



CLUSTER
Trading Services

UNIT
Engineering

DEPARTMENT
Water and Sanitation Engineering

PROCUREMENT DOCUMENT
INFRASTRUCTURE

Documents are to be obtained, free of charge, in electronic format, from the [National Treasury's eTenders website](#) or the [eThekweni Municipality's website](#).

Contract No: 31300-5W

**Contract Title: ISIPINGO WASTEWATER TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO
SELECTED PROCESSES**

Est. CIDB Grade/ Class: 8 CE or 8 ME

CLARIFICATION MEETING AND QUERIES

Clarification Meeting: Compulsory Clarification Meeting

**Meeting Location, Date, Time: Outside the Main Boardroom, Isipingo Wastewater Treatment Works
on 10 June 2025 at 11h00 (-29.9903, 30.9061)**

Queries can be addressed to: Project Engineer
The Employer's Agent's: isipingowwtw@zutari.com
**Representative: Email queries to be sent to isipingowwtw@zutari.com by 19 June
2025, response to queries will be uploaded by 26 June 2025.**

TENDER SUBMISSION

**Delivery Location: The Tender Box in the foyer of the Municipal Building
166 KE Masinga Road, Durban**

Closing Date/ Time: Friday, 04 July 2025 at 11h00

FACSIMILE, eMAIL, or POSTED TENDERS WILL NOT BE ACCEPTED

Issued by:

ETHEKWINI MUNICIPALITY

Deputy Head: Water and Sanitation Engineering

Date of Issue: 25/04/2025

Document Version 01/03/2024

FOR OFFICIAL USE ONLY

| Tenderer Name: | | | VAT Registered: Yes No |
|----------------|--------------|-----|------------------------|
| | Price (excl) | VAT | Price (incl) |
| Submitted: R | | R | R |
| Corrected: R | | R | R |

INDEX TO PROCUREMENT DOCUMENT

| TENDER PART | Part T1 | VOLUME 1: TENDERING PROCEDURES | Page |
|--------------------|----------------|--|-------------|
| | | T1.1 Tender Notice and Invitation to Tender | |
| | | T1.1.1 Tender Notice and Invitation to Tender | 3 |
| | | T1.2 Tender Data | |
| | | T1.2.1 Standard Conditions of Tender | 4 |
| | | T1.2.2 Tender Data (<i>applicable to this tender</i>) | 4 |
| | | T1.2.3 Additional Conditions of Tender | 13 |
| | Part T2 | VOLUME 1: RETURNABLE DOCUMENTS | Page |
| | | T2.1 List of Returnable Documents | 19 |
| | | T2.2 Returnable Schedules, Forms and Certificates | 21 |

| CONTRACT PART | Part C1 | VOLUME 1: AGREEMENT AND CONTRACT DATA | Page |
|----------------------|----------------|--|-------------|
| | | C1.1 Form of Offer and Acceptance | |
| | | C1.1.1 Offer | 86 |
| | | C1.1.2 Acceptance | 87 |
| | | C1.1.3 Schedule of Deviations | 88 |
| | | C1.2 Contract Data | |
| | | C1.2.1 Conditions of Contract | 89 |
| | | C1.2.2 Contract Data | 89 |
| | | C1.2.3 Additional Conditions of Contract | 104 |
| | | C1.3 Pro-Formas | |
| | | Annexure A | 123 |
| | | Annexure B | 125 |
| | Part C2 | VOLUME 1: PRICING DATA | Page |
| | | C2.1 Pricing Assumptions / Instructions | 126 |
| | | C2.2 Bill of Quantities (separate page numbering system) | 131 |
| | | C2.3 Summary of Bill of Quantities (separate page numbering system) | 132 |
| | Part C3 | VOLUME 2: SCOPE OF WORK | Page |
| | | C3.1 Project Description and Scope of Contract | 6 |
| | | C3.2 Engineering | 13 |
| | | C3.3 Procurement | 37 |
| | | C3.4 Construction | 38 |
| | | C3.5 Management | 57 |
| | | C3.6 OHS and Environmental Specifications | 66 |

| | | | |
|--|------------|---|------|
| | | C3.7 Civil Specifications | 68 |
| | | C3.8 Mechanical Specifications..... | 370 |
| | | C3.9 Electrical and Electronic Specifications | 434 |
| | Part C4 | VOLUME 2: SITE INFORMATION | |
| | | | Page |
| | | C4.1 Locality Plan | 461 |
| | | C4.2 Conditions on Site (Geotechnical Report)..... | 462 |

| | | | |
|--|--|----------------------------|--|
| | | VOLUME 3: BOOK OF DRAWINGS | |
|--|--|----------------------------|--|

PART T1: TENDERING PROCEDURES**T1.1.1: TENDER NOTICE AND INVITATION TO TENDER**

Tenders are hereby invited to tender for Mechanical, Electrical and Civil works for the construction of functional improvements to selected processes.

| Subject | Description | Tender Data Ref. |
|------------------------------------|---|-------------------------|
| Employer | The Employer is the eThekweni Municipality as represented by: Deputy Head: Water and Sanitation Engineering | F.1.1.1 |
| Tender Documents | Documents can only be obtained in electronic format, issued by the eThekweni Municipality. Documentation can be downloaded from the National Treasury's eTenders website or the eThekweni Municipality's Website . The <u>entire document</u> should be printed (on A4 paper) and suitably bound by the tenderer. | F.1.2 |
| Eligibility | It is <u>estimated</u> that tenderers should have a CIDB contractor grading designation of 8 CE or 8 ME (or higher). The CIDB provisions in relation to a Contractor's Potentially Emerging (PE) status <u>do not</u> apply. | F.2.1.1 |
| Clarification Meeting | Outside the Main Boardroom, Isipingo Wastewater Treatment Works on 10 June 2025 at 11h00 (-29.9903, 30.9061) | F.2.7 |
| Seek Clarification | Queries relating to these documents are to be addressed to the Employer's Agent's Representative whose contact details are: Project Engineer isipingowwtw@zutari.com Email queries to be sent to isipingowwtw@zutari.com by 19 June 2025, response to queries will be uploaded by 26 June 2025. | F.2.8 |
| Submitting a Tender Offer | Tender offers shall be delivered to: The Tender Box in the foyer of the Municipal Building 166 KE Masinga Road, Durban | F.2.13 |
| Closing Time | Tender offers shall be delivered on or before Friday, 04 July 2025 at or before 11h00 . | F.2.15 |
| Evaluation of Tender Offers | The 90/10 Price Preference Point System, as specified in the PPPFA Regulations 2022 will be applied in the evaluation of tenders. Refer to Clause F.3.11 of the Tender Data for the Specific Goal(S) for the awarding of Preference Points, and other related evaluation requirements. | F.3.11 |

Requirements for sealing, addressing, delivery, opening and assessment of tenders are further stated in the Tender Data

PART T1: TENDERING PROCEDURES

T1.2: TENDER DATA

T1.2.1 STANDARD CONDITIONS OF TENDER

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (July 2015) as published in Government Gazette No 38960, Board Notice 136 of 2015 of 10 July 2015.

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

T1.2.2 TENDER DATA

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

| |
|---------------------|
| F.1: GENERAL |
|---------------------|

F.1.1 The employer: The Employer for this Contract is the eThekweni Municipality as represented by: Deputy Head: [Water and Sanitation Engineering](#)

F.1.2 Tender documents: The Tender Documents issued by the Employer comprise:

- 1) This procurement document.
- 2) "General Conditions of Contract for Construction Works – 3rd Edition 2015" issued by the South African Institution of Civil Engineering (GCC 2015). This document is obtainable separately, and Tenderers shall obtain their own copies.
- 3) "City of Durban Technical Specifications" hereinafter referred to as the Standard Engineering Specifications. This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections.
- 4) Drawings, issued separately from this document, and bound in Volume 3.
- 5) In addition, Tenderers are advised, in their own interest, to obtain their own copies of the following acts, regulations, and standards referred to in this document as they are essential for the Tenderer to get acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and the participation of targeted enterprise and labour.
 - The Employer's current (as at advertising date) Supply Chain Management Policy.
 - The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (2022).
 - The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).
 - The Construction Industry Development Board Act No 38 of 2000 and the Regulations issued in terms of the Act (July 2013).
 - SANS 1921:2004 – Construction and Management Requirements for Works Contract, Parts 1-3.

- Any other eThekwini Policy documents referenced in the Tender Documents.

Electronically downloaded documentation is obtainable from the National Treasury's **eTenders Website** or the **eThekwini Municipality's Website** at URLs:

- <https://www.etenders.gov.za/>
- <https://www.durban.gov.za/pages/business/procurement>

The entire downloaded document should be printed on white A4 paper (single-sided) and suitably bound by the tenderer.

F.1.4 Communication and employer's agent: The Employer's Agent is:

Name: [Zutari Pty \(Ltd\)](#)
 Tel: [031 575 5500](#)
 eMail: ethekwini@zutari.com

The Employer's Agent's Representative is:

Name: [Project Engineer](#)
 eMail: isipingowwtw@zutari.com

The Tenderer's contact details, as indicated in the Contract Data: C1.2, Part 2 "Data to Be Provided by Contractor", shall be deemed as the only valid contact details for the Tenderer for use in communications between the Employer's Agent and the Tenderer.

F.2: TENDERER'S OBLIGATIONS

F.2.1.1 Eligibility: General

A Tenderer will not be eligible to submit a tender if:

- the Tenderer does not comply with the legal requirements as stated in the Employer's current SCM Policy.
- the Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.
- In the event of a Compulsory Clarification Meeting:
 - the Tenderer fails to attend the Compulsory Clarification Meeting.
 - the Tenderer fails to have form "Certificate of Attendance at Clarification Meeting / Site Inspection" (in T2.2) signed by the Employer's Agent or his representative.
- at the time of closing of tenders, the Tenderer is not registered on the National Treasury Central Supplier Database (CSD) as a service provider.
- The tenderer has not submitted, with this tender, a valid Letter of Good Standing from the Compensation Commissioner as proof of being registered and in good standing with the compensation fund. Reference is to be made to Returnable Document T2.2.16.
- The tender fails to complete and sign the Declaration of Municipal Fees in T2.2: "Returnable Documents" and submits the required documentation. Reference is to be made to Returnable Document T2.2.15.

SCM Policy (CI.14(4)) requires suppliers/ service providers/ contractors to be registered on the eThekwini Municipality Central Supplier Database or be in a position to be so prior to the Tender

closing time.

In the event of the Tenderer not being registered on the eThekweni Municipality's Central Supplier Database, the tenderer must register on the internet at www.durban.gov.za by following these links:

- Business
- Supply Chain Management (SCM)
- Accredited Supplier and Contractor's Database.

The following are to be noted:

- (a) The information for registration as in the possession of the eThekweni Municipality will apply.
- (b) It is the Tenderer's responsibility to ensure that the details as submitted to the Municipality are correct.
- (c) Tenderers are to register prior to the submission of tenders.

F.2.1.2 Eligibility: CIDB

Only those tenderers who are registered (as "Active") with the CIDB (at time of tender closing), in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a **CE or ME** class of construction work, are eligible to have their tenders evaluated.

It should be noted that this contract is not part of a Targeted Development Programme (TDP). The CIDB provisions in relation to a Contractor's Potentially Emerging (PE) status do not apply.

F.2.1.4 Eligibility: Bank Rating

Due to the estimated value of this enquiry, the tenderer will be required to confirm working capital requirement in respect of this bid by furnishing with the tender submission, an **original** letter from his/her bank providing a bank rating.

Only those tenderers who receive a minimum "C" rating shall be eligible to tender.

F.2.2.2 The cost of the tender documents: Replace this paragraph with the following:

"Documents are to be obtained, free of charge, in electronic format, from the **National Treasury's eTenders website** or the **eThekweni Municipality's Website**. The entire electronically downloaded document should be printed on white A4 paper (single-sided) and suitably bound by the tenderer.

F.2.6 Acknowledge addenda: Add the following paragraphs to the clause:

"Acknowledgement of receipt of the addenda will be by the return of the relevant completed, dated, and signed portion of the addenda, to the email address as specified in F.1.4. Failure of the tenderer to comply with the requirements of the addenda may result in the tender submission being made non-responsive."

F.2.7 Clarification meeting:

A compulsory physical and on-site meeting will be held at the Outside the Main Boardroom, Isipingo Wastewater Treatment Works on 10 June 2025 at 11h00 (-29.9903, 30.9061).

In the event of a Compulsory Clarification Meeting, Tenderers must sign the attendance register in the name of the tendering entity. The Tenderer's representative(s) at the clarification meeting must be able to clearly convey the discussions at the meeting to the person(s) responsible for compiling the entity's tender offer.

F2.8 Seek clarification: Replace the contents of the clause with the following:

Request clarification of the tender documents, if necessary, by notifying the Employer's official or the Employer's agent indicated in the Tender notice and invitation to Tender (Section T1.1 of this document) in writing at least seven working days before the closing time stated in clause F.2.15.

These queries shall be addressed to the Employer's Agent's Representative whose contact details are: Project Engineer, Tel: 031 575 5500, eMail: isipingowwtw@zutari.com. Email queries to be sent to isipingowwtw@zutari.com by 19 June 2025, response to queries will be uploaded by 26 June 2025.

F.2.12 Alternative tender offers: No alternative tender offers will be considered.**F.2.13 Submitting a tender offer:** Submissions must be submitted on official submission documentation issued (a hard copy with a scanned electronic copy attached to the hard copy submission) by the eThekweni Municipality.

Identification details to be shown on each tender offer package are:

- Contract No. : **31300-5W**
- Contract Title : **ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES**

The Employer's address for delivery of tender offers is:

**The Tender Box in the foyer of the Municipal Building
166 KE Masinga Road, Durban**

Bidders are required to also make an electronic submission via SSS. Bidders must ensure that the hard copy and electronic submission are the same, failing which the submission will be deemed invalid. Bidders are responsible for resolving all access rights and submission queries before the tender closing date.

SSS Queries Contact: Lindo Dlamini: Tel: 031-3227133/031-3227153 email: supplier.selfservice@durban.gov.za

Tenderers will be issued with the electronic versions of the Bills of Quantities and Technical Data Sheets. Tenderers are requested to also submit completed electronic versions (Microsoft Excel) of the Bills of Quantities and Technical Data Sheets as an unofficial version, i.e., filled in by the tenderer in the format issued by the Employer. The unofficial version shall not be regarded as a substitute for the documents.

The Employer may through addenda re-issue the Bills of Quantities and Technical Data Sheets in its entirety, as electronic versions. Tenderers may complete these documents electronically and print to hard copy in the same format. In this instance the printed submission shall be returned in its entirety, and tenderers shall unbind the affected tender documents and replace the hardcopy with the printed version and then rebind the affected tender documents to its original condition.

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

F.2.15 Closing time: The closing time for delivery of tender offers is:

- Date : **Friday, 04 July 2025**
- Time : **11h00**

F.2.16 Tender offer validity: The Tender Offer validity period is 120 Days from the closing date for submission of tenders.

- F.2.20 Submit securities, bonds, policies:** The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in T2.2 of this procurement document.
- F.2.23 Certificates:** Refer to T2.1 for a listing of certificates that must be provided with the tender. All certificates must be valid at the time of tender closing.

Tenderers are to include, at the back of their tender submission document, a printout of the required documents/ certificates.

The Form of Offer (C1.1.1), Data to be provided by the Contractor (C1.2., Part 2), and the Bill of Quantities (C2.2) are also required to be completed in full.

Tax Clearance

Reference is also to be made to returnable form T2.2.3: "Tax Compliance Status PIN/ Tax Clearance Certificate".

SARS has introduced a new Tax Compliance Status System. Tenderers must submit a **Tax Compliance Status PIN** (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status. This TCS PIN is to be entered on Returnable Document T2.2.1: "Compulsory Enterprise Questionnaire".

Failure to comply will make the tender non-responsive.

