O.R. TAMBO
DISTRICT MUNICIPALITY

TENDER NO: **ORTDM SCMU 03 – 20/21**

DESCRIPTION**: CONSTRUCTION OF MPENDLE WATER SUPPLY**

OCTOBER 2020

Issued By:

The Municipal Manager
O. R Tambo District Municipality
Private Bag X 6043
MTHATHA
5100

Tel No: (047) 501 64000

Prepared By:

Supply Chain Management Unit
O. R. Tambo District Municipality
Private Bag X 6043
MTHATHA
5100

Tel No: (047) 501 6400

NAME OF BIDDER: _____

CSD SUPPLIER NUMBER: _____

EMAIL ADDRESS: _____

TENDER AMOUNT: _____

PLEASE CHECK **x / √**

1. That you have read all the pages of the tender document. …….

2. That you have completed ALL the forms required to be completed in **NON-ERASEABLE INK**. …….

3. That your arithmetic calculation in the pricing schedule is correct. …….

4. That you have attached ALL necessary documentation relating to the Composition of the tendering entity, i.e. ……..

   (a) Company registration documents naming the shareholders and Directors / members of the company, close corporation etc

   (b) Joint venture agreement, if tendering entity is a joint venture.

5. That the **COMPLETE** tender document is submitted. ……..

6. That the **FORM OF OFFER** is completed in full and signed. ……..

7. That ALL returnable documents are submitted. …….

8. That ALL returnable schedules are completed and signed. ……..

9. Ensure that your tender is submitted by **12H00PM** on the closing date of the tender.

TENDERS ARE HEREBY INVITED FOR:

To ensure that your Tender is not exposed to invalidation, documents are to be completed in accordance with the conditions and Tender rules contained in the Tender documents. Supporting documents must be sealed and externally endorsed **CONTRACT**: **ORTDM SCMU 03 – 20/21: CONSTRUCTION OF MPENDLE WATER SUPPLY** and be submitted in the tender box, Ground Floor, OR Tambo District Municipality, Nelson Mandela Drive, OR Tambo House, Myezo, Mthatha, not later than the closing date and time as stated.

The lowest or any Bid will not necessarily be accepted, and the OR Tambo District Municipality reserves the right not to consider any tender not suitably endorsed or comprehensively completed as well as the right to accept a Tender in whole or part. Tenders will be adjudicated in accordance with the Supply Chain Management Policy of the OR Tambo District Municipality.

The following documents must be completed, signed (where applicable) and submitted as a complete set:

Document		**Colour of pages**
Number	**Heading**	
T1.1	Tender Notice and Invitation to Tender	White
T1.2	Tender Data	Pink
T2.1	List of Returnable Documents	Yellow
T2.2	Returnable Documents for tender evaluation purposes	Yellow
C1.1	Form of Offer and Acceptance	Yellow
C1.2	Contract Data	Yellow
C1.3	Operational Health & Safety Specification	Yellow
C1.4	ORTDM Supply Chain Management Policy	Yellow
C2.1	Pricing Instructions	Yellow
C2.2	Activity Schedule	Yellow
C3	Scope of Work	Blue
C4	Site Information	Green
C5	Additional Relevant Documents “Tender Drawings”	White

T1.1 TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited from suitably qualified and experienced contractors who are registered with CIDB for the construction of Mpendle Water Supply within the Nyandeni Local Municipality.

Project Number	Name and Description	CIDB Grading	Contract period
ORTDM SCMU 03 – 20/21	CONSTRUCTION OF MPENDLE WATER SUPPLY	5CE PE or 6CE or higher	8 months

A compulsory clarification meeting with representatives of the client will take place at 10H00 Thursday, 29 October 2020 at Nyandeni Local Municipality Offices- Libode, before proceeding to site.

The municipality will not repeat any matters already covered in the compulsory briefing meeting to the bidders who arrive more than 10 minutes late to the meeting, nor will it allow such bidders to complete the attendance register. Any bid received from a bidder who did not attend the briefing meeting and sign the attendance register will not be considered and will be returned to the bidder unopened.

Bid documents should be downloaded on the e-Tender website (www.etenders.gov.za) alternatively on the OR Tambo website (www.ortambodm.gov.za), at no Cost.

Bids must be completed tenders in black ink, enclosed in a sealed envelope and clearly marked with the "**Project number, project name and description**" must be placed in the tender box, Ground Floor, O. R. Tambo District Municipality Building, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape, not later than **12H00 Monday, 23 November 2020,**

It must be expressly understood that the Municipality does not accepts responsibility for ensuring that bid submissions sent by courier or post, or delivered in any other way, are deposited in the Tender Box. It is therefore preferable for the bidder to ensure that its bid submission is placed in the Tender Box by its own staff or representative(s).

Tender submissions will be opened in public at **23 November 2020**. Bids will be opened at the Ground Floor, O.R. Tambo House, Myezo, Mthatha. The Municipality reserves the right not to accept the only or lowest priced tender or any tender at all, or to accept the whole or part of any tender.

RETURNABLE DOCUMENTS TO BE SUBMITTED WITH THE BID:

- Original or certified copy of BBBEE certificate, or sworn affidavit confirming annual total revenue and level of black ownership, if bidder is an Exempted Micro Enterprise (EME) or Qualified Small Enterprise (QSE);
- Certified copies of business registration documents, as issued by CIPC;
- Certified copy of identity documents of directors/ shareholders/ partners/ members, as the case may be.

INVALID OR NON-SUBMISSION OF THE FOLLOWING RETURNABLE DOCUMENTS WILL DISQUALIFY A BID SUBMISSION:

- CSD supplier number;
- Proof of latest municipal rates and taxes statement indicating that rates and taxes are not in arrears for more than 3 months;
- Proof of registration with CIDB
- Proof of subcontracting at least 30% of the works to any designated enterprises, as stipulated in this document;
- Audited annual financial statements of the bidding entity (for projects in excess of R10million);
- Unaudited financial statements for close corporations, as required by the close corporation Act (if applicable);
- Joint Venture agreement or consortium (in CIDB format), signed and initialled in each page (where applicable).

PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT NO 5, 2000 (PPPFA) POINTS WILL BE AWARDED AS FOLLOWS: -

THE BIDS WILL BE EVALUATED IN THREE STAGES, NAMELY:

- Stage 1 - Prequalification criteria
- Stage 2 - Functionality
- Stage 3 - Price and BBBEE Points

STAGE 1 – PRE-QUALIFICATION CRITERIA

In terms of the Preferential Procurement Policy Framework Act 2000, Preferential Procurement Regulation 2017, pre-qualification criteria for preferential procurement as specified in Regulation 4 will apply.

(i) an EME or QSE which is at least 51% owned by black people;
(ii) an EME or QSE which is at least 51% owned by Black people who are youth;
(iii) an EME or QSE which is at least 51% owned by Black people who are women;
(iv) an EME or QSE which is at least 51% owned by Black people living in rural or underdeveloped areas or townships;
(v) a cooperative which is at least 51% owned by black people;
(vi) an EME or QSE which is at least 51% owned by Black people who are military veterans;
(vii) an EME or QSE.
Failure to meet the pre-qualification criteria will render a bid non-responsive, and such bid will be disqualified and not proceed to be evaluated further.

Item	Weight
Stage 2 of Evaluation-Functionality	**100**
• Company Experience with respect to similar projects	40
• Experience of key staff assigned to the contract	30
• Methodology	15
• Availability of key plant and equipment	15
Stage 3 of Evaluation- Price & B-BBEE	**100**
• B-BBEE	20
• Price	80

Tenders may only be submitted on tender documentation issued. No late, faxed, e-mailed, or other form of tender will be accepted.

Technical enquiries: Mr. N. Noto, 047 501 6425 or email: *nkosiyabon@ortambodm.gov.za*. All **Supply Chain Management enquiries** may be directed to Mr. S. Hopa, telephone number 047 501 6449 or email: ***sakhiwoh@ortambodm.gov.za*** during office hours: Monday to Friday 08H00-13H00 and 13H30-16H30.

Tenders will be evaluated in terms of the Supply Chain Management policy of the O. R. Tambo District Municipality and the lowest tender will not necessarily be accepted and the right to accept the whole or part of any tender or not to consider any tender not suitably endorsed is fully reserved by the O. R. Tambo District Municipality. A 80/20 point system shall apply where 80 points is for the price and 20 points is in terms of B-BBEE status level of contributor as follows:

B-BBEE status level of contributor	**Number of points**
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

Joint Ventures will qualify for points for their BBBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such BBBEE scorecard is prepared for every separate tender.

F. Mphako

Acting Municipal Manager

T1.2 TENDER DATA

The conditions of tender are the **Standard Conditions of Tender** as contained in Annexure F of the 10 July 2015 edition of the **CIDB Standard for Uniformity in Construction Procurement**. The Standard Conditions of Tender Procurements make several references to the Tender Data for details that apply specifically to the 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.

Please note that the word "Client" is used in this document and referred to as "Employer" in the Standard Conditions of Tender document.

Clause Number	
F.1	**General**
F.1.1	The Client is: O. R. Tambo District Municipality Private Bag x 6043 Mthatha 5100
F.1.2	The Tender documents issued by the Client comprise: **Tender** T1.1 Tender Notice and invitation to tender T1.2 Tender Data T2.1 List of Returnable Documents T2.2 Returnable Documents for tender evaluation purposes T2.3 Returnable Documents to be incorporated into the contract **Contract** **Part 1 : Agreements and Contract data** C1.1 Forms of Offer and Acceptance C1.2 Contract Data C1.3 Occupational health and safety specification C1.4 O.R. Tambo District Municipality's Health and Safety Specification
	Part 2 : Pricing Data C2.1 Pricing Instructions C2.2 Bill of Quantities **Part 3 : Scope of Work** C3.1 Description of the Works C3.2 Applicable Standardised Specifications C3.3 Variations and Additions to the Standardised and Particular Specifications C3.5 Particular Specification Health and Safety C3.6 Particular Specification Environmental Management Plan C3.7 HIV/AIDS Specification C3.8 Contractors Report **Part 4 : Site Information** C4 Site information **Part 5: Additional Relevant Documents** **Part 6: Contract Drawings**

F1.3 F.1.3.1 F.1.3.2	**Interpretation** 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 tender conditions. 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.1.4	**Communication:** Communication with all stakeholders shall be through the O. R. Tambo Municipality's District Engineer. Ccommunication's shall be in the English language. The Employer shall not take any responsibility for non-receipt of communications from or by a tenderer.
	Contact person: Mr. Nkosiyabo Noto Tel: 047 501 6425
F.1.5 F.1.5.1 F.1.5.2	**Cancellation and Re-Invitation of Tenders** **An organ of state may, prior to the award of the tender, cancel a tender if-** (a) Due to changed circumstances, there is no longer a need for the services, works or goods requested; or (b) Funds are no longer available to cover the total envisaged expenditure; or (c) No acceptable tenders are received. The decision to cancel a tender must be published in the cidb website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.
F.1.6	**Procurement procedures**
F.1.6.1	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.2	**Tenderer's obligations**
F.2.1.1	**Eligibility** Only those tenders who are registered with CIDB and have in their employ management and supervisory staff satisfying the requirement of the scope of work for labour intensive competencies for supervisory and management staff are eligible to submit tenders.
F.2.1.2	**CIDB Grading** The required CIDB grading for this project is 5CE PE or 6CE or higher.
F.2.2	**Cost of tendering** Accept that the Employer will not compensate the tenderers 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** 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.
F2.6	**Acknowledge Addenda** Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension of the closing time stated in the tender data, in order to take the addenda into account.
F.2.7	Tenderers must be represented at the clarification meeting by a person who is suitably qualified and Experienced to comprehend the implications of the work involved.

	The tenderer's representative must sign the attendance register in the name of the tendering entity and ensure that they have obtained the site inspection certificate. The arrangements for a **compulsory clarification meeting** are:	
	Date: 29 October 2020 **Starting time:10H00**	**Location:** Nyandeni Local Municipality Offices-Libode then proceed to site
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.	
F2.10	**Pricing the tender**	
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 South African Rand	
F2.11	**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 tender offers** Alternative offers may be submitted only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted. The alternative tender offer is to be submitted with the main tender offer together with a schedule that compares the requirements of the tender documents with the alternative requirements the tenderer proposes.	
F.2.13.5	The Client's address for delivery of Tender offers and identification details to be shown on each Tender offer package are:	
	Location of Tender box: Tender Box, Ground Floor, O. R. Tambo District Municipality Building, Nelson Mandela Drive, Myezo Park, Mthatha, Eastern Cape.	
	Physical address : O. R. Tambo House, Nelson Mandela Drive, Mthatha	
F.2.14	**Information and data to be completed in all respects** Accept that tender offers, which do not provide all the data or information requested completely and, in the form, required, may be regarded by the employer as non-responsive.	
F.2.15	**Closing time** The closing times for submission of Tenders are **12H00 23 November 2020**.	
F.2.15	Telephonic, telegraphic, telex, facsimile or e-mailed Bid offers will **not** be accepted.	
F.2.16	**Tender offer validity** The Tender offer validity period is 90 Days as stated in the tender data.	
F.2.17	**Clarification of tender offer after submission** The tenderer shall 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.	
F.2.18	**Provide other material** The tenderer shall, when requested by the Employer to do so, 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.
F2.20	**Submit securities, bonds, policies** Submit to the employer before formation of the contract, certificates of insurance required in terms of the conditions of contract identified in the contract data.
F.2.23	**The tenderer is required to submit with his tender:** (1) an original Tax Verification Pin issued by the South African Revenue Services; and (2) Certified copy of the original of all the Companies / CC Registration documents. (3) Joint Venture Agreement where applicable in CIDB format (signed and initialed on each page). (4) Proof of registration with CIDB (5) Certified copies of the original green bar-coded ID copies of Members of the companies.
F.3	**The employer's undertakings**
F.3.1	**Respond to requests from the tenderer**
F.3.1.1	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.3.2	**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 seven 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.3.4	**Opening of tender submissions**
F.3.4.1	The employer shall open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.
F.3.4.2	Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, preferences claimed and time for completion for the main tender offer only.
F.3.4.3	The client shall not be obliged to make available the record outlined in F.3.4.2 to any tenderer who fail to attend the tender opening.
F.3.6	**Non-disclosure** The client shall 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.
F3.9	**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 invite the tenderer to 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.
F3.11	**Evaluation of tender offers** *Replace the contents of the entire sub-clause with the following:* The procedure for evaluation of responsive tender offers will be method 2 of table F.1 of SANS 294: 2004. Financial offer & Preferences. The bid will be awarded to the bidder who has scored the highest points for price and preferences combined **BUT** the prerequisite will be to obtain at least **60 points** for quality (functionality), which will be explained in Stage 1 below. Nevertheless, O. R. Tambo District Municipality retains the right to accept any bid. C. First stage in evaluation: Compliance with Bid Rules and other Requirements The bids will be checked to ensure that they comply with the bid rules and all other requirements of the project document. In particular the following documentation must be completed and/or included within the bid. • The form of Offer and acceptance • Audited financial statements for any tender price over R10million • Certified company registration documents and ID of members • Form C: Compulsory Enterprise Questionnaire • Form D: Certificate of Authority for Signature • Form E: Amendments, Qualifications and Alternatives • Form H: Certificate of Good Standing • Form I: Relevant experience • Form J: Details of key staff and CVs • Form M: Preference Points Claim Form in Terms of the Preferential Procurement Regulations 2017 Note: • All information supporting the above forms such as Curricula Vitae of staff who will work on the project and their functions, details of ownership, relevant experience etc. • Addenda issued during the bid period, if any. • The pricing schedules Failure to supply the required information will compromise the bid D. Next Stage in Evaluation: Pre-qualification; Quality / Functionality; Price & BBBEE Status Level The next state in the evaluation process will consist of three stages, as follows:
	STAGE 1: PRE-QUALIFICATION CRITERIA In terms of the Preferential Procurement Policy Framework Act 2000, Preferential Procurement Regulation 2017, pre-qualification criteria for preferential procurement as specified in Regulation 4 will apply. Tenderers must comply with the requirement to subcontract a minimum 30% of these works to either of the following enterprises: (i) an EME or QSE which is at least 51% owned by black people; (ii) an EME or QSE which is at least 51% owned by Black people who are youth; (iii) an EME or QSE which is at least 51% owned by Black people who are women; (iv) an EME or QSE which is at least 51% owned by Black people living in rural or

underdeveloped areas or townships;

(v) a cooperative which is at least 51% owned by black people;

(vi) an EME or QSE which is at least 51% owned by Black people who are military veterans;

(vii) an EME or QSE.

Failure to meet the pre-qualification criteria will render a bid non-responsive, and such bid will be disqualified and not proceed to be evaluated further.

STAGE 2: FUNCTIONALITY/QUALITY EVALUATION

ITEM	WEIGHT
Functionality (see detailed criteria below)	100
• Experience with respect to similar projects	40
• Experience of key staff assigned to the contract	30
• Methodology	15
• Availability of key plant and equipment	15

Only bidders who score ***60 points or more*** on stage 1 will be evaluated further and therefore eligible for award.

The maximum score for functionality shall be 100, distributed as follows:
Tender functionality / quality claimed

	Category of Quality / Functionality	Maximum tender evaluation points provided
B1.1	**Experience on similar projects**	**40**
	Tenderer has completed at least Four (4) Waterborne Sewer contracts or Water Supply whose individual contract value is at least R4 Million. **Copies of Certificate of Completion MUST be submitted with the bid. No points will be awarded where Certificates of Completion have not been submitted with the Bid**.	40
	Tenderer has completed at least Three (3) Water Supply or Waterborne Sewer contracts whose individual contract value is at least R3 Million. **Copies of Certificate of Completion MUST be submitted with the bid. No points will be awarded where Certificates of Completion have not been submitted with the Bid**.	20
	Tenderer has completed at least two (2) Water Supply or Waterborne Sewer contracts whose individual contract value is at least R2 Million. **Copies of Certificate of Completion MUST be submitted with the bid. No points will be awarded where Certificates of Completion have not been submitted with the Bid**.	10
	No previous water projects completed, or completed projects	0
B1.2	Experience of key personnel (NB no key personnel member may be assigned more than one duty on the Contract, i.e. different personnel must be assigned for each of the following key positions) **Contracts Manager = ND Civil Engineering, Site Agent / Foreman = N6 Civil Engineering, Health & Safety Officer = N6 + OHS Course / Certificate**	**30**
	Previous experience in the Built Environment with a minimum of 5 years; **Contracts Manager** = 12 points, 3-4 years = 10 points & 0-2 years = 8 points.	12
	Previous experience in the Built Environment with a minimum of 5 years; **Site Agent / Foreman** = 10 points, 3-4 years = 8 points & 0-2 years = 6 points.	10
	Previous experience in the Construction Environment with a minimum of 3 years; **Health & Safety Officer** = 8 points, 2 years = 6 points & 1 year = 4 points.	8

	Contractor failed to provide evidence of qualification and experience.be attached).	
B1.3	**Methodology**	**15**
	Presentative methodology approach with works programme and Cash flow projections	15
	Presentative method approach with works programme	10
	Presentative method approach	5
	Bidder has submitted no method statement or cash flows and works programme	0
B1.4	**Availability of key machinery and equipment** **Points will be only be awarded for the mentioned machinery, proof of registration with the traffic authority to be submitted. Note irrelevant machinery to the project will not be considered. For hire, a signed confirmation letter from service provider to be submitted.**	**15**
	Bidders who own 3 (three) of the machinery required for the execution of the contract or have a written agreement with the plant hire to supply all the required machinery; namely, Excavator / TLB, Tipper Truck, and compaction equipment) made available for the project.	15
	Bidders who own 2(two) of the machinery required for the execution of the contract or have a written agreement with the plant hire to supply two(2) of the required machinery; namely, Excavator / TLB, Tipper Truck and compaction equipment) made available for the project. machinery; namely, Excavator, TLB, Tipper Truck or compaction equipment) made available for the project.	10
	Bidders who own 1 (one) of the machinery required for the execution of the contract or have a written agreement with the plant hire to supply one (1) of the required machinery; namely, Excavator / TLB, Tipper Truck or compaction equipment) made available for the project.	5

STAGE 3 : EVALUATION FOR PRICE AND PREFERENCE (80/20)
The procedure for Stage 3 of evaluation of responsive tenders is **Method 2**

a) PRICE: …… 80

a) B-BBEE STATUS LEVEL OF CONTRIBUTION: ……..…… 20

Points Awarded for Price (Ps)

A total of 80 points will be awarded to the Tenderer with the lowest balanced price. The **other tenders will be awarded points on the ratio to bench mark price as follows:**

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

Where
Ps = Points scored for price of bid under consideration
Pt = Rand value of bid under consideration
Pmin = Rand value of lowest acceptable bid

<table>
<tr><td></td><td>b) Points awarded for B-BBEE Status Level of Contribution
In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

<table>
<tr><th>B-BBEE Status Level of Contributor</th><th>Number of points (80/20 system)</th></tr>
<tr><td>1</td><td>20</td></tr>
<tr><td>2</td><td>18</td></tr>
<tr><td>3</td><td>14</td></tr>
<tr><td>4</td><td>12</td></tr>
<tr><td>5</td><td>8</td></tr>
<tr><td>6</td><td>6</td></tr>
<tr><td>7</td><td>4</td></tr>
<tr><td>8</td><td>2</td></tr>
<tr><td>Non-compliant Contributor</td><td>0</td></tr>
</table>
The total calculated points will be rounded to the second decimal place.</td></tr>
<tr><td>F.3.13</td><td>Acceptance of tender offer</td></tr>
<tr><td>F.3.13.1</td><td>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.</td></tr>
<tr><td></td><td>Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period. Providing the form of offer and acceptance does not contain any qualifying statements, it will constitute the formation of a contract between the employer and the successful tenderer as described in the form of offer and acceptance.</td></tr>
<tr><td>F.3.14</td><td>Notice to unsuccessful tenderers
After the successful tenderer has acknowledged the employer’s notice of acceptance, after written request, the employer will notify the tenderers that their tender offers have not been accepted in O.R Tambo District Municipality’s website: www.ortambodm.org.za by listing the successful tender.</td></tr>
<tr><td>F.3.15</td><td>Prepare contract documents
If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:
a) addenda issued during the tender period,
b) inclusion of some of the returnable documents,
c) other revisions agreed between the employer and the successful tenderer, and
d) The schedule of deviations attached to the form of offer and acceptance, if any.</td></tr>
<tr><td>F.3.16</td><td>Issue final contract
Prepare and issue the final draft of the contract to the successful tenderer for acceptance as soon as possible after the date of the employer's signing of the form of offer and acceptance (including the schedule of deviations, if any).</td></tr>
</table>

T2.1 LIST OF RETURNABLE DOCUMENTS

The Tenderer must complete the following returnable documents:

T2.2 Returnable Documents required for Tender evaluation purposes		
1	Form 2.2.1	General Information of the Tenderer
2	Form 2.2.2	Authority for Signatory
3	Form 2.2.3	Schedule of Previous Experience
4	Form 2.2.4	Schedule of Current Projects
5	Form 2.2.5	Declaration of good standing regarding tax
6	Form 2.2.6	Certificate of Attendance at Site Meeting
7	Form 2.2.7	Proposed Key Personnel
8	Form 2.2.8	Schedule Equipment to be used
9	Form 2.2.9	Schedule of Proposed Sub-Contractors
10	Form 2.2.10	Financial References

T2.3 Returnable Documents that will be incorporated into the contract		
1	Form 2.3.1	Record of Addenda to Tender Documents
2	Form 2.3.2	Procurement Form

T2.2 RETURNABLE DOCUMENTS

RETURNABLE DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Form 2.2.1 General Information of Tenderer
Form 2.2.2 Authority of Signatory
Form 2.2.3 Schedule of Previous Experience
Form 2.2.4 Schedule of Current Projects
Form 2.2.5 Declaration of good standing regarding tax
Form 2.2.6 Registration on the Central Supplier Database
Form 2.2.7 Certificate of Attendance at Site Meeting
Form 2.2.8 Proposed Key Personnel
Form 2.2.9 Schedule of Proposed Sub-consultants
Form 2.2.10 Financial References
Form 2.2.11 Declaration of interest

FORM 2.2.1 GENERAL INFORMATION OF TENDERER

1. Name of Tenderer: ……

2. Contact details

Address : ……

Tel no : ……

Fax no : ……

Cell no : ……

E-mail address: ……

3. Legal entity: Mark with an X.

Sole proprietor	
Partnership	
Close corporation	
Company (Pty) Ltd	
Joint venture	

In the case of a Joint venture, provide details on joint venture members:

Joint venture member	Type of entity (as defined above)

4. Income tax reference number:

……..
(in case of a joint venture, provide for all joint venture members)

5. Municipal services area where the enterprise is registered:

……..
(in case of a joint venture, provide for all joint venture members)

6. Company / close corporation Registration Number:

…….
(in case of a joint venture, provide for all joint venture members)

7. VAT Registration number:

……..
(in case of a joint venture, provide for all joint venture members)

8. CIDB registration number:

……..
(in case of a joint venture, provide for all joint venture members)

ATTACH THE FOLLOWING DOCUMENTS HERETO

1. For Closed Corporations

   Certified copies of CK1 or CK2 as applicable (Founding Statement)

2. For Companies

   Certified copies of Shareholders register

3. ID copies

   Certified ID Copies for members

4. CIDB registration

   Proof of registration with CIDB

5. CSD registration

   Proof of registration with Central Supplier Database

6. For Joint Venture Agreements

   Copy of the Joint Venture Agreement between all the parties, as well as the certified documents in (1), and or (2) and (4) and (4) of each Joint Venture member.

