pre - Feasibility study 1 - Feasibility study A - Preliminary Design B - Design Review C - Tender Design D - Detailed Design E - For Construction F - As Built G - For Information Only	Group Codes BUILDINGS BP - Building IT BP - Building Public Address BS - Building Service BA - Building Architectural BE - Building Electrical BF - Building Fire Service BM - Building Mechanical BT - Building Public Telecoms BU - Building Public Utilities	DRAWING STATUS <b>FOR TENDER</b>			No	Date	chkd	Details	CLIENT 	CONSULTANT 	PROJECT <b>SILOS SPRINGBOKPAN PROJECT, NORTH WEST PROVINCE</b>	Project code <b>SBS - C - BE - TCS - TDW - 000 - TD</b>	Status Group Consultant Doc Type Seq No Rev
		PROJECT NUMBER <b>0338 - SBS - TCS</b>			TD	10.02.2023	EM	FOR TENDER					
Drawn By N NGCEMU A13204		Designed By N NTUTA		Reviewed/Approved By E MENSAH 20100414		Name S.A.J.D Number		Name Pr Number		Name Pr Number		Signature	
DATE 10.02.2023													