Compensation Commissioner

Reference is also to be made to returnable form T2.2.16: "Eligibility: Registration with Compensation Commissioner".

The tenderer is to supply proof of being registered and in good standing with the compensation fund by submitting a valid **Letter of Good Standing** from the Compensation Commissioner.

Failure to comply will make the tender non-responsive.

Central Supplier Database (CSD)

Reference is also to be made to returnable form T2.2.17: "Eligibility: CSD Registration Report".

The entities (full) **CSD Registration Report**, obtained from the National Treasury Central Supplier Database, is to be included in the tender submission (<https://secure.csd.gov.za>).

CIDB Registration

Reference is also to be made to returnable form T2.2.18: "Eligibility: Verification of CIDB Registration and Status".

Registration with the CIDB must be reflected as "Active" at time of tender closing.

Tenderers are to include with their submission a printout of their **CIDB Registration**, obtained from the CIDB website (<https://registers.cidb.org.za/PublicContractors/ContractorSearch>).

The date of obtaining the CIDB printout(s) is to be indicated on the printout.

Broad-Based Black Economic Empowerment (B-BBEE) Status Level Certificate(s)

Tenderers shall submit documentary evidence/proof in the form of an original valid or certified copy B-BBEE Status Level verification certificate or an Exempted Micro Enterprise affidavit in terms of Council's Preferential Procurement Policy.

F.3: THE EMPLOYER'S UNDERTAKINGS

F.3.1.1 Respond to requests from the tenderer: Replace the words “five working days” with “three working days”.

F.3.2 Issue addenda: Add the following paragraph:

“Addenda will be issued, in electronic format, via email to all Tenderers who were present at the Compulsory Clarification Meeting and whose details were captured on the attendance register as per F.2.7 above.”

F.3.4 Opening of Tender Submissions: Tenders will be opened immediately after the closing time for tenders. The public reading of tenders will take place in the SCM Boardroom, 6th Floor, Engineering Unit Building, 166 KE Masinga Road, Durban.

F3.8 Test for Responsiveness

Add the following to F3.8:

Tenders will be considered non-responsive if:

- The tender offer is not in compliance with the specifications;
- The tenderer is not registered on the eThekweni Municipality Supplier Database prior to the Tender closing time;
- The tenderer has not completed and / or signed the offer portion of C1.1 Form of Offer and Acceptance;
- The tenderer does not comply with the CIDB contractor grading designation as specified in F.2.1.2 above;
- The tenderer has failed to achieve the minimum score for functionality;
- The tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the Employer's written request.
- The tenderer has failed to comply with Clause F.2.23;
- The tenderer does not meet the minimum score for a level 8 B-BBEE contributor, or who is not verified in terms of the Construction Sector Charter;
- The Tenderer has failed to provide a bank rating letter from the bank indicating that the account is managed in a satisfactory manner, and that there are no dishonours and that the tenderer is good for normal business engagements for the tendered amount over the contract period;
- The tenderer has not complied with any other requirements stipulated in Section T.1.2 – Annexure A: Responsiveness and Evaluation Criteria, and the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2022 (Government Gazette No. 47452) shall apply.

F.3.11 Evaluation of Tender Offers:

Eligibility

Tenders will be checked for compliance with the ELIGIBILITY requirements, as specified in T1.2.2 Clause F.2.1. Tenderers not in compliance will be deemed non-responsive.

Functionality

FUNCTIONALITY will be evaluated to determine the responsiveness of tenders received. The minimum score for FUNCTIONALITY is **70** points. Those tenders not achieving the minimum score will be deemed non-responsive.

The functionality Criteria, Sub-Criteria, Points per Criteria/ Sub-Criteria, Returnable Documentation and Schedules, Method of Evaluation, and Prompts for Judgement are as specified in T1.2.3: "Additional Conditions of Tender".

Preference Point System

The procedure for the evaluation of responsive tenders is **PRICE AND PREFERENCE** in accordance with the Employer's current SCM Policy, the Preferential Procurement Policy Framework Act (5 of 2000), and the Preferential Procurement Policy Framework Act Regulations (2022).

Price Points

The **90/10** preference points system will be applied. The Formula used to calculate the **Price Points (max. 90)** will be according to that specified Regulation 5.1.

Preference Points

Reference is also to be made to T2.2.7: "MBD 6.1: Preference Points Claim".

The Preference Points (either 20 or 10) will be derived from points allocated/ claimed for **Specific Goals** as indicated in the table(s) below, according to the specified **Goal/ Category Weightings**.

- **Ownership Goal**

Goal Weighting: 70%

The tendering entity's **Percentage Ownership**, in terms of the **Ownership Category(s)** listed below, is to be used in the determination of the tenderer's claim for **Preference Points** for this specific goal.

| Ownership Categories | Criteria | 80/20 | 90/10 |
|-----------------------------|--|--------------|--------------|
| Race: Black (w1) | Equals 0% | n/a | 0 |
| | Between 0% and 51% | n/a | 3 |
| | Greater or equal to 51% and less than 100% | n/a | 5 |
| | Equals 100% | n/a | 7 |
| Maximum Goal Points: | | n/a | 7 |

Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status)

- Companies and Intellectual Property Commission registration document (CIPC)
- CSD report.
- B-BBEE Certificate of the tendering entity.

- **RDP Goal: The promotion of enterprises located in a specific municipal area**

Goal Weighting: 30%

The tendering entity's **Address** (as stated on the National Treasury Central Supplier Database (CSD) or on the eThekweni Municipality Vendor Portal) is to be used in the determination of the tenderer's claim for **Preference Points** for this Specific Goal.

| Municipal Area | 80/20 | 90/10 |
|---|-------|-------|
| Not within eThekweni Municipality | n/a | 0 |
| Within eThekweni Municipality | n/a | 1 |
| Within the specified region / Adjoining Wards | n/a | 2 |
| Within the specified zone / Project Ward(s) | n/a | 3 |
| Maximum Goal Points: | n/a | 3 |

Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status)

- CSD Report

F.3.11.6 Risk Analysis

Notwithstanding compliance with regard to CIDB registration or any other requirements of the Tender, the employer will perform a risk analysis in respect of the following:

- reasonableness of the financial offer
- reasonableness of unit rates and prices
- the tenderer's ability to fulfil its obligations in terms of the tender document, that is, that the tenderer can demonstrate that he/she/it possesses the necessary professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, capacity, experience, reputation, personnel to perform the contract, etc.; the Employer reserves the right to consider a tenderer's existing contracts with the Employer in this regard
- any other matter relating to the submitted bid, the tendering entity, matters of compliance, verification of submitted information and documents.
- financial bank rating

The conclusions drawn from this risk analysis will be used by the Employer in determining the acceptability of the tender offer in terms of F.3.13.

F.3.13 Acceptance of tender offer: In addition to the requirements of Clause F.3.13 of the Standard Conditions of Tender, tender offers will only be accepted if:

- The tenderer submits a **valid Tax Clearance Certificate OR Tax Compliance Status PIN**, issued by the TCS System of the South African Revenue Services, or has made arrangements to meet outstanding tax obligations.
- The tenderer is **registered, and "Active", with the Construction Industry Development Board**, at time of tender closing, in an appropriate contractor grading designation.
- The tenderer or any of its directors/shareholders is **not listed on the Register of Tender Defaulters** in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.
- The tenderer has not:
 - Abused the Employer's Supply Chain Management System; or
 - Failed to perform on any previous contract and has been given a written notice to this effect.
- The tenderer has completed the **Compulsory Enterprise Questionnaire** and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process.
- The tenderer is **registered and in good standing with the compensation fund or with a licensed compensation insurer**.

- (g) The Employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the **necessary competencies and resources to carry out the work safely.**

The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound to provide any quantities stipulated in the specification.

The municipality has a firm intention to proceed with the work, subject to funding being identified. Notwithstanding clause F.1.1.3 of the Standard Conditions of Tender, the municipality reserves the right to award or not award the tender based on the municipalities available budget.

F.3.15 Complete adjudicator's contract: Refer to the General Conditions of Contract and the Contract Data.

F.3.17 Copies of contract: The number of paper copies of the signed contract to be provided by the Employer is ONE (1).

Bidders are required to also make an electronic submission via SSS. Bidders must ensure that the hard copy and electronic submission are the same, failing which the submission will be deemed invalid. Bidders are responsible for resolving all access rights and submission queries before the tender closing date.

SSS Queries Contact: Lindo Dlamini: Tel: 031-3227133/031-3227153 email: supplier.selfservice@durban.gov.za

T1.2.3 ADDITIONAL CONDITIONS OF TENDER**T1.2.3.1 Appeals**

In terms of Regulation 49 of the Municipal Supply Chain Management Regulations persons aggrieved by decisions or actions taken by the Municipality, may lodge an appeal within 14 days of the decision or action, in writing to the Municipality. All appeals (clearly setting out the reasons for the appeal) and queries with regard to the decision of award are to be directed to:

The City Manager
Attention Ms S. Pillay eMail: Simone.Pillay@durban.gov.za
P O Box 1394
DURBAN, 4000

T1.2.3.2 Prohibition on awards to persons in the service of the state

Clause 44 of the Supply Chain Management Regulations states that the Municipality or Municipal Entity may not make any award to a person:

- (a) Who is in the service of the State;
- (b) If that person is not a natural person, of which a director, manager, principal shareholder or stakeholder is a person in the service of the state; or
- (c) Who is an advisor or consultant contracted with the municipality or a municipal entity.

Should a contract be awarded, and it is subsequently established that Clause 44 has been breached, the Employer shall have the right to terminate the contract with immediate effect.

T1.2.3.3 Code of Conduct and Local Labour

The Tenderers shall make themselves familiar with the requirements of the following policies that are available on web address: <ftp://ftp.durban.gov.za/cesu/StdContractDocs/>:

- Code of Conduct;
- The Use of CLOs and Local Labour.

T1.2.3.5 Functionality Specification

The Functionality criteria (Returnable Schedule T2.2.32) maximum scores in respect of each of the criteria are as follows:

| Item | Functionality Criteria / Sub Criteria | | Max Points per Sub-Criteria | Maximum Points per Criteria |
|------|--|--|-----------------------------|-----------------------------|
| 1 | Tenderer's Experience | Civil Works | 10 | 30 |
| | | Mechanical Works | 10 | |
| | | Electrical Works | 10 | |
| 2 | Project Organogram and Experience of Key Staff | Contracts Site Agent | 15 | 70 |
| | | Mechanical Design Engineer / Technologist | 9 | |
| | | Electrical Design Engineer / Technologist | 9 | |
| | | Control and Instrumentation Design Engineer / Technologist | 9 | |
| | | Civil Site Engineer | 7 | |
| | | Mechanical Site Engineer | 7 | |
| | | Electrical Site Engineer | 7 | |
| | | Control and Instrumentation Site Engineer | 7 | |

Maximum possible score for Functionality (M_s) 100

The minimum number of evaluation points for Functionality is **70**. Only those tenderers who achieve the minimum number of Functionality evaluation points (or greater) will be eligible to have their tenders further evaluated.

The score achieved for functionality will be the sum of the scores achieved, in the evaluation process, for the individual criteria.

Evaluation criteria will be adjudicated according to submissions made in accordance with the following schedules, which are found in T2.2: Returnable Schedules:

| Item | Functionality criteria / Sub criteria | Returnable Schedules |
|------|--|---|
| 1 | Tenderer's Experience | <ul style="list-style-type: none"> Experience of Tenderer (T2.2.19) |
| 2 | Project Organogram and Experience of Key Staff | <ul style="list-style-type: none"> Proposed Organisation and Staffing (T2.2.20) Key Personnel (T2.2.21) CVs with Experience of Key Personnel (T2.2.22) |

T1.2.3.6 Claims arising after submission of tender

No claim for any extras arising out of any doubt or obscurity as to the true intent and meaning of anything shown on the Contract Drawings or contained in the Conditions of Contract, Scope of Work and Pricing Data, will be admitted by the Employer/Employer's Agent after the submission of any tender and the Tenderer shall be deemed to have:

- inspected the Contract Drawings and read and fully understood the Conditions of Contract.
- read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.
- visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials, plant and equipment to and from the site and made the necessary provisions for any additional costs involved thereby.

-
- d) Requested the Employer or his duly authorised agent to make clear the actual requirements of anything shown on the Contract Drawings or anything contained in the Scope of Work and Pricing Data, the exact meaning or interpretation of which is not clearly intelligible to the Tenderer.
 - e) received any Addenda to the tender documents which have been issued in accordance with the Employer's Supply Chain Management Policy.

Before submission of any tender, the Tenderer should check the number of pages, and if any are found to be missing or duplicated, or the figures or writing indistinct, or if the Pricing Data contain any obvious errors, the tenderer must apply to the Employer/Employer's Agent at once to have the same rectified, as no liability will be admitted by the Employer/Employer's Agent in respect of errors in any tender due to the foregoing.

T1.2.3.7 Awarding of Tender

The Awarding of the contract is subject to the availability of budget.

ANNEXURE A: RESPONSIVENESS AND EVALUATION CRITERIA

1. RESPONSIVENESS CRITERIA

No bid will be considered by eThekweni Municipality unless it meets the following responsiveness criteria (for the bid to be considered responsive, the bid must meet the following requirements):

- a) Bidders must ensure that they are registered on the database of eThekweni Municipality, if they wish to conduct business with the eThekweni Municipality. If the bidder is not registered on the eThekweni Municipality's supplier database prior to the award of the bid, the registration form can be obtained as follows:
 - i. Website at: <https://ethekwinisupplierportal.durban.gov.za/>
- b) eThekweni Municipality will reject a bid in terms of the following:
 - i. If any municipal rates and taxes or municipal service charges owed by the bidder or any of its directors to this or any other municipality or municipal entity, are in arrears for more than three months.
 - ii. The name of the company or any of its director(s) names appear on the list of Tender Defaulters or restricted suppliers as published by National Treasury.
- c) The following completed documents must be submitted or provided as part of the bid submission:
 - i) Bidder to submit their unique person identification number (pin) issued by SARS to enable the organ of state to view the taxpayer's profile and tax status.
 - ii) Copy or Certified valid B-BBEE Status Level Verification Certificate. Bidders who do not submit a B-BBEE Status Level Verification Certificate or are non-compliant contributors to B-BBEE do not qualify for preference points for B-BBEE but will not be disqualified from the bidding process.
 - iii) Completed and signed declaration of interest form (MBD 4).
 - iv) Subcontracting agreement/s, if applicable to the bid that provides a breakdown of the subcontracting arrangement/s relating to powers and functions between the parties involved.
- d) Bidders must acquaint themselves fully on the General Conditions of contract and special conditions of contract (if applicable).
- e) No bids will be accepted unless the bid documentation as issued by the municipality is utilized.
- f) No telephonic, faxed or e-mailed or late bids will be accepted.
- g) The awarding of this bid is subject to the following:
 - i. Relevant technical specifications / scope of works as stated in this bid document;
 - ii. Attendance of compulsory site or clarification meetings, if applicable;
 - iii. Attaining the minimum points for functionality, if applicable;
 - iv. Proper completion of this bid document and signing of declarations;
 - v. General conditions of contract that applies for this bid;
 - vi. Any conditions as stipulated in MBD 1; and
 - vii. Any special conditions of contract as stipulated in this bid document.
- h) Persons aggrieved by decisions or actions taken in the implementation of this supply chain management system, may lodge within 14 days of the decision or action, a written objection or complaint against the decision or action.
- i) Inducements, rewards, gifts and favors to municipalities, officials and other role players
 - i. No person who is a provider or prospective provider of goods or services, or a recipient or prospective recipient of goods disposed or to be disposed of may either directly or through a representation intermediary promise, offer or grant any inducement or reward to the eThekweni Municipality for or in connection with the award of a contract;
 - ii. The accounting officer must promptly report any alleged contravention of subparagraph to the National Treasury for considering whether the offending person, and any representative or intermediary through which such person is alleged to have acted, should be listed in the National Treasury's database of persons prohibited from doing business with the public sector.