7. Copy of the latest municipal service account where enterprise is registered

8. Central Supplier Database Summary Report

FORM 2.2.2 AUTHORITY OF SIGNATORY

Details of person responsible for tender process:

Name : .....

Contact number : .....

Office address : .....

Signatories for close corporations and companies shall confirm their authority by attaching to this form a **duly signed and dated original or certified copy** of the relevant resolution of their members or their board of directors, as the case may be.

"By resolution of the board of directors passed on *(date)*.....

Mr .....

has been duly authorized to sign all documents in connection with the Tender for Contract

Number ……and any Contract which may arise

there from on behalf of ……
(BLOCK CAPTIALS)

SIGNED ON BEHALF OF THE COMPANY .....

IN HIS CAPACITY AS .....

DATE .....

.....

FULL NAMES OF SIGNATORY .....

AS WITNESSES: 1. ……..

2. ……

FORM 2.2.2 CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Ms . . . . . , authorised signatory of the company . . . . . , acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

NAME OF FIRM	**ADDRESS**	**DULY AUTHORISED SIGNATORY**
Lead partner CIDB registration no ……..		Signature. . .. . Name ……..……. Designation……
CIDB registration no …….		Signature. . . . . . Name ……..……. Designation……..
CIDB registration no …….		Signature. . . . . . Name ……..……. Designation…….
CIDB registration no …….		Signature. . . . . . Name ……..……. Designation…….

ATTACH HERETO THE DULY SIGNED AND DATED ORIGINAL OR CERTIFIED COPY OF AUTHORITY OF SIGNATORY ON COMPANY LETTERHEAD

FORM 2.2.3 SCHEDULE OF PREVIOUS EXPERIENCE

Provide the following information on relevant previous experience (indicate specifically projects of similar or larger size and/or which is similar with regard to type of work). **(*OPERATION AND MAINTENANCE PROJECTS*).**

Description	Value (R) VAT excluded	Year(s) work executed	Reference		
			Name	Organisation	Tel no

Name of Tenderer: ……...

Date: …….

Signature : ……...

Full name of signatory:……

FORM 2.2.4 SCHEDULE OF CURRENT PROJECTS

Provide the following information on current relevant projects. **This information is material to the award of the Contract.**

Description	Value (R) VAT excluded	Date Appointed	Reference		
			Name	Organisation	Tel no

Name of Tenderer: …….

Date: ……..

Signature : ……...

Full name of signatory:…….

FORM 2.2.5 DECLARATION OF GOOD STANDING REGARDING TAX

SOUTH AFRICAN REVENUE SERVICES	Tender No: …….. Closing Date: ……

DECLARATION OF GOOD STANDING REGARDING TAX

PARTICULARS

1. Name of Taxpayer/Tenderer: .....
2. Trade Name: .....
3. Identification Number: (If applicable) | | | | | | | | | | | | | |
4. Company / Close Corporation registration number: | | | | | | | | | | |
5. Income Tax reference number: | | | | | | | | | | |
6. VAT registration number: (If applicable) | | | | | | | | | | |
7. PAYE employer's registration number: (If applicable) | | | | | | | | | | |
8. Monetary value of Bid: | | | | | | | | | | | | | | |

DECLARATION

I, …… the undersigned, the above taxpayer/Bidder, hereby declare that my Income Tax, Pay-As-You-Earn (PAYE) and Value-Added-Tax (VAT) obligations of the above-mentioned taxpayer, which include the rendition of returns and payment of the relevant taxes:

(i) Have been satisfied in terms of the relevant Acts; or

(ii) That suitable arrangements have been made with the Receiver of Revenue,…….…….. to satisfy them.*

…… …… ……

SIGNATURE **CAPACITY** **DATE**

PLEASE NOTE:* **The declaration (ii) cannot be made unless formal arrangements have been made with the Receiver of Revenue with regard to any outstanding revenue/outstanding tax returns.**

ATTACH ORIGINAL

VALID TAX VERIFICATION PIN

FORM 2.2.6 REGISTRATION ON THE CENTRAL SUPPLIER DATABASE

Attach proof of registration with the Central Supplier Database. **This information is material to the award of the Contract.**

ATTACHED CERTIFICATE PROOF OF REGISTRATION ON THE NATIONAL CENTRAL SUPPLIER DATABASE

FORM 2.2.7 CERTIFICATE OF ATTENDANCE AT SITE MEETING

This is to certify that I, ……..…… (Name) duly

authorised representative of ……..……(Tenderer)

Address: ……

Date: ……..Visited the site on ……(date) in the

presence of ……(Employer's Agent)

I have made myself familiar with the sites and all the local conditions likely to influence the work and the cost thereof.

I further certify that I am satisfied with the description of the work and explanations given by the said Engineer and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.

_____ _____

REPRESENTATIVE OF EMPLOYER REPRESENTATIVE OF TENDERER

FORM 2.2.8 PROPOSED KEY PERSONNEL

The Tenderer shall list below the key personnel **(including first nominee and the second-choice alternate) including CV's**, whom he proposes to employ on the project should his Tender be accepted, both at his headquarters and on the Site, to direct and for the execution of the work, together with their qualifications, experience, positions held and their nationalities.

No	Name	Qualification	Designation	YEARS WITH CURRENT COMPANY

Name of Tenderer: ……

Date: …… **Signature:** ……..

Full name of signatory: ……

FORM 2.2.9 SCHEDULE OF PROPOSED SUB-CONTRACTORS

NAME OF SUB-CONTRACTOR	FULL DESCRIPTION OF WORK TO BE PERFORMED BY SUB- CONTRACTORS

NB: It is a Condition of Contract that a minimum of 30% of the construction work shall be subcontracted to QSEs and EMEs as contemplated in the 'The Broad-Based Black Economic Empowerment Act (No. 53 of 2003) as amended by B-BBEE Act 46 of 2013 (The Act)'. The Contractor shall take all reasonable and practical measures to support, mentor, train, upskill and supervise such subcontractors as envisaged in the Strategic Objectives of the Amended Construction Sector Code.

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed above being approved by the Engineer.

Name of Tenderer: …… **Date:** ……

Signature : ……..

Full name of signatory: ……

FORM 2.2.10 FINANCIAL REFERENCES

FINANCIAL STATEMENTS

I/We agree to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Client.

DETAILS OF TENDERERS BANKING INFORMATION

I/We hereby authorise the Client/Engineer to approach all or any of the following banks for the purposes of obtaining a financial reference:

BANK NAME:	
ACCOUNT NAME: *(e.g. ABC Civil Construction cc)*	
ACCOUNT TYPE: *(e.g. Savings, Cheque etc)*	
ACCOUNT NO:	
ADDRESS OF BANK:	
CONTACT PERSON:	
TEL. NO. OF BANK / CONTACT:	
How long has this account been in existence:	0-6 months ☐ 7-12 months ☐ 13-24 months ☐ More than 24 months ☐ (Tick which is appropriate)

Name of Tenderer: …… Date: ……

Signature : ……

Full name of signatory: ……

ATTACH AUDITED FINANCIAL STATEMENTS

FORM 2.2.11 MUNICIPAL BIDDING DOCUMENTS

MBD 1

PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF *O.R. TAMBO DISTRICT MUNICIPALITY*					
BID NUMBER:	ORTDM SCMU 03-20/21	CLOSING DATE:	23 NOVEMBER 2020	CLOSING TIME:	12H00
DESCRIPTION:	CONSTRUCTION OF MPENDLE WATER SUPPLY				

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT:

TENDER BOX, GROUND FLOOR, O.R. TAMBO DISTRICT MUNICIPALITY BUILDING

NELSON MANDELA DRIVE

MYEZO PARK , MTHATHA, EASTERN CAPE

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

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

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

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:		TECHNICAL INFORMATION MAY BE DIRECTED TO:	
DEPARTMENT	SCM DEPARTMENT	CONTACT PERSON	MR. N. NOTO
CONTACT PERSON	MR. SAKHIWO HOPA	TELEPHONE NUMBER	047 501 6425
TELEPHONE NUMBER	047 501 6449	FACSIMILE NUMBER	N/A
FACSIMILE NUMBER	N/A	E-MAIL ADDRESS	nkosiyabon@ortambodm.gov.za
E-MAIL ADDRESS	sakhiwoh@ortambodm.gov.za		

PART B
TERMS AND CONDITIONS FOR BIDDING

1.	**BID SUBMISSION:**
1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2.	**ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED– (NOT TO BE RE-TYPED).**
1.3.	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
2.	**TAX COMPLIANCE REQUIREMENTS**
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3	APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
2.4	FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PART B:3.
2.5	BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.6	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.7	WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
3.	**QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS**
3.1.	IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? ☐ YES ☐ NO
3.2.	DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO
3.3.	DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO
3.4.	DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO
3.5.	IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? ☐ YES ☐ NO
	IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.

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

SIGNATURE OF BIDDER: ……

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……

DATE: ……

MBD 4

DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state[1].

2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.

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

3.1 Full Name of bidder or his or her representative:
……

3.2 Identity Number:
……

3.3 Position occupied in the Company (director, trustee, shareholder[2]):

……

3.4 Company Registration Number:
……

3.5 Tax Reference Number:
……..

3.6 VAT Registration Number:
……..

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state?..... **YES / NO**

3.8.1 If yes, furnish particular…….....

……..……

[1] MSCM Regulations: "in the service of the state" means to be –

(a) a member of –
   I. any municipal council;
   II. any provincial legislature; or
   III. the national Assembly or the national Council of provinces;

(b) a member of the board of directors of any municipal entity;

(c) an official of any municipality or municipal entity;

(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);

(e) a member of the accounting authority of any national or provincial public entity; or

(f) an employee of Parliament or a provincial legislature.

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

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

3.9.1 If yes, furnish particulars……

……

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

3.10.1 If yes, furnish particulars……

……

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

3.11.1 If yes, furnish particulars……

……

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state ..... **YES / NO**

3.12.1 If yes, furnish particular……

……

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

3.13.1 If yes, furnish particulars……

……

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract?..... **YES / NO**

3.14.1 If yes, furnish particulars……

……..……

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

Full name	**Identity number**	**State employee number**

…… ……

Signature **Date**

..…… ……..

Capacity **Name of Bidder**

DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire:

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
1.	Are you by law required to prepare annual financial statements?		
1.1	If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the last 3 years.		

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
2.	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than 3 months or any other service provider in respect of which payment is overdue for more than 30 days?		
2.1	If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than 3 months or other service provider in respect of which payment is overdue for more than 30 days.		
2.2	If yes, provide details: …… …… ……		

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
3.	Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?		
3.1	If yes, provide details:		

	…… …… …… …… …… …….

NO.	QUESTION	ANSWER (TICK WHICH RESPONSE IS APPLICABLE)	
		YES	NO
4.	Will any portion of the goods of services be sourced from outside the Republic, and if so, what portion, and whether any portion of payment from the municipality is expected to be transferred outside of the Republic?		
4.1	If yes, provide details: …… …… …… …… …… ……		

CERTIFICATION

I, THE UNDERSIGNED (NAME)

……..
CERIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

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

…… ……
Signature Date

…… ……
Position Name of Bidder

MBD 8

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1 This Municipal Bidding Document must form part of all bids invited.

2 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

3 The bid of any bidder may be rejected if that bidder, or any of its directors have:

a. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
b. been convicted for fraud or corruption during the past five years;
c. willfully neglected, reneged on or failed to comply with any government, municipal or other public
d. sector contract during the past five years; or
e. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

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

Item	Question	Yes	No
4.1	**Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?** (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the *audi alteram partem* rule was applied). **The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐

4.3.1	If so, furnish particulars:		
Item	**Question**	**Yes**	**No**
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder and the municipality/municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) ……....……..…… CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE**.**

……... ……..
Signature Date

…… ……..
Position Name of Bidder

MBD 9

CERTIFICATE OF INDEPENDENT BID DETERMINATION

1 This Municipal Bidding Document (MBD) must form part of all bids[1] invited.

2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).[2] Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.

3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

a. Take all reasonable steps to prevent such abuse;
b. Reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
c. Cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

[1]Includes price quotations, advertised competitive bids, limited bids and proposals.

[2]Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid: **PROJECT NO.: ORTDM SCMU 03 – 20/21: CONSTRUCTION OF MPENDLE WATER SUPPLY** in response to the invitation for the bid made by: **O.R. TAMBO DISTRICT MUNICIPALITY** do hereby make the following statements that I certify to be true and complete in every respect:
I certify, on behalf of:

_____that:
(Name of Bidder)

1. I have read, and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
   (a) has been requested to submit a bid in response to this bid invitation;
   (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
   (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium[3] will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
   (a) prices;
   (b) geographical area where product or service will be rendered (market allocation)
   (c) methods, factors or formulas used to calculate prices;
   (d) the intention or decision to submit or not to submit, a bid;
   (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
   (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

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

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

……	……..
Signature	Date
……	…….
Position	Name of Bidder

T2.3 RETURNABLE DOCUMENTS

RETURNABLE DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

Form 2.3.1 Record of Addenda to Tender Documents
Form 2.3.2 Procurement Form

FORM 2.3.1 RECORD OF ADDENDA TO TENDER DOCUMENTS

(Addenda received from Employer's Agent for amendments on Tender Documentation)

	Date	**Title or Details**
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Name of Tenderer: ……. Date: ……

Signature : ……

Full name of signatory: ……

FORM 2.3.2 PROCUREMENT FORM

Acceptable Tenders will be evaluated using a system that awards points on the basis of Tender price and the meeting of specific goals.

DEFINITIONS

"Acceptable Tender" means any Tender which, in all respects, complies with the conditions of Tender and specifications as set out in the Tender document, including conditions as specified in the Preferential Procurement Policy Framework Act (Act 5 of 2000) and the Supply Chain Management of Council.

"Council" refers to the OR TAMBO DISTRICT Municipality.

"Equity ownership" refers to the percentage ownership and control, exercised by individuals within an enterprise and they are involved in the day to day running of the Company.

"HDI equity ownership" refers to the percentage of an enterprise, which is owned by individuals, or in the case of a company, the percentage shares that are owned by individuals meeting the requirements of the definition of a HDI.

"**Historically disadvantaged individuals (HDIs)**" means all South African citizens –

(i) Who had no franchise in national elections prior to the introduction of the 1983 and 1993 constitutions (Referred to as Previously Disadvantaged Individuals (PDIs) in this document)
(ii) Women
(iii) Disabled persons.

"SMME's" (small, medium and micro enterprises) refers to separate and distinct business entities, including co-operative enterprises and NGOs, managed by one owner or more, as defined in the National Small Business (Act 102 of 1996). Refer to the attached addendum for a definition of SMME's for different economic sectors.

Tenders are adjudicated in terms of NDM Procurement Policy, and the following framework is provided as a guideline in this regard.

1. Technical adjudication and General Criteria

- Tenders will be adjudicated in terms of inter alia:

- Compliance with Tender conditions
- Technical specifications

If the Tender does not comply with the Tender conditions, the Tender will be rejected. If technical specifications are not met, the Tender may also be rejected.

With regard to the above, certain actions or errors are unacceptable, and warrants **REJECTION OF THE TENDER**, for example:

- A Tax Verification Pin. (**Only valid tax verification pin** must be attached to the Tender document).
- Pages to be completed, removed from the Tender document, and have therefore not been submitted.
- Failure to complete the schedule of quantities as required
- Scratching out without initialling next to the amended rates or information.
- Writing over / painting out rates / the use of tippex or any erasable ink, eg. Pencil.
- Failure to attend compulsory site inspections
- The Tender has not been properly signed by a party having the authority to do so, according to the **Form 2.2.2 – "Authority for Signatory"**
- No authority for signatory submitted.
- Form of Offer not completed.
- Particulars required in respect of the Tender have not been provided – non-compliance of Tender requirements and/or specifications.
- The Tenderer's attempts to influence or has in fact influenced the evaluation and/or awarding of the contract.
- The Tender has been submitted after the relevant closing date and time
- Each page of the Contract portion of this Tender document (Part C1 – C4) must be initialled by the authorised person in order for the document to constitute a proper Contract between the Employer (ORTDM) and the undersigned.
- If any municipal rates and taxes or municipal service charges owed by that Tenderer or any of its directors to the municipality, or to any other municipality or municipal entity, are in arrears for more than three months.
- If any Tenderer who during the last five years has failed to perform satisfactorily on a previous contract with the municipality or any other organ of state after written notice was given to that Tenderer that performance was unsatisfactory.

2. Size of enterprise and current workload

Evaluation of the Tenderer's position in terms of:

- Previous and expected current annual turnover
- Current contractual obligations
- Capacity to execute the contract

3. Staffing profile

Evaluation of the Tenderer's position in terms of:

- Staff available for this contract being Tendered for
- Qualifications and experience of key staff to be utilised on this contract

4. Financial ability to execute the contract:

Evaluation of the Tenderer's financial ability to execute the contract. Emphasis will be placed on the following:

- Contact the Tender's bank manager to assess the Tenderer's financial ability to execute the contract and the Tenderer hereby grants his consent for this purpose.

5. Good standing with SA Revenue Services

- Determine whether an original valid tax verification pin has been submitted.
- The Tenderer must affix an original valid Tax Verification Pin to page T2.2.9 of the Tender document.

6. Penalties

The O.R. Tambo District Municipality will if upon investigation it is found that a preference in terms of the Contract has been obtained on a fraudulent basis, or any specified goals are not attained in the performance of the contract, on discretion of the Municipal Manager, one or more of the following penalties will be imposed:

- Cancel the contract and recover all losses or damages incurred or sustained from the Tenderer.
- Impose a financial penalty of twice the theoretical financial preference associated with the claim, which was made in the Tender.
- Restrict the suppliers, its shareholders and directors on obtaining any business from the O.R. Tambo District Municipality for a period of 5 years.

DECLARATION

I/We the undersigned, who warrants that he/she is duly authorised to do so on behalf of the firm, certifies that the items mentioned in part of the foregoing procurement form and returnable documents qualifies/qualify for the preference(s) shown and acknowledge(s) that:

The information furnished is true and correct.

The contractor may be required to furnish documentary proof to the satisfaction of the OR Tambo District Municipality that the claims are correct.

If the claims are found to be inflated, the OR Tambo District Municipality may, in addition to any other remedy it may have, recover from the contractor all cost, losses or damages incurred or sustained by the OR Tambo District Municipality as a result of the award of the contract and/or cancel the contract and claim any damages which the OR Tambo District Municipality may suffer by having to make less favourable arrangements after such cancellation.

Signature of Tenderer

Signed at _____on _____ day of _____2020

_____

For the tenderer

WITNESSES:

1. _____

2. _____

C1 AGREEMENTS AND CONTRACT DATA

C1.1 Form of Offer and Acceptance

C1.2 Contract Data

C1.3 Special Condition

C1.4 Occupational Health and Safety Specification

C1.5 Supply Chain Management Policy

FORM C1.1 FORM OF OFFER AND ACCEPTANCE

FORM OF OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works: **PROJECT: ORTDM SCMU 03 – 20/21: CONSTRUCTION OF MPENDLE WATER SUPPLY.**

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

…….

……..…… Rand (in words);

R ……..……(in figures).

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) _____ _____

Name(s) _____ _____

Capacity _____ _____

For the tenderer_____

(Name and address of organisation)

Name & Signature Of Witness _____ _____

Name Date

ACCEPTANCE

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

The terms of the contract are contained in:

Part 1 Agreements and Contract Data (which includes this Agreement)
Part 2 Pricing Data
Part 3 Scope of Work
Part 4 Site information
Part 5 Additional Relevant Documentation
Part 6 Contract Drawings

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 6 above.

Deviations from and amendments to the documents listed in the Tender Data, including the proposed key personnel 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 representative(s) of both parties.

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

Name(s) _____ _____

Capacity _____ _____

For the
tenderer_____
(Name and address of organisation)

Name & Signature
Of Witness _____ _____
Name Date

SCHEDULE OF DEVIATIONS

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.

2. A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid becomes the subject of agreements reached during the process of Offer and Acceptance; the outcome of such agreement shall be recorded here.

3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract, shall also be recorded here.

4. Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the Contract.

1 Subject

_____

Details

_____

2 Subject

_____

Details

_____

3 Subject

_____

Details

_____

4 Subject

_____

Details

_____

5 Subject

_____

Details

_____

6 Subject

_____

Details

_____

By the duly authorised representatives signing this Schedule of Deviations, 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 change 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.

FOR THE TENDERER:

Signatures (s)

_____

Name(s)

_____

Capacity

_____

_____

(Name and address of Organisation)

Name & Signature Of Witness_____ Date _____

FOR THE EMPLOYER

Signatures (s)

_____

Name(s)

_____

Capacity

_____

_____

(Name and address of Organisation)

Name & Signature Of Witness _____Date_____

FORM C1.2 CONTRACT DATA

PART 1: DATA PROVIDED BY THE EMPLOYER

The contract data of this contract are:
C1.2.1 Conditions of Contract
C1.2.2 Data provided by the Employer
C1.2.3 Data provided by the Contractor

C1.2.1 Conditions of Contract

The General Conditions of Contract for Construction Works 3rd Edition (2015) published by the South African Institution of Civil Engineering, is applicable to this contract. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering www.saice.org.za

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

C1.2.2 Data provided by the employer

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

The following contract specific data are applicable to this Contract:

CONTRACT SPECIFIC DATA

The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition, 2015, are applicable to this Contract:

Clause 1.1.1.13:
The Defects Liability Period is **12 months.**

Clause 1.1.1.14:
The time for achieving Practical Completion is **8 months.**
Clause 1.1.1.15:
The name of the Employer is **O. R. Tambo District Municipality** represented by the Municipal Manager and/or such other person or persons duly authorised thereto by the Employer in writing.

Clause 1.1.1.16:
The name of the Employer's Agent is **Beacon Consulting Engineers** represented by Masibulele Mafika and/or such other person or persons duly authorised thereto by the Employer in writing.

Clause 1.1.1.26:
The Pricing Strategy is a Re-measurement

Clause 1.2.1.2:
The address of the Employer is: *Postal*: Private Bag x 6043, **Mthatha** 5100.

Physical: O.R. Tambo House, Nelson Mandela Drive, ***Mthatha*** 5100.