-
- j) The bid must be properly received in a sealed envelope. The outside of the envelope must clearly indicate the quotation number and title (refer to invitation to bid for further details regarding submission)
 - k) The bid must be deposited in the relevant quotation box as indicated in the invitation to bid (MBD1) on or before the closing date and time of the bid. Telephonic, facsimile, electronic/ emailed and late bids will not be accepted.
 - l) Bids shall be declared invalid, and shall be endorsed and recorded as such in the bid opening record by the responsible official to open the bid, in the following instances:
 - i. If the bid is not sealed;
 - ii. if the bid including the bid price amount, where applicable is not submitted on the official pricing schedule;
 - iii. if the bid is not completed in non-erasable ink;
 - iv. if the bid was not submitted on the official forms provided or retyped or online; or
 - v. if the name of the bidder is not stated, or is indecipherable
 - m) A bid will not be invalidated if the amount in words and the amount in figures do not correspond, in which case the amount in words shall be read out at the bid opening and shall be deemed to be the bid amount.
 - n) The official bid document must be fully completed in indelible ink. Where information requested does not apply to the bidder and the space is left blank, the bidder must provide written clarification.
 - o) All requested relevant and/ or additional documentation such as compliance certificates, professional registration, artisan qualification, etc., must be attached behind the bid document.
 - p) Bidders must submit a certified statement signed by the bidder declaring that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 90 days.
 - q) The bidder must be in good standing to do business with the public sector in terms of Regulation 38 of the Municipal Supply Chain Management Regulations (Government Gazette 27636 of 30 May 2005).
 - r) The bidder must adhere to the pricing instructions. All prices must be inclusive of Value Added Tax (VAT)
 - s) The Bidder's details must be provided.
 - t) The necessary document authorizing the representative to sign and submit the bid on the bidder's behalf must be completed and signed.
 - u) The declaration of interest by the bidder must be completed and signed.
 - v) The bid must comply with all the minimum technical specifications.
 - w) The MBD 9 (certificate of bid determination) must be completed and signed.
 - x) No award, where a competitive bidding process was followed, shall be formally implemented until a ruling has been made on any appeal/s received.
 - y) Only tender documents that were issued as indicated in the tender notice will be deemed as an acceptable PDF version of the original document. Re-distribution of the electronic version to any other prospective tenderer is prohibited. If it is found that this provision has not been complied with, the tenderer(s) offer will be regarded as being non-responsive.
 - z) Consent is given to eThekweni Municipality to use any personal information, as provided within the tender document, by the bidder and contained herein for purpose of evaluating the tender.

2. EVALUATION OF BIDS

- a) All bids received shall be evaluated in terms of the Municipal Supply Chain Management Regulations, the Preferential Procurement Policy Framework Act no 5 of 2000, the Preferential Procurement Regulations of 2022, Council's Supply Chain Management Policy and Council's Preferential Procurement Policy.
- b) The municipality reserves the right to accept all, some, or none of the bids submitted — either wholly or in part — and it is not obligated to accept the lowest bid. The municipality also reserves the right to
- c) reduce or increase the contracting period as stated within the tender document.
- d) A contract may be awarded to a tenderer that did not score the highest points, only in accordance with section 2(1)(f) of the Preferential Procurement Policy Framework Act (Act no 5 of 2000).

3. BID VALIDITY PERIODS

- a) A bid validity period will apply to all bids and will be calculated from the bid closure date. Bids shall remain in force and binding for the bid validity period as indicated in the invitation to bid and the bid documents.
- b) Before the expiration of bid validity, the relevant employer's representative the relevant contract manager must contact all bidders in writing in which they are requested to extend their bid validity period.
- c) All bidders who indicated the acceptance of the extension of the bid validity period in time, will be considered for evaluation purposes.
- d) Any such extension shall be agreed to by a bidder in writing and must be sent back to the relevant employer's representative or relevant contract manager before the expiration of the bid validity period. Bidders who fail to respond to such a request before the validity of their bid expires or who decline such a request shall not be considered further in the bid evaluation process.
- e) All bidders who indicated the acceptance of the extension of the bid validity period in time, will be considered for evaluation purposes.

PART T2: RETURNABLE DOCUMENTS

T2.1 LIST OF RETURNABLE DOCUMENTS

General

The Tender Submission Documentation must be submitted in its entirety. All forms must be properly completed as required.

The Tenderer is required to complete each and every Schedule and Form listed below to the best of their ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the Schedules and Forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is non-responsive.

T2.2 Returnable Schedules, Forms and Certificates

Entity Specific

| | | |
|---------|--|----|
| T2.2.1 | Compulsory Enterprise Questionnaire | 22 |
| T2.2.2 | Certificate of Attendance at Clarification Meeting | 25 |
| T2.2.3 | Tax Compliance Status PIN | 26 |
| T2.2.4 | Contractor's Health and Safety Declaration | 27 |
| T2.2.5 | MBD 4: Declaration of Interest | 29 |
| T2.2.6 | MBD 5: Declaration for Procurement Above R10 Million | 31 |
| T2.2.7 | MBD 6.1: Preference Points Claim Form ITO the Preferential Regulations | 32 |
| T2.2.8 | MBD 8: Declaration of Bidder's Past SCM Practices | 35 |
| T2.2.9 | MBD 9: Certificate of Independent Bid Determination | 37 |
| T2.2.10 | Record of Addenda to Tender Documents | 40 |
| T2.2.11 | Form Concerning the Fulfilment of The Construction Regulations, 2014 | 41 |
| T2.2.12 | Confirmation of eThekweni Municipality Supplier Database Registration | 43 |
| T2.2.13 | Authority of Signatory | 44 |
| T2.2.14 | Assurance of Provision of Performance Guarantee | 45 |

Eligibility

| | | |
|---------|---|----|
| T2.2.15 | Eligibility: Declaration of Municipal Fees | 40 |
| T2.2.16 | Eligibility: Registration with Compensation Commissioner | 47 |
| T2.2.17 | Eligibility: CSD Registration Report | 48 |
| T2.2.18 | Eligibility: Verification of CIDB Registration and Status | 49 |

Technical or Functionality Evaluation

| | | |
|---------|---|----|
| T2.2.19 | Experience of Tenderer | 50 |
| T2.2.20 | Proposed Organisation and Staffing | 61 |
| T2.2.21 | Key Personnel | 62 |
| T2.2.22 | Experience of Key Personnel | 63 |
| T2.2.23 | Preliminary Programme | 64 |
| T2.2.24 | Schedule of Proposed Subcontractors | 65 |
| T2.2.25 | Plant and Equipment | 66 |
| T2.2.26 | Contractor's Health and Safety Plan | 67 |
| T2.2.27 | Schedule of Estimated Monthly Expenditure | 68 |

| | | |
|---------|---|----|
| T2.2.28 | Schedule of Special Materials | 70 |
| T2.2.29 | Tenderer's Workshop Facilities and Installation Equipment | 71 |
| T2.2.30 | Licensing For Electricians and Technicians | 72 |
| T2.2.31 | Price Basis for Imported Resources | 73 |
| T2.2.32 | Functionality Evaluation Criteria | 74 |
| T2.2.33 | Mechanical Data Sheets | 82 |
| T2.2.34 | Electrical, Control and Instrumentation Data Sheets | 83 |
| T2.2.35 | Checklist | 84 |

T2.2 RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

The returnable schedules, forms, and certificates, as listed in T2.2, can be found on pages 22 to 84.

NOTE

The **Form of Offer** (C1.1.1), The **Data to be Provided by Contractor** (C1.2, Part 2), and the **Bill of Quantities** (C2.2) are also required to be completed by the tenderer.

T2.2.1 COMPULSORY ENTERPRISE QUESTIONNAIRE

| Ref | Description | Complete or Circle Applicable |
|------|--|---|
| 1.1 | Name of enterprise | |
| 1.2 | Name of enterprise's representative | |
| 1.3 | ID Number of enterprise's representative | |
| 1.4 | Position enterprise's representative occupies in the enterprise | |
| 1.5 | National Treasury Central Supplier Database Registration number | MAAA |
| 1.6 | eThekweni Supplier Database: Reference number (PR), if any: | PR |
| 1.7 | VAT registration number, if any: | |
| 1.8 | CIDB registration number, if any: | |
| 1.9 | Department of Labour: Registration number | |
| 1.10 | Department of Labour: Letter of Good Standing Certificate number | |
| 2.0 | Particulars of sole proprietors and partners in partnerships (attach separate pages if more than 4 partners) | |
| | Full Name | Identity No. Personal income tax No. * |
| 2.1 | | |
| 2.2 | | |
| 2.3 | | |
| 2.4 | | |
| 3.0 | Particulars of companies and close corporations | |
| 3.1 | Company registration number, if applicable: | |
| 3.2 | Close corporation number, if applicable: | |
| 3.3 | Tax Reference number, if any: | |
| 3.4 | South African Revenue Service: Tax Compliance Status PIN: | |

4.0 Record in the service of the state (Insert on a separate page if necessary)

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

- | | |
|---|--|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> a member of any provincial legislature |
| <input type="checkbox"/> an official of any municipality or municipal entity | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | <input type="checkbox"/> a member of the National Assembly or the National Council of Province |
| <input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) | <input type="checkbox"/> an employee of Parliament or a provincial legislature |

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

5.0 Record of spouses, children and parents in the service of the state (Insert on a separate page if necessary)

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

- | | |
|---|--|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> a member of any provincial legislature |
| <input type="checkbox"/> an official of any municipality or municipal entity | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | <input type="checkbox"/> a member of the National Assembly or the National Council of Province |
| <input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) | <input type="checkbox"/> an employee of Parliament or a provincial legislature |

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

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

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

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.2 CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING / SITE INSPECTION

Reference is to be made to Clauses F.2.1(c) and F.2.7 of the Tender Data.

This is to certify that:

(entity name):

of (address):

was represented by the person(s) named below at the Clarification Meeting held for all tenderers, the details of which are stated in the Tender Data (F.2.7).

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

Particulars of person(s) attending the meeting:

Name:

Name:

Signature:

Signature:

Capacity:

Capacity:

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

Name:

Signature:

Date:

T2.2.3 TAX COMPLIANCE STATUS PIN

Reference is to be made to Clauses F.2.23 and F.3.13(a) of the Tender Data.

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.

The TCS PIN(s) are to be entered under item 3.4 on form **T2.2.1: Compulsory Enterprise Questionnaire**.

Tenderers are to include, at the back of their submission document, a printout of their Tax Compliance Status PIN (TCS PIN) OR an original Tax Clearance Certificate.

Failure to include the required document will make the tender submission non-responsive.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the entity, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the submission.***

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.4 CONTRACTOR'S HEALTH AND SAFETY DECLARATION

If Functionality is applicable as part of tender evaluation, reference is to be made to Clause F.3.11 of the Conditions of Tender.

Reference is to be made to Clauses F.2.1(e) and F.2.23 of the Tender Data.

In terms of Clause 5(1)(h) of the OHS Act 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Principal Contractor may only be appointed to perform construction work if the Client is satisfied that the Principal Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHS Act 1993 Construction Regulations 2014.

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

Declaration by Tenderer

- 1 I, the undersigned, hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHS Act 1993 Construction Regulations 2014.
- 2 I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
- 3 I propose to achieve compliance with the Regulations by one of the following (Tenderers are to Circle Applicable - Yes or No):

(a) From my own competent resources as detailed in 4(a) hereafter.

(b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter:

(c) From outside sources by appointment of competent specialist Subcontractors as detailed in 4(c) hereafter:

| Circle Applicable | |
|-------------------|----|
| Yes | NO |
| Yes | NO |
| YES | NO |

- 4 Details of resources I propose:

(Note: Competent resources shall include safety personnel such as a construction supervisor and construction safety officer as defined in Regulation 8, and competent persons as defined in Regulations 9, 10, 11, 12, 13, 14, 16, 17, 20, 21, 22, 23(1), 24, 25, 26, 27, 28 and 29, as applicable).

- (a) Details of the competent and qualified key persons from my company's own resources, who will form part of the contract team:

| NAMES OF COMPETENT PERSONS | POSITIONS TO BE FILLED BY COMPETENT PERSONS |
|----------------------------|---|
| | |
| | |
| | |
| | |
| | |
| | |

(b) Details of training of persons from my company's own resources (or to be hired) who still have to be trained to achieve the necessary competency:

(i) By whom will training be provided?

(ii) When will training be undertaken?

(iii) Positions to be filled by persons to be trained or hired:

| |
|--|
| |
| |
| |
| |
| |

(c) Details of competent resources to be appointed as subcontractors if competent persons cannot be supplied from own company:

Name of proposed subcontractor:

Qualifications or details of competency of the subcontractor:

| |
|--|
| |
| |
| |
| |

- 5 I, the undersigned, hereby undertake, if this tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 7(1) of the Construction Regulations, which plan shall be subject to approval by the Client.
- 6 I, the undersigned, confirm that copies of this company's approved Health and Safety Plan, the Client's Safety Specifications as well as the OHSA 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Principal Contractor's personnel, the Client's personnel, the Employer's Agent, visitors, and officials and inspectors of the Department of Labour.
- 7 I, the undersigned, hereby confirm that adequate provision has been made in the tendered rates and prices in the Bill of Quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHSA 1993 Construction Regulations 2014, and that I will be liable for any penalties that may be applied by the Client in terms of the said Regulations (Regulation 33) for failure on the Principal Contractor's part to comply with the provisions of the Act and the Regulations.
- 8 I, the undersigned, agree that failure to complete and execute this declaration to the satisfaction of the Client will mean that this company is unable to comply with the requirements of the OHSA 1993 Construction Regulations (2014) and accept that this tender will be prejudiced and may be rejected at the discretion of the Client.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.5 MBD 4: DECLARATION OF INTEREST

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

- (a) a member of:
 - (i) any municipal council.
 - (ii) any provincial legislature.
 - (iii) the national Assembly or the national Council of provinces.
- (b) a member of the board of directors of any municipal enterprise.
- (c) an official of any municipality or municipal enterprise.
- (d) an employee of any national or provincial department, national or provincial public enterprise 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 enterprise.
- (f) an employee of Parliament or a provincial legislature.

"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.

- 1 No bid will be accepted from persons in the service of the state¹.
- 2 Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.
- 3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Name of enterprise

Complete T2.1.2.1 Item 1.1

Name of enterprise's representative

Complete T2.1.2.1 Item 1.2

3.2 ID Number of enterprise's representative

Complete T2.1.2.1 Item 1.3

3.3 Position enterprise's representative occupies in the enterprise

Complete T2.1.2.1 Item 1.4

3.4 Company Registration number

Complete T2.1.2.1 Item 3.1 or 3.2

3.5 Tax Reference number

Complete T2.1.2.1 Item 3.3

3.6 VAT registration number

Complete T2.1.2.1 Item 1.7

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

Circle Applicable

3.8 Are you presently in the service of the state?

YES

NO

If yes, furnish particulars:

3.9 Have you been in the service of the state for the past twelve months?

YES

NO

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 |
|-----|----|

3.11 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 |
|-----|----|

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 |
|-----|----|

If yes, furnish particulars:

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 |
|-----|----|

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 |
|-----|----|

If yes, furnish particulars:

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

| Full Name | Identity No. | State Employee No. | Personal income tax No. |
|-----------------------------------|--------------|--------------------|-------------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Use additional pages if necessary | | | |

| |
|--|
| |
|--|

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.6 MBD 5: 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.

| | | Circle Applicable | |
|-------|--|----------------------|----|
| | | YES | NO |
| 1.0 | Are you by law required to prepare annual financial statements for auditing? | | |
| 1.1 | If YES, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years. | | |
| 2.0 | Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? | YES | NO |
| 2.1 | If NO, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days. | | |
| 2.2 | If YES, provide particulars. | | |
| | | | |
| | | | |
| 3.0 | 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? | YES | NO |
| 4.0 | Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? | YES | NO |
| 4.1 | If YES, provide particulars. | | |
| | | | |
| | | | |

If required by 1.1 above, tenderers are to include, at the back of their tender submission document, a printout of their audited annual financial statements.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and, if required, that the requested documentation has been included in the tender submission.

| | | | |
|------------------------|-------|------|-------|
| NAME (Block Capitals): | _____ | Date | _____ |
| SIGNATURE: | _____ | | _____ |

T2.2.7 MBD 6.1: PREFERENCE POINTS CLAIM
In terms of THE PREFERENTIAL PROCUREMENT REGULATIONS (2022)

Reference is to be made to Clause F.3.11 of the Tender Data.

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

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

1.0 GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to invitations to tender:
 - the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).
- 1.2 The applicable preference point system for this tender is the 90/10 preference point system.
- 1.3 Preference Points for this tender shall be awarded for:
 - Price and Specific Goals: Either 80 or 90 (price) and 20 or 10 (specific goals), in terms of 1.2 above.
 - The total Preference Points, for Price and Specific Goals, is 100.
- 1.4 Failure on the part of the tenderer to submit the required proof or documentation, in terms of the requirements in the Conditions of Tender for claiming specific goal preference points, will be interpreted that preference points for specific goals are not claimed.
- 1.5 The Municipality reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard of preferences, in any manner required by the Municipality.

2.0 DEFINITIONS

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

3.0 FORMULA FOR CALCULATION OF PREFERENCE PRICE POINTS

3.1 PROCUREMENT OF GOODS AND SERVICES

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

OR

90 / 10 Points System

$$P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where:

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

4.0 POINTS AWARDED FOR SPECIFIC GOALS

- 4.1 In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goal(s) stated in Table 1 below, as supported by proof/ documentation stated in the Conditions of Tender:
- 4.2 In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of:
 - (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system, or
 - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

TABLE 1: Specific Goals for the tender and maximum points for each goal are indicated per the table below.

Tenderers are to indicate their points claim for each of the Specific Goals in the shaded blocks.

| The Specific Goals to be allocated points in terms of this tender | Maximum Number of points ALLOCATED (80/20 system) | Maximum Number of points ALLOCATED (90/10 system) | Number of points CLAIMED (80/20 system) | Number of points CLAIMED (90/10 system) |
|--|---|---|---|---|
| Ownership Goal: Race (black) | n/a | 7 | n/a | |
| RDP Goal: The promotion of enterprises located in a specific municipal area. | n/a | 3 | n/a | |
| Total CLAIMED Points (10 Maximum) | | | n/a | |

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, certify that the points claimed, based on the specific goals as specified in the tender, qualifies the tendering entity for the preference(s) shown.

I acknowledge that:

- 1) The information furnished is true and correct.
- 2) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.
- 3) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct.
- 4) If the specific goals have been claimed or obtained on a fraudulent basis, or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have:
 - (a) disqualify the person from the tendering process.
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct.
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation.
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.8 MBD 8: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1.0 This Municipal Bidding Document must form part of all bids invited.
- 2.0 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.
- 3.0 The bid of any bidder may be rejected if that bidder, or any of its directors have:
- a) abused the 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) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years.
 - d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- 4.0 In order to give effect to the above, the following questions must be completed and submitted with the bid.

- 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.

- 4.1.1 If YES, provide 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.

- 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?

- 4.3.1 If YES, provide particulars.

.....

.....

| Circle Applicable | |
|-------------------|----|
| YES | NO |

| | |
|-----|----|
| YES | NO |
|-----|----|

| | |
|-----|----|
| 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 YES, provide 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 |
|-----|----|

4.5.1 If YES, provide particulars.

.....

.....

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both 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.

NAME (Block Capitals):

Date

SIGNATURE:

.....

.....

T2.2.9 MBD 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION**NOTES**

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.

- 1.0 This Municipal Bidding Document (MBD) must form part of all **bids**¹ invited.
- 2.0 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.
- 3.0 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.
- 4.0 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**.
- 5.0 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

.....
(Bid Number and Description)

in response to the invitation for the bid made by:

.....
(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect.

I certify, on behalf of:

.....
(Name of Bidder)

that:

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.
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.

6. 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.
 - (f) bidding with the intention not to win the bid.

7. 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.

8. 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.

9. 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.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.10 RECORD OF ADDENDA TO TENDER DOCUMENTS

I / We confirm that the following communications received from the Employer or his representative before the date of submission of this tender offer, amending the tender documents, have been taken into account in this tender offer.

| ADD.No | DATE | TITLE OR DETAILS |
|--------|------|------------------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

It is also confirmed that the requirements, as stated on the Addenda, have been complied with.

NAME (Block Capitals): _____ **Date** _____

SIGNATURE: _____

T2.2.11 FORM CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014

In terms of regulation 5(1)(h) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated on 7 February 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a Contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

1. In confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations. (Tick)

| | |
|-----|--|
| YES | |
| NO | |

2. Proposed approach to achieve compliance with the Regulations (Tick)

| | |
|--|--|
| Own resources, competent in terms of the Regulations (refer to 3 below) | |
| Own resources, still to be hired and/or trained (until competency is achieved) | |
| Specialist subcontract resources (competent) – specify | |
| | |
| | |
| | |
| | |
| | |

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CVs to be attached):

.....

.....

.....

.....

.....

.....

4. Provide details of proposed training (if any) that will be undergone:

.....

.....

.....

.....

.....

.....

5. Potential key risks identified and measured for addressing risks:

.....

.....

.....

.....

.....

.....

6. I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.
(Tick)

| | |
|------------|--|
| YES | |
| NO | |

Signature of Person(s) authorised to sign this tender:

1. ID No
2. ID No

ATTACH THE FOLLOWING CERTIFIED COPIES TO THIS PAGE

1. A Certified Copy of the Tenderer's Workmen's Compensation Certificate, Act 4 of 2002.
2. A Certified Copy of the Tenderer's Unemployment Insurance Certificate, Act 4 of 2002.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): **Date**

SIGNATURE: **SIGNATURE:**

T2.2.12 CONFIRMATION OF ETHEKWINI MUNICIPALITY SUPPLIER DATABASE REGISTRATION

| ETHEKWINI MUNICIPALITY SUPPLIER DATABASE REGISTRATION | | |
|---|----------------------|--------------------------------------|
| COMPANY NAME | REGISTERED YES/NO | REGISTRATION NUMBER IF APPLICABLE |
| | | |

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.13 AUTHORITY OF SIGNATORY

Assurance shall be given at the time of submission of the tender that the tender has been signed by someone properly authorised thereto by resolution of the Directors, Members or Partners. Tenderers shall submit with their tenders the following information:

Single Company, Close Corporation or Partnership

Signatories for companies shall confirm their authority by attaching to this form a copy of the relevant resolution of the board of directors, duly signed and dated.

By resolution of the board of directors taken on (*Date*)

Mr/Ms (*Print Name*)

has been duly authorized to sign all documents in connection with this tender / contract on behalf of:

.....

(*Print Company Name*)

Signed on behalf of Company :.....

In his/her capacity as :.....

Date:

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.14 ASSURANCE OF PROVISION OF PERFORMANCE GUARANTEE

Having examined the Contract Data, the Scope of Work and the Bill of Quantities and having reviewed my/our financial commitments, I/we have approached the insurance company/bank named below for a Performance Guarantee in the exact terms of the Pro Forma is provided in these tender documents (Part C1.3, Pro-formas).

I/we hereby declare that the insurance company/bank named below is aware of my/our financial position and commitments in terms of this tender and any other tender offers made and is prepared to issue the Performance Guarantee unconditionally, within the period called for in these tender documents, and until the issue of the Certificate of Completion.

Name of proposed Performance Guarantee provider:
.....

(Insurance Company/Bank)

Date: Signed on behalf
of the Tenderer:

Date: Signed on behalf
of the insurance
company/bank:

In their capacity as

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): **Date**

SIGNATURE:
.....

T2.2.15 ELIGIBILITY: DECLARATION OF MUNICIPAL FEES

Reference is to be made to Clause F.2.1(f)(ii) of the Tender Data.

I, the undersigned, do hereby declare that the Municipal fees of:

.....
(full name of Company / Close Corporation / partnership / sole proprietary)

(hereinafter referred to as the TENDERER) are, as at the date hereunder, fully paid or an Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in instalments.

The following account details relate to property of the said TENDERER:

| <u>Account</u> | <u>Account Number: to be completed by tenderer</u> | | | | | | | | | | | |
|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Consolidated Account | | | | | | | | | | | | |
| Electricity | | | | | | | | | | | | |
| Water | | | | | | | | | | | | |
| Rates | | | | | | | | | | | | |
| JSB Levies | | | | | | | | | | | | |
| Other | | | | | | | | | | | | |

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears.

- Where the tenderer's place of business or business interests are outside the jurisdiction of eThekweni municipality, a copy of the accounts/ agreements from the relevant municipality are to be provided.
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or an official letter to that effect, is to be provided.

Tenderers are to include, at the back of their tender submission document, a printout of the above account's and or agreements signed with the municipality.

Failure to include the required document will make the tender submission non-responsive.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.16 ELIGIBILITY: REGISTRATION WITH COMPENSATION COMMISSIONER

Reference is to be made to Clause F.2.1(f)(i) of the Tender Data.

The Occupational Injuries and Diseases Act (130 of 1993 as amended) (the Act) refers. A summary of the pertinent Clauses is listed below. The act is to be referenced for the full text of the clauses.

Clause 80: Employer to register with commissioner and furnish him with particulars

The Act requires that an Employer carrying out business in the Republic to register with the Compensation Commissioner. Any person who fails to comply with the provisions of this clause is guilty of an offence.

Clause 82: Employer to furnish returns of earnings

The Act requires an Employer to furnish the commissioner with a return showing:

- The amount of earnings paid by him to his employees.
- Any further information as may be prescribed or as the commissioner may require.

Any Employer who fails to comply with the provisions of this clause is guilty of an offence.

Clause 86: Assessment to be paid by an employer to commissioner

The Act states that an Employer will receive notices of assessment from the commissioner. The Employer must pay the commissioner the assessment amount on the notices.

Clause 89: Mandators and contractors

The Act requires a contractor (a person with a contract with a mandator) to register as an Employer in accordance with the provisions of the Act and pay the necessary assessments. Failing registration or payment of assessments, the mandator is required to pay the assessments in respect of the employees of the contractor. The mandator is allowed to recover the assessment amounts paid from the contractor.

The Department of labour issues contractors with a **Letter of Good Standing** if the contractor has complied with the requirement(s) of the Act and is in "good standing" with the Compensation Fund. Employers can check the validity of such Letters of Good Standing on the internet (<https://cfoonline.labour.gov.za/VerifyLOGS>).

Tenderers are to include, at the back of their tender submission document, a printout of their most recent Letter of Good Standing from the Department of Labour.

Failure to include the required document will make the tender submission non-responsive.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.17 ELIGIBILITY: CSD REGISTRATION REPORT


Reference is to be made to Clauses F.2.1(e) and F.2.23 of the Tender Data.

The Conditions of Tender, Clause F.2.1: Eligibility, requires a tenderer to be registered, at the time of tender closing, on the **National Treasury Central Supplier Database (CSD)** as a service provider.

CSD Registration Reports can be obtained from the National Treasury's CSD website at <https://secure.csd.gov.za/Account/Login>.

The date of obtaining the printout is to be indicated on the printout.

The following is an example of the beginning of the printout obtained from the above website.

| | |
|--|----------------------|
|  CENTRAL SUPPLIER DATABASE FOR GOVERNMENT | Report Date: |
| | <input type="text"/> |
| | Report Ran By: |
| | <input type="text"/> |
| CSD REGISTRATION REPORT | |
| SUPPLIER IDENTIFICATION | |
| Supplier number | <input type="text"/> |
| Is supplier active? | <input type="text"/> |
| Supplier type | <input type="text"/> |
| Supplier sub-type | <input type="text"/> |
| Legal name | <input type="text"/> |
| Trading name | <input type="text"/> |
| Identification type | <input type="text"/> |
| Government breakdown | <input type="text"/> |
| Business status | <input type="text"/> |
| Country of origin | <input type="text"/> |
| South African company/CC registration number | <input type="text"/> |
| Have Bank Account | <input type="text"/> |
| Total annual turnover | <input type="text"/> |
| Financial year start date | <input type="text"/> |
| Registration date | <input type="text"/> |
| Created by | <input type="text"/> |
| Created date | <input type="text"/> |
| Edit by | <input type="text"/> |
| Edit date | <input type="text"/> |
| Restricted Supplier | <input type="text"/> |
| Restriction Last Verification Date | <input type="text"/> |

Tenderers are to include, at the back of their tender submission document, a printout of their (full) CSD Registration Report.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.18 ELIGIBILITY: VERIFICATION OF CIDB REGISTRATION AND STATUS

Reference is to be made to Clause F.2.1.1 and F.2.23 of the Tender Data.

The Conditions of Tender, **Clause F.2.1.1: Eligibility**, requires a tenderer to be registered, as “Active”, with the CIDB (at time of tender closing), in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations. The required class of construction work is specified in Clause F.2.1.1.

CIDB Registrations can be obtained from the CIDB website at <https://registers.cidb.org.za/PublicContractors/ContractorSearch>. The date of obtaining the printout is to be indicated on the printout.

The following is an example of the beginning of the printout obtained from the above website.

Home

Contractor Detail Print

Contractor Detail

CRS Number: Type of Enterprise:

Contractor Name: Registration Date:

Trading Name: Expiry Date:

Status:

Contractor Grades

Grade:

Back

Copyright © cidb 2011. All rights reserved
[Website technical enquires contact](#)

01/01/2017

Tenderers are to include, at the back of their tender submission document, a printout of their registration with the CIDB.

*I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, **and that the requested documentation has been included in the tender submission.***

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.19 EXPERIENCE OF TENDERER

Refer to Clause F.3.11 for Functionality Points evaluation prompts.

The following is a statement of works of similar nature (in relation to the scope of works) recently (within the past 15 years) executed by myself / ourselves.

Tenderers are to submit copies of **signed Completion Certificates / Practical Completion Certificates / Taking Over Certificates / Performance Certificates for all projects submitted**. Failure to do so will lead to the conclusion that the contract was not successfully completed, and NO points will be awarded for any experience claimed.

The Tenderer shall ensure that the names and contact numbers provided for the referees above are correct as failure to do so will lead to the conclusion that the contract was not successfully completed, and NO points will be awarded for any experience claimed.

(Note: A separate sheet to be completed for each contract.)

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

| CONTRACT INFORMATION | | | |
|--|--|------------------------------|--|
| Contract Description: | | | |
| Month and Year Commenced: | | Award Value (Excl. VAT) | |
| Month and Year Completed: | | *Completed Value (Excl. VAT) | |
| DETAILS OF CONTRACTING PARTIES AND REFEREE | | | |
| Name of Client/End user: | | | |
| Name of Consulting Engineering Firm: | | | |
| Name of Main Contractor: | | | |
| Name of Referee for this contract: | | Referee Contact No: | |
| DETAILS OF CONTRACT SCOPE OF WORK | | | |
| Tenderer to provide details of scope of work below or on a separate page attached hereto. Failure to provide relevant information will prejudice the scoring for experience claimed. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):
Date

SIGNATURE:

T2.2.20 PROPOSED ORGANISATION AND STAFFING

Refer to Clause F.3.11 for Functionality Points evaluation prompts.

The tenderer should propose the structure and composition of their team i.e. the main disciplines involved, the key staff member / expert responsible for each discipline, and the proposed technical and support staff and site staff.

The roles and responsibilities of each key staff member / expert should be set out as job descriptions.