Tel: [047] 501 6400 **Fax**: [047] 532 4166

Clause 1.2.1.2:
The address of the client is: 37 Mtamvuna Road, Sidwadwa View, **Mthatha**, 5099
Tel: 047 495 0459 ***Email address:*** mafikam@beaconce.co.za

Clause 3.2.3:
Special Approval of the Employer Required
The Employer's Agent is required to obtain the specific approval of the Employer before executing any of the following functions or duties:

1. Providing consent for subcontracting part of the contract in terms of Clause 4.4.
2. The issuing of instructions for dealing with fossils and the like in terms of Clause 4.7.
3. The reduction of a penalty for delay in terms of Clause 5.13.2.
4. The determination of additional or reduced costs arising from changes in legislation in terms of Clause 6.8.4.
5. The agreeing of the adjustment of the sums for general items in terms of Clause 6.11.
6. Authorizing the Contractor to repair and make good excepted risks in terms of Clause 8.2.2.2.
7. The inclusion of credits in the next payment certificate in terms of Clause 10.1.5.2.

Clause 4.4.2:
A successful tenderer must subcontract at least **30% (minimum)** of the total contract value excluding VAT, to EME's or QSE's that are 51% owner by the following enterprises:
(i) Black people;
(ii) Black people who are youth;
(iii) Black people who are women;
(iv) Black people with disabilities;
(v) Black people living in rural or underdeveloped areas or townships;
(vi) Cooperatives which is at least 51% owned by black people;
(vii) Black people who are military veterans.

Clause 5.3.1:
The documentation required before commencement with Works execution are:

- Approved Health and Safety Plan (Refer to Clause 4.3)
- Initial programme (Refer to Clause 5.6)
- Accepted security (Refer to Clause 6.2)
- Insurance (Refer to Clause 8.6)

Clause 5.3.2:
The time to submit the documentation required before commencement with Works execution is **14 days**.

Clause 5.4:
Access to the Site
Add the following clause after Clause 5.4.3:

Clause 5.4.4:
The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his/her own cost any additional facilities outside the Site required by him/her for the purposes of the Works.

Clause 5.7.1:
Where the Rate of Progress falls behind the approved Programme of Works by three months, the Employer may terminate the contract giving a five days' notice.

Clause 5.8.1:
The non-working days are Sundays and Saturdays
The special non-working days are:

(1) public holidays

(2) The year-end break commencing on **11/12/2020 and ending on 04/01/2021**.

Clause 5.11.1
In the event that the performance of the services has to be suspended on the grounds of Force Majeure, the period of performance shall be extended by the extent of the delay at no extra cost.

Clause 5.11.2
During the period of his inability to perform services as a result of an event of Force Majeure, the service provider shall not be entitled to any payment in terms of the contract.

Clause 5.13.1:
The penalty for failing to complete the Works is **R 1 000.00** per calendar per day.

Clause 5.16.3:
The latent defect period is **10 years**.

Clause 6.8.2
There is no contract price adjustment

Clause 6.10.1.5:
The percentage advance on materials not yet built into the Permanent Works is **80%**

Clause 6.10.3:
The limit of retention money is **5%**

Clause 8.6.1.1.2:

The value of Plant and materials supplied by the Employer to be included in the insurance sum is **NIL**

Clause 8.6.1.1.3:
The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is **15%** of the value.

Clause 8.6.1.3:
The limit of indemnity for liability insurance is **R5 million.**

Clause 9.2.1
The Employer may terminate the contract:

a) Where the services are no longer required
b) Where the funding for the services is no longer available
c) If the service provider does not remedy a failure in the performance of his obligations under the Contract within 7 days after having been notified thereof by the employer.
d) If the service provider becomes insolvent or liquidated; or
e) If as a result of Force Majeure, the Service Provider is unable to perform part or the whole service for a period of thirty (30) days.
f) Where the Rate of Progress falls behind the approved Programme of Works by three months, the Employer may terminate the contract giving a five days' notice.

Clause 10.5.3
The number of Adjudication Board Members to be appointed is **one.**

C1.2.3 Data to be provided by the contractor

Clause 1.1.1.9 The name of the contractor is: (insert legal name)

_____

Clause 1.2.1.2 The address of the contractor is:

Physical address_____

_____

Postal Address_____

_____

Telephone_____

Fax_____

Email_____

Clause 6.2.1 The security to be provided by the contractor shall be one of the following

Type of security: Note VAT is included in the contract sum and Value of works for calculating percentages	Contractor's choice. Indicate "Yes" or "no"
(1) Cash deposit of 10% of the Contract Sum plus retention of 10% of the value of the works.	
(2) Performance guarantee (note A) of 10% of the Contract Sum plus retention of 10% of the value of the works.	

Note A

The Performance Guarantee shall be of an Insurance Company listed on the Johannesburg Stock Exchange or owned by such a company, a Registered South African Bank or a recognised government sponsored, provincial or national development agency.

_____

Tenderer's signature

C1.3 FORM OF GUARANTEE

PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:
…….

Physical Address:
……

"Employer" means: **OR TAMBO DISTRICT MUNICIPALITY**

"Contractor" means:
……

"Employer's Agent" means: **BEACON CONSULTING ENGINEERS**

"Works" means: **CONSTRUCTION OF MPENDLE WATER SUPPLY**

"Site" means: the land and other places made available by the Employer, for the purposes of the Contract, on, under, over, in or through which the Works are to be executed

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount inclusive of tax of R
……

Amount in words:
…….

"Guaranteed Sum" means: The maximum aggregate amount of R
……

Amount in words:
…….

"Expiry Date" means:
……..

CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate, and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of

issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3. The Guarantor hereby acknowledges that:

3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

3.2 its obligation under this Performance Guarantee is restricted to the payment of money.

4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum of the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration of liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting

surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

9. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

10. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

12. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

13. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

14. Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at …….

Date……

Guarantor's signatory (1)…….

Capacity……

Guarantor's signatory (2) ……..

FORM C1.3 SPECIAL CONDITION

Payment for the labour-intensive component of the works

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

Applicable labour laws

The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N° R63 of 25 January 2002, as reproduced below, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.

1 Introduction

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

1.2 In this document –

(a) "**Department**" means any department of the State, implementing agent or contractor;

(b) "**Employer**" means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;

(c) "**Worker**" means any person working in an elementary occupation on a SPWP;

(d) "**Elementary** occupation" means any occupation involving unskilled or semi-skilled work;

(e) "**Management**" means any person employed by a department or implementing agency to administer or execute an SPWP;
(f) "**Task**" means a fixed quantity of work;

(g) "**task-based work**" means work in which a worker is paid a fixed rate for performing a task;

(h) "**task-rated worker**" means a worker paid on the basis of the number of tasks completed;

(i) "**time-rated worker**" means a worker paid on the basis of the length of time worked.

(j) **"Task rate or daily rate**" = ***As per Government Gazette***

2 Terms of Work

2.1 Workers on a SPWP are employed on a temporary basis.
2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.
2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

3 Normal Hours of Work

3.1 An employer may not set tasks or hours of work that require a worker to work–

(a) More than forty hours in any week
(b) On more than five days in any week; and
(c) For more than eight hours on any day.

3.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4 Meal Breaks

4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
4.2 An employer and worker may agree on longer meal breaks.
4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5 Special Conditions for Security Guards

5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.
5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

6 Daily Rest Period

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7 Weekly Rest Period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

8 Work on Sundays and Public Holidays

8.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.

8.2 Work on Sundays is paid at the ordinary rate of pay.

8.3 A task-rated worker who works on a public holiday must be paid –

(a) The worker's daily task rate, if the worker works for less than four hours;

(b) Double the worker's daily task rate, if the worker works for more than four hours.

8.4 A time-rated worker who works on a public holiday must be paid –

(a) The worker's daily rate of pay, if the worker works for less than four hours on the public holiday;

(b) Double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

9 Sick Leave

9.1 Only workers who work four or more days per week have the right to claim sick pay in terms of this clause.

9.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

9.3 A worker may accumulate a maximum of twelve days' sick leave in a year.

9.4 Accumulated sick-leave may not be transferred from one contract to another contract.

9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

9.7 An employer must pay a worker sick pay on the worker's usual payday.

9.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –

(a) Absent from work for more than two consecutive days; or

(b) Absent from work on more than two occasions in any eight-week period.

9.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

9.10 A worker is not entitled to paid sick leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

10 Maternity Leave

10.1 A worker may take up to four consecutive months' unpaid maternity leave.

10.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.

10.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

10.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife, or qualified nurse certifies that she is fit to do so.

10.5 A worker may begin maternity leave –

(a) four weeks before the expected date of birth; or

(b) On an earlier date –

(i) If a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or

(ii) if agreed to between employer and worker; or

(c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.

10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

10.7 A worker who returns to work after maternity leave has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

11 Family responsibility leave

11.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -

(a) When the employee's child is born;

(b) When the employee's child is sick;

(c) In the event of a death of –

(i) The employee's spouse or life partner;

(ii) The employee's parent, adoptive parent, grandparent, child, adopted child, grandchild, or sibling.

12 Statement of Conditions

12.1 An employer must give a worker a statement containing the following details at the start of employment –

(a) The employer's name and address and the name of the SPWP;

(b) The tasks or job that the worker is to perform; and

(c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;

(d) The worker's rate of pay and how this is to be calculated;

(e) The training that the worker will receive during the SPWP.

12.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

12.3 An employer must supply each worker with a copy of these conditions of employment.

13 Keeping Records

13.1 Every employer must keep a written record of at least the following –
- (a) The worker's name and position;
- (b) In the case of a task-rated worker, the number of tasks completed by the worker;
- (c) In the case of a time-rated worker, the time worked by the worker;
- (d) Payments made to each worker.

13.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

14 Payment

14.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.

14.2 A task-rated worker will only be paid for tasks that have been completed.

14.3 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

14.4 A time-rated worker will be paid at the end of each month.

14.5 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

14.6 Payment in cash or by cheque must take place –
- (a) At the workplace or at a place agreed to by the worker;
- (b) during the worker's working hours or within fifteen minutes of the start or finish of work;
- (c) In a sealed envelope which becomes the property of the worker.

14.7 An employer must give a worker the following information in writing –
- (a) The period for which payment is made;
- (b) The numbers of tasks completed, or hours worked;
- (c) The worker's earnings;
- (d) Any money deducted from the payment;
- (e) The actual amount paid to the worker.

14.8 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it

14.9 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

15 Deductions

15.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

15.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

15.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order, or arbitration award concerned.

15.4 An employer may not require or allow a worker to –

(a) Repay any payment except an overpayment previously made by the employer by mistake;
(b) State that the worker received a greater amount of money than the employer actually paid to the worker; or
(c) Pay the employer or any other person for having been employed.

16 Health and Safety

16.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.
16.2 A worker must –
(a) Work in a way that does not endanger his/her health and safety or that of any other person;
(b) Obey any health and safety instruction;
(c) Obey all health and safety rules of the SPWP;
(d) Use any personal protective equipment or clothing issued by the employer;
(e) Report any accident, near-miss incident, or dangerous behaviour by another person to their employer or manager.

17 Compensation for Injuries and Diseases

17.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
17.2 A worker must report any work-related injury or occupational disease to their employer or manager.
17.3 The employer must report the accident or disease to the Compensation Commissioner.
17.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

18 Termination

18.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.
18.2 A worker will not receive severance pay on termination.
18.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.
18.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
18.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

19 Certificate of Service

19.1 On termination of employment, a worker is entitled to a certificate stating –

(a) The worker's full name;
(b) The name and address of the employer;
(c) The SPWP on which the worker worked;
(d) The work performed by the worker;
(e) Any training received by the worker as part of the SPWP;
(f) The period for which the worker worked on the SPWP;
(g) Any other information agreed on by the employer and worker

MONTHLY REPORTING

The successful bidder will be expected to assist with monthly reporting. These will include progress reports, labour reports, etc, submitted to the Project Manager on the dates to be stipulated.

FORM C1.4 HEALTH AND SAFETY SPECIFICATION

HEALTH AND SAFETY SPECIFICATION
THE OCCUPATIONAL HEALTH AND SAFETY ACT 1993
CONSTRUCTION REGULATIONS 2014

SECTION 1

1. INTRODUCTION

This document was construed in order to comply with the provisions of the **OCCUPATIONAL HEALTH AND SAFETY ACT NO 85 OF 1993, CONSTRUCTION REGULATIONS 2014 and** COVID-19 Occupational Health And Safety Measures in Workplace 2020
Definitions of words are those described in the Act and the Construction Regulations of 2014. As well COVID-19 Occupational Health And Safety Measures in Workplace 2020

This document formulates the specification of the OR Tambo District Municipality in terms of the above act and forms part of the constitution of the organisation.

This document forms part of the employment contract of all employees and is as such accepted in writing by each employee. It also forms part of the agreement between the OR Tambo District Municipality and all service providers.

No clause in this document shall be amended in any contract document construed by agents, designers or anyone else except so ordered or sanctioned by the OR Tambo District Municipality in writing.

SCHEDULE
1.1 Definitions

1. In these Policy any word or expression to which a meaning has been assigned in the Act shall have the meaning so assigned and, unless the context otherwise indicates—

"Agent" means any person who acts as a representative for a client in the managing the overall construction work.

"**angle of repose**" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on a surface, rather than sliding or crumbling away;

"*Batch plant*" *means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work***;**

"**Client"** *means OR Tambo District Municipality***;**

"competent person" in relation to construction work, means any person having the knowledge, training and experience specific to the work or task being performed: Provided that where appropriate qualifications and training are

registered in terms of the provisions of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), these qualifications and training shall be deemed to be the required qualifications and training;

"Construction work" means any work in connection with—

(a) The erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;

(b) The installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;

(c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or

(d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;

"*construction vehicle*" *means a vehicle used for means of conveyance for transporting persons or material or both such persons and material, as the case may be, both on and off the construction site for the purposes of performing construction work;*

"*Contractor*" *mean an employer, as defined in section 1 of the Act, who performs construction work and includes principal contractors;*
"*Design*" *in relation to any structure includes drawings, calculations, design details and specifications;*

"*Designer*" *means any person who—*

(a) prepares a design;
(b) checks and approves a design;
(c) arranges for any person at work under his control (including an employee of his, where he is the employer) to prepare a design, as well as;
(d) Architects and engineers contributing to, or having overall responsibility for the design;
(e) Build services engineers designing details for fixed plant;
(f) Surveyors specifying articles or drawing up specifications;
(g) Contractors carrying out design work as part of a design and build project;
(h) Temporary works engineer designing formwork and false work; and
(i) Interior designers, shopfitters and landscape architects.

"*ergonomics*" *means the application of scientific information concerning humans to the design of objects, systems and the environment for human use in order to optimise human well-being and overall system performance;*

"Excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"**explosive powered tool**" means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing**;**

"fall prevention equipment" means equipment used to prevent persons from falling from an elevated position, including personal equipment, body harness,

body belts, lanyards, lifelines or physical equipment, guardrails, screens, barricades, anchorages or similar equipment;

"fall arrest equipment" means equipment used to arrest the person in a fall from an elevated position, including personal equipment, body harness, lanyards, deceleration devices, lifelines or similar equipment, but excludes body belts;

"**fall protection plan**" means a documented plan, of all risks relating to working from an elevated position, considering the nature of work undertaken, and setting out the procedures and methods to be applied in order to eliminate the risk;

"Hazard identification" means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed;

"Health and safety file" means a file, or other record in permanent form, containing the information required as contemplated in these regulations;

"Health and safety plan" means a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

"Health and safety specification" means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

"material hoist" means a hoist used to lower or raise material and equipment, and includes cantilevered platform hoists, mobile hoists, friction drive hoists, scaffold hoists, rack and pinion hoists and combination hoists;

"Medical certificate of fitness" means a certificate valid for one year issued by an occupational health practitioner, issued in terms of these regulations, whom shall be registered with the Health Professions Council of South Africa;

"Method statement" means a written document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

"*Mobile plant*" means machinery, appliances or other similar devices that is able to move independently, for the purpose of performing construction work on the construction site;

"National Building Regulations" means the National Building Regulations made under section 17(1) of the National Building Regulations and Building Standards Act, 1977 (Act No.103 of 1977), and published under Government Notice No. R.1081 of 10 June 1988, as amended;

"Person day" means one individual carrying out construction work on a construction site for one normal working shift;

"**principal contractor**" means an employer, as defined in section 1 of the Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site**;**

"professional engineer or professional certificated engineer" means any person holding registration as either a Professional Engineer or Professional Certificated Engineer under the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional technologist" means any person holding registration as a Professional Technologist under the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations under the Act;

"risk assessment" means a programme to determine any risk associated with any hazard at a construction site , in order to identify the steps needed to be taken to remove, reduce or control such hazard;

"Roof apex height" means the dimensional height in metres measured from the lowest ground level abutting any part of a building to the highest point of the roof;

"SABS 085" means the South African Bureau of Standards' Code of Practice entitled "The Design, Erection, Use and Inspection of Access Scaffolding";

"SABS 0400" means the South African Bureau of Standards, Code of Practice for the application of the National Building Regulations;

"SABS EN 1808" means the South African Bureau of Standards' Standard Specification entitled: "Safety requirements on suspended access equipment – Design calculations, stability criteria, construction-tests";

"SABS 1903" means the South African Bureau of Standards' Standard Front-end Specification entitled: "Safety requirements on suspended access equipment – Design calculations, stability criteria, construction-tests";

"Scaffold" means any temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a structure such as a hydraulic, mechanical or timber/steel shoring system that supports the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation, and "shoring system" has a corresponding meaning;

"Structure" means—

(a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, batching plants, pylon,

surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;

(b) any formwork, false work, scaffold or other structure designed or used to provide support or means of access during construction work; or

(c) any fixed plant in respect of work which includes the installation, commissioning, decommissioning or dismantling and where any such work involves a risk of a person falling two metres or more;

"Suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support;

"The Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"Tunnelling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral

SECTION 2: DESIGNERS

1. All wording shall have the meaning as defined by the H&S Regulations 2014.

3. This specification is in terms of the H&S act 1993 and the regulations of 2014.

3. All work performed, and procedures followed by designers shall be done according to the H&S regulations of 2014.

4. The client is aware of the fact that the appointment of a designer does not implicate that the designer becomes the agent of the client for the particular project. The appointment of an agent is done separately in writing and should be accepted by the designer as such.

5. The client is ultimately responsible for all safety issues regarding the project for which a designer is appointed and cannot contract out of his obligations in terms of the law.

6. The client shall not employ a designer should he have reasonable doubts that the designer is not able to execute work in a safe manner.

7. All designers shall have adequate insurance cover to indemnify the client for their acts and omissions in terms of professional conduct the H&S act in particular to indemnify the client against penalties imposed for acts or omissions. The client is aware of the fact that additional insurance over and above PI insurance is necessary to have himself indemnified by the designers for acts and omissions in terms of the H&S regulations. The professional indemnity insurance has a "negligent acts and omissions" wording only and therefore additional insurance is necessary to cover the client against penalties imposed in terms of the regulations.

8. Designers shall not accept work from the client if they are not capable of executing such work professionally and if such work cannot be executed in a safe manner, according to the provisions of the H&S regulations.

9. Designers shall execute all designs in terms of the relevant SABS and other acceptable codes and procedures and shall place great emphasis on safety issues including the maintenance procedures after inaugurations of such systems or projects.

10. Ergonomic parameters shall have high priority in all designs.

SECTION 3: PRINCIPAL CONTRACTORS (P C)

1. All work by the P C shall be done in compliance with the provisions of the H&S regulations. As well as COVID-19 Occupational Health and Safety Measures in Workplace 2020

2. The Employer recognises the right of each employee to work safely in a healthy environment under decent human conditions. Each employee has the right to return home safely and healthy to his home and family after each day's work.

3. Work shall not be done at the expense of human safety or health.

4. Work shall be executed under humane conditions, especially with reference to hours and H&S issues in mind.

5. The P C shall appoint a fulltime H&S Manager should he have more than 50 employees on site.

6. The PC shall conduct monthly safety meetings on site. All foremen, gang leaders and other employees shall participate and all incidents with relation to unsafe practices shall be discussed. Minutes of such meetings shall be kept in the H&S file.

7. Foremen and gang leaders shall, under the supervision of the H&S manager, conduct meetings with all staff and people under their direct supervision on a frequent basis.
   Minutes of such meetings shall be kept in the H&S file.

8. New personnel (temporary or full-time employees) shall attend safety induction courses under the supervision of the H&S manager.

9. The P C shall install and maintain a box in which proposals for improvement of H&S procedures could be placed. All such proposals shall be considered, recorded and placed in the H&S file.

10. An adequate first aid facility shall be placed maintained on site and shall be adequately indicated by means of signs. All personnel shall be made aware of its existence and only trained first aid assistants shall be authorized to treat injuries.

11. The P C shall see that work is only executed by people trained for the particular task.

12. All safety equipment shall be SABS approved and under no circumstance shall any safety equipment be non-certified homemade equipment. Specifications and order details shall be kept in the H&S file.

13. Workers and personnel shall be attending safety courses on a regular basis and all information regarding such training shall be kept in the H&S file.

14. All employees shall be trained in safe working procedures and shall be trained on safety consciousness in particular. Employees in position of leadership shall be trained through accredited training processes in H&S matters.

15. The contractor shall prepare and maintain a safety plan for the particular project and shall train his personnel to work according to such plan.

16. Personnel and workers will be made aware of any natural hazards existing on site. They will also be made aware of items defined by the designer in his risk assessment.

17. No horseplay between employees will be tolerated on site. Neither will aggressive or threatening behaviour by anybody be allowed.

18. Workers shall wear appropriate protective clothing for the applicable task which shall include special safety equipment like protective eyewear, gloves, boots, ear protection, etc. Workers shall be issued with these items and copy of such issuing shall be kept in the H&S file.

19. Workers shall not be allowed to wear loose clothes and footwear.

20. Workers shall have the opportunity and right to prescribed rest, eating and toilet breaks.

21. Workers on nightshift shall be protected against inclement weather and shall have access to adequate food and drinks.

22. In cases where work is executed in remote or in security restricted areas, the P C will make provision for food to be supplied to his employees.

23. Potable water shall be made available free of charge to all workers on site.

24. Adequate toilet and washing facilities shall be made available to workers.

25. In the event of chemicals being present or used on site, the P C will allow for adequate shower facilities on site. All chemicals shall be stored according to specification and shall be clearly identified and marked in prescribed containers.

26. Workers under instruction to execute inherently unsafe procedures shall report such incidences to the H&S manager, designer of client immediately.

27. Unauthorised or unlawful instructions from foremen, gang leaders or colleagues shall be reported by the H&S manager immediately.

28. The P C shall stop his contractors if they work unsafely.

29. All specialist work shall be executed by registered artisans only.

30. Workers shall not be required to lift equipment or material heavier than 25kg or carry a load of more than 50 kg for more than 10 metres.

31. Workers shall not be exposed to conditions of heat where the temperature is above 40° Celsius and the humidity more than 75%. Likewise, will personnel not be exposed to temperatures lower than –5° Celsius? Should the designer and the P C decide that the work is urgent; workers will be issued with proper protective clothing.

32. All workers shall have access to a shaded eating and resting place on site.

33. Workers executing tasks in rivers, trenches and other natural or artificial water ways shall be made aware of the hazard of flash floods and special precautions shall be made by the P C to implement an effective flood warning system.

34. Workers executing tasks in manholes for sewer or storm water systems, shall be made aware of the existence of hazardous gasses in closed areas and shall be issued with gas masks in any event, even after tests conducted by the H&S manager has proven that no gasses are existent. Only specialists shall work in gas filled chambers.

35. Personnel executing work during rainy weather or under other wet conditions shall be equipped with proper gumboots and proper rain suits.

36. No personnel will be allowed to work in water unless gumboots are worn. Should the water be deeper than 300mm watertight suits shall be worn.