The tenderer must attach his / her organization and staffing proposals to this page. (this is to include both the on-site and off-site staffing resources used for this project)

In addition to any lists, this information should also be shown in an organogram format (flow chart) clearly indicating the staff hierarchy and reporting lines, again for on- and off-site resources.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.21 KEY PERSONNEL

Refer to Clause F.3.11 for Functionality Points evaluation prompts.

The Tenderer shall list below the personnel which he intends to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.

| CATEGORY OF EMPLOYEE | NUMBER OF PERSONS | |
|--|--|---|
| | KEY PERSONNEL, PART OF THE CONTRACTOR'S ORGANISATION | KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY |
| Contracts Site Agent | | |
| Mechanical Design Engineer / Technologist | | |
| Electrical Design Engineer / Technologist | | |
| Control and Instrumentation Design Engineer / Technologist | | |
| Civil Site Engineer | | |
| Mechanical Site Engineer | | |
| Electrical Site Engineer | | |
| Control and Instrumentation Site Engineer | | |
| Site Agent, Project Managers | | |
| Foremen, Quality Control and Safety Personnel | | |
| Technicians, Surveyors, etc | | |
| Artisans and other Skilled workers | | |
| Plant Operators | | |
| Unskilled Workers | | |
| Others: | | |

Note: CVs of key personnel may be requested during the contract period.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.22 EXPERIENCE OF KEY PERSONNEL

Refer to Clause F.3.11 for Functionality Points evaluation prompts.

The experience of assigned staff member in relation to the Scope of Work will be evaluated from three different points of view:

- 1) General experience (total duration of professional activity), level of education and training and positions held of each discipline specific team leader.
- 2) The education, training, skills and experience of the Assigned Staff in the specific sector, field, subject, etc which is directly linked to the scope of work.
- 3) The key staff members' / experts' knowledge of issues which the tenderer considers pertinent to the project e.g. local conditions, affected communities, legislation, techniques etc.

A CV of the following key personnel, of not more than 2 pages should be attached to this schedule:

- **Contracts Site Agent**
- **Mechanical Design Engineer / Technologist**
- **Electrical Design Engineer / Technologist**
- **Control and Instrumentation Design Engineer / Technologist**
- **Civil Site Engineer**
- **Mechanical Site Engineer**
- **Electrical Site Engineer**
- **Control and Instrumentation Site Engineer**

Each CV should be structured under the following headings:

- a) Personal particulars
 - name
 - date and place of birth
 - place (s) of tertiary education and dates associated therewith
 - professional awards
- b) Qualifications (degrees, diplomas, grades of membership of professional societies and professional registrations)
- c) Skills
- d) Name of current employer and position in enterprise
- e) Overview of post-graduate / diploma experience (year, organization and position)
- f) Outline of recent assignments / experience that has a bearing on the scope of work

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.23 PRELIMINARY PROGRAMME

The Tenderer shall attach a preliminary programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this Contract. The programme shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of his Tender.

This programme shall be in the form of a bar chart (Gantt chart) or similar acceptable time/activity form reflecting the various activities and the quantities that will be carried out every week under each of the elements, comprising the work for this contract. The programme shall also indicate the point where the Tenderer intends to commence work operations and the direction in which the work will proceed. The working hours shall be indicated.

Cognisance must be taken of Section C3.5.1 Programming and Planning when preparing this Schedule.

| PROGRAMME | | | | | | | | | | | | | | |
|-----------|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| ACTIVITY | WEEKS / MONTHS | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Note: The programme must be based on the completion time as specified in the Contract Data.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____ **Date** _____

SIGNATURE: _____

T2.2.24 SCHEDULE OF PROPOSED SUBCONTRACTORS

The following firms have been identified as possible subcontractors for work in this contract.

| NAMES AND ADDRESSES OF PROPOSED SUBCONTRACTORS | NATURE AND EXTENT OF WORK TO BE SUBCONTRACTED | PREVIOUS EXPERIENCE WITH SUBCONTRACTOR |
|--|---|--|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Attach additional pages if more space is required

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.25 PLANT AND EQUIPMENT

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

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

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

Attach additional pages if more space is required

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

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

Attach additional pages if more space is required

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

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.26 CONTRACTOR'S HEALTH AND SAFETY PLAN

At tender stage only a brief overview (**to be attached to this page**) of the tenderers' perception on the safety requirements for this contract will be adequate.

Only the successful Tenderer shall **submit separately** the Contractor's Health and Safety Plan as required in terms of Regulation 7 of the Occupational Health and Safety Act 1993 Construction Regulations 2014.

The detailed safety plan will take into consideration the site-specific risks as mentioned under C.3.6.1 Occupational Health and Safety Specification. A generic plan will not be acceptable.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.27 SCHEDULE OF ESTIMATED MONTHLY EXPENDITURE

The tenderer shall state his estimated expenditure indicating the value of work done and materials not yet built into the Permanent Works for each month of the Contract period which he estimates will arise based on his preliminary programme and tendered rates, as set out in the table below. The total of the monthly amounts shall be equal to the tender sum.

| MONTH | VALUE |
|-------|-------|
| 1. | R |
| 2. | R |
| 3. | R |
| 4. | R |
| 5. | R |
| 6. | R |
| 7. | R |
| 8. | R |
| 9. | R |
| 10. | R |
| 11. | R |
| 12. | R |
| 13. | R |
| 14. | R |
| 15. | R |
| 16. | R |
| 17. | R |
| 18. | R |
| 19. | R |
| 20. | R |
| 21. | R |
| 22. | R |
| 23. | R |
| 24. | R |
| 25. | R |
| 26. | R |
| 27. | R |

| MONTH | VALUE |
|--------------------------|-------|
| 28. | R |
| | |
| | |
| SUB TOTAL | R |
| CONTINGENCIES (10%) | R |
| ESCALATION ALLOWANCE | R |
| FOREX ALLOWANCE | R |
| TOTAL (EXCLUDING VAT) | R |
| VAT (15%) | |
| TOTAL (INCLUDING VAT) | |

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.28 SCHEDULE OF SPECIAL MATERIALS

Each material dealt with as a special material in terms of Clause 4.1 of the Contract Price Adjustment Schedule of the General Conditions of Contract is stated in the list below. The provisions of Clause 6.8.2 of the General Conditions of Contract shall apply to such special materials. The rates and prices for the special materials shall be furnished by the Tenderer, which rates and prices shall not include VAT but shall include all other obligatory taxes and levies.

| Special Material | Unit* | Rate or Price for the base month |
|------------------|-------|----------------------------------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

*Indicate whether the material will be delivered in bulk or in containers.
When called upon to do so, the Tenderer shall substantiate the above rates or prices with acceptable documentary evidence.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____ **Date** _____

SIGNATURE: _____

T2.2.29 TENDERER'S WORKSHOP FACILITIES AND INSTALLATION EQUIPMENT

The tenderer shall state below what workshop facilities will be available for this Contract. The tenderer shall include workshop facilities of sub-contractors and suppliers inside and outside the boundaries of South Africa.

.....

.....

.....

.....

.....

.....

Address of Workshop:

.....

.....

.....

.....

Number of Artisans Normally employed by the Firm:

.....

.....

.....

.....

Number of Technically Qualified Persons Employed:

.....

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

.....

T2.2.30 LICENSING FOR ELECTRICIANS AND TECHNICIANS

Electrical installations that are to have a fixed connection to the local electricity supply, or work being carried out on equipment that is connected to the local electricity supply, must be carried out by a correctly accredited person and licensed electrical contractor.

Technicians working on equipment that is supplied from a 220 volt or 400 volt socket outlet need not be registered, but if they do any wiring or installation work in hazardous locations or work carried out for the petroleum industry, the work must be carried out by a Master Installation Electrician.

On completion of the work the Master Installation Electrician must provide an acceptable Certificate of Compliance for the installation and the Contractor should not be paid for the electrical installation until the certificate has been received.

Questionnaire to be completed by the Electrical Contractor

- Is your company registered as an Employer in the Electrical Contracting Industry with the Industrial Council for the Electrical Contracting Industry in your area?

Yes/No

State Registration No:.....

- Is your company licensed with the Electrical Contracting Board of South Africa as an Electrical Contractor in terms of Regulation No. 5 of the Electrical Installation Regulations of the Occupational Health and Safety Act?

Yes/No

State Contractor's License No:.....

For Hazardous areas and the Petroleum Industry:

- Are you personally a Master Installation Electrician registered in accordance with Regulation No. 9 of the Electrical Installation Regulations of the Occupational Health and Safety Act?

Yes/No

Certificate of Registration No.....

The Tenderer shall attach copies of Certificates of Registration, Letters of Appointment and Licenses mentioned.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.31 PRICE BASIS FOR IMPORTED RESOURCES

| VALUES OF IMPORTED RESOURCES TO BE ADJUSTED | | | | | CUSTOMS DUTY | | SURCHARGE | | Total in Rand of (C) + (D) + (E) included in Bill of Quantities Item (F) |
|---|--------------------------|-------------------------------|--------------------------------------|-----------------------------|--------------|----------|-----------|----------|--|
| Bill of Quantities Item No. | Description of Equipment | Value in Foreign Currency (A) | Rate of Exchange as at Base Date (B) | Value in Rand (A) X (B) (C) | % | Rand (D) | % | Rand (E) | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

* STATE CUSTOMS DUTY TARIFF REFERENCE FOR EACH ITEM

Note:

Note that any resources not inserted in this schedule shall be deemed to be manufactured / supplied in South Africa for the purposes of Contract Price Adjustment.
The BASE DATE referred to in column (B) will be seven (7) calendar days before tender closing.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.32 FUNCTIONALITY EVALUATION CRITERIA

The Tenderer shall provide information for the functionality criteria listed in this Returnable Schedule.

The Tenderer's attention is drawn to clause T1.2.3.5 in the Tender Data for a more detailed explanation of the functionality criteria given in the table below and how the score will be calculated (with applicable values).

| Description of functionality criteria | Weighting | Points attained |
|---|------------|-----------------|
| Tenderer's Experience | 30 | |
| Project Organogram and Experience of Key Staff | 70 | |
| Maximum possible score for Functionality | 100 | |

The minimum score for functionality is **70**. Tenderers that fail to achieve the minimum score for functionality will be rejected.

Tenderers are advised to study the additional conditions of the Tender, specifically T1.2.3.5, prior to completing this schedule and providing the technical information.

| Item | Description of functionality criteria | Description of information | Maximum percentage / points available | Category total | Percentage / Points attained |
|------|---|---|---------------------------------------|----------------|------------------------------|
| 1 | Demonstrated experience of the tendering entity with respect to comparable projects. To be substantiated by submission of a detailed list and description of relevant projects/work, with contact details for client references and submission of a Practical Completion Certificate / Completion Certificate or Taking Over Certificate / Performance Certificate. This information will be assessed based on the information completed for Returnable Schedule T2.2.19 (i.e., completed contracts). | Provide details of projects for the Civil Contractor, Mechanical Contractor and, Electrical Contractor undertaken in the last 15 years to score points for items 1.1 to 1.3. Points will only be awarded for completed projects/contracts. | | 30 | |
| 1.1 | Water treatment and wastewater treatment works projects (local and/or international) with an overall Project Value of R 60 million or more (per individual project) excluding VAT (escalated to date of tender closure by the Employer/Employer's representative using an escalation factor of 7.5% per annum) successfully completed within the past 15 years: Civil Contractor / Sub-Contractor (Contractor to have a minimum CIDB grading of 8 CE). | <u>Points for 1.1 will be allocated as follows:</u> <ul style="list-style-type: none"> - 4 or more projects listed with all details as requested = 10 Points (Excellent) - 3 projects listed with all details as requested = 8 Points (Good) - 2 projects listed with all details as requested = 6 Points (Average) - 1 projects listed with all details as requested = 4 Points (Poor) - No projects listed = 0 Points (Insufficient) | 10 | | |
| 1.2 | Wastewater Treatment Works projects (local and/or international) where the Mechanical portion of the project scope had a value of R 40 million or more (per individual project) excluding VAT (escalated to date of tender closure by the Employer/Employer's representative using an escalation factor of 7.5% per annum) successfully completed within the past 15 years: Mechanical Contractor / Subcontractor (If the Mechanical Contractor is the main Contractor, the Contractor is to have a minimum CIDB grading of 8 ME. However, if the Mechanical Contractor is not the main Contractor, the Contractor is to have a minimum CIDB grading of 7 ME) | <u>Points for 1.2 will be allocated as follows:</u> <ul style="list-style-type: none"> - 4 or more projects listed with all details as requested = 10 Points (Excellent) - 3 projects listed with all details as requested = 8 Points (Good) - 2 projects listed with all details as requested = 6 Points (Average) - 1 projects listed with all details as requested = 4 Points (Poor) - No projects listed = 0 Points (Insufficient) | 10 | | |
| 1.3 | Local and/or International Industrial Electrical and Automation Projects (e.g. industrial treatment, water or wastewater treatment and large pump station projects, etc.) with a Project Value of R 30 million or more (per individual project) excluding VAT (escalated to date of tender closure by the Employer/ Employer's representative using an escalation factor of 7.5% per annum) successfully completed within the past 15 years: Electrical Contractor / Subcontractor (Contractor to have a minimum CIDB grading of 7 EP) | <u>Points for 1.3 will be allocated as follows:</u> <ul style="list-style-type: none"> - 4 or more projects listed with all details as requested = 10 Points (Excellent) - 3 projects listed with all details as requested = 8 Points (Good) - 2 projects listed with all details as requested = 6 Points (Average) - 1 projects listed with all details as requested = 4 Points (Poor) - No projects listed = 0 Points (Insufficient) | 10 | | |

| Item | Description of functionality criteria | Description of information | | | | | | Maximum percentage / points available | Category total | Percentage / Points attained | | | | | | | | |
|--|--|---|--------|----------------------------|--------|---------------------|--------|--|----------------|---|---|-----------------------|----|---------------------|---|----|----|--|
| | | Qualification | | Professional Accreditation | | Relevant Experience | | | | | | | | | | | | |
| | | Type | Points | Type | Points | Type | Points | | | | | | | | | | | |
| 2 | Qualifications and demonstrated experience of the key staff in relation to the scope of work. Refer to Returnable Schedule T2.2.22 for details of qualifications and experience of staff (Please ensure the CVs are attached to T2.2.22). | Points will be measured and awarded to qualification, professional accreditation and relevant experience columns independently and then combined to get the total points scored. Proposed key staff are limited to one discipline i.e., the same person may not hold more than one discipline (role). * For ECSA registrations, note that a registration with a body who is a member of the International Engineering Alliance with its Standards and processes recognized by the Washington Accord will also be recognized. | | | | | | | | | | | | | | | | |
| 2.1 | Contracts Site Agent Contracts Site Agent appointed by the Contractor (relevant experience refers to experience in the Civil construction industry). Contracts Site Agent to have a minimum of 10 years' experience in the construction industry, a minimum 3-year Degree / Diploma in the Built Environment. Contracts Site Agent to have relevant experience which includes as a minimum, water treatment and/or wastewater treatment projects with an average capacity of 10 Ml/d and/or R 75 million or more (excluding VAT, per individual project, to be escalated to date of tender closure by Employer/Employer's Agent using an escalation factor of 7.5% per annum) and should include a minimum of two such projects). (It is expected that the Contracts Site Agent will fulfil the following duties as part of their role: <ul style="list-style-type: none">Managing the project on behalf of the contractor, which includes project management, financial management and | <u>Points for 2.1 will be allocated as follows:</u> <table><tr><td rowspan="2">Four (4) Year Degree in the Built Environment/ Three (3) Year Diploma in the Built Environment</td><td rowspan="2">2</td><td rowspan="2">ECSA* Pr Eng or Pr. Tech or Pr. Techni or SACPCMP (PrCPM)</td><td rowspan="2">1</td><td>> 4 Relevant Projects</td><td>12</td></tr><tr><td>4 Relevant Projects</td><td>8</td></tr></table> | | | | | | Four (4) Year Degree in the Built Environment/ Three (3) Year Diploma in the Built Environment | 2 | ECSA* Pr Eng or Pr. Tech or Pr. Techni or SACPCMP (PrCPM) | 1 | > 4 Relevant Projects | 12 | 4 Relevant Projects | 8 | 15 | 70 | |
| Four (4) Year Degree in the Built Environment/ Three (3) Year Diploma in the Built Environment | 2 | ECSA* Pr Eng or Pr. Tech or Pr. Techni or SACPCMP (PrCPM) | 1 | > 4 Relevant Projects | 12 | | | | | | | | | | | | | |
| | | | | 4 Relevant Projects | 8 | | | | | | | | | | | | | |

| Item | Description of functionality criteria | Description of information | | | | | | Maximum percentage / points available | Category total | Percentage / Points attained |
|------|--|---|--------|---|--------|----------------------|--------|---------------------------------------|----------------|------------------------------|
| | | Qualification | | Professional Accreditation | | Relevant Experience | | | | |
| | | Type | Points | Type | Points | Type | Points | | | |
| | <div>contractual related matters.</div> <ul style="list-style-type: none">Preparation and management of construction programmes, cash flows and budgets. The Contracts Site Agent shall be responsible for the overall management of the contractor's staff completing the project and shall be the primary contact for the Employer's Agent and the Employer.The Contracts Site Agent is expected to attend all contract site meetings and is responsible for Health and Safety and overall quality control for the project.)Shall be full time on site for the duration of the construction contract and programme, particularly when work is being performed or when the Employer's Agent, with reason requires his presence. | | | | | 3 Relevant Projects | 5 | | | |
| | | | | | | 2 Relevant Projects | 2 | | | |
| | | | | | | <2 Relevant Projects | 0 | | | |
| 2.2 | Mechanical Design Engineer / Technologist Mechanical Design Engineer / Technologist appointed by contractor (relevant experience should include as a minimum, wastewater treatment projects with an average capacity of 10 Ml/d and/or R 40 million or more (excluding VAT, per individual project, escalated to date of tender closure by Employer/Employer's Agent using an escalation factor of 7.5% per annum) and should include a minimum of two such projects). Mechanical Design Engineer / Technologist to have a minimum of 10 years' experience. | <u>Points for 2.2 will be allocated as follows:</u> | | | | | | 9 | | |
| | | Four (4) Year Mechanical Eng. Degree / Three (3) Year Mechanical Eng. Diploma / BTech | 2 | ECSA* Pr. Eng or Pr. Tech or Pr. Techni | 1 | >4 Relevant Projects | 6 | | | |
| | | | | | | 4 Relevant Projects | 4 | | | |
| | | | | | | 3 Relevant Projects | 3 | | | |
| | | | | | | 2 Relevant Projects | 2 | | | |
| | | | | | | <2 Relevant Projects | 0 | | | |

| Item | Description of functionality criteria | Description of information | | | | | | Maximum percentage / points available | Category total | Percentage / Points attained |
|------|--|---|--------|---|--------|----------------------|--------|---------------------------------------|----------------|------------------------------|
| | | Qualification | | Professional Accreditation | | Relevant Experience | | | | |
| | | Type | Points | Type | Points | Type | Points | | | |
| 2.3 | Electrical Design Engineer / Technologist Electrical Design Engineer / Technologist (relevant experience should include as a minimum, industrial treatment and water or wastewater treatment projects with an average capacity of 10 Ml/d and/or R 30 million or more or industrial electrical projects with an average project value of R 20 million or more (excluding VAT, per individual project, escalated to date of tender closure by Employer/Employer's Agent using an escalation factor of 7.5% per annum) and should include a minimum of two such projects). Electrical Design Engineer / Technologist to have a minimum of 10 years' electrical design experience. | <u>Points for 2.3 will be allocated as follows:</u> | | | | | | 9 | | |
| | | Four (4) Year Electrical and/or Electronic Eng. Degree / Three (3) Electrical and/or Electronic Eng. Year Diploma / BTech | 2 | ECSA* Pr. Eng or Pr. Tech or Pr. Techni | 1 | >4 Relevant Projects | 6 | | | |
| | | | | | | 4 Relevant Projects | 4 | | | |
| | | | | | | 3 Relevant Projects | 3 | | | |
| | | | | | | 2 Relevant Projects | 2 | | | |
| | | | | | | <2 Relevant Projects | 0 | | | |
| 2.4 | Control and Instrumentation Design Engineer / Technologist Control and Instrumentation Project Engineer (relevant experience should include as a minimum, industrial treatment and water or wastewater treatment projects with an average capacity of 10 Ml/d and/or R 30 million or more or industrial electrical projects with an average project value of R 20 million or more (excluding VAT, per individual project, escalated to date of tender closure by Employer/Employer's Agent using an escalation factor of 7.5% per annum) and should include a minimum of two such projects). Control and Instrumentation Project Engineer to have a minimum of 10 years' electrical design experience. | <u>Points for 2.4 will be allocated as follows:</u> | | | | | | 9 | | |
| | | Four (4) Year Electrical and/or Electronic Eng. Degree / Three (3) Electrical and/or Electronic Eng. Year Diploma / BTech | 2 | ECSA* Pr. Eng or Pr. Tech or Pr. Techni | 1 | >4 Relevant Projects | 6 | | | |
| | | | | | | 4 Relevant Projects | 4 | | | |
| | | | | | | 3 Relevant Projects | 3 | | | |
| | | | | | | 2 Relevant Projects | 2 | | | |
| | | | | | | <2 Relevant Projects | 0 | | | |

| Item | Description of functionality criteria | Description of information | | | | | | Maximum percentage / points available | Category total | Percentage / Points attained |
|------|---|---|--------|----------------------------|--------|----------------------|--------|---------------------------------------|----------------|------------------------------|
| | | Qualification | | Professional Accreditation | | Relevant Experience | | | | |
| | | Type | Points | Type | Points | Type | Points | | | |
| 2.5 | Civil Site Engineer Civil Site Foreman to have a minimum of 10 years' experience. | <u>Points for 2.5 will be allocated as follows:</u> | | | | | | 7 | | |
| | | | | | | >4 Relevant Projects | 7 | | | |
| | | | | | | 4 Relevant Projects | 5 | | | |
| | | | | | | 3 Relevant Projects | 4 | | | |
| | | | | | | 2 Relevant Projects | 2 | | | |
| | | | | | | <2 Relevant Projects | 0 | | | |
| 2.6 | Mechanical Site Engineer Mechanical Site Foreman to have a minimum of 10 years' experience. | <u>Points for 2.6 will be allocated as follows:</u> | | | | | | 7 | | |
| | | | | | | >4 Relevant Projects | 7 | | | |
| | | | | | | 4 Relevant Projects | 5 | | | |
| | | | | | | 3 Relevant Projects | 4 | | | |
| | | | | | | 2 Relevant Projects | 2 | | | |
| | | | | | | <2 Relevant Projects | 0 | | | |

| Item | Description of functionality criteria | Description of information | | | | | | Maximum percentage / points available | Category total | Percentage / Points attained |
|------|--|---|--------|----------------------------|--------|----------------------|--------|---------------------------------------|----------------|------------------------------|
| | | Qualification | | Professional Accreditation | | Relevant Experience | | | | |
| | | Type | Points | Type | Points | Type | Points | | | |
| 2.7 | Electrical Site Engineer Electrical Site Electrician to have a minimum of 10 years' experience. | <u>Points for 2.7 will be allocated as follows:</u> | | | | | | 7 | | |
| | | | | | | >4 Relevant Projects | 7 | | | |
| | | | | | | 4 Relevant Projects | 5 | | | |
| | | | | | | 3 Relevant Projects | 4 | | | |
| | | | | | | 2 Relevant Projects | 2 | | | |
| | | | | | | <2 Relevant Projects | 0 | | | |
| 2.8 | Control and Instrumentation Site Engineer Electrical Site Electrician to have a minimum of 10 years' experience. | <u>Points for 2.8 will be allocated as follows:</u> | | | | | | 7 | | |
| | | | | | | >4 Relevant Projects | 7 | | | |
| | | | | | | 4 Relevant Projects | 5 | | | |
| | | | | | | 3 Relevant Projects | 4 | | | |
| | | | | | | 2 Relevant Projects | 2 | | | |
| | | | | | | <2 Relevant Projects | 0 | | | |

Number of sheets appended by the tenderer to this Schedule (If nil, enter NIL).

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

| | |
|-------------------------------|-------------|
| NAME (Block Capitals): | Date |
| _____ | |
| SIGNATURE: | |
| _____ | _____ |

T2.2.33 MECHANICAL DATA SHEETS

See attached Annexure A.

| <u>Item</u> | <u>Description</u> |
|--------------------|--|
| 01 | Trash Rack Screen |
| 02 | Mechanical Front Rake Screens |
| 03 | Hand Rake Screens: Bypass Channels |
| 04 | Washer Compactor |
| 05 | Vortex Degritter Equipment |
| 06 | Grit Extraction Pump |
| 07 | Grit Classifier |
| 08 | Skip Dolly: Screenings |
| 09 | Skip Dolly: Grit |
| 10 | Biofilter Pumps |
| 11 | Second Class Water System: Raw Water Pumps |
| 12 | Second Class Water System: Booster Pumps |
| 13 | Second Class Water System: Air Compressor |
| 14 | Lifting Equipment for Trash Rack Screen |
| 15 | Lifting Equipment for Mechanical Front Raked Screens |
| 16 | Lifting Equipment for Biofilter Pump Station |
| 17 | Lifting Equipment for Raw Water Pump Station |
| 18 | Lifting Equipment for Booster Pump Station |
| 19 | Ventilation for Raw Water Pump Station |
| 20 | Ventilation for Booster Water Pump Station |
| 21 | Ventilation for Inlet Works MCC Room |
| 22 | Ventilation for Biofilter Pump Station MCC Room |

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block

Date

Capitals):

SIGNATURE:

T2.2.34 ELECTRICAL, CONTROL AND INSTRUMENTATION DATA SHEETS

See attached Annexure B.

| <u>Item</u> | <u>Description</u> |
|--------------------|---------------------------|
| 01 | Busbar Trunking System |
| 02 | 11kV Cables |
| 03 | LV Generator |
| 04 | MCC's |
| 05 | LV Cables |
| 06 | Cable Supports |
| 07 | Luminaire Schedule |
| 08 | VFC's |
| 09 | Soft Starters |
| 10 | Electrical Motors |
| 11 | Electrical Actuators |
| 12 | Small Power and Lighting |
| 13 | PLC |
| 14 | C&I Cabling |
| 15 | Instrumentation |
| 17 | CCTV |
| 18 | Networking Infrastructure |

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block

Date

Capitals):

SIGNATURE:

T2.2.35 CHECKLIST

The following information **MUST** be completed in full and/or attached to the tender document:

| Schedule | Section | Description | Requirement to Comply* | Completed/ Attached** (Y/N) | Comply (Y/N) | Office Use |
|----------|--------------------|---|--|-----------------------------------|-----------------|---------------|
| C1 | C1.1.1 & C1.1.2 | Form of Offer and Acceptance | Completed and comply | | | |
| C1 | C1.1.3 | Schedule of Deviations | Completed if applicable or marked N/A | | | |
| Schedule | Section | Description | Requirement to Comply | Completed/ Attached (Y/N) | Comply (Y/N) | Office Use |
| C2 | C2.2 | Bill of Quantities | Complete | | | |
| C2 | C2.3 | Summary of Bill of Quantities | Complete | | | |
| Schedule | Section | Description | Requirement to Comply | Completed/ Attached (Y/N) | Comply (Y/N) | |
| T2 | T2.2.3 | Tax Compliance Status PIN/Certificate | Attached | | | |
| T2 | T2.2.6 | Original latest Audited Financial Statements (last three years) | Attached | | | |
| T2 | T2.2.7 | B-BBEE Verification Certificate | Attached | | | |
| T2 | T2.2.12 | A Certified Copy of the Tenderer's Workmen's Compensation Certificate, Act 4 of 2002 | Attached | | | |
| T2 | T2.2.13 | Documentary evidence / proof of registration and verification on eThekweni Municipality Supplier Database | Attached | | | |
| T2 | T2.2.15 | Declaration of Municipal Fees | Attached | | | |
| T2 | T2.2.16 | Registration with Compensation Commissioner | Attached | | | |
| T2 | T2.2.17 | CSD Registration Report | Attached | | | |
| T2 | T2.2.18 | CIDB Registration Certificate | Attached | | | |
| T2 | T2.2.19 | Experience of Tenderer | Completed | | | |
| T2 | T2.2.20 | Proposed Organisation and Staffing | Completed | | | |
| T2 | T2.2.21 | Key Personnel | Completed | | | |
| T2 | T2.2.22 | Experience of Key Personnel | Completed | | | |

| Schedule | Section | Description | Requirement to Comply* | Completed/ Attached** (Y/N) | Comply (Y/N) | Office Use |
|----------|---------|---|------------------------|-----------------------------------|-----------------|---------------|
| T2 | T2.2.23 | Preliminary Programme | Completed | | | |
| T2 | T2.2.24 | Schedule of Proposed Subcontractors | Completed | | | |
| T2 | T2.2.25 | Plant and Equipment | Completed | | | |
| T2 | T2.2.26 | Contractor's Health and Safety Plan | Completed | | | |
| T2 | T2.2.27 | Schedule of Estimated Monthly Expenditure | Completed | | | |
| T2 | T2.2.28 | Schedule of Special Materials | Completed | | | |
| T2 | T2.2.29 | Tenderer's Workshop Facilities and Installation Equipment | Completed | | | |
| T2 | T2.3.30 | Licensing For Electricians and Technicians | Completed | | | |
| T2 | T2.3.31 | Price Basis for Imported Resources | Completed | | | |
| T2 | T2.3.32 | Functionality Evaluation Criteria | Completed | | | |
| T2 | T2.3.33 | Mechanical Data Sheets | Completed | | | |
| T2 | T2.3.34 | Electrical, Control and Instrument Data Sheets | Completed | | | |

Reasons for non-compliance:

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____

Date

SIGNATURE: _____



ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD01: Trash Rack Screen

| | |
|------------|--|
| CLIENT N°. | |
|------------|--|

Y6975



PAGE

ZUTARI N°.

REV.

A

[illegible]

| | | | | | | | |
|---|-------------------------------|---|-----------|---|------|------|----------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD01: Trash Rack Screen | | | | CLIENT N°. | | | PAGE |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | | REV. |
| | | | | 1002680 | | | A |
| Rev. | T1 | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD01: Trash Rack Screen | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Material of frame | text | | | | | |
| 5.2 | Material of screen field | text | | | | | |
| 5.3 | Material of rake assembly | text | | | | | |
| 5.4 | Material of rake comb | text | | | | | |
| 5.5 | Material of chain | text | | | | | |
| 5.6 | Material of chain guides | text | | | | | |
| 5.7 | Material of sprockets | text | | | | | |
| 5.9 | Material of wiper assembly | text | | | | | |
| 5.10 | Material of wiper blade | text | | | | | |
| 6 | MOTORS | | | | | | |
| 6.1 | Make | text | | | | | |
| 6.2 | Model | text | | | | | |
| 6.3 | Nameplate power | kW | | | | | |
| 6.4 | Voltage | V | | | | | |
| 6.5 | Rated load current | Amps | | | | | |
| 6.6 | Frequency | Hz | | | | | |
| 6.7 | Phase | Ph. | | | | | |
| 6.8 | Ingress Protection | IP | | | | | |
| 6.9 | Weight | kg | | | | | |
| 7 | GEARBOXES | | | | | | |
| 7.1 | Make | text | | | | | |
| 7.2 | Model | text | | | | | |
| 7.3 | Gearbox type | text | | | | | |
| 7.4 | Gearbox service factor | text | | | | | |
| 7.5 | Power | kW | | | | | |
| 7.6 | Torque | Nm | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD01: Trash Rack Screen

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A

| Rev. | T1 | Description | By | Ckd | APP. | Aut. | Date |
|------|----|-------------------------|----|-----|------|------|----------|
| A | | TD01: Trash Rack Screen | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

Supplier: _____ **Quantity:** _____

| Item | | Unit | Offered |
|----------|--|------|---------|
| 7 | GEARBOXES (CONTINUED) | | |
| 7.7 | Input speed (N ₁) | rpm | |
| 7.8 | Output speed (N ₁) | rpm | |
| 7.9 | Ratio | - | |
| 7.10 | Weight | kg | |
| | | | |
| 8 | WEIGHT AND DIMENSIONS | | |
| 8.1 | Overall weight of unit | kg | |
| 8.2 | Width of screen field | mm | |
| 8.3 | Height of screen field | mm | |
| 8.4 | Width of frame at level of screen field | mm | |
| 8.5 | Screen discharge height (above top of channel) | mm | |
| 8.5 | Screen height (above top of channel) | mm | |
| 8.7 | Overall length (from top of floor) | mm | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____



ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD02: Mechanical Front Rake Screens

| | |
|------------|--|
| CLIENT N°. | |
| Y6975 | |



PAGE

ZUTARI N°.