37. All ladders shall be fixed against scaffolding or other permanent structures.

38. Welding on site shall only be done by trained personnel behind adequate eye protecting shields and all welders shall wear proper protective gear.

39. Personnel operating grinders, saws or any other hand tools of similar description shall be equipped with the necessary eyewear and ear protection.

40. All personnel working under potentially dusty conditions shall wear nose and mouth filters.

41. Workers operating rock drilling equipment shall wear ear, nose and eye protection.

42. All scaffolding will comply with the H&S regulations.

43. Blasting will be done by specialists under the regulations of the Explosives Act.

44. Workers shall wear protective clothing when exposed to chemicals like cement, lime, detergents, tar, fumes, etc. Should work be executed in the presence of such material, adequate protective clothing and equipment shall be issued after permission is granted by the H&S manager.

45. Workers will not be allowed to make open fires on any part of the site unless it is made in designated areas approved by the H&S manager.

46. Fuel storage will only be allowed on certified areas on site.

47. Workers and other personnel will be trained for fire procedures and will practise such fire drill on a regular basis.

48. Assembly areas for emergency evacuations will be indicated by adequate signage.

49. The P C will have an attendance register for the purposes of identifying people before, during and after potential hazardous situations.

50. All transport supplied by the P C shall be on road worthy vehicles only and all transport shall be conducted in terms of the transport act.

51. Drivers of vehicles shall be responsible for the roadworthiness of vehicles and will report any dysfunctional vehicles to the P C.

52. All drivers will be responsible to handle vehicles in such a way to comply with the transport act.

53. Passengers of vehicles shall report any unsafe conduct to the P C immediately. Such report shall be forwarded to the H&S manager and shall be investigated. Copy of such procedure shall be entered into the H&S file.

54. Only trained personnel shall be permitted and required to operate construction machinery. All such machinery shall be maintained in a safe working condition.

55. All vehicles operating on site shall have audible warning signals if driven backwards.

56. No vehicle shall be kept on site if it is leaking oil or other substances.

57. No vehicle or equipment shall be operated on site if it produces noise above 90 decibel measured within a distance of 10,0 m from the unit.

58. Equipment producing serious dusty conditions shall only be operated under the supervision of the P C and the H&S manager with the necessary protection to workers.

59. All excavations on site shall be adequately protected and not only indicated.

60. Exploratory excavation to reveal services shall be done in a specific way.

    - All areas to be explored shall first be inspected by the landowner or local authority.
    - Position of services identified shall then be verified by opening by hand, not by machine.
    - Particular care shall be taken not to damage these services.
    - Electrical services are inherently dangerous and shall be opened by skilled people only.
    - These excavations shall not be left open without supervision. If necessary the excavation shall be backfilled temporarily with approved material until the specified modifications to the services can be made.

61. Access to excavations shall only be by means of ladders or stairs with handrails.

62. All refuse, unsafe material, potential hazardous material and rubbish shall be placed in designated areas to be removed on a regular basis.

63. Rainwater shall be contained in trenches or pipes in such a way that it will not cause contamination of material in these refuse areas.

64. All electrical sources or cables or overhead power lines should be regarded as live at all times and all workers on site shall be made aware of its existence during H&S meetings and as many times as necessary.

65. Adequate signage shall be used on site to indicate
    - Non-smoking areas on site
    - Safety exits / Emergency exits from buildings under construction
    - Stairs (temporary and permanent works)
    - Toilets
    - Firefighting equipment
    - Workmen busy with equipment overhead
    - Fire assembly points
    - Fire escapes
    - Areas where members of the public are not allowed.
    - First aid room

66. All visitors to the site shall be granted permission to the site only upon application through a predetermined procedure and records of these visitors shall be kept in the H&S file. Visitors shall attend safety induction training before entering the site. Areas out of bounds to all visitors shall be indicated clearly by means of adequate signs.

67. Work performed in public servitudes like the construction of streets or roads shall be done according to the specifications of the local or national authority and adequate signage shall be implemented.

68. People complaining about their health or people displaying symptoms of illness or disease, shall be allowed to go to the first aid facility or to visit a doctor or a clinic. Permission shall not be withheld unreasonably. In remote areas the P C is required to have reasonable ways of transporting people to a doctor or clinic whether the person is ill or injured on site.

69. Personnel must be informed about the location of the nearest doctor or clinic for casualty purposes and the P C shall provide such transport for injured workers and injured members of the public (within the limits of the site) free of charge.

70. A principal contractor who intends to carry out any construction work shall—

(a) before carrying out that work, notify the provincial director in writing of the construction work if it includes—

(i) The demolition of a structure exceeding a height of 3 metres; or
(ii) The use of explosives to perform construction work; or
(iii) The dismantling of fixed plant at a height greater than 3m.

(b) before carrying out that work, notify the provincial director in writing when the construction work—

(i) Exceeds 30 days or will involve more than 300-person days of construction work; and
(ii) Includes excavation work deeper than 1m; or
(iii) Includes working at a height greater than 3 metres above ground or a landing.

(2) The notification to the provincial director must be done on the form similar to Annexure A to this Policy.

(3) A principal contractor shall ensure that a copy of the completed form is kept on site for inspection by an inspector, client, client's agent or employee.

SECTION 4: CLIENT

(1) A client shall be responsible for the following in order to ensure compliance with the provisions of the Act —

(a) to prepare a documented health and safety specification for the construction work, and provide any principal contractor who is making a bid or appointed to perform construction work for the client with the same;
(b) To promptly provide the principal contractor and his or her agent with any information which might affect the health and safety of any person at work carrying out construction work;
(c) To appoint each principal contractor in writing for the project or part thereof on a construction site;
(d) To take reasonable steps to ensure that each principal contractor's health and safety plan is implemented and maintained on the construction site: Provided that the steps taken, shall include periodic audits at intervals mutually agreed upon between the client and principal contractor, but at least once every month;
(e) to stop any contractor from executing construction work which is not in accordance with the principal contractor's health and safety plan for the site or which poses to be a threat to the health and safety of persons;
(f) to ensure that where changes are brought about, sufficient health and safety information and appropriate resources are made available to the principal contractor to execute the work safely;
(g) to ensure that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site; and
(h) To ensure that potential principal contractors submitting tenders, have made provision for the cost of health and safety measures during the construction process.

(2) A client shall discuss and negotiate with the principal contractor the contents of the health and safety plan and thereafter finally approve the health and safety plan for implementation.

(3) A client shall ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor.

(4) OR Tambo District Municipality shall not appoint a principal contractor to perform construction work, unless OR Tambo District Municipality is reasonably satisfied that the principal contractor that he or she intends to appoint has the necessary competencies and resources to carry out the work safely.

(5) A client may appoint an agent in writing to act as his or her representative and where such an appointment is made, the responsibilities as are imposed by these regulations upon a client, shall as far as reasonably practicable apply to the person so appointed.

(6) No client shall appoint any person as his agent, unless the client is reasonably satisfied that the person he or she intends to appoint has the necessary competencies and resources to perform the duties imposed on a client by these regulations.

ANNEXURE A

NOTIFICATION OF CONSTRUCTION WORK

1.(a) Name and postal address of principal contractor:

_____

(b) Name and tel. no of principal contractor's contact person:

_____

2. Principal contractor's compensation registration number:

_____

3.(a) Name and postal address of client:

_____

(b) Name and tel. no. of client's contact person or agent:

_____

4.(a) Name and postal address of designer(s) for the project:

_____

(b) Name and tel. no. of designer(s) contact person:

_____

Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 6.(1).

_____

5. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 6.(2).

_____

6. Exact physical address of the construction site or site office:

_____

7. Nature of the construction work:

_____

_____

_____

9. Expected commencement date:

_____

10. Expected completion date:

_____

11. Estimated maximum number of persons on the construction site.

_____

12. Planned number of contractors on the construction site accountable to principal contractor:

_____

13. Name(s) of contractors already chosen.

_____

_____

_____

_____ _____

Principal Contractor Date

_____ _____

Client Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR ***PRIOR TO COMMENCEMENT*** OF WORK ON SITE.

- ***ALL PRINCIPAL CONTRACTORS*** THAT QUALIFY TO NOTIFY MUST DO SO EVEN IF ANOTHER PRINCIPAL CONTRACTOR ON THE SAME SITE HAD DONE SO PRIOR TO THE COMMENCEMENT OF WORK.

GUIDELINES FOR CONTRACT ADMINISTRATION

O.R. TAMBO
DISTRICT MUNICIPALITY

OR TAMBO DISTRICT MUNICIPALITY

OR TAMBO DISTRICT MUNICIPALITY

GUIDELINES FOR CONTRACT ADMINISTRATION
IN TERMS OF THE CONSTRUCTION REGULATIONS 2014
HEALTH & SAFETY ACT 1993

SECTION 1 AND 2

1. PURPOSE OF THIS DOCUMENT

This document describes the procedures to be followed in the execution of Engineering Projects for OR Tambo District Municipality.

The role of all parties to the development project is described.

The document is in terms of the Construction Regulation 2014 of the Health and Safety Act 1993. As well as COVID-19 Occupational Health & Safety Measures in Workplace 2020

2. BACKGROUND

The Minister of Labour has on 18 July 2014 under section 43 of the Occupational Health and Safety Act 1993 (Act No. 85 of 1993) published new regulations in the Government Gazette 7721, Vol. 456. They have immediate effect and are applicable to the Construction Environment.

These regulations inter alia identify the different role players and their responsibilities, particularly the role of the client, the contractor and that of the designer.

The Construction Regulations endeavour to ensure that:

i) Hazards or potential hazards to a healthy working environment are identified.

ii) These hazards or potential hazards are removed or minimised.

iii) Employers and Workers are made aware of the value of safe working procedures and train themselves to work safely in potential hazardous environments or under potentially unsafe conditions.

SECTION 3

3. THE CLIENT

In terms of the law the client is ultimately responsible for all acts and omissions as far as health and safety is concerned on site. It should be noted that the client will be held legally responsible for every trespass of the regulations, not the designer or the contractor. The law makes provision for fines to be levied and unless the client has been indemnified by the designer or the contractor, such fines will have to be paid by the client.

Clients cannot contract out of their statutory obligations except where the law allows for it. Therefore, any liability imposed upon them for statutory non-compliance, cannot be passed on to designers (consultants) or contractors.

In particular the client's responsibilities are defined as follows:

.1	To prepare a health and safety (H&S) specification for the work. This should cover the spectrum of activities handled by the client as part of his normal duties.	Clause 4(1)(a)
.2	To provide a risk assessment to the principal contractor.	Clause 4(1)(b)
.3	To appoint the principal contractor in writing.	Clause 4(1)(c)
.4	To ensure that the H&S plan is implemented.	Clause 4(1)(d)
.5	To stop any contractor executing work in an unsafe manner.	Clause 4(1)(e)
.6	To provide additional H&S information to the contractor should changes be made to the work?	Clause 4(1)(f)
.7	To ensure that the principal contractor is registered and in good standing with the workmen's compensation fund.	Clause 4(1)(h)
.8	To make sure tenderers have made provision in their offers for H&S measures.	Clause 4(1)(h)
.9	To discuss and approve the H&S plan with the principal contractor.	Clause 4(2)
.10	To keep a copy of the H&S plan of the principal contractor.	Clause 4(3)
.11	To not employ a contractor unless the client is reasonably satisfied that the principal contractor who is earmarked for an appointment has the necessary skills, competencies and resources to carry out the work safely.	Clause 4(4)
.12	The client can appoint an agent to handle his duties. The client can obviously also delegate some of his duties but this does not make the person responsible for such particular responsibilities as agent. The client should make sure whether such responsibilities are not already part of the designer in terms of the regulations clause 9(2).	Clause 4(5)
.13	The client shall only appoint someone as his agent if he is reasonably satisfied that such person can handle such responsibilities.	Clause 4(6)

SECTION 4

4. THE DESIGNER

The regulations do not use names like engineer, architect, etc. Instead the term designer has been introduced. The responsibilities of the designer are given in a sub-paragraph under the obligations of the Principal Contractor.

4.1	The regulations has a comprehensive definition of the designer and this includes:	Definitions "designer"
a)	A person preparing a design.	Definitions "structure"
b)	A person checking a design.	
c)	A firm preparing a design.	
d)	An architect or engineer contributing to or having responsibility for a design.	
e)	A building services engineer designing details of fixed plant (scaffolding or cranes).	
f)	A surveyor specifying articles or drawing up specification (Quantity Surveyor).	
g)	A contractor in design & build contract.	
h)	A contractor designing temporary work.	
i)	A interior designer, shop fitter and landscape architect.	
	The regulation also talks of "an engineer designing a structure". "Structure" is a wide concept and is given in paragraph 3.2.5.1(a) underneath.	
4.2	The designer does not automatically through an appointment become the agent of the client in terms of the regulations unless he is appointed in writing to that effect and he accepts such appointment in writing.	Clause 4(5)
4.3	The SAACE model agreement between the client and Engineer has a different meaning of the word "agent". According to the model agreement of SAACE the Engineer acts as the "agent" of the client in a conventional contractual context. "Agent" in terms of the Health & Safety regulations has a totally different meaning.	
4.4	It can be derived from the regulations that the client can appoint a designer to perform certain tasks of the client on his behalf. This still does not mean that these designers become his agent in terms of clause 4(5).	Clause 4(5)
4.5	The regulations are fairly quiet regarding the functions and responsibilities of the designer except when designing of a structure. It is again assumed that the client will identify certain functions to be done by the designer on his behalf.	

4.5.1	"Structure" in terms of the regulations means:	Definitions
(a)	• any building • steel or reinforced concrete structure • railway line • railway siding • bridge • waterworks • reservoir • pipe or pipeline • cable • sewer • sewage works • fixed vessels • road • drainage works • earthworks • dam • wall • mast • tower • tower crane • batching plants • pylon • surface and underground tanks • earth retaining structure or any structure designed to preserve or alter any natural feature and any other similar structure.	
(b)	Any formwork, false work, scaffold or other structure designed or used to provide support or access during construction (structural engineering sector).	
(c)	Fixed plant to prevent people from falling 2 meters or more.	
4.5.2	The designer is in fact regarded as a person delivering designs only and unless his role is defined by the client, his role is quite limited.	Clause 9(2)
4.5.3	The designer should inform the client and the principal contractor about anticipated dangers relating to the construction work. <u>This is in fact a Risk Assessment.</u>	Clause 9(2)(b)
4.5.4	The designer (in the structural engineering context) shall further furnish to the contractor in writing:	Clause 9(2)
i)	A geo-technical report.	
ii)	The loading of the structure.	
iii)	The method and sequence of the construction process.	
iv)	He should exclude inherently dangerous methods of construction in his design.	
v)	The maintenance of the structure shall be through safe procedures.	
vi)	He should carry out inspections.	
vii)	And stop the contractor from executing work dangerously.	
viii)	A final inspection is necessary to ensure safety of the	

	structure.	
ix)	Great emphasis should be given to the ergonomic design of the structure.	
x)	The engineer should also give input in the design of temporary work e.g. scaffolding.	Clause 10(c)

SECTION 5

5. THE PRINCIPAL CONTRACTOR (P C) AND CONTRACTOR

The responsibilities of these parties are comprehensively stipulated in the regulations.

5.1	In general it can be seen that the responsibilities of the PC (Principal Contractor) towards his contractors is Mutatis Mutandis to the responsibilities of the Client towards the PC.	
5.2	The PC is responsible for the collecting of these contractors' safety plans and to hold them to it.	Clause 5(1) and (2)
i)	He should also stop his contractors should they work unsafely.	Clause 5(3)(d)
ii)	He should appoint safety officers should the size of the work warrant it.	Clause 6(6)
iii)	He should cause a risk assessment to be executed by a competent person.	Clause 7(1)
iv)	Visitors to his site should undergo induction pertaining to H&S issues.	Clause 7(8)
v)	He shall see to his employees induction and H&S training.	Clause 7(7)
vi)	The employees of the PC and his contractors shall wear visible proof of their induction training.	Clause 7(9)(a)
5.3	The regulations also covers the detail of:	
	• Fall protection	Clause 8
	• Structures (under this heading the responsibilities of the designer of a structure is found)	Clause 9
	• Formwork and support work	Clause 10
	• Excavation work	Clause 11
	• Demolition work	Clause 12
	• Tunnelling	Clause 13
	• Scaffolding	Clause 14
	• Suspended platforms	Clause 15
	• Boatswain's chairs	Clause 16
	• Material hoists	Clause 17
	• Batch plants	Clause 18
	• Explosive powered tools	Clause 19
	• Cranes	Clause 20
	• Construction vehicles and mobile plant	Clause 21
	• Electrical installation and machinery on construction sites	Clause 22
	• Use and storage of flammable liquids on construction sites	Clause 23
	• Water environment	Clause 24
	• Housekeeping on construction sites	Clause 25
	• Stacking and storage on construction sites	Clause 26
	• Fire precautions on construction sites	Clause 27
	• Construction welfare facilities	

SECTION 6

6. APPOINTMENT OF THE DESIGNER — Clause 4(5)

6.1 The client appoints the consultant or designer as agent only for the particular project and also for the duration of the project.

6.2 It is further important to distinguish between “agent” in terms of the SAACE model agreement between client and engineer and “agent” in terms of the H&S regulations.

6.3 The responsibilities and duties of a designer in the H&S context are <u>those that are dictated by law and/or those respectively given to him by the client</u>, except when he is a structural engineer and designs a “structure” in which case clause 9(2) applies automatically.

6.4 The client should only add to the responsibilities of the designer those which is not automatically in his hand in terms of clause 9(1) of the regulations.

6.5 The following duties are not regarded as normal work of the designer of a “structure” and will therefore require an additional appointment.

.1	To ensure the H&S plan of the PC is implemented on site.	Clause 4(1)(d)
.2	To ensure that changes to the design are also incorporated in the H&S plan.	Clause 4(1)(e)
.3	To ensure that the principal contractor is registered and in good standing with the workmen’s’ compensation fund.	Clause 4(1)(f)
.4	To see that the contractor registers the site as a construction site at the Department of Labour.	Clause 4(1)(g)
.5	To discuss with the contractor the H&S plan and then recommend to the client the approval thereof.	Clause 4(2)
.6	To keep a copy of the H&S plan of the contractor in his possession and see that a copy is forwarded to the client.	Clause 4(4)
.7	Control the following on site:	
	a) To see that the principal contractor keeps the H&S file up to date and that it is given to the client upon completion of the contract.	Clause 5(7)
	b) To see that the principal contractor keeps a data base of all contractors involved with the project.	Clause 5(9)
	c) To see that the principal contractor appoints one or more construction supervisors.	
	d) To see that this person is dedicated to the particular project only.	Clause 6(4)
	e) To receive from the contractor his risk assessment and keep a copy of that for his and the client’s records.	Clause 7(1)

SECTION 7

7. THE ROLE OF THE CLIENT

7.1	The client shall still prepare the H&S specification in terms of clause 4(1)(a) for its global activities. The H&S specification for the particular project is assigned to the designer.	Clause 4(1)(a)
7.2	The client shall approve of the H&S plan of the contractor, but on the recommendation of the consultant/ designer.	Clause 4(2)
7.3	The client employs the Principal Contractor.	Clause 4(1)(c)
7.4	The client can appoint an agent in which case all the responsibilities of the agent in the regulations are transferred to the agent.	Clause 4(5)
7.5	The client should only appoint an agent should he have made reasonably sure that the agent can handle the responsibility.	Clause 4(6)
7.6	The client shall not appoint a contractor if he is not reasonably sure that the contractor can execute such work in a safe manner.	Clause 4(4)

SECTION 8

8. THE ROLE OF THE PRINCIPAL CONTRACTOR

The principal contractor should execute the following duties:

.1	Provide a health and safety plan.	5(1)
.2	See that his contractors comply with the regulations.	5(2)
.3	He should discuss the particular H&S plan.	5(5)
.4	He should have his H&S plan available.	5(6)
.5	He should have an H&S file available on site and hand it over to the client upon completion.	5(7)
.6	He should not employ contractors who are not capable.	5(10)
.7	He should have full time supervision on site.	6(1) to 6(8)
.8	He should produce a risk assessment of the work.	7(1)
.9	He should train his employees.	7(4)
.10	He should introduce induction training on site.	7(7)/ 7(8)
.11	All physical aspects of the regulations as in terms of the regulations.	

SECTION 9

9. THE PROCEDURE

9.1	The Client decides to execute work and appoints a designer to administer the work.	
9.2	The scope of works and the exact duties of the designer are identified and given to him in writing. The designer should affect insurance by which the client is indemnified (by the designer) for acts and omissions of the designer. This type of insurance does not form part of the normal PI insurance provided by the designer. The designer prepares a contract document and ensures that this document states clearly the following:	
.1	A risk assessment of the project and the H&S specification of the client.	
.2	All relevant information to enable the pricing of the contract.	9(2)(a)
.3	Items in the bill to enable the tenderer to price for the risk including insurance indemnifying the client. The document should state whether a full-time safety officer is required on site.	9(2)(b)
.4	(i) Geotechnical information (ii) Loading of the structure – in other words all relevant technical data taking the definition of "structure" into account. (iii) The method and sequence of the process. This should identify the priorities of the client.	9(2)(c)(i) to (iii)
.5	Inherently dangerous procedures should be avoided in the design.	9(2)(d)
.6	The maintenance of the structure should be considered also so that this aspect would be safe and ergonomic too.	9(2)(e)
9.3	The tenderers then respond by each giving a H&S plan based on the risk assessment of the designer.	
9.4	The client then chooses the contractor according to his procurement policy (taking into account his ability to do the work safely) and appoints him in writing via the designer.	
9.5	The chosen principal contractor then affects a detailed risk assessment and a risk management plan, based on the H&S specification. Once on site the principal contractor should register the site by means of the prescribed form and have it approved by the client/designer. He should open and then maintain his H&S file through the duration of the contract.	

He should then further adhere to the provisions of the H&S regulations.

9.6 He should hand over the H&S file (recommend to do that with the designer's as-built drawings).

9.7 The designer should stop the work if he has reason to belief that the contractor is executing work in an unsafe manner.

9.8 Likewise, should the principal contractor stop the work of his contractor(s) should he have reason to belief that such contractor is not working safely.

SECTION 10

10. CONTRACT DOCUMENTATION

The contract documentation needs to emphasize the following points in order to comply with the Health and Safety Act 1993 and the Construction Regulations 2014. As well as COVID-19 OHS Measures in Workplace 2020,

A. In the Specification section

1. Health and Safety Specification

The Client shall issue the Designer with his Health and Safety specification and it shall be included as such in the document.

Should the Designer be of the opinion that variations and additions be made to the specification, due to the nature of the particular project, he shall forward the proposed variation or addition to the NDM who will authorize this in writing.

2. Risk Assessment

This can form part of the contract specifications.

It is necessary to identify to the contractor:

i) The situation on site as it is with all the potential hazards and dangers involved.

ii) The nature of the work and the situations that the average contractor would encounter during the execution of the work. The nature of the work and the expected risks should be described in particular as well as the method and the sequence of the work.

iii) The basic safety precautions that he should take.

iv) The Safety and Health specification of the client.

v) To allow sufficient items in the bill of quantities for the tenderer to price for the specified H&S measures and precautions.

3. Insurance

The contractor shall affect insurance indemnifying the client against penalties levied upon the client due to the acts or omissions of the contractor in failing to comply with the provisions of the H&S regulations 2014. And COVI-19 OHS Measures in Workplace, 2020

The contractor shall prove to the Engineer that such insurance has been affected and maintained during the construction.

B. The Tender Rules

The tender rules shall contain a clause requiring the contractor to submit a H&S plan based on the risk assessment given in the contract document. It should also state that the client is bound by law not to appoint a contractor should he be reasonably sure that the contractor would not be able to execute the work safely should he be appointed.
The following example is recommended.
Compliance with the Regulations of the H&S Act 2014

Tenderers are required to study the published risk assessment and provide Annexure Y his Health and Safety Plan. Generic document will be disregarded. Such H&S plan should give details regarding the tenderers intention of dealing with the risks.