1002680

REV.

[illegible]

| | | | | | | | |
|---|-------------------------------|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD02: Mechanical Front Rake Screens | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | T1 | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD02: Mechanical Front Rake Screens | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Material of frame | text | | | | | |
| 5.2 | Material of screen field | text | | | | | |
| 5.3 | Material of rake assembly | text | | | | | |
| 5.4 | Material of rake comb | text | | | | | |
| 5.5 | Material of chain | text | | | | | |
| 5.6 | Material of chain guides | text | | | | | |
| 5.7 | Material of sprockets | text | | | | | |
| 5.9 | Material of wiper assembly | text | | | | | |
| 5.10 | Material of wiper blade | text | | | | | |
| 6 | MOTORS | | | | | | |
| 6.1 | Make | text | | | | | |
| 6.2 | Model | text | | | | | |
| 6.3 | Nameplate power | kW | | | | | |
| 6.4 | Voltage | V | | | | | |
| 6.5 | Rated load current | Amps | | | | | |
| 6.6 | Frequency | Hz | | | | | |
| 6.7 | Phase | Ph. | | | | | |
| 6.8 | Ingress Protection | IP | | | | | |
| 6.9 | Weight | kg | | | | | |
| 7 | GEARBOXES | | | | | | |
| 7.1 | Make | text | | | | | |
| 7.2 | Model | text | | | | | |
| 7.3 | Gearbox type | text | | | | | |
| 7.4 | Gearbox service factor | text | | | | | |
| 7.5 | Power | kW | | | | | |
| 7.6 | Torque | Nm | | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD02: Mechanical Front Rake Screens

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A

| Rev. | T1 | Description | By | Ckd | APP. | Aut. | Date |
|------|----|-------------------------------------|----|-----|------|------|----------|
| A | | TD02: Mechanical Front Rake Screens | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|--------------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 7 | GEARBOXES (CONTINUED) | | |
| 7.7 | Input speed (N ₁) | rpm | |
| 7.8 | Output speed (N ₁) | rpm | |
| 7.9 | Ratio | - | |
| 7.10 | Weight | kg | |
| | | | |
| 8 | WEIGHT AND DIMENSIONS | | |
| 8.1 | Overall weight of unit | kg | |
| 8.2 | Width of screen field | mm | |
| 8.3 | Height of screen field | mm | |
| 8.4 | Width of frame (external) | mm | |
| 8.5 | isipingotds321 | mm | |
| 8.5 | Screen height (above top of channel) | mm | |
| 8.7 | Overall length (from top of floor) | mm | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD03: Hand Rake Screens: Bypass Channels

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD03: Hand Rake Screens: Bypass Channels | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |



| Supplier: | | Quantity: | |
|-----------|--------------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 1 | CONSTRUCTION AND DESIGN | | |
| 1.1 | Angle of inclination | Deg. (°) | |
| 1.2 | Method of fixing | text | |
| 1.3 | Bar spacing | mm | |
| 1.4 | Bar cross section dimensions | mm x mm | |
| | | | |
| 2 | MATERIALS AND COATINGS | | |
| 2.1 | Material of construction (screen) | text | |
| 2.2 | Material of construction (hand rake) | text | |
| | | | |
| 3 | WEIGHT AND DIMENSIONS | | |
| 3.1 | Weight of rake | kg | |
| 3.2 | Weight of screen | kg | |
| 3.3 | Screen width | mm | |
| | | | |
| | | | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|---|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD04: Washer Compactor | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD04: Washer Compactor | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Number of units | No. | | | | | |
| 1.2 | Make | text | | | | | |
| 1.3 | Model | text | | | | | |
| 1.4 | Country of manufacture | text | | | | | |
| 1.5 | Spares supplier and address | text | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Operating capacity | kg/hr | | | | | |
| 2.2 | Guaranteed dry solids percentage | % | | | | | |
| 2.3 | Degree of washing (percentage organics removal) | % | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Level measuring instrumentation | text | | | | | |
| 3.2 | Over torque protection for screw conveyor | text | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Volume of feed hopper | m ³ | | | | | |
| 4.2 | Details of wearing surfaces and liners | text | | | | | |
| 4.3 | Wash water flowrate | l/s | | | | | |
| 4.4 | Wash water supply pressure | bar | | | | | |
| 4.5 | Wash water line size connection | DN | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Material of frame | text | | | | | |
| 5.2 | Material of supports | text | | | | | |
| 5.3 | Material of Screw / Spiral | text | | | | | |
| 5.4 | Material of Shaft | text | | | | | |
| 5.5 | Material of lining | text | | | | | |
| 5.6 | Material of agitator | text | | | | | |

| | | | | | | | |
|---|------------------------|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD04: Washer Compactor | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD04: Washer Compactor | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 6 | MOTORS | | | | | | |
| 6.1 | Agitator | | | | | | |
| 6.1.1 | Make | text | | | | | |
| 6.1.2 | Model | text | | | | | |
| 6.1.3 | Nameplate power | kW | | | | | |
| 6.1.4 | Voltage | V | | | | | |
| 6.1.5 | Rated load current | Amps | | | | | |
| 6.1.6 | Frequency | Hz | | | | | |
| 6.1.7 | Phase | Ph. | | | | | |
| 6.1.8 | Ingress Protection | IP | | | | | |
| 6.1.9 | Weight | kg | | | | | |
| | | | | | | | |
| 6.2 | Screw Conveyor | | | | | | |
| 6.2.1 | Make | text | | | | | |
| 6.2.2 | Model | text | | | | | |
| 6.2.3 | Nameplate power | kW | | | | | |
| 6.2.4 | Voltage | V | | | | | |
| 6.2.5 | Rated load current | Amps | | | | | |
| 6.2.6 | Frequency | Hz | | | | | |
| 6.2.7 | Phase | Ph. | | | | | |
| 6.2.8 | Ingress Protection | IP | | | | | |
| 6.2.9 | Weight | kg | | | | | |
| | | | | | | | |
| 7 | GEARBOXES | | | | | | |
| 7.1 | Agitator | | | | | | |
| 7.1.1 | Make | text | | | | | |
| 7.1.2 | Model | text | | | | | |
| 7.1.3 | Gearbox type | text | | | | | |
| 7.1.4 | Gearbox service factor | text | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD04: Washer Compactor

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A

| Rev | TI | Description | By | Ckd | APP. | Aut. | Date |
|-----|----|------------------------|----|-----|------|------|----------|
| A | | TD04: Washer Compactor | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

Supplier:



Quantity:

| Item | | Unit | Offered |
|------------|--------------------------------|--------------|---------|
| 7 | GEARBOXES (CONTINUED) | | |
| 7.1 | Agitator | | |
| 7.1.5 | Power | kW | |
| 7.1.6 | Torque | Nm | |
| 7.1.7 | Input speed (N ₁) | rpm | |
| 7.1.8 | Output speed (N ₁) | rpm | |
| 7.1.9 | Ratio | - | |
| 7.1.10 | Weight | kg | |
| 7.2 | Screw Conveyor | | |
| 7.2.1 | Make | text | |
| 7.2.2 | Model | text | |
| 7.2.3 | Gearbox type | text | |
| 7.2.4 | Gearbox service factor | text | |
| 7.2.5 | Power | kW | |
| 7.2.6 | Torque | Nm | |
| 7.2.7 | Input speed (N ₁) | rpm | |
| 7.2.8 | Output speed (N ₁) | rpm | |
| 7.2.9 | Ratio | - | |
| 7.2.10 | Weight | kg | |
| 8 | WEIGHT AND DIMENSIONS | | |
| 8.1 | Overall dimensions | mm x mm x mm | |
| 8.2 | Mass when full (empty/full) | kg/kg | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|---|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD05: Vortex Degritter Equipment | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD05: Vortex Degritter Equipment | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Make & model | | text | | | | |
| 1.2 | Type & description | | text | | | | |
| 1.3 | County of manufacture | | text | | | | |
| 1.4 | Spares supplier and address | | text | | | | |
| 1.5 | Method of operation | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Maximum grit removal | | kg/hr | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Number of paddle blades | | No. | | | | |
| 4.2 | Method of grit extraction | | text | | | | |
| 4.3 | Grit sparging water requirements | | kPa, l/s | | | | |
| | | | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Material of paddle shaft | | text | | | | |
| 5.2 | Material of blades | | text | | | | |
| 5.3 | Material of grit sparging pipework and manifold | | text | | | | |
| | | | | | | | |
| 6 | MOTORS - GRIT PADDLE | | | | | | |
| 6.1 | Make | | text | | | | |
| 6.2 | Model | | text | | | | |
| 6.3 | Nameplate power | | kW | | | | |
| 6.4 | Voltage | | V | | | | |
| 6.5 | Rated load current | | Amps | | | | |
| 6.6 | Frequency | | Hz | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD05: Vortex Degritter Equipment

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|----------------------------------|----|-----|------|------|----------|
| A | | TD05: Vortex Degritter Equipment | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|--------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 6 | MOTORS GRIT PADDLE (CONTINUED) | | |
| 6.7 | Phase | Ph. | |
| 6.8 | Ingress Protection | IP | |
| 6.9 | Weight | kg | |
| | | | |
| 7 | GEARBOXES - GRIT PADDLE | | |
| 7.1 | Make | text | |
| 7.2 | Model | text | |
| 7.3 | Gearbox type | text | |
| 7.4 | Gearbox service factor | text | |
| 7.5 | Power | kW | |
| 7.6 | Torque | Nm | |
| 7.7 | Input speed (N ₁) | rpm | |
| 7.8 | Output speed (N ₁) | rpm | |
| 7.9 | Ratio | - | |
| 7.10 | Weight | kg | |
| | | | |
| 8 | WEIGHT AND DIMENSIONS | | |
| 8.1 | Total Mass | kg | |
| 8.2 | Nominal diameter of blades | mm | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|---|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD06: Grit Extraction Pump | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD06: Grit Extraction Pump | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Number of pumps | | No. | | | | |
| 1.2 | Make | | text | | | | |
| 1.3 | Model | | text | | | | |
| 1.4 | Country of manufacture | | text | | | | |
| 1.5 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Shut-off head | | m | | | | |
| 2.2 | Flowrate at duty point (for water) | | ℓ /s | | | | |
| 2.3 | Head at duty point (for water) | | m | | | | |
| 2.4 | Flow range (min - max) | | ℓ /s to ℓ /s | | | | |
| 2.5 | Efficiency at duty point | | % | | | | |
| 2.6 | Best efficiency point | | % | | | | |
| 2.7 | NPSHrequired at duty point (absolute pressure) | | m | | | | |
| | | | | | | | |
| | | | | | | | |
| 3 | CONSTRUCTION AND DESIGN | | | | | | |
| 3.1 | Pump type and description | | text | | | | |
| 3.2 | Maximum diameter of solid object that can be pumped | | mm | | | | |
| 3.3 | Pump seal type and description | | text | | | | |
| 3.4 | Description of impeller | | text | | | | |
| 3.5 | Description of couplings | | text | | | | |
| | | | | | | | |
| | | | | | | | |
| 4 | MATERIALS AND COATINGS | | | | | | |
| 4.1 | Pump casing | | text | | | | |
| 4.2 | Impeller | | text | | | | |
| 4.3 | Shaft | | text | | | | |
| 4.4 | Wear plate | | text | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD06: Grit Extraction Pump

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|----------------------------|----|-----|------|------|----------|
| A | | TD06: Grit Extraction Pump | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|------------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 4 | MATERIALS AND COATINGS (CONTINUED) | | |
| 4.5 | Seal Material | text | |
| 4.6 | Base frame | text | |
| 4.7 | Exterior coating | text | |
| | | | |
| 5 | MOTORS | | |
| 5.1 | Make | text | |
| 5.2 | Model | text | |
| 5.3 | Nameplate power | kW | |
| 5.4 | Voltage | V | |
| 5.5 | Rated load current | Amps | |
| 5.6 | Frequency | Hz | |
| 5.7 | Phase | Ph. | |
| 5.8 | Ingress Protection | IP | |
| 5.9 | Weight | kg | |
| | | | |
| 6 | WEIGHT AND DIMENSIONS | | |
| 6.1 | Mass (empty pump) | kg | |
| 6.2 | Impeller diameter | mm | |
| 6.3 | Inlet diameter | DN | |
| 6.4 | Outlet diameter | DN | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD07: Grit Classifier | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD07: Grit Classifier | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1. | Number of units | | text | | | | |
| 1.2 | Make & model | | text | | | | |
| 1.3 | Type & description | | text | | | | |
| 1.4 | County of manufacture | | text | | | | |
| 1.5 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Maximum possible feed rate | | l/s | | | | |
| 2.2 | Maximum possible solids loading rate | | kg/h | | | | |
| 2.3 | Separation Capability | | % > size mm | | | | |
| 2.4 | Maximum moisture content of discharged grit | | % | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Description of overload protection system for screw conveyor | | text | | | | |
| | | | | | | | |
| 4 | MATERIALS AND COATINGS | | | | | | |
| 4.1 | Material of frame | | text | | | | |
| 4.2 | Material of supports | | text | | | | |
| 4.3 | Material of Screw / Spiral | | text | | | | |
| 4.4 | Material of Shaft | | text | | | | |
| 4.5 | Material of discharge trough lining | | text | | | | |
| | | | | | | | |
| 5 | MOTORS | | | | | | |
| 5.1 | Screw Conveyor | | | | | | |
| 5.1.1 | Make | | text | | | | |
| 5.1.2 | Model | | text | | | | |
| 5.1.3 | Nameplate power | | kW | | | | |
| 5.1.4 | Voltage | | V | | | | |



31300-5W

TD07: Grit Classifier

Y6975

PAGE

1002680

REV.