Failure to submit such H&S plan will result in disqualification of the tender.

Tenderers are informed that the client is bound by law not to accept a tender should he be reasonable sure that the tenderer will not be able to execute the work safely.

SECTION 11

11. CONCLUSION

The Construction Regulations 2014 was long overdue in the South African Civil Engineering Construction Industry. Role players will now be forced to implement them and an awareness of safe working environments will be cultivated.

Clients might initially detect a contemptuous attitude particularly from contractors and even designers or consultants. This should not deter clients since acts and omissions from these parties will bring clients in confrontation with the law.

Contract cost will certainly escalate due to the additional specifications but this should be weighed against the value of human lives improved and saved.

The construction industry, particularly the Civil Engineering Sector, will have to accept and embrace these regulations and then seriously look at its productivity to kerb the cost of the implementation process.

1.0 SCOPE

This part of the specification has the objective to assist principal contractors entering into contracts with The Employer that they comply with the Occupational Health and Safety (OH&S) Act, No 85 of 1993.Compliance with this document does not absolve the principal contractor from complying with minimum legal requirements, and the principal contractor remains responsible for the health and safety of his employees and those of his Mandataries. Principal and other contractors should therefore insist that this part of the specification from part of any contract that he may have with other contractors and/or suppliers.

This section covers the development of a health and safety specification that addresses all aspects of occupational health and safety as affected by this contract. It provides the requirements that the principal contractors and other contractors shall comply with in order to reduce the risks associated with this contract that may lead to incidents causing injury and/or ill health.

2.0 GENERAL OCCUPATIONAL HEALTH AND SAFETY PROVISIONS

2.1 Hazard Identification and Risk Assessment (Construction Regulation 7)

2.1.1 Risk Assessments

Paragraph 4 contains a generic list of risk assessment headings that have been identified by The Employer as possibly applicable to this contract. It is, by no means, exhaustive and is offered as assistance to contractors intending to bid.

2.1.2 Development of Risk Assessment

Every principal contractor performing construction work shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, cause a risk assessment to be performed by a competent person, appointed in writing, and the risk assessment shall form part of the

OH&S plan and be implemented and maintained as contemplated in Construction Regulation 5(1).

The risk assessment shall include at least:

- *the identification of the risks and hazards to which persons may be exposed*
- *the analysis and evaluation of the risks and hazards identifies*
- *a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified.*
- *a monitoring plan and*
- *a review plan*

Based on the risk assessment, the principal contractor shall develop set site-specific OH&S rules that shall be applied to regulate the OH&S aspects of the construction. The risk assessment, together with the site-specific OH&S rules shall be submitted to The Employer before construction on site commences.

Despite the risk assessment listed in paragraph4, the principal contractor shall conduct a baseline risk assessment and the aforesaid listed risk assessment shall be incorporated into the baseline risk assessment. The baseline assessment shall further include the standard working procedures and the applicable method statements based on the risk assessments.

All variations to the scope of work shall similarly be subjected to a risk assessment process.

2.1.3 Review of Risk Assessment

The principal contractor shall review the hazard identification, risk assessments and standard working procedures at each production planning and progress report meetings as the contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes. The principal contractor shall provide The Employer, other contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in paragraph 2.1.3.

2.2 Legal Requirements

A principal contractor shall, as minimum, comply with:

The Occupational Health and Safety Act and Regulations (Act 85 of 1993), an up to date copy of which shall be available on site at all times.

The Compensation or Occupational Injuries and Diseases Act (Act 130 of 1993), an up to date copy of which shall be available on site at all times.

COVID-19 Occupational Health And Safety Measures in Workplace, 2020

Where work is being carried out on a "mine", the contractor shall comply with the Mines Health and Safety Act and Regulations (Act 29 of 1960) and any other OH&S requirements that the mine may specify. An up-to-date copy of the Mine's Health and Safety Act and Regulations shall be available on site at all times.

2.3 Structure and Responsibilities

It is a requirement that the principal contractor, when he appoints contractors (Sub-contractors) in terms of Construction Regulations 5(3), 5(5), 5(10), and 5(12) includes in his agreement with such contractors the following:

- *OH& S Act (85 of 1993), Section 37(2) agreement: "Agreement with Mandatory"*
- *OH&S Act (85 of 1993), Section 16(2) appointee/s as detailed in his / her/ their respective appointment forms.*

2.2.3 Further (Specific) Supervision Responsibilities for OH & S

The contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations. Below is a generic list of identified appointments and may be used to select the appropriate appointments for this contract. The contractor shall note it is a generic list only and is intended for use as a guideline.

Ref. Section/ Regulation in OHS Act
Batch Plant Supervisor (Construction Regulation 6(1)
Construction Vehicles/ Mobile Plant/ Machinery Supervisor (Construction Regulation 21)

Demolition Supervisor	*(Construction Regulation 12)*
Drivers/Operators of Construction Vehicles/ Plant	*(Construction Regulation 21)*
Electrical Installation and Appliances Inspector	*(Construction Regulation 22)*
Emergency/Security/Fire Control	*(Construction Regulation 27)*
Excavation Supervisor	*(Construction Regulation 11)*
Explosive powered Tool Supervisor	*(Construction Regulation 19)*
Fall Protection Supervisor	*(Construction Regulation 8)*
First Aider	*(Construction Regulation 3)*
Fire Equipment Inspector	*(Construction Regulation 27)*
Formwork & Support work Supervisor	*(Construction Regulation 10)*
Hazardous Chemical Substances Supervisor	*(HCS Regulations)*
Incident Investigator	*(General Admin Regulation 29)*
Ladder Inspector	*(General Safety Regulation 13A)*
Lifting Equipment Inspector	*(Construction Regulation 20)*
Material Hoist Inspector	*(Construction Regulation 17)*
OH&S Committee	*(OH&S Section 19)*
OH&S Officer	*(Construction Regulation 6(6)*
OH&S Representatives	*(OHS Act Section 17)*
Person Responsible for Machinery	*(General Machinery Regulation 2)*
Scaffolding Supervisor	*(Construction Regulation 14)*
Stacking & Storage Supervisor	*(Construction Regulation 26)*
Structures Supervisor	*(Construction Regulation 9)*
Suspended Platform Supervisor	*(Construction Regulation 15)*
Tunneling under Pressure Supervisor	*(Construction Regulation 13)*
Vessel under Pressure Supervisor	*(Vessel under Pressure Regulations)*
Working on/next to Water Supervisor	*(Construction Regulation 24)*
Welding Supervisor	*(General Safety Regulation 9)*

In addition, The Employer requires that a Traffic Safety Officer be appointed (see COLTO Section 1500). The above appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated and agreed with the appointees. Notice of appointments shall be submitted to The Employer. All changes shall also be communicated to the Employer.

The principal contractor or shall, furthermore, provide The Employer with an organogram of all contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site.

Where necessary, or when instructed by an inspector of the Department of Labour, the principal contractor shall appoint a component safety officer.

2.3.3 Designation of OH&S Representatives (Section 17 of the OH&S Act)

Where the principal contractor employs more than 20 persons (including the employees of other contractors (sub-contractors) he has to appoint one OH&S representatives for every 5 employees or part thereof. General Administrative Regulation 6 requires that the appointment or election and subsequent designation of the OH&S representatives be conducted in consultation with employee representatives or employees. (Section 17 of the Act and General Administrative Regulation 6 & 7). OH&S representatives shall be designated in writing and the designation shall include the area of responsibility of the person and term of the designation.

2.3.4 Duties and Functions of the OH&S representatives (Section 18 of the OH&S Act)

The principal contractor shall ensure that the designated OH&S representatives conduct continuous monitoring and regular inspections of their respective areas of responsibility using a checklist and report thereon to the principal contractor. OH&S representatives shall be included in accident or incident investigations. OH&S representatives shall attend all OH&S committee meetings.

2.3.5 Appointment: of OH&S Committee (Section 19 and 20 of the OH&S Act)

The principal contractor shall establish an OH&S committee, which shall meet as specified in the Regulations.

2.4 Administrative Controls and the Occupational Health & Safety File

2.4.1 The OH&S File (Construction Regulation 5(7)

As required by the Construction Regulation 5(7), the principal contractor and other contractors shall each keep an OH&S file on site. The following list is not exhaustive and shall only be used as a guide:

- *Notification of construction work (Construction Regulation 3)*
- *Latest copy of OH&S Act (General Administrative Regulation 4)*
- *Latest copy of Construction Regulation, 2014*
- *Latest copy of COVI-19 Occupational Health & Safety Measures in work place, 2020*
- *Proof of registration and good standing with COID Insurer (Construction Regulation 4(g)*
- *OH&S plan agreed with the client including the underpinning risk assessment/s and method statements(Construction Regulation 5(1)*
- *Copies of OH&S committee and other relevant minutes*
- *Designs/Drawings (Construction Regulation 5(8)*
- *A list of contractors (sub-contractors) including copies of the agreements between the parties and the type of work being done by each contractor (Construction Regulation 9)*
- *Appointment/designation forms as per paragraphs 2.1.1 and 2.1.2*
- *Registered as follows:*
    - *Accident/incident register (Annexure 1 of the General Administrative Regulations)*
    - *OH&S representatives' inspection register*
    - *Asbestos demolition and stripping register*
    - *Batch plant inspections*
    - *Construction vehicles and mobile plant inspections by controller*

- *Daily inspection of vehicles, plant and other equipment by the operator/driver/user*
- *Demolition inspection register*
- *Designer's inspection of structures record*
- *Electrical installations, equipment and appliances including portable electrical tools)*
- *Excavations inspector*
- *Explosive powered tool inspection, maintenance, issue and returns register (incl. Cartridges and nails*
- *Fall protection inspection register*
- *First aid box contents*
- *Fine equipment inspection and maintenance*
- *Formwork and support work inspections*
- *Hazardous chemical substances record*
- *Ladder inspections*
- *Lifting equipment register*
- *Materials hoist inspection register*
- *Machinery safety inspection register (incl. Machine guards, lock-outs etc.)*
- *Scaffolding inspections*
- *Stacking and storage inspection*
- *Inspection of structures*
- *Inspection of suspended platforms*
- *Inspection of tunnelling operations*
- *Inspection of vessels under pressure*
- *Welding equipment inspections*
- *Inspection of work conducted near water*
- *All other applicable records including traffic safety officer reports.*

The Employer will conduct an audit on the OH&S file of the principal constructor from time-to time.

2.5 Notification of Construction Work (Construction Regulation 3)

The principal constructor shall, where the contract meets the requirements laid down in Construction work and use the form (Annexure A in the Construction Regulations) for the purpose. A copy shall be kept on the OH&S file and a copy shall be forwarded to The Employer for record keeping purposes.

2.6 Training and Competence

The contents of all training required by the Act and Regulations shall be included in the principal contractor's OH&S plan. The principal contractor shall be responsible for ensuring that all relevant training is undertaken.

Only accredited service providers shall be used for OH&S training. The principal contractor shall ensure that his and other contractor's personnel appointed are competent and that all training required to do the work safely and without risk to health, has been completed before work commences. The principal contractor shall ensure that follow-up and refresher training is conducted as the contract progresses and the work situation changes. Records of all training must be kept on the OH&D file for auditing purposes.

2.7 Consultations, Communication and Liaison

OH&S liaison between the client, the principal contractor, the other contractors, the designer and other concerned parties will be through the OH&S committee as contemplated in paragraph 2.3.5.In addition to the above, communication may be directly to the client or his appointed agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their supervisions, OH&S representatives and the OH&S committee. The principal contractor shall be responsible for the dissemination of all relevant OH&S information to the other contractors e.g. design changes agreed with the client and the designer, instructions by the client and/or/his/her agent, exchange of information between contractors, the reporting of hazardous/dangerous conditions/situations etc. The principal contractor's most senior manager on site shall be required to attend all OH&S meetings.

2.8 Checking Reporting and Corrective Actions

2.8.1 Monthly Audit by Client (Construction Regulation 4(1) (d)

The Employer will conduct monthly audits to comply with Construction Regulation 4(1)(d) to ensure that the principal contractor has implemented and is maintaining the agreed and approved OH&S plan.

2.8.2 Other Audits and Inspections by The Employer

The Employer reserves the right to conduct other hoc audits and inspections as deemed necessary. This will include site safety walks.

2.8.3 Contractor's Audits and Inspections

The principal contractor is to conduct his own monthly internal audits to verify compliances with his own OH&S management system as well as this specification.

2.8.4 Inspections by OH&S Representatives and other Appointees

OH&S representatives shall conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle and machinery drivers, operators and users must conduct daily inspections before start-up.

2.8.5 Recording and Review of Inspection Results

All the results of the above-mentioned inspections shall be in writing at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

2.9 Accidents and Incident Investigation (General Administrative Regulation 9)

The principal contractor shall be responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic. The results of the investigations shall be entered into an accident/incident register listed in paragraph2.4.1

The principal contractor shall be responsible for the investigation of all minor and non-injury incidents as described in Section24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

2.10 Reporting

The principal contractor shall provide the Employer with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring.

3.0 OPERATIONAL CONTROL

3.1 Operational Procedures

Each construction activity shall be assessed by the principal contractor so as to identify operational procedures that will mitigate against the occurrence of an incident during the execution of each activity. This specification requires the principal contractor:

- *to be conversant with Regulations 8 to 29 (inclusive)*

- *to comply with their provisions*
- *to include them in his OH&S plan where relevant*

3.2 Emergency Procedure

Simultaneous with the identification of operational procedures (per paragraph 3.1 above), the principal contractor shall similarly identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in the principal contractor's OH&S plan.

3.3 Personal & Other Protective Equipment (Section 8/ 15/ 23 of the OH&S Act)

The contractor shall identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable, take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.
Where it is not possible to create an absolutely safe and healthy workplace the contractor shall inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating or discharging the employee.

The principal contractor shall include in his OH&S plan the PPE he intends issuing to his employees for use during construction and the sanctions he intends to apply in cases of non-conformance by his employees. Conformance to the wearing of PPE shall be discussed at the weekly inspection meetings.

3.4 Other Regulations

Wherever in the Construction Regulations or this specification there is reference to other regulations (e.g. Construction Regulation 22: Electrical and Machinery on Construction Sites) the principal contractor shall be conversant with and shall comply with these regulations.

3.5 Public Health and Safety (Section 9 of the OH&S Act)

The principal contractor shall be responsible for ensuring that non-employees affected by the construction work are aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimize those dangers. This includes:

- *Non-employees entering the site for whatever reason*
- *The surrounding community*
- *Passers-by to the site*

4.0 PROJECT/S SPECIC REQUIREMENTS

4.1 List of Risk Assessments

- Clearing and Grubbing of the areas/site
- Site establishment including:
  - Offices
  - Secure/safe storage foe materials and equipment
  - Ablutions
  - Sheltered eating area
  - Maintenance workshop
  - Vehicle access to the site
- Dealing with existing structures
- Location of existing services
- Installation and maintenance of temporary construction electrical supply, lightning and equipment
- Adjacent land uses/surrounding property exposures
- Boundary and access control/public liability exposures (NB: the employer is also responsible for the OH&S of the non-employees affected by his/her work activities)
- Health risks arising from neighbouring as well as own activities and from the environment e.g. threats by dogs, bees, snakes and lightning etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Dealing with HIV/AIDS, COVID-19 and other diseases
- Use of portable electrical equipment including
  - Angle grinder
  - Electrical drilling machine
  - Still saw
- Excavation including
  - Ground/soil conditions
  - Trenching
  - Shoring
  - Drainage of trench
- Welding including
  - Arc welding
  - Gas welding
  - Flame cutting
  - Flame cutting
  - Use of LP gas torches and appliances
- *Loading and offloading of truck*
- *Aggregate/sand and other materials delivery*
- *Manual and mechanical handling*
- *Lifting and powering operators*
- *Driving and operation of construction vehicles and mobile plant including.*
  - Trenching machine
- Use and storage of flammable liquids and other hazardous substances
- Layering and bedding
- Installation of pipes in pipelines
- Backfilling trenches

- Protection against flooding
- Gabion work
- Use of explosive
- Protection form overhead power lines
- As discovered by the principal contractor’s hazard identification exercise
- As discovered from any inspection and audits conducted by the client of by the principal contractor or any other contractor on site
- As discovered from any accident/incident investigation

FORM C1.5 SUPPLY CHAIN MANAGEMENT POLICY

Please refer to OR Tambo Procurement Policy.

C2 PRICING DATA

C2.1 Pricing Instructions

C2.2 Bill of Quantities

FORM C2.1 PRICING INSTRUCTIONS

1. The Tender Data, the Scope of Work and the Drawings are to be read in conjunction with the Schedule of Quantities.

2. a. The Schedule comprises items covering the Consortium's profit and costs of general liabilities and of the construction of temporary and permanent Works.

   b. Although the Tenderer is at liberty to insert a rate of his own choosing for each item in the Schedule, his attention is drawn to the fact that the tenderer has the right, under various circumstances, to payment for additional works carried out and that the Client is obliged to base his assessment of the payment to be paid for such additional work on the rates inserted in the Schedule by the tenderer.

   c. Clause 8 of each Standardized Specification and the measurement and payment clause of each Particular Specification, read together with the relevant clause of the Project Specification, set out what ancillary or associated activities are included in the rate for the operations specified.

3. Descriptions in the Schedule of Quantities are abbreviated. The schedule has been drawn up generally in accordance with the latest issue of "Civil Engineering Quantities". Should any requirement of the measurement and payment clause of the applicable Standardized Specification, or the Project Specification, or the Particular Specification(s) conflict with the terms of the Schedule or, when relevant "Civil Engineering Quantities", the requirement of the Standardized, Project or Particular Specification, as applicable, shall prevail.

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

5. The prices and rates to be inserted in the Schedule of Quantities are to be the full inclusive prices to the Employer for the work described under the several items. The prices and rates shall be exclusive of Value Added Tax. Such prices shall cover all costs and expenses that may be required in and for the construction of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based.

6. A price or rate is to be entered, in **BLACK INK**, against each item in the Schedule of Quantities.

7. In the event of the Tenderer failing to price any item it will be held that the Tenderer has made adequate allowance under other items for all labour, material and costs required for the execution, not only of the quantum of work covered by the unpriced item but also for any increase in the said quantum which may have to be undertaken during the course of the Contract.

8. An amount or rate shall be entered against each item in the Bill of Quantities, whether or not quantities are stated. An item against which no amount or rate is entered will be considered to be covered by the other amounts or rates in the Bill. The Bidder shall also fill in a rate against the items where the words "rate only" appears in the amount column. Although no work is foreseen under these items and no quantities are consequently given in the quantity column, the bided rates shall apply should work under these items actually be required.

9 The quantities set out in the schedule of quantities are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the schedule of quantities, will be used to determine payments to the contractor.

10 For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit	:	The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications
Quantity	:	The number of units of work for each item
Rate	:	The payment per unit of work at which the Bidder bids to do the work
Amount	:	The quantity of an item multiplied by the bided rate of the (same) item
Sum	:	An amount bided for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

11 The units of measurement indicated in the Bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:

mm	=	millimetre
m	=	metre
km	=	kilometre
km-pass	=	kilometre-pass
m^2	=	square metre
m^2-pass	=	square metre-pass
ha	=	hectare
m^3	=	cubic metre
m^3-km	=	cubic metre-kilometre
kW	=	kilowatt
kN	=	kilo newton
kg	=	kilogram
%	=	per cent
MN	=	mega Newton

FORM C2.2 BILL OF QUANTITIES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
1	**SANS 1200 A**	**PRELIMINARY AND GENERAL**				
1.1	8,3	**Scheduled Fixed-Charge and Value-Related Items**				
1.1.1	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	Provision for the site facilities:				
1.1.2	8.3.2.1	a) Facilities for the Engineer SANS 1200AB				
		i) Telephone	Sum	1		
		ii) Contract nameboards (1 no)	Sum	1		
		iii) Engineers Equipment	Sum	1		
1.1.3	8.3.2.2	b) Facilities for the Contractor				
		i) Offices, storage sheds, workshops and laboratories	Sum	1		
		ii) Living accommodation, toilet facilities and ablutions	Sum	1		
		iii) Tools and small equipment	Sum	1		
		iiv) Water supplies, electric power and communications	Sum	1		
		v) Dealing with water	Sum	1		
		vi) Access	Sum	1		
1.1.4	8.3.3	Other fixed-charge obligations	Sum	1		
1.1.5	8.3.4	Removal of Contractor's site establishment on completion of the contract	Sum	1		
1.2	**8.4**	**SCHEDULED TIME-RELATED ITEMS**				
1.2.1	8.4.1	Contractual requirements	Sum	1		
1.2.2	8.4.2	Operation and maintenance of the site facilities for the duration of contract, except where otherwise stated				
1.2.3	8.4.2.1	a) Facilities required by the Engineer				
		i) Telephone	Sum	1		
		ii) Contract nameboards (1 no)	Sum	1		
		iii) Engineers Equipment	Sum	1		
1.2.4	8.4.2.2	b) Facilities required by the Contractor				
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Carried Forward						
		i) Offices, storage sheds, workshops and laboratories	Sum	1		
		ii) Living accommodation, toilet facilities and ablutions	Sum	1		
		iii) Tools and small equipment	Sum	1		
		iiv) Water supplies, electric power and communications	Sum	1		
		v) Dealing with water	Sum	1		
		vi) Access	Sum	1		
1.2.6	8.4.3	Supervision for the duration of the contract	Sum	1		
1.2.7	8.4.4	Company and Head Office Overhead cost for the duration of the contract	Sum	1		
1.2.8	8.4.5	Other time-related obligations	Sum	1		
1.2.9		Cost of compliance to the Environmental Management Act, the Occupational Health & Safety Act, 85/1993; Construction Regulations (2014) as well as COVI-19 Occupational Health & Safety Measures in Workplace, 2020.	Sum	1		
1.3		**SUMS STATED PROVISIONALLY BY THE ENGINEER**				
		<u>COMMUNITY LIASON OFFICER</u>				
1.3.1	PSA3	Employment of CLO for the duration of the Contract (R4000 pm plus R500 pm cell phone allowance)	Prov. Sum	1	R 36 000	R 36 000,00
1.3.2		Employment of student for the duration of the contract	Prov. Sum	1	R 48 000	R 48 000,00
1.3.3		Contractors mark up on Item 1.3.1 and 1.3.2 above	%	R84 000		
1.3.4		Allow for the Transportation for the Engineer's Representative for the duration of the Contract (R3600 pm)	Prov. Sum	1	R 28 800	R 28 800,00
1.3.5		Contractor's mark up on Item 1.3.4 above		R28 800		
1.3.6		Allow for the Accommodation for the Engineer's Representative for the duration of the Contract (R2400 pm)	Prov. Sum	1	R 19 200	R 19 200
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Carried Forward						
1.3.7		Contractor's mark up on Item 1.3.6 above		R19 200		
1.3.8		Allow for Employment of PSC for the duration of the contract (6No at R200pm each per seating)	Prov. Sum	1	R 8 400	R 8 400.00
1.3.10		Allow for the services of an Occupational Health and Safety Agent for the duration of the Contract.	Prov. Sum	1	R 75 000	R 75 000.00
1.3.11		Contractors mark-up on Item 1.3.10 above	%	R75 000		
1.3.12		Allow for the services of an ISD Consultant for the duration of Contract	Prov. Sum	1	R75 000	R 75 000,00
1.3.13		Contractor's mark on Item 1.3.12 above	%	R75 000		
1.3.14		Allow for the services of an Environmental Management Plan Practitioner for the duration of the Contract.	Prov. Sum	1	R 75 000	R 75 000,00
1.3.15		Contractor's mark on Item 1.3.14 above	%	R75 000		
1.3.16		Allow for the provision of PPE and Medicals for local labour	Sum	1		
1,4	8.7	**Dayworks Provisional**				
1.4.1		**Labour**				
1.4.1.1		Skilled labour	hr	16		
1.4.1.2		Semi-skilled labour	hr	16		
1.4.1.3		Unskilled labour	hr	16		
1.4.2		**Materials**				
1.4.2.1		Allow for net cost of goods or materials actually used	Prov Sum	1	R 50 000	R 50 000,00
1.4.2.2		Contractor's mark up for Item 1.4.2.1	%	R50 000		
1.4.3		**Plant**				
1.4.3.1		Allow for net cost of plant actually used	Prov Sum	1	R 20 000	R 20 000,00
1.4.3.2		Contractor's mark up for Item 1.4.3.1	%	R20 000		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Carried Forward						
1,5		**Temporary Works**				
1.5.1		Accommodation of traffic for the duration of the contract	Sum	1		
1.5.2		Existing Services				
		a) Excavation by hand to expose existing services	m^3	10		
		b) Temporary protection of existing services	Sum	1		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
2	**SANS 1200 C & PSC**	**SITE CLEARANCE**				
2,1		CLEAR SITE				
2.1.1	8.2.1	Clear and grub vegetation in strip 2m wide on pipe route. Rate to include for trees of girth up to and including 1m.	m	12 990		
2.1.2	8.2.2	Where instructed remove and grub large trees and tree stumps of girth:				
2.1.2.1	8.2.2(a)	over 1m and up to 2m.	No.	1		
2.1.3	8.2.10	Remove topsoil in 600mm wide strip to depth of 150mm, stockpile, maintain and reinstate.	m^3	1 169		
2.1.4	PSC 8.2.13	Remove existing gravel layer works to stockpile and maintain (for use as selected layers) as instructed by the Engineer.				
2.1.4.1		Gravel layer works	m^3	10		
2.1.4.2		Fill material	m^3	10		
2.1.5		Relocation of existing fences	km	0,5		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
3	**SANS 1200 D & 200 DB**	**PIPE TRENCHES**				
3,1	**PSDB 8.3.2**	**Excavation (Single Trench Pipe)**				
3.1.1	8.3.2(a)	Excavate in all materials for up to 710mm wide trenches backfill, compact, and dispose of surplus/unsuitable material (See drg No. BEC-ORTDM-RCPL-01 Section Through Trench Single Pipe)				
		Spring Gravity Main (Spring - 50kl Pump Sump)				
3.1.1.1		Up to and including 110mm ND for total trench depth:				
3.1.1.1.1		Exceeding 0,0m but not exceeding 1.0m	m	392		
3.1.1.1.2		Exceeding 1.0m but not exceeding 2.0m	m	98		
		Pumping Main (Borehole PS - High Lift PS)				
3.1.1.1.3		Exceeding 0,0m but not exceeding 1.0m		64		
3.1.1.1.4		Exceeding 1.0m but not exceeding 2.0m	m	16		
		Reticulation				
3.1.1.1.5		Exceeding 0,0m but not exceeding 1.0m	m	9 531		
3.1.1.1.6		Exceeding 1.0m but not exceeding 2.0m	m	1 059		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Carried Forward						
3,2	**PSDB 8.3.2**	**Excavation (Two or More Pipes In Same Trench)**				
3.2.1	8.3.2(a)	Excavate in all materials for up to 1000mm wide trenches backfill, compact, and dispose of surplus/unsuitable material (See drg No. BEC-ORTDM-RCPL-01 Section Through Trench Two Pipes In Same Trench)				
		Pumping Main (Borehole PS - 50kl Pump Sump)				
3.2.1.1		Up to and including 110mm ND for total trench depth:				
3.2.1.1.1		Exceeding 0,0m but not exceeding 1.0m	m	54		
3.2.1.1.2		Exceeding 1.0m but not exceeding 2.0m	m	216		
		Pumping Main (High Lift PS - 350kl Res)				
3.2.1.1.3		Exceeding 0,0m but not exceeding 1.0m	m	312		
3.2.1.1.4		Exceeding 1.0m but not exceeding 1.5m	m	1 248		
3.2.1.2		Extra over item for items 3.1.1.1.1 to 3.2.1.1.4 for hard rock (Prov)	m^3	482		
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
4	**SANS 1200 DK**	**GABIONS AND PITCHING** <u>Gabions</u>				
4,1	8,2	Excavate materials for gabions	m^3	30		
4,2	8.2.1	Surface preparation for bedding of gabions.				
4.2.1	8.2.1	Cavities filled with approved excavated material or rock (Provisional Quantity)	m^2	60		
4.2.2	8.2.1	Cavities filled with 15MPa concrete	m^2	10		
4,3	8.2.2 PSDK 3.1.2	Construct gabions using double twisted hexagonal mesh type 80 with 3.4mm OD frame wire and 2.7mm OD mesh wire to SANS 1480:2005:				
4.3.1		Supply and install the following rock filled gabion baskets complete :				
4.3.1.1		2 x 1 x 1m with 80 x 100mm galv. mesh	m^3	30		
4.3.1.2		3 x 2 x 1m with 80 x 100mm galv. mesh (Reno Mattress)	m^3	10		
4,4	8.2.4 PSDK 3.1.3	Geotextile (Type AG 200) placed where ground water seepage occurs:				
4.4.1	8.2.4	Below gabion mattresses	m^2	30		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
5	**SANS 1200 LB & PS LB**	**BEDDING**				
5.1	8.2.1 & PS LB 3.1	Provision of Bedding from Trench Excavation (See drg No. BEC-ORTDM-RCPL-01)				
		Single Trench Pipe				
5.1.1	8.2.1 (a)	Selected granular material	m³	951		
5.1.2	8.2.1 (b)	Selected fill material	m³	634		
5.2	8.2.2	Supply only of Bedding by Importation				
5.2.1	8.2.2.1	From other necessary excavations (Provisional)				
5.2.1.1	8.2.2.1 (a)	Selected granular material	m³	713		
5.2.1.2	8.2.2.1 (b)	Selected fill material	m³	475		
5.3	8.2.2.2	From Borrow pit				
5.2.1.1	8.2.2.2 (a)	Selected granular material	m³	594		
5.2.1.2	8.2.2.2 (b)	Selected fill material	m³	396		
5.4	8.2.2.3	From Commercial sources				
5.4.1.1	8.2.2.3 (a)	Selected granular material	m³	119		
5.4.1.2	8.2.2.3 (b)	Selected fill material	m³	79		
5.5	8.2.1 & PS LB 3.1	Provision of Bedding from Trench Excavation (See drg No. BEC-ORTDM-RCPL-01)				
		Double Trench Pipe				
5.5.1	8.2.1 (a)	Selected granular material	m³	1 339		
5.5.2	8.2.1 (b)	Selected fill material	m³	893		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Carried Forward						
5.6	8.2.2	Supply only of Bedding by Importation				
5.6.1	8.2.2.1	From other necessary excavations (Provisional)				
5.6.1.1	8.2.2.1 (a)	Selected granular material	m³	1 004		
5.7.1.2	8.2.2.1 (b)	Selected fill material	m³	670		
5.8	8.2.2.2	From Borrow pit				
5.8.1.1	8.2.2.2 (a)	Selected granular material	m³	837		
5.8.1.2	8.2.2.2 (b)	Selected fill material	m³	558		
5.9.2	8.2.2.3	From Commercial sources				
5.9.2.1	8.2.2.3 (a)	Selected granular material	m³	167		
5.9.2.2	8.2.2.3 (b)	Selected fill material	m³	112		
5.10	8.2.3	Concrete Bedding Cradle (Provisional)				
5.10.1		15/19 Grade concrete	m³	2		
5.11	8.2.4	Encasing of Pipes in Concrete (Provisional)				
5.11.1		Encasement of Pipe in 25/19 Grade concrete including all formwork and reinforcement (100kg steel per m3 concrete) for water crossings	m³	2		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
6	**SANS 1200 L**	**MEDIUM PRESSURE PIPELINES**				
6,1	8.2.1	Supply, bed, lay, disinfect, join and test potable water pipelines. All works inclusive in the rate, except where specific items are provided. All activities in accordance with project specifications.:				
		Spring Gravity Main (Spring - 50kl Pump Sump)				
	8.2.1	PVC-M Pipes				
6.1.1		75 mm dia. Class 09 (Spring Gravity Main)	m	490		
		Pumping Main (Borehole PS - 50kl Pump Sump) incl Spring Gravity Main & Reticulation All To Be Laid In The Same Trench.				
	8.2.1	PVC-M Pipes				
6.1.2		50 mm dia. Class 12 (Pumping Main)	m	270		
6.1.3		75 mm dia. Class 09 (Spring Gravity Main)	m	160		
	8.2.1	HDPE PE 63 Pipes				
6.1.4		50 mm dia. Class 16 (Reticulation)	m	240		
		Pumping Main (High Lift PS - 350kl Res) incl Reticulation All To Be Laid In The Same Trench.				
	8.2.1	PVC-M Pipes				
6.1.5		63 mm dia. Class 09 (Pumping Main)	m	780		
6.1.6		63 mm dia. Class 12 (Pumping Main)	m	250		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Brought Forward						
6.1.7		63 mm dia. Class 16 (Pumping Main)	m	440		
6.1.8		63 mm dia. Class 20 (Pumping Main)	m	90		
6.1.9		75 mm dia. Class 12 (Reticulation)	m	580		
6.1.10		75 mm dia. Class 16 (Reticulation)	m	245		
6.1.11		90 mm dia. Class 09 (Reticulation)	m	680		
6.1.12		110 mm dia. Class 09 (Reticulation)	m	15		
		Reticulation (Ezimpungeni Village)				
	8.2.1	HDPE PE 63 Pipes				
6.1.13		32 mm dia. Class 10	m	270		
6.1.14		40 mm dia. Class 10	m	1 440		
6.1.15		40 mm dia. Class 12	m	170		
6.1.16		40 mm dia. Class 16	m	900		
6.1.17		50 mm dia. Class 10	m	1 200		
	8.2.1	PVC-M Pipes				
6.1.18		63 mm dia. Class 9	m	1 050		
6.1.19		63 mm dia. Class 16	m	110		
6.1.20		75 mm dia. Class 9	m	650		
6.1.21		75 mm dia. Class 16	m	870		
6.1.22		90 mm dia. Class 9	m	310		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Brought Forward						
		Reticulation (Mpendle Village)				
	8.2.1	HDPE PE 63 Pipes				
6.1.23		40 mm dia. Class 10	m	410		
6.1.24		40 mm dia. Class 16	m	630		
6.1.25		50 mm dia. Class 10	m	420		
6.1.26		50 mm dia. Class 12	m	330		
6.1.27		50 mm dia. Class 16	m	580		
6.1.28		63 mm dia. Class 9	m	1 250		
	8.2.1	STEEL PIPE				
6.1.29		80 mm dia. Klambon pipe	m	36		
6.1.30		50 mm dia. Klambon pipe	m	36		
6,2	PSL 8.2.16	Pipeline Markers (as per drawing BEC-ORTDM-RCPL-01 Road Crossing & Pipeline Marker Details)	No.	70		
6,3		Supply and install standpipe complete including HDPE saddle, 32mm HDPe pipe(20m), tap and galvanised riser pipe, concrete work including shuttering, elbows, nipples, etc, (as per drawing BEC-ORTDM-STAP-01 Standpipe & Anti-Erosion Berm Details)	No	38		
6.4		Anchor/thrust blocks and pedestals (as per drawing BEC-ORTDM-TDET-D01 Typical Details)				
		a) Concrete (15MPa/19)	m^3	5		
		b) Formwork (rough)	m^2	3		
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
7	**SANS 1200 L**	**PIPE FITTINGS AND SPECIALS**				
7.1.	8.2.2 PSL 8.2.4 PSL 8.2.5	Supplying, Laying, Bedding and Testing of Specials complete with Couplings as follows:-				
	8.2.4 PSL 8.2.6	Supply, lay, joint, bed and test including cutting pipes where required for the following:				
		HDPE Pipe Bends (Class 16)				
7.1.1		50mm dia. x 45° bends.	No.	10		
7.1.2		50mm dia. x 90° bends.	No.	6		
7.1.3		32mm dia. x 45° bends.	No.	2		
7.1.4		32mm dia. x 90° bends.	No.	2		
		PVC-M Pipe Bends (Class 16)				
7.1.5		75mm dia. X 11.25° bends.	No.	20		
7.1.6		75mm dia. x 22.5° bends.	No.	10		
7.1.7		75mm dia. x 45° bends.	No.	4		
7.1.8		75mm dia. x 90° bends.	No.	2		
7.1.9		110mm dia. X 11.25° bends.	No.	4		
7.1.10		110mm dia. x 45° bends.	No.	2		
		PVC-M Pipe Bends (Class 20)				
7.1.11		63mm dia. X 11.25° bends.	No.	2		
7.1.12		63mm dia. x 22.5° bends.	No.	1		
7.1.13		63mm dia. x 45° bends.	No.	2		
7.1.14		63mm dia. x 90° bends.	No.	2		
		Flanged Reducers				
7.1.15		75mm x 63mm	No.	4		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Brought Forward						
7.1.17		50mm x 32mm	No.	1		
7.1.18		110mm x 75mm	No.	4		
7.1.19		75mm x 50mm	No.	6		
7.1.20		75mm x 32mm	No.	1		
		STEEL FITTINGS				
7.1.21		80mm dia. X 11.25° bends.	No.	6		
7.1.22		80mm dia. x 22.5° bends.	No.	1		
7.1.23		80mm dia. x 45° bends.	No.	1		
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
8		**VALVES**				
8.1	8.2.3	Isolation Valve assemblies. Extra over item 8.2.1 for supplying, installing, bedding and testing Class 16-line valve assemblies as per details and specification complete cutting of pipes and couplings included. (See drg No. BEC-ORTDM-TDET-D01 Typical Details)				
8.1.1		a) Fitted on 50mm HDPE	No.	8		
8.1.2		b) Fitted on 75mm HDPE	No.	4		
8.1.3		c) Fitted on 110mm MPVC	No.	2		
8.2	8.2.4	Supply and install the following flanged Air Valve assembly (as per drawing BEC-ORTDM-TDET-D01 Typical Details)				
8.2.1		a) 50mm Air Valve	No.	8		
8.2.2		b) 80mm Air Valve	No.	2		
8.3	8.2.5	Supply and install Scour Valve assemblies with wedge gate valve (as per drawing BEC-ORTDM-TDET-D01 Typical Details)	No.	5		
8.3.1		a) Fitted on 50mm HDPE	No.	3		
8.3.2		b) Fitted on 75mm HDPE	No.	2		
8.4		Valve Chambers with leyed alike ABUS padlocks or approved equivalent (See drg No. BEC-ORTDM-TDET-D01 Typical Details)				
8.4.1		a) Isolation Valve Chambers	No	14		
8.4.2		b) Air Valve Chambers	No	10		
8.4.3		c) Scour Valve Chambers Incl Headwalls	No	5		
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
9		**RESERVOIR**				
9.1		**350kl Reservoir**				
9.1.1	8.2.3	Supply and erect 350kl ABECO or SBS Type reservoirs complete. rate to include for all excavations, concrete bases, inlet and outlet pipes, overflow pipe, access lid, access ladder, disinfection, etc.	Sum	1		
9.1.2		Isolation Valve assemblies. Extra over item 8.2.1 for supplying, installing, bedding and testing Class 16 line valve assemblies as per details and specification complete cutting of pipes and couplings included. (See drg No. BEC-ORTDM-TDET-D01 Typical Details)	No	2		
9.1.3	8.2.4	Supply and install the following flanged Air Valve assembly (as per drawing BEC-ORTDM-TDET-D01 Typical Details)	No	2		
9.1.4	8.2.5	Supply and install Scour Valve assemblies with wedge gate valve incl Headwall (as per drawing BEC-ORTDM-TDET-D01 Typical Details)	No.	1		
		Valve Chambers with leyed alike ABUS padlocks or approved equivalent (See drg No. BEC-ORTDM-TDET-D01 Typical Details)		5		
9.1.5		110 mm Ø Class 34 Heavy Duty Sewer Pipe	m	20		
9.2		**50kl Pump Sump**				
9.2.1	8.2.3	Supply and erect 50kl ABECO or SBS Type reservoirs complete. rate to include for all excavations, concrete bases, inlet and outlet pipes, overflow pipe, access lid, access ladder, disinfection, etc.	Sum	1		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Brought Forward						
9.2.2		Isolation Valve assemblies. Extra over item 8.2.1 for supplying, installing, bedding and testing Class 16 line valve assemblies as per details and specification complete cutting of pipes and couplings included. (See drg No. BEC-ORTDM-TDET-D01 Typical Details)	No	3		
9.2.3	8.2.4	Supply and install the following flanged Air Valve assembly (as per drawing BEC-ORTDM-TDET-D01 Typical Details)	No	3		
9.2.4	8.2.5	Supply and install Scour Valve assemblies with wedge gate valve incl Headwall (as per drawing BEC-ORTDM-TDET-D01 Typical Details)	No.	1		
		Valve Chambers with leyed alike ABUS padlocks or approved equivalent (See drg No. BEC-ORTDM-TDET-D01 Typical Details)		7		
9.2.5		110 mm Ø Class 34 Heavy Duty Sewer Pipe	m	20		
9.3		**100lk Existing Reservoir**				
9.3.1		Filling reservoir with water, find and mark all the cracks and leaks.	Sum	1		
9.3.2		Exposing and filling all the structural cracks in both the wall and floor areas of the reservoir with Sikadur-52 ZA agent or similar approved	m	60		
9.3.3		Re-sealing all expansion joints with Sikadur-Combiflex SG agent or similar approved	m	50		
9.3.4		Cleaning and backwashing reservoir walls with cement mortar	m^2	40		
9.3.5		Testing and disinfection	Sum	1		
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
10		**FENCING**				
10.1		Supply and erect fencing as detailed in drg No. BEC-ORTDM-FENC-D01 Fencing Details				
10.1.1		350 kl Reservoir	m	60		
10.1.2		50 kl Pump Sump	m	80		
10.1.3		Spring Capture Box	m	60		
10.1.4		Existing 100kl Reservoir	m	50		
10.2		Supply and erect vehicle gates as detailed in drg No. BEC-ORTDM-FENC-D01 Fencing Details				
10.2.1		Double leaf vehicle gates	No	3		
10.2.2		Pedestrian gate (Spring Capture Box)	No	1		
Total Carried Forward to Summary						

SECTION11: SOURCE DEVELOPMENT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
11		**SPRING PROTECTION**				
11,1		Build a spring chamber complete at a spring eye as per drawing BCE-ORTDM-SCBD-01 Spring Capture Box-Detail	No	1		
11,2		Supply materials and construct Borehole Pump Station building complete with reinforced concrete foundations and rising walls, brick wall superstructure, doors, windows, reinforced concrete roof slab, polymer concrete manhole cover and frame, toe drain, and all things necessary for the complete construction and functioning of the Borehole Pump Station Building.(See drg No. BEC-ORTDM-BHPS-01 Borehole Pumpstation Layout & Details)	No	1		
11,3		Supply materials and construct High Lift Pumpstation building complete with reinforced concrete foundations and rising walls, brick wall superstructure, doors, windows, reinforced concrete roof slab, polymer concrete manhole cover and frame, toe drain, and all things necessary for the complete construction and functioning of the Booster Pump Station Building.(See drg No. BEC-ORTDM-HLPS-01 High Lift Pumpstation Layout & Details)	No	1		
Total Carried Forward to Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
12		**SECTION 7: ELECTRICAL-MECHANICAL AND ASSOCIATED WORKS**				
12,1		MOTOR CONTROL PANELS				
12.1.1		Supply of a wall-mounted motor control panel for the control of pump (irrespective of power). The MCP shall be wired with a sump level, delay on timer, and a DIR control contactor, as well as the MCB and earth leakage for the SSO, and lighting circuits	No	2		
12,2		MECHANICAL EQUIPMENT IN BOREHOLE AND HIGH LIFT PUMP STATIONS				
12.2.1		Supply, install and commission pump, motor and meter unit complete as specified for the following borehole and high lift pumps (the rate shall include the Supply, install and commission all pipework, valves and fittings as indicated in drawings and specifications,)				
12.2.2		High Lift Pump Station	No	1		
12.2.3		Borehole Pump Station	No	1		
12,3		LIGHTING CIRCUITS				
		Luminaries installed in pump stations:				
		a) Supply, install luminaries to the concrete ceiling				
12.3.1		i) Luminaries Nordland JB/258/SS/Colour 21/SS	No	2		
12.3.2		ii) Install lighting circuits complete and connect to the motor control panels	No	2		
12.3.3		Galvanised conduit	No	2		
		Wiring of the cirsuits				
12.3.4		Supply, install abd commission lighting circuits	No	2		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Brought Forward						
12,4		EARTHING SYSTEM				
12.4.1		Supply and install crows foot earthing system at the pump stations	Sum	2		
12,5		CABLING				
		Cabling to the borehole pumps				
12.5.1		a) 50 mm^2 x 4c armoured cable for the connection of motors	m	1 000		
12.5.2		b) 2.5mm^2 x 7c armoured cable for the no-flow/sump level/pressure switch	m	300		
12.5.3		c) 2.5mm^2 x 3c cabtye for the no-flow/pressure switch	m	20		
12.5.4		d) 2.5mm^2 x 2c flexible PVC conductor for sump measurement	m	250		
12.5.5		e) 2.5mm^2 x 3c armoured cable for the supply of the emergency stops	No	2		
12.5.6		Supply, install, and terminate glands, shrouds, cable lugs for 2.5 mm2 x 3 core cables at each pressure, flow or level switch and at the combined distribution board and motor control panel in each pump station	No	12		
12.6		Cable trays				
12.6.1		76mm galvanised heavy duty cable tray in each pump station, complete with bends, and P2000 supports to support cable between motor control centre and each item of control equipment	m	30		
12.6.2		50mm galvanised conduit connected up reservoir wall with saddles and brass bushes to protect cable to level control termination	m	40		
Total Carried Forward						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE R	AMOUNT R
Total Brought Forward						
12.6.3		Supply and install two way surface Pratley IP65 boxes for cables to reservoir level control equipment	m	8		
12,7		LIGHTNING PROTECTION				
2.7.1		Lightning protection services	Sum	2		
12,8		TELEMETRY				
		Telemetry control of the pump stations				
12.8.1		Supply and install SSI telemetry system, or similar approved, into the motor control panels:	Sum	2		
12,9		TRAINING AND MAINTENANCE				
12.9.1		Allowance for three arranged visits to site to carry out training and maintenance on the equipment (NB: to be used upon approval by Engineer, either in part or in full)	Sum	1		
Total Carried Forward to Summary						

SUMMARY PAGE

Section	Description		Amount	
			R	c
1	Preliminary and General	R		
2	Site Clearance	R		
3	Pipe Trenches	R		
4	Gabions and Pitching	R		
5	Bedding	R		
6	Pressure Pipelines	R		
7	Pipe Specials & Fittings	R		
8	Valves	R		
9	Storage Reservoir	R		
10	Fencing	R		
11	Source Equipping	R		
12	Mechanical and Electrical	R		
	Net-Total	R		
	CONTINGENCIES			
	Allow the sum of 10% (ten percent) of the above Sub-total for Contingencies to be spent as the Engineer may direct and to be deducted in whole or in part if not required.	R		
	TENDER AMOUNT (EXCL. VAT)	R		
	VAT @ 15%			
	Total Carried to Form of Offer	R		

DECLARATION (In respect of completeness of Tender)

O.R Tambo District Municipality
Private Bag X 6043
Mthatha, 5100
Telephone: 047 531 0320/501 6440
Facsimile: 047 532 6518

I/We, the undersigned, do hereby declare that these are the properly priced Bills of Quantities forming part C2.2 of this Contract Document containing 15 pages (including summary) in consecutive order upon which my/our tender for the **Bid No: ORTDM SCMU 03-20/21, CONSTRUCTION OF MPENDLE WATER SUPPLY** has been based.

Also, as stated in the Contract Data, the works shall be completed within **……** Weeks, exclusive of the year end break and special non-working days falling outside thereof, and inclusive of the 28-day period referred to in Contract.

SIGNATURE OF TENDERER/S

DATE

C3 SCOPE OF WORK

All definitions, interpretations and general provisions for the General Conditions of Contract for Construction Work (2015) (3rd edition) are applicable.

C 3.1 DESCRIPTIONS OF WORKS

C3.1.1 Client's Objective

The Clients objective is to supply water the community of Mpendle Location and surrounding areas. The contractor shall use reasonable resources. These resources include local labour, sub-contractors, and plant hire. The specification of the material should be specified by the engineer.

It is a specific goal of this project that the labour component where possible be maximised where it is economically feasible, and that the use of this labour goes hand in hand with on the job training of the labour force. The project is thus process and product orientated, and it is expected that the contractor will pursue these goals in the execution of the project.

C3.1.2 Overview of the Works

The Works entails the construction of a water supply in Mpendle Village of Nyandeni Local Municipality within the jurisdiction of the OR Tambo District Municipality. This includes the construction and equipment of two pump stations, storage reservoirs, rising and bulk mains, and associated reticulation network.

C3.1.3 Extend of the Works

The work to be carried out by the Tenderer under this Contract comprises mainly of the following:

- Refurbishment of the existing spring capture box;
- Construction of 50kl pump sump ABECO or SBS type;
- Construction of 0.650km 75mmØ HDPE Class 10 gravity main from spring capture box to 50kl detention tank (pump sump);
- Construction and equipping of high lift pumpstation at the 50kl detention tank (pump sump);
- Construction of 1,55km 63mmØ PVC-M (Class 20 - Class 9) pumping main from high lift pump station to 350kl reservoir ABECO or SBS type;
- Construction and equipping of borehole pumpstation and accessories (yielding at 0.61l/s over 8 hours);
- Construction of 0.26km 50mmØ PVC-M Class 9 pumping main from borehole pumpstation to 50kl Pump Sump;
- Construction of 350kl Reservoir ABECO or SBS type;

- Construction of 12.35km of internal reticulation ranging from 110 – 32mmØ mPVC & HDPE with associated valves, fittings;
    - 110mm Ø PVC-M class 9 - 20m
    - 90mm Ø PVC-M class 9 - 990m
    - 75mm Ø PVC-M class (9-16) - 2 350m
    - 63mm Ø PVC-M class (9-20) - 2 400m
    - 50mm Ø HDPe PE100 class (10-16) - 5 510m
    - 40 - 32mm Ø HDPe PE100 class (10-12) - 1 080m
- Construction of 37 standpipes including one (1) double standpipe for school; and
- Refurbishment of the existing 100kl concrete reservoir (*to be utilised as a break pressure tank and also additional storage*)

The above description is not necessarily complete and shall not limit the work to be carried out.

C3.1.4Construction program

It is specifically brought to the notice of the Contractor that time is critical on this project, and the construction period will be a major factor in the award of the tender.

C3.1.5Change in works

The ORTDM may, from time to time by order in writing without in any way vitiating the Contract or giving to the Contractor any claim for additional payment, require the Contractor to proceed with the execution of the works in such order as in his opinion may be necessary, and may alter the order of or suspend any part of the Works at such time and times as he may deem desirable and the Contractor shall not, after receiving such written order, proceed with work ordered to be suspended until he shall receive a written order to do so from the ORTDM. Where the work must of necessity be carried out in conjunction with work of other Contractors, or with that of the Employer, it shall be co-ordinated and arranged in such a manner as to Interfere as little as possible with the progress of such other work so as to offer every reasonable facility to other Contractors or to employees of the Employer.

C3.2 PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT NO 5, 2000 (PPPFA) POINTS WILL BE AWARDED AS FOLLOWS:-

The bids will be evaluated in three stages, namely:

- Stage 1- Pre-qualification criteria
- Stage 2- Functionality
- Stage 3- Price and BBBEE Points

Only Bidders who score 60 points or more on stage 1 would be evaluated further and therefore eligible for the award.

Item	Weight
Stage 1 of Evaluation-Functionality	**100**
• Company Experience with respect to similar projects	40
• Experience of key staff assigned to the contract	30
• Methodology	15
• Availability of key plant and equipment	15
Stage 2 of Evaluation- Price & B-BBEE	**100**
• B-BBEE	20
• Price	80

Tenders may only be submitted on tender documentation issued. No late, faxed, e-mailed, or other form of tender will be accepted.

Tenders will be evaluated in terms of the Supply Chain Management policy of the O. R. Tambo District Municipality and the lowest tender will not necessarily be and the right to accept the whole or part of any tender or not to consider any tender not suitably endorsed is fully accepted reserved by the O. R. Tambo District Municipality. An 80/20-point system shall apply where 80 points is for the price and 20 points is in terms of B-BBEE status level of contributor as follows:

B-BBEE status level of contributor	**Number of points**
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

Joint Ventures will qualify for points for their BBBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such BBBEE scorecard is prepared for every separate tender.

C3.3 SUB-CONTRACTING

No work may be sub-contracted to another party unless approval is given by the ORTDM in writing. The Contractor is to submit to the ORTDM in writing a request for appointment of a particular sub-contractor. Accompanying this request is to be the full detail of the sub-contractor, including:

- Previous experience
- Work which will be sub-contracted to him/her
- Approximate value of the work to be sub-contracted

C3.4 CONSTRUCTION

C3.4.1 Work Specifications

The following applicable standardized and particular specifications are relevant to this contract:

SABS 1200 A	General
SABS 1200 C	Site Clearance
SABS 1200 DAH	Earthworks (small works)
SABS 1200 DB	Earthworks (Pipe trenches)
SABS 1200 L	Medium Pressure Pipelines
SABS 1200 GA	Concrete (small works)
SABS 1200 LB	Bedding (pipes)
SABS 1200 GB	Concrete (Ordinary building)

C3.4.2 Plant and materials

All materials shall comply with the requirements of the South African Bureau of Standards and shall bear the official standardization mark. Where SABS standard does not exist for a certain material, or a material does not bear the official standardization mark, the Engineers approval of such material must be gained before use thereof.

C3.4.3 Construction Equipment

All equipment on site shall be in a good working order and is to be in such a condition that it can achieve production rates which are typical of the industry standards.

Should any equipment, in the opinion of the Engineer, be substandard or breaks down frequently to such an extent that it affects the progress on the project, the Engineer may instruct the Contractor to replace such equipment.

C3.4.4Health & Safety

All work is to be carried out in accordance with the Occupational Health and Safety Act and Regulations (Act 85 of 1993) (a copy of which must be kept on site), the Explosive Material Act of (Act 26 of 1956), the Minerals Act of 1991, and the Factories Machinery and Building Work Act (No 22 of 1941). as well as COVI-19 Occupational Health & Safety Measures in Workplace, 2020.

Two items relating to the fixed cost and time related cost of complying with these regulations have been provided in the Schedule of Quantities (items 1.2.9 and 1.3.16).

The Contractor is to ensure that **at least** the following is allowed for in his/ her rates:-

(i) Provision of a full-time safety officer (and assistants if necessary) for the duration of the contract.

(ii) Provision of all safety equipment required in terms of the Act (e.g. gloves, hard hats, safety boots, harness, masks, goggles, etc.).

(iii) Provision for all other costs necessary for conforming with the Regulations (e.g. management, risk assessments, etc.)

- Accommodation of traffic

It is expected of the Contractor to ensure that the free flow of traffic is possible throughout the construction period.

The Contractor is to provide all necessary barricades, signs and lighting in accordance with the stipulations of the South African Road Signs Traffic Manual, and the Protective Services of the OR Tambo District Municipality. All work is to be to the satisfaction of the Engineer.

- Inspection by engineer

No stage of construction shall be proceeded with until the Engineer or his representative has examined and approved the previous stage. If any work is covered or hidden from view before the Engineer has inspected same, the Contractor shall at his own cost open the covered work for inspection. The Contractor shall also be responsible for making good any work damaged by such uncovering.

- Employment of local labour

It is a specific criterion of this project that should as far as possible adheres to RDP principles, and to meet these principles the following procedures will be followed:

All labour is to be sourced from the OR Tambo District Municipality area of jurisdiction and the Contractor may only bring in key personnel from outside this area.

C3.5 CPG APPLICABILITY

The Contract Participation Goals (CPG) target is applicable to all WSIG contracts to be adjudicated through the OR Tambo District Municipality procurement process and shall be achieved through the following mechanisms:-

- Main Service Provider may propose a suitable targeted enterprise or CPG partner/s but OR Tambo District Municipality reserves the right to provide or arrange a targeted enterprise or CPG partner/s to work with the successful company.
- Value of the work to be sub contracted shall be at least **30% (minimum)** of the total contract value excluding VAT.
- In cases where CPG works has been already identified, the successful tenderer will be allocated a CPG partner/s as deemed necessary by the Engineer.

Professional Service Providers						
Type Of Enterprise		**Annual Turnover**	**Black Ownership**	**Tax Clearance Certificate**	**Minimum Full Time Technical Employees**	**CPG Target**
Targeted Enterprise (TE)	Qualifying Small Enterprise	R5 m ≤ TE ≤R15 m	> 50%	Required	>6	30% Min.
	Emerging Micro Enterprise	TE < R5 m	> 50%	Required	>3	

For each monthly invoice submitted by the Service Provider, the Targeted Enterprise(s) hours and costs per function must be clearly articulated to enable the CPG targets to be easily and regularly monitored.

The Service Provider must withhold 10% retention of the Targeted Enterprise(s) fees until the acceptance of the project.

The Service Provider must pay the amount due to the Targeted Enterprise(s) within 3 days of receiving payment from the Employer.

C3.6 CONTACT PERSON ON PROJECT

The contact person on this project is as follows:

Contact Person: Nkosiyabo Noto

Contact Number: 047 501 6425

INDEX TO SPECIFICATION RA: MOTORS

RA: MOTORS

RA1 GENERAL

RA1.1 Single phase induction motors shall comply with SABS 1189, and three-phase motors with SABS 948.

RA1.2 Bidders shall submit full particulars of drawings of the motors offered, together with torque-speed curves.

RA2 CONSTRUCTION

RA2.1 The motors shall be of the squirrel cage or slip ring type, with enclosures.

RA3 INSTALLATION

RA3.1 The motors shall be installed by a suitably qualified person.

RA4 GUARANTEE

RA4.1 Bidders are required to give a twelve-month guarantee to replace, free of charge, any part of the motors in which any manufacturing defects may develop during that period, such period shall commence from the date of take-over by the Employer.

INDEX TO SPECIFICATION RD: MOTOR CONTROL GEAR

RD: MOTOR CONTROL GEAR

RD1 GENERAL

The starters and control gear shall comply with BS 587, operate at the rated voltage and shall be suitable for mounting on panels or motor control centres as specified. The starters shall be totally enclosed in a metal-clad dust proof enclosed suitably treated to prevent rust.

The starters shall be designed so that their contacts open positively on overload and cannot be held in by pressing the push button. All connections shall be made from the front of the starters without removing the starters from their housing.

The starters shall be of the contractor type, and the solenoid shall operate as non-volt release when the voltage drops below 65% of its rated value.

Starters in motor control centres shall all be of the same make as that already supplied and installed in the existing pumping scheme when practicable.

RD2 CONTACTORS

The contactors shall be of the open or totally enclosed triple or double pole, air break, general purpose and magnetically operated type.

Contactors which shall comply with SABS 1092, shall be of adequate rating to carry at least 1,2 x the current specified at 0,85 power factor.

Spare normally open and normally closed auxiliary contacts shall be provided as specified.

RD3 STARTERS

Starters shall be of the following types as specified:

a) Direct-on line, non-reversing
b) Star-delta, non-reversing
c) Soft Start Electronic Motor Starters

RD4 OVERLOAD PROTECTION

All motor starters shall have overload protection on each phase, with positive protection against single phasing. Each pole shall be protected by means of an electronic type overload trip as specified.

The electronic overload trips shall be adjustable over the full range of the trips by means of a dial mounted in front of the starter.

The current range of the overload trips and the coil voltage shall be as specified.

Back-up protection shall be by means of motor protection circuit breakers as specified.

RD5 MOTOR PROTECTION BREAKERS

Motor protection breakers shall provide an adjustable thermal overload release setting range, selected for the motor it is to give protection to.

An additional magnetic release should be provided for disconnection of the supply to the motor with an instantaneous overcurrent, set at a level in order to provide protection.

The motor breaker should have a panel mounted handle available to be mounted on the panel front.

RD6 PUSH BUTTON SWITCHES

Push button switches shall be of the heavy-duty type with two or more push buttons, as required by the device being controlled, and a pilot light. Contacts shall be rated at 600 volts, sustained or monetary contact as required.

Where push buttons are located adjacent to a motor, lock-out feature shall be provided to permit locking of control circuit in the "OFF" condition. Pilot lights may be omitted as noted.

For remote control switch operation, two normally open contacts, key operated "OFF" and push button operated "ON", shall be provided as specified.

The pushbuttons and hand reset shall be mounted on the starter. Wiring terminals shall be provided for remote control.

RD7 PHASE OVER / UNDER VOLTAGE PROTECTION

The supply protection relay must be a four-wire unit which monitors the supply voltage.

The output relay must energise if the phases are all present and in the correct sequence and each voltage is within the adjustable over and under voltage limits.

The relay de-energises on:

- Phase voltage imbalance exceeding the 10% present value
- Total failure of one or more of the phases
- Incorrect phase sequence
- Any phase fails outside the set voltage range

RD9 NO FLOW PROTECTION SENSORS AND TRANSMITTERS

A no flow electronic flow sensor shall be provided to be fitted into the incoming pipe work of each pumping system.

The no flow electronic sensor installed in the borehole pump pipe work shall be installed in the pump house at a point closed to the discharge of the pump.

The sensor shall be mounted on the horizontal side of the pump discharge pipe work.

RD10 PRESSURE SENSING SWITCHES

An electromechanical pressure switch being of IP66 design with an adjustable differential pressure.

The fitting is to be for a ½" BSP nipple. With cast aluminium or machined stainless steel connections.

The pressure switch is to be of a type that is readily available and from a reputable manufacturer. Pressure switches from the following manufactures will be considered:

Telemecaniqe
Allen Bradley
Danfoss
Klockner Moeller

RD11 TIMERS OR PLC CONTROLLERS

The timers must be of the eleven-pin type fully adjustable for varying times settings and adjustable operation settings.

The PLC controllers must be programmable on site with a built-in key pad.

The Timers and PLC controllers must be a reputable manufacture with the replacement units being available off the shelf and interchangeable.

RD12 AUXILIARY CIRCUITS

All auxiliary circuits shall be wired with stranded copper conductor sized for the duty of its operation with PVC insulation.

All wiring between equipment shall be mechanically protected, in galvanised conduct or in cable trays.

All wiring fitted inside the borehole should be inside a PVC water pipe installed the distance of the pump.

All wiring must be protected with the use of glands.

Signal wiring should be mechanically protected.

RD14 SWITCHED SOCKET OUTLETS

Switched socket outlets will be mounted on the motor control panel.

All switched socket outlets will be protected with a double pole earth leakage breaker.

The switched socket outlet will be painted the same orange colour as the motor control panel.

The switched socket outlet will be a 16 ampere ‘rating.

RD15 LIGHTNING PROTECTION

Lightning protection shall be carried out on all exposed mental work at the pump stations and steel reservoirs.

This must include all the steel hatch covers mounted on the roof structure of the pump stations, concrete reservoirs, and aerial structures installed for the Telemetry system.

This shall be carried out by earthing all the structures by means of 16mm2 stranded copper PVCX insulated earth wire mechanically secured to the structure and firmly bonded to the earthing electrode by means of a copper bronze EXO-WELD.

A1.2-meter earth electrode shall be driven into the ground at the end of the earthing cable.

RD16 TELEMETRY EQUIPMENT

The controls for the new Telemetry Equipment shall be into the control of the duty and standby centrical control panel.

RD17 INDICATION PANEL LIGHTS AND SWITCH COMBINATION

All indication lamps must be of the 250-volt Light Emitting Cluster type diodes.

All indication light fittings must be of the 22 mm dia fully interchangeable with push button and illumination options.

The support base shall be manufactured from a cast aluminium base.

A fully modular system must be supplied which will be able to accept additional contact blocks.

RD18 INDICATION METERING

All moving coil voltmeter must be rated at 500 volt.

All moving coil ammeters must be rated at 100% over current.

The scale dials must be interchangeable for different ampere rating.

All meters are for alternating voltage and current applications.

RD19 MOTOR CONTROL CUBICLES

The motor control cubical shall be suitable sized to house all the equipment required for its duty.

It shall be manufactured of bent 3CR12 sheets stainless steel, with reinforcing to prevent bending.

It shall be manufactured to an IP 65 standard.

A neoprene seal shall be fitted on all doors.

The motor control boxes shall be wall mounted and shall have the fixing brackets supplied, for the fixing of the panel without the drilling of holes through the motor control box.

RD20 OPERATOR TRAINING, MAINTENANCE INSPECTION AND REPAIRS DURING THE 12 MONTHS GUARANTEE PERIOD

Three Training AND MAINTENANCE inspections site visits must be allowed for during the 12 months guarantee period, the labour and transport must be specified.

The TRAINING shall be specified and comply with the operational procedures as per the operational and maintenance manual.

The maintenance shall comprise checking of all terminal connections for tightness and continuity and full operation of the Telemetry control of the pumping scheme.

A full operational testing of the system and calibration of the water level transducers if a fault is recorded by the operator on duty.

The operator on duty shall be given an update training on the operation of the system.

Note:

The TRAINING AND MAINTENANCE visits to site shall be arranged by the Engineer and an instruction in writing given to the sub-contractor.

The three TRAINING AND MAINTENANCE inspections site visits may be used in full or in part as deemed necessary by the Engineer.

The replacement of faulty equipment covered under the sub-Contractors 12-month warranty agreement will not be covered under the TRAINING AND MAINTENANCE site visit.

RD21 GUARANTEE

Tenderers shall give a 12 months guarantee to replace free of charge any part of the control gear in which manufacturing defects may develop during that period. Such period will commence on the date when the equipment is taken over by the client.

INDEX TO SPECIFICATION WE: ELECTRICAL WORKS FOR PUMPING INSTALLATIONS

EW: ELECTRICAL WORKS FOR PUMP INSTALLATIONS

EW1 SCOPE

This specification covers the supply, testing at manufacturer's works, delivery to site, off-loading, storage until required, installation, testing commissioning handing over to the Employer and free maintenance for twelve months, of the electrical equipment associated with outdoor pumping installations for sewage and water, and includes the electrical equipment necessary for the safe and efficient installation of the plant, in particular the:

- Switchboard/control panel;
- Motors;
- Cables;
- Earthing, and
- Telemetry

Equipment ratings shall be as stated in the general specifications unless specified otherwise in the Project or Particular Specifications. All materials and equipment shall be new and free of defects.

The Contractor is responsible for the selection of the correct equipment based on the Specifications.

EW2 STANDARDS

The following specifications are applicable:

IEC 72	:	Dimensions and output ratings for rotating electrical machines;
IEC 309	:	Plugs, socket outlets and couplers for industrial purposes;
SABS 150	:	PVC insulated electric cables;
SABS 763	:	Hot-dip (galvanised) zinc coatings;
SABS 948	:	Low-voltage motors for miscellaneous applications;
SABS 0142	:	The wiring of premises
SABS 0198	:	The selection, handling and installation of electric power cables not exceeding 33kV
SABS 1092	:	Contactors
SABS 1222	:	Enclosures for electric equipment
SABS 1507	:	Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1900/3300 V).

The Contractor shall carry out all work, where applicable, in accordance with the OHS Act of 1993, applicable by-laws, requirements of the supply authority and any other applicable laws of the Republic.

EW3 SWITCHBOARD/CONTROL PANEL

The installation of all electrical equipment within the pump stations is required, as well as all connections between the pump stations and reservoirs, which are necessary to ensure the proper operation of the pumping system as a whole.

The electrical supply will be from an existing pole mounted transformer 50 kVA 3 Phase 400 Volt and neutral supplied by Eskom and positioned at a point approximately 300 m from the proposed pump stations. It is the responsibility of the Bidder to satisfy himself/herself that these details are indeed accurate before their tender rates are finalised.

The Contractor, through a suitably qualified electrical sub-contractor, shall provide a certificate of compliance for each separate pump station and make arrangements for the switching on of the supply by Eskom. The costs of all these shall be deemed to have been included in the tendered rates.

A copy of the certificate of compliance shall be forwarded to the Engineer as part of the operation and maintenance manual.

Motor Control Panel for the Boreholes

The Motor Control Panel shall be manufactured from orange-painted 3CR12 sheet stainless steel bent and welded IP65, wall mounted to electrical control panel and sized for the control equipment needed for the starting control.

MCP1 and MCP2 shall be provided with panel-mounted isolators that will disconnect the supply to the pump when the door is opened.

The controls for the two boreholes will be from the reservoir level and the pump timer controls, the pumps shall be selected for Pump 1/Pump 2/Alternate operation or Pump 1 and Pump 2 operation.

- Main isolator sized for the connected load of the pumping operation;
- Lightning arrestors connected on all three phases and neutral to earth;
- A V3E three phase to neutral phase rotation, over and under voltage protection relay;
- A panel mounted IP65 “Smart Relay” timer;
- A 500 Voltmeter and Voltmeter selector switch;
- A maximum demand ammeter with current transformers to monitor the motor current during operation;

- Panel control and indication fitted with light emitting cluster diodes for the indication of the operations stated below:

(1)	Power normal	white indication
(2)	Lightning arrestors normal	white indication
(3)	Motor start push button switch with indication	red indication
(4)	Motor stop push button switch with indication	green indication
(5)	No flow trip indication	orange indication
(6)	Borehole level low trip (where needed)	red indication
(7)	Water pressure high trip	red indication
(8)	A trip indication reset button	black indication
(9)	An emergency trip indication	red indication
(10)	Motor tripped indication	red indication

- A three-phase over current motor protection mounted on the main contactor;
- A borehole water level tripping relay with electrodes installed to the specified level;
- A no-flow electronic flow sensor with indication and control to trip the pump off when a no-flow condition is detected and that will only be reset on the next operating cycle of by the operator. The unit is to be supplied complete with the by-pass timer for the start pumping cycle;
- A "Smart Relay" timer for the backup operation of two borehole pumping system;
- A telemetry control wired into the terminal block to accept a control signal from a radio-controlled telemetry unit;
- A direct on-line motor starter control with the electronic overcurrent for the control of each borehole motor;
- An emergency stop lock push button mounted near the motor or door of MCP

The motor controls for each panel shall have the following operation criteria:

1) An off/manual/timer/change-over switch circuit for selection of the pumping operation;
2) A manual start/stop button for the operation of the pump in the manual mode;
3) A "Smart Relay" timer for the operation of the plant in the timer mode of operation;
4) A reservoir level control of the borehole pumps;
5) A local control with earth leakage protection of a switched socket outlet mounted on the motor control panel, and provision for the connection of the lighting circuit;

The MCP shall be sized for the control of the two submersible pumps, which must be able to supply the specified volumes to the reservoirs.

The motor protection shall be so wired that it gives protection in the manual, timer modes of operation.

Wiring to instrumentation or electrically operated equipment shall be in the form of PVC SWA PVC cable installed in open-ended conduit run at right angles and neatly saddled to the appropriate surface, be it the floor or plinth.

EW3.2 SWITCHBOARD CONSTRUCTION

Switchboards housed inside the building shall comply with IP 54 protection class but shall be adequately ventilated to prevent condensation accumulating within the switchboard.

The switchboard shall be manufactured from 3CR12 steel of 2mm minimum thickness and panels shall be reinforced to prevent distortion and ensure rigidity. Interior surface of the switchboard/control panel shall be painted white and the exterior of the switchboard shall be painted orange.

The panel/door carrying the rotary switches and indicator lights shall hinge outward to give access to wiring. It shall seat on a rubber or neoprene gasket which shall form an effective dust seal and shall be flush with the face of the cubicle when in the closed position.

Panel doors shall be constructed of 2 mm 3CR12 steel or sheet steel, pressed or rolled so that the edges have a neat rounded finish, They shall be stiffened as necessary so that neoprene gaskets attached to the door frames form a dust-tight seal. Each door shall be fitted with a latch which shall fit a standard square panel key. When in the closed position, the doors shall be flush with the face of the cubicle.

All wiring shall be neatly run in covered wiring channels and each wire shall be permanently marked with numbered ferrules at each end in accordance with the schematic and wiring diagrams and schedules, Wire runs from point shall be continuous and without joints.

Each panel shall be provided with sufficient terminal block rail to accommodate 120% of the panel terminal block requirements. The terminal blocks shall be Klippon RSF1 or approved equal. Each terminal block shall be permanently marked in accordance with the schematic and wiring diagrams and schedules. The terminal block shall be the only means whereby connection to external equipment and circuits may be effected. All cables shall be bottom entry.

All cables ducts entering the control panel enclosure or building shall be adequately sealed after the installation of the cables to prevent sewage gasses from entering the control panel.

EW4 PUMP DRIVE MOTORS

The rated voltage of all motors shall be 400V.

All motors to be sized 25% larger than the power required.

The starting current of a motor shall be limited to 1.5 times the rated full-load current of the transformer supplying the switchboard to which the motor is connected.

EW6 CABLES

The cable sizes are to be suitably sized for the duty of each supply and are to be approved by the Engineer in writing, when the duties of the pumps offered are supplied.

The cable sizes may have to be re-assessed if the distance to the boreholes is greater than stated elsewhere.

Cables shall be of stranded copper conductors, PVC insulated, steel wire armoured, and PVC sheathed and rated to suit the motor.

All cables used in the wet well shall be flexible, of extra heavy duty. All terminations within the wet well shall be totally sealed against the ingress of moisture.
Joints in multicore cables will not be accepted.

All cables shall be made off with metal, non-rusting, compression glands as approved by the cable manufacturers. The glands shall be of the correct size and shall firmly clamp the armouring between substantial taper sections and give a proper earth connection. Each gland shall be provided with neoprene rubber shroud and earth tag. Gland locknuts shall be brass or stainless steel.

Each terminal block shall be clearly and indelibly marked in accordance with the wiring diagrams and schedules.

Each cable core shall be marked at each end by means of a numbered ferrule, in accordance with the wiring diagrams and schedules or with a label indicating its destination.

Each cable shall be marked with an engraved cable marker attached to the cable with cable ties and shall be marked on both sides of the cable.

Control cables shall be chosen so that there are at least 20% spare cores. Control cables shall have minimum conductor size of 2.5 mm2. The number of cores and the cable cross-sectional area shall be determined by the Contractor in terms of the load currents and method of operation of the proposed by the Contractor. The Contractor’s calculations of core cross-sectional area shall be submitted to the Engineer for approval before purchase of the cable.

All cabling shall either be accommodating directly in the ground, in cable ducts, in cable trays or shall be firmly cleated to their supporting structures.

Cables buried directly in the ground shall be buried at a depth of 1500 mm. The cable trench shall be prepared in the following way:

The cable trench shall be dug to a depth of 850 mm and a 100 mm deep layer of sifted sand shall be placed in the bottom. The cables shall then be neatly laid on top of the sand side by side. Cable runs shall be carefully planned so as to avoid crossings. A further 150 mm layer of sifted sand shall then be laid on top of the cables which shall be covered by a full (trench) width sheet of polythene warning tape for cable trenches. The trench shall finally be filled in with soil from which all stones larger than 100 mm have been discarded. In this context "sifted sand" shall mean sand which has passed through a screen or sieve with aperture not exceeding 2,5 mm x 2,5 mm.

Cable runs shall be carefully planned to avoid crossings and cables shall be neatly run side by side in the ducts.

Cables to be cleated to their supporting structures shall be fixed by means approved by the Engineer. In general, cables shall either be secured by means of regularly spaced non-corrodible saddles or shall be run-in open-ended conduit.

Each cable core shall be terminated by means of an approved crimped hook lug in a Klippon type RSF1 terminal. The same terminal shall be used in all cubicles except where other requirements specifically exclude its use. 10% spare terminals shall be provided.

Each cable shall be permanently and indelibly numbered with its cable number at each end of the cable. The label must be clearly visible.

Cables may be buried in the ground only where authorised by the Engineer.

EW7 CABLE TRAYS

Cable trays (where required) shall be galvanised in accordance with SABS 763 or made from an approved non-corrodible material. Cable trays shall be chosen to accommodate all the cables in a single layer with at least 50% being left spare for possible future expansion. Cable trays shall be rigidly supported along their lengths. Each cable in the cable tray shall be individually strapped to the tray at regular intervals using plastic cable ties. Cables shall be strapped at 2 m intervals in horizontal cable trays and at 500 mm intervals in all cable trays where the base of the cable tray is not horizontal.

Cable trays shall be continuous, and wall mounted with the base of the cable tray 25 mm from the wall and the lower edge of the tray 300 mm above floor level.

EW8 EARTHING

The non-current carrying metal part of all electrical equipment shall be bonded to earth in accordance with the regulations.

All earth conductors shall be connected using lugs of the correct size, properly crimped to the conductor ends.

An earth electrode shall be driven into the immediate vicinity of each of two diagonally opposite corners of the pump well so that the top of the earth electrode is at a depth of 300 mm below finished ground level. The earth electrodes shall be connected together by means of a 70 mm^2 bare stranded copper conductor buried at a depth of 750 mm below finished ground level. The bare stranded copper conductor will continue unbroken from each earth electrode to the switchboard where each end will be terminated on the switchboard earth bar to form a continuous earth loop.

Earth electrodes shall be 16 mm diameter 2.4 m long copper plated steel or grade 316 stainless steel rod.

The pump motor frame and terminal box shall be connected by a 35 mm2 bare stranded copper conductor (bscc) and shall be connected to the switchboard earth bar by a 35 mm2 bscc. For submersible pumps one core of the motor supply cable shall be used as earth conductor.
No through jointing of earth conductors shall be permitted.

Since it is not required that the pump motor be protected by earth leakage units, the Contractor shall take extreme care to ensure that adequate earthing is installed.

EW9 LABELS

Each panel shall be labelled according to its designation and according to the requirements of the applicable regulations and by-laws in both official languages. All items of equipment that must be identified in order to operate and maintain the system safely and effectively shall be labelled in accordance with the schematic and wiring diagrams and schedules.

All labels shall be manufactured from a durable weatherproof material providing a smooth white surface for engraving. The inscriptions on the labels shall be permanently engraved into the label material and shall be black. Lettering shall be at least 4 mm high. Labels shall be permanently attached in prominent positions by means of stainless steel or brass bolts, nuts and washers.

All cables (power and control) shall be clearly labelled at each end with cable identification tags. These shall be copper labels or approved equal, strapped to the cable immediately below the gland with copper wire. Numbers shall be printed, embossed or engraved so that they are neat in appearance and permanently legible.

EW10 LIGHTING

The lighting circuits and lighting equipment shall be of the type and manufacture as specified below:

The light fitting shall be surface mounted 1 500 mm long fluorescent luminaire, all complying to *SABS.*

The body Glass – reinforced polyester, grey.

The reflector Manufactured from 0.8 mm cold rolled sheet steel, treated in accordance with SABS 064-1060 for rust proofing and painted to SABS 783 – 73.

The diffuser shall be made of a high impact polycarbonate diffuser, complete with neoprene gasket and stainless-steel clips, providing a dust, moisture and corrosion proof luminaire.

The Lamps shall be 2 x 58-Watt, colour 21,26 mm diameter, fluorescent lamps, with bi-pin, push-in pin type rotor lock type lamp holders and injection moulded, heat resistant plastic and caps.

The control gear shall be switched ballasts, power factor corrected to minimum 0.85.

The luminaire shall bear SABS 1464 Mark.

The recommended type should be Nordland JB / 258 / SS / colour 21 / ss.

The lighting circuit wiring may be installed in galvanised conduct. The minimum conductor size shall be 2.5 mm^2 conductors and earth.

EW11 TELEMETRY

The Contractor shall use the services of a reputable radio telemetry sub-contractor to install and commission the telemetry control system to the motor control panel.

The 12 months guarantee is to be comprehensive with a full cover for transport and accommodation.

The principle of operation is as follows:

1. The borehole pumps
- The borehole pump is to be controlled with the level signal from the reservoir.
- The borehole pump is selectable for individual operation from the reservoir level.
- Or the borehole pump can be selected to start when the reservoir level demands pumping.
- The borehole can be selected to operate with a timer control and reservoir level.

2. Technical Details:

In order to consider all the aspects of the equipment available please supply us with technical details.

3. Operator Training

Full operational checks must be made before the system is handed over to the electrical sub-contractor for the checking of the system.

When the system is fully operational, training shall be provided to the operators and this training shall be duplicated in the operation and maintenance manual.

EW12 DRAWINGS AND MANUALS

Detailed drawings, schematic and wiring diagrams shall be submitted to the Engineer for approval before start of manufacture.

The Contractor shall supply one set of wiring diagrams to be housed in a suitable plastic holder inside the control panel and two complete manuals for operation and maintenance of the installed equipment. The manuals shall contain copies of all test certificates and shall include all drawings, schematic and wiring diagrams.

The Contractor shall not be complete until as-built drawings and manuals have been supplied and approved by the Engineer.

EW13 TESTING AFTER INSTALLATION

The Contractor shall carry out the following tests before acceptance of the installation:

A physical inspection of the installation shall be carried out to ensure compliance with the specification.

The following electrical tests shall be performed, and the results submitted to the Engineer in writing:

- The insulation resistance of each core to the other cores and to earth shall be tested with an approved "Megger" type of instrument.
- Phase connections are to be checked at each termination to ensure consistency of phase rotation throughout the installation.
- Complete functional testing to check the correctness of the circuits, writing and markings.
- Earth continuity test of the armouring of each cable.
- Earth resistance of the network at:
  - The earth electrodes
  - The switchboard
  - The pump motors
  - The float switches

The Contractor shall supply test certificates for each earth resistance measurement. If the earthing resistance on any part of the network exceeds 2 ohms an instruction shall be obtained from the Engineer who may require that additional trench earthing or earth electrodes be installed. The Contractor shall ensure that his telemetry sub-contractor has fully tested and ensure that the control system is fully functional at least ten days before the Engineer is called to site to carry out the tests and commissioning of the pumping system. The Contractor shall give the Engineer at least 7 days' notice in writing of tests that are to be carried out in order that the Engineer may witness the tests.

EW14 MEASUREMENT

Cable lengths shall be measured on site and allowance made for making terminations. Allowance for wastage or a joint in a run of length of cable supplied on a drum shall be made by the Contractor in the tendered rates. Cable joints and joint markers for long runs shall also be included in the prices. Rates shall include installation in trenches and drawing through ducts and sleeves, and strapping to cable tray, but exclude cable tray, trenching, warning sheeting and terminations. Trenching shall include excavation, bedding material, backfilling, compaction and cable warning sheeting. Irrespective of the volume excavated, the measurement of excavation shall be according to route length. Cable tray shall include all materials, supports, fixing bolts, and other parts required. Cable terminations shall include all materials, glands, shrouds, lugs, labels and other parts required. Testing and commissioning shall include the supply and operation of test equipment, the submission of test certificates

and testing and commissioning in the presence of the Engineer, Supply Authority and / or Employer. The Contractor shall carry out, in all instances and his own cost, any work to be made good, including any damage caused by himself or his employees during the implementation of this subcontract.

INDEX TO SPECIFICATION P: PUMPS

P: WATER PUMPS

P1 SCOPE

This specification covers the design, manufacture, supply, delivery and testing of water pumps such as used for pumping water from boreholes, dams and reservoirs, and as in line booster pumps.

P2 GENERAL

Pumps shall be of the maker's standard and approved design, capable of performing the required duty at a preferred speed of 1470 RPM. Pumps shall be supplied complete with motor, drives, couplings and baseplate or frame. Pipes, pipe fittings, valves, etc. are specified elsewhere. All electrical switchgear, cabling etc. shall be supplied as stated in the project specification. The entire proposed system shall be capable of operating without any human intervention. Consequently, the bidder shall submit with his/her bid the proposed control system, as well as all specifications thereof.

The duty required of the pump is described in terms of the system curves in this document and pumps supplied shall be capable of successfully performing under all conditions so indicated.

As far as possible, standard component parts shall be used.

P3 MATERIALS AND WORKMANSHIP

The contractor shall ensure that materials, seals, bearings and couplings are correctly chosen in compliance with the original design requirements. Where substitution to suit local (as opposed to overseas) conditions and availability of materials is required, the Engineer shall be advised in writing, together with the motivation for the substitution. The calculations and specifications for the original design and the proposed substitutions shall be made available to the Engineer.

P3.1 Bearings

All bearings shall have a minimum design life given by a B10 rating of 30 000 hrs.

Adequate attention to choice of bearings shall be made in respect of loading, thrust, mounting, thermal expansion and contraction, lubrication and the conditions under which the bearings will be operating.

P3.2 Impellers

Impellers shall be made of cast iron, cast steel, zinc free bronze or stainless steel. For fractional kW pumps other materials may be considered but used only with the Engineer's approval. The impeller shall be securely fixed to the shaft with a key and keyway and blind nut.

P3.3 Wearing Rings

Where pumps are fitted with wearing rings to limit recirculation losses they shall be machined to tolerances compatible with the solids content of the water to be pumped.

P3.4 Seals

Pumps shall be fitted with stuffing boxes rather than mechanical seals under most conditions for ease and simplicity of maintenance.

Seals shall be effective over the normal working range, ie no flow static head to shut off head of pump. Leakage from glands shall be openly collected and suitably piped out of the pump station.

a) Stuffing Boxes

   Stuffing boxes shall be sized as to accommodate not less than four rings of parking plus the lantern ring and a portion of the gland. The lantern ring shall be served by both inlet and outlet connections. A renewable sleeve shall be fitted to the shaft where it passes through the stuffing box. A slinger shall be incorporated between the stuffing box and the bearings. The stuffing box shall be easily tightened and removed for parking.

b) Mechanical Seals

   Particular attention shall be paid to the selection of materials and design of the seal in relation to the conditions under which the pump is to operate.

P3.5 Mountings and Baseplate

The pump shall be suitably equipped with mounting points to facilitate location and fixing in position of the pump to a baseplate or flange mounting. In mounting to the baseplate or frame, which shall also serve the prime mover and gearbox, facility shall be provided for setting up and alignment.

The baseplate shall be manufactured from steel and be of sufficient stiffness to ensure location and alignment within acceptable tolerances.

The baseplate shall be surely bolted to the floor or foundation block with at least M20 bolts, before final alignment and setting up of the pump/motor.

P3.6 Pipework and fittings

P3.6.1 General

The pipework associated with the pumps shall be supplied and installed by the Contractor to ensure the proper functioning of the installation.

The pipework shall be designed by the Contractor to suit the characteristics of the pumps supplied, and in addition shall be sized so that the velocity in the suction pipework shall not exceed 1,5 m/sec whilst the velocity in the delivery pipework shall not exceed 2,5 m/sec. Where specified, all pipework, reflux valves, puddle flanges, bends and specials shall conform to the following:

SABS 509 and 546	cast iron and cast steel fittings
SABS 719 and 720	Mild steel pipes and fittings
SABS 286, 721 and 946	Asbestos cement pipes and fittings
SABS 763	Galvanised iron pipes and fittings
SABS 966	Unplasticised poly-vinyl chloride pipes and fittings
SABS 533	High density Polyethylene pipes and fittings
BS 3605	Stainless steel
SABS 664	Sluice Valves

P3.6.2 Pipes

The class of pipe selected shall be such as to provide a working pressure equal to the greater of:

a. Maximum shut off of the pumps, or
b. The pressure given in the project specifications which allows for working head and pressure surges, or
c. Steel Pipes / Sizes
d. Pipe sizes within the pump station are as shown on the drawings.

P3.6.3 Pipe Joints

Generally, flanged joints are required. Where required for movement or assembly and maintenance requirements Viking Johnson couplings shall be used.

Flanges shall be manufactured in accordance with SABS 1123 as amended, and the pressure requirements of the adjacent pipework.

Each joint shall be completely watertight under test and working conditions.

P3.6.4 Valves

Each pump shall be fitted with an isolating valve on both the suction and delivery pipes, and a non-return valve shall be installed adjacent to the pump on the delivery side.

P3.6.5 Gate Valves

Gate valves shall be manufactured to the requirements of SABS 665, with the class to suit the maximum shut off head of the pumps. All valves shall close on clockwise rotation of the handwheel. The handwheel shall be clearly and permanently marked with "open" and "shut" with arrows indicating the direction of rotation. All valves shall be capable of being opened and closed by one man against the maximum differential pressure.

P3.6.6 Butterfly valves

Butterfly valves may not be used.

P3.6.7 Non-return valves

Non-returns valves shall be suitable for use in either horizontal or vertical mounting.

They shall be so designed and manufactured so as provide satisfactory operation under the conditions of service envisaged and under zero flow conditions. Access to moving parts shall be possible without the need to remove the body from the line.

P3.7 Pressure Gauges

Each pump shall be fitted with suitable pressure gauges on both the suction side and the delivery side of the pump to measure to 50% greater than the maximum head.

The gauges shall be permanently mounted in position and provided with an isolation valve.

Gauges shall be a diameter of not less than 100 mm and shall be calibrated to indicate at least 15% increments. An accuracy of within 1% or better is required.

P3.8 Motor/Pump Couplings and Transmissions

Generally, the pump shall run at the same speed as the prime mover and be directly coupled by means of a flexible coupling. Where such a layout is not desirable vee-Belt drives are preferred, and only under exceptional circumstances will the use of a Gearbox be approved.

The flexible coupling or vee-belt drive, where used, shall be designed to accept the full load torque at design speed, and also the start and stop loads, with due allowance being made for shock loading.

The couplings or drive shall also be designed to accommodate under all the above loading conditions, thermal expansion and contraction movements of the shafts, the effects of end float, vibrations and a practical amount of misalignment of the shafts.

P3.9 Shafts

The installation shall comply with the requirements of the Machinery and Occupational Safety Act No.6 of 1983 as amended.

P3.10 Painting and Corrosion Protection

Where possible, materials or manufacture shall be selected for corrosion resistant properties.

Detailed requirements for painting and corrosion protection are specified in a separate section.

P3.11 Nameplates

A corrosion resistant nameplates shall be fixed to the pump with the following information punched or engraved thereon;

- Manufacturer’s name
- Serial number of the pump
- Model number and type
- Impeller type/diameter installed
- Normal operating head and flow
- Rotational speed
- Bearing numbers
- Lubricant type

PUMPING SYSTEM SELECTION DATA											
PS	**Delivery Reservoir TWL (mamsl)**	**Pump Ground Level (mamsl)**	**Recommended Pump Installation Depth (mbgl)**	**Casing Internal Diameter (mm)**	**Static Water Level (mbgl)**	**Critical Water Level (mbgl)**	**Pumping Rate (l/s)**	**Pipe length (m)**	**Pipe size (OD) (mm)**	**Pipe material & Class#**	**Static Head (m)**
High Lift PS	981	851					1.23	1550	63	MPVC-CL 20	140.1
Borehole PS	853	822	70	177	22.63	50	0.61	260	50	MPVC-CL 20	31.5

Hydraulic details of the pumping mains are provided above. Bidders are invited to familiarise themselves with these details. Bidders are required to offer the pumping equipment (i.e. pump, motor, controls, etc.) to satisfy the above operating conditions. The **full** details of the proposed particular make and model of pumping equipment shall be submitted with the price submitted. The make, model and pump characteristic curve of proposed pump and other relevant information for the controls and motors **MUST** be attached in the completed Bid document. Failure to comply with this requirement may render the bid non-responsive. Proposed equipment and methods of control **MUST** also be submitted with the Bid. The Employer requires a system that, during the operation of the entire bulk supply system, will require the least human control/interaction.

P4 INSTALLATION

P4.1 Pumps

The pump and motor set, mounted on common base plate or frame, shall be fixed in position on a concrete plinth, to the Contractor's requirements. The concrete shall be cast to within 20 mm of the underside of the base plate, so that the final position and alignment can be carried out by the Contractor during installation. For this purpose, steel shims shall be used, and after the Contractor has tightened the holding down bolts against the shims and the alignment of the rest has been checked a non-shrink grout will be placed by others under the baseplate. The Contractor shall complete tightening of the holding down bolts after the grout has cured.

P4.2 Pipework and Fittings

Erection of pipework and position of fittings shall be carried out in such a way as to ensure the minimum of residual stress in the installation. Great care shall be taken both in the design and protection of the pipework to ensure that no undue forces are imposed on the pump itself. The Contractor shall be responsible for the positioning, design and implementation of all pipe supports.

Flexibility in the installation must be maintained until all pipe runs are complete, and only then should the pump baseplate be finally fixed, and pipes grouted in and pipe and valve support pedestals be cast (by others).

After the pumps have been in operation for about a week the foundation bolts shall be finally tested for tightness, the alignment checked, and dowel pins fitted in the pump and motor feet.

P5 TESTING

All pumps shall be subject to a site test, as installed, to confirm the performance of the equipment supplied against the data supplied at time of tender. Under certain Circumstances, pumps may also be tested in the manufacturer's works before Installation.

All performance testing shall be carried out in accordance with BS 5316 Part 1 Class C, with all instrumentation and personnel being supplied by the Contractor. The tests shall be carried out after initial installation checks and after at least 12 hours of test running. Should any aspects of performance not fall within 5% of the stated figures supplied at time of tender, the Contractor shall take all necessary steps to correct the performance and the tests shall be performed again. On completion of each test the result shall be made available to the Engineer.

P6 MEASUREMENT AND PAYMENT

Pumping equipment, all valves and fittings shall be measured and paid for by lump sum and shall be held to include the supply, installation, testing and commissioning of all pumps including all fixing bolts and brackets and all work necessary to ensure satisfactory operation of the pumping installation. Over and above the aforementioned, the rate shall include the cost of the entire pump station, including all control features, pipes and other measures to ensure a complete, operable pumping unit.

C4 SITE INFORMATION

Bidders are expected to make their own assessment of the site, site access, geotechnical conditions, services etc before submitting Bids. No claims for extension of time or additional compensation of any kind will be entertained if it is found (in the opinion of the Engineer) that such claims are the result of a lack of knowledge of the site conditions where such conditions could and would have been reasonably foreseen by a suitably qualified and competent person carrying out an investigation of the site.

LOCATION AND DESCRIPTION

The project is located approximately 14km from Mthatha CBD. The main access to the project is through district road, which takes-off from provincial route 61 (R61) from Mthatha towards Libode. The villages fall under the Nyandeni Local Municipality within the jurisdiction of OR Tambo District Municipality in the province of the Eastern Cape.

The area is known to have mild to general warm climate with dominantly summer rainfall. According to Climate-Data.Org, the average rainfall is approximately 693mm per annum with more than 70% of the annual rainfall occurring during the summer period. High temperatures can be experienced during the summer months while June to August are the coldest months. The average annual temperature is recorded to be 17.5°C.

The vegetation of this area is grassland with very dispersed foreign trees mostly planted on erve. There are no commercial resurgence forests existing. The area can be categorized as a dry land due to their type of vegetation and the lack of water/dryness of streams.

The central co-ordinates of the village are as follows:

S 31º35’16.45”

E 28º55’11.17”

C5 TENDER DRAWINGS