A

| | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD07: Grit Classifier

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|-----------------------|----|-----|------|------|----------|
| A | | TD07: Grit Classifier | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|--|-----------|---------|
| Item | | Unit | Offered |
| 8 | WEIGHT AND DIMENSIONS | | |
| 8.1 | Overall height | mm | |
| 8.2 | Overall length / diameter of grit classifier | mm | |
| 8.3 | Grit discharge height | mm | |
| 8.4 | Inlet connection (grit inlet) | DN | |
| 8.5 | Drain outlet connection | DN | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD08: Skip Dolly: Screenings | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD08: Skip Dolly: Screenings | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1. | Number of units | | No. | | | | |
| 1.2 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Carrying capacity (No. of skips) | | No. | | | | |
| 2.2 | Operating speed of dolly | | m/min | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Overrun protection | | text | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Wheel bearing load rating | | kg | | | | |
| 4.2 | Rail bearing load rating | | kg | | | | |
| 4.3 | Details of cable reel system | | text | | | | |
| | | | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Material of construction for frame | | text | | | | |
| 5.2 | Material of wheels | | text | | | | |
| 5.3 | Material of shafts | | text | | | | |
| 5.4 | Corrosion protection system for frame | | text | | | | |
| 5.5 | Corrosion protection system for wheels | | text | | | | |
| 5.6 | Corrosion protection system for shafts | | text | | | | |
| | | | | | | | |
| 6 | MOTORS | | | | | | |
| 6.1 | Make | | text | | | | |
| 6.2 | Model | | text | | | | |
| 6.3 | Nameplate power | | kW | | | | |
| 6.4 | Voltage | | V | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD08: Skip Dolly: Screenings

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|------------------------------|----|-----|------|------|----------|
| A | | TD08: Skip Dolly: Screenings | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 6 | MOTORS (CONTINUED) | | |
| 6.5 | Rated load current | Amps | |
| 6.6 | Frequency | Hz | |
| 6.7 | Phase | Ph. | |
| 6.8 | Ingress Protection | IP | |
| 6.9 | Weight | kg | |
| | | | |
| 7 | WEIGHT AND DIMENSIONS | | |
| 7.1 | Total Mass | kg | |
| 7.2 | Length (dolly only, no skip) | mm | |
| 7.3 | Width (dolly only, no skip) | mm | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD09: Skip Dolly: Grit | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD09: Skip Dolly: Grit | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1. | Number of units | | No. | | | | |
| 1.2 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Carrying capacity (No. of skips) | | No. | | | | |
| 2.2 | Operating speed of dolly | | m/min | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Overrun protection | | text | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Wheel bearing load rating | | kg | | | | |
| 4.2 | Rail bearing load rating | | kg | | | | |
| 4.3 | Details of cable reel system | | text | | | | |
| | | | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Material of construction for frame | | text | | | | |
| 5.2 | Material of wheels | | text | | | | |
| 5.3 | Material of shafts | | text | | | | |
| 5.4 | Corrosion protection system for frame | | text | | | | |
| 5.5 | Corrosion protection system for wheels | | text | | | | |
| 5.6 | Corrosion protection system for shafts | | text | | | | |
| | | | | | | | |
| 6 | MOTORS | | | | | | |
| 6.1 | Make | | text | | | | |
| 6.2 | Model | | text | | | | |
| 6.3 | Nameplate power | | kW | | | | |
| 6.4 | Voltage | | V | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD09: Skip Dolly: Grit

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A

| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|------------------------|----|-----|------|------|----------|
| A | | TD09: Skip Dolly: Grit | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 6 | MOTORS (CONTINUED) | | |
| 6.5 | Rated load current | Amps | |
| 6.6 | Frequency | Hz | |
| 6.7 | Phase | Ph. | |
| 6.8 | Ingress Protection | IP | |
| 6.9 | Weight | kg | |
| | | | |
| 7 | WEIGHT AND DIMENSIONS | | |
| 7.1 | Total Mass | kg | |
| 7.2 | Length (dolly only, no skip) | mm | |
| 7.3 | Width (dolly only, no skip) | mm | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____



ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD10: Biofilter Pumps

| | |
|------------|--|
| CLIENT N°. | |
|------------|--|

Y6975

PAGE



ZUTARI N°.

REV.

A

1002680

| | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|

| | | | | | | | |
|---|---|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD10: Biofilter Pumps | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD10: Biofilter Pumps | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Pump type and description | text | | | | | |
| 4.2 | Installation type (wet well / dry well / both) | text | | | | | |
| 4.3 | Maximum diameter of solid object that can be pumped | mm | | | | | |
| 4.4 | Pump seal type and description | text | | | | | |
| 4.5 | Description of ingress protection for motor (shaft end) | text | | | | | |
| 4.6 | Description of ingress protection for motor (cable end) | text | | | | | |
| 4.7 | Bearing life | L ₁₀ | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Pump casing | text | | | | | |
| 5.2 | Impeller | text | | | | | |
| 5.3 | Shaft | text | | | | | |
| 5.4 | Base frame | text | | | | | |
| 5.5 | Exterior coating | text | | | | | |
| 6 | MOTORS | | | | | | |
| 6.1 | Description of motor | text | | | | | |
| 6.2 | Nameplate power | kW | | | | | |
| 6.3 | Voltage | V | | | | | |
| 6.4 | Rated load current | Amps | | | | | |
| 6.5 | Frequency | Hz | | | | | |
| 6.6 | Phase | Ph. | | | | | |
| 6.7 | Number of poles | No. | | | | | |
| 6.8 | Service factor | text | | | | | |
| 6.9 | Ingress Protection | IP | | | | | |
| 6.10 | Weight | kg | | | | | |
| | | | | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD10: Biofilter Pumps

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A

| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|-----------------------|----|-----|------|------|----------|
| A | | TD10: Biofilter Pumps | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| | | | | | | | |

Supplier:



Quantity:

| Item | | Unit | Offered |
|------|-----------------------|------|---------|
| 7 | WEIGHT AND DIMENSIONS | | |
| 7.1 | Mass (empty pump) | kg | |
| 7.2 | Impeller size | mm | |
| 7.3 | Inlet diameter | DN | |
| 7.4 | Outlet diameter | DN | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|---|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD11: Second Class Water System: Raw Water Pumps | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD11: Second Class Water System: Raw Water Pumps | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Number of pumps | No. | | | | | |
| 1.2 | Make | text | | | | | |
| 1.3 | Model | text | | | | | |
| 1.4 | Country of manufacture | text | | | | | |
| 1.5 | Spares supplier and address | text | | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Shut-off head | m | | | | | |
| 2.2 | Flowrate at duty point (for water) | ℓ /s | | | | | |
| 2.3 | Head at duty point (for water) | m | | | | | |
| 2.4 | Flow range (min - max) | ℓ /s to ℓ /s | | | | | |
| 2.5 | Efficiency at duty point | % | | | | | |
| 2.6 | Best efficiency point | % | | | | | |
| 2.7 | NPSHrequired at duty point (absolute pressure) | m | | | | | |
| | | | | | | | |
| 3 | CONSTRUCTION AND DESIGN | | | | | | |
| 3.1 | Pump type and description | text | | | | | |
| 3.2 | Maximum diameter of solid object that can be pumped | mm | | | | | |
| 3.3 | Pump seal type and description | text | | | | | |
| 3.4 | Description of impeller | text | | | | | |
| 3.5 | Description of couplings | text | | | | | |
| | | | | | | | |
| 4 | MATERIALS AND COATINGS | | | | | | |
| 4.1 | Pump casing | text | | | | | |
| 4.2 | Impeller | text | | | | | |
| 4.3 | Shaft | text | | | | | |
| 4.4 | Wear ring (or equivalent) | text | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD11: Second Class Water System: Raw Water Pumps

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD11: Second Class Water System: Raw Water Pumps | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|---|-----------|---------|
| Item | | Unit | Offered |
| 4 | MATERIALS AND COATINGS (CONTINUED) | | |
| 4.5 | Seal Material | text | |
| 4.6 | Base frame | text | |
| 4.7 | Exterior coating | text | |
| | | | |
| 5 | MOTORS | | |
| 5.1 | Make | text | |
| 5.2 | Model | text | |
| 5.3 | Nameplate power | kW | |
| 5.4 | Voltage | V | |
| 5.5 | Rated load current | Amps | |
| 5.6 | Frequency | Hz | |
| 5.7 | Phase | Ph. | |
| 5.8 | Ingress Protection | IP | |
| 5.9 | Weight | kg | |
| | | | |
| 6 | WEIGHT AND DIMENSIONS | | |
| 6.1 | Mass (empty pump) | kg | |
| 6.2 | Impeller diameter | mm | |
| 6.3 | Inlet diameter | DN | |
| 6.4 | Outlet diameter | DN | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|---|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD12: Second Class Water System:Booster Pumps | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD12: Second Class Water System:Booster Pumps | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Number of pumps | | No. | | | | |
| 1.2 | Make | | text | | | | |
| 1.3 | Model | | text | | | | |
| 1.4 | Country of manufacture | | text | | | | |
| 1.5 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Shut-off head | | m | | | | |
| 2.2 | Flowrate at duty point (for water) | | ℓ /s | | | | |
| 2.3 | Head at duty point (for water) | | m | | | | |
| 2.4 | Flow range (min - max) | | ℓ /s to ℓ /s | | | | |
| 2.5 | Efficiency at duty point | | % | | | | |
| 2.6 | Best efficiency point | | % | | | | |
| 2.7 | NPSHrequired at duty point (absolute pressure) | | m | | | | |
| | | | | | | | |
| 3 | CONSTRUCTION AND DESIGN | | | | | | |
| 3.1 | Pump type and description | | text | | | | |
| 3.2 | Maximum diameter of solid object that can be pumped | | mm | | | | |
| 3.3 | Pump seal type and description | | text | | | | |
| 3.4 | Description of impeller | | text | | | | |
| 3.5 | Description of couplings | | text | | | | |
| | | | | | | | |
| 4 | MATERIALS AND COATINGS | | | | | | |
| 4.1 | Pump casing | | text | | | | |
| 4.2 | Impeller | | text | | | | |
| 4.3 | Shaft | | text | | | | |
| 4.4 | Wear ring (or equivalent) | | text | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD12: Second Class Water System:Booster Pumps

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|---|----|-----|------|------|----------|
| A | | TD12: Second Class Water System:Booster Pumps | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |



| Supplier: | | Quantity: | |
|-----------|---|-----------|---------|
| Item | | Unit | Offered |
| 4 | MATERIALS AND COATINGS (CONTINUED) | | |
| 4.5 | Seal Material | text | |
| 4.6 | Base frame | text | |
| 4.7 | Exterior coating | text | |
| | | | |
| 5 | MOTORS | | |
| 5.1 | Make | text | |
| 5.2 | Model | text | |
| 5.3 | Nameplate power | kW | |
| 5.4 | Voltage | V | |
| 5.5 | Rated load current | Amps | |
| 5.6 | Frequency | Hz | |
| 5.7 | Phase | Ph. | |
| 5.8 | Ingress Protection | IP | |
| 5.9 | Weight | kg | |
| | | | |
| 6 | WEIGHT AND DIMENSIONS | | |
| 6.1 | Mass (empty pump) | kg | |
| 6.2 | Impeller diameter | mm | |
| 6.3 | Inlet diameter | DN | |
| 6.4 | Outlet diameter | DN | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--------------------------------------|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD13: Second Class Water System: Air Compressor | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD13: Second Class Water System: Air Compressor | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Number of Compressors | No. | | | | | |
| 1.2 | Make | text | | | | | |
| 1.3 | Model | text | | | | | |
| 1.4 | Country of manufacture | text | | | | | |
| 1.5 | Spares supplier and address | text | | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Flowrate at duty point | ℓ /s | | | | | |
| 2.3 | Pressure Range (min-max) | kPa | | | | | |
| 2.4 | Flow range (min - max) | ℓ /s to ℓ /s | | | | | |
| 2.6 | Design Pressure for casing | kPa | | | | | |
| 2.8 | Test Pressure for Casing | kPa | | | | | |
| 2.9 | Power at duty point | kW | | | | | |
| 2.10 | Efficiency at duty point | % | | | | | |
| | | | | | | | |
| 3 | CONSTRUCTION AND DESIGN | | | | | | |
| 3.1 | Compressor type and description | text | | | | | |
| 3.2 | Compressor seal type and description | text | | | | | |
| 3.3 | Intergrated Refriginrant Dryer | Yes/No | | | | | |
| 3.4 | Intergrated Inlet Filter | Yes/No | | | | | |
| 3.5 | Sound Attenuating hood | text | | | | | |
| | | | | | | | |
| 4 | MOTORS | | | | | | |
| 4.1 | Make | text | | | | | |
| 4.2 | Model | text | | | | | |
| 4.3 | Nameplate power | kW | | | | | |
| 4.4 | Voltage | V | | | | | |
| 4.5 | Rated load current | Amps | | | | | |

| | | | | | | | |
|---|--------------------------------------|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD13: Second Class Water System: Air Compressor | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD13: Second Class Water System: Air Compressor | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 4 | MOTORS (CONTINUED) | | | | | | |
| 4.6 | Frequency | Hz | | | | | |
| 4.7 | Phase | Ph. | | | | | |
| 4.8 | Ingress Protection | IP | | | | | |
| 4.9 | Weight | kg | | | | | |
| | | | | | | | |
| 5 | REFRIGRANT DRYER | | | | | | |
| 5.1 | Make | text | | | | | |
| 5.2 | Model | text | | | | | |
| 5.3 | Design Pressure of Receiver | kPa | | | | | |
| 5.4 | Maximum Capacity | Nm3/h | | | | | |
| 5.5 | Dew Point | °C | | | | | |
| 5.6 | Power at Duty | kW | | | | | |
| 5.7 | Weight | kg | | | | | |
| | | | | | | | |
| 6 | DESICCANT DRYER | | | | | | |
| 6.1 | Make | text | | | | | |
| 6.2 | Model | text | | | | | |
| 6.3 | Design Pressure of Receiver | kPa | | | | | |
| 6.4 | Maximum Capacity | Nm3/h | | | | | |
| 6.5 | Dew Point | °C | | | | | |
| 6.6 | Power at Duty | kW | | | | | |
| 6.7 | Weight | kg | | | | | |
| | | | | | | | |
| 7 | FILTERS | | | | | | |
| 7.1 | Make | text | | | | | |
| 7.2 | Model | text | | | | | |
| 7.3 | No of Filters and location in system | text | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD13: Second Class Water System: Air Compressor

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|---|----|-----|------|------|----------|
| A | | TD13: Second Class Water System: Air Compressor | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|---|--------------|---------|
| Item | | Unit | Offered |
| 7 | FILTERS (CONTINUED) | | |
| 7.4 | Design pressure | kPa | |
| 7.5 | Test pressure | kPa | |
| 7.6 | Country of Manufacture | text | |
| | | | |
| 8 | WEIGHT AND DIMENSIONS | | |
| 8.1 | Mass of Compressor | kg | |
| 8.2 | Impeller diameter | mm | |
| 8.3 | Inlet diameter | DN | |
| 8.4 | Outlet diameter | DN | |
| 8.5 | Overall Dimensions of Compressor (Length x Breadth x Height) | mm X mm X mm | |
| 8.6 | Overall Dimensions of Refrigerant dryer (Length x Breadth x Height) | mm X mm X mm | |
| 8.7 | Overall Dimensions of Desiccant dryer (Length x Breadth x Height) | mm X mm X mm | |
| 8.8 | Overall Dimensions of Air Receiver (Length x Breadth x Height) | mm X mm X mm | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|-----------|---|------|------|----------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD14: Lifting Equipment for Trash Rack Screen | | | | CLIENT N°. | | | PAGE |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | | REV. |
| | | | | 1002680 | | | A |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD14: Lifting Equipment for Trash Rack Screen | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Type of Lifting Equipment | text | | | | | |
| 1.2 | Make and model | text | | | | | |
| 1.3 | Country of manufacture | text | | | | | |
| 1.4 | Spares supplier and address | text | | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Load Capacity (Safe Working Load) | ton | | | | | |
| 2.2 | Test Load | ton | | | | | |
| 2.3 | Maximum lifting height | mm | | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Hoist Control (electrical / manual) | text | | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Details of hoist (trolley and chain block) | text | | | | | |
| 4.2 | Details of locking mechanism | text | | | | | |
| | | | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Lifting chain | text | | | | | |
| 5.2 | Hoist | text | | | | | |
| 5.3 | Trolley | text | | | | | |
| 5.4 | Hook | text | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD14: Lifting Equipment for Trash Rack Screen

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.



A

| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|---|----|-----|------|------|----------|
| A | | TD14: Lifting Equipment for Trash Rack Screen | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 6 | WEIGHT AND DIMENSIONS | | |
| 6.1 | Total equipment weight. | kg | |
| 6.2 | Chain length | m | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____ **Signature:** _____

| | | | | | | | |
|---|--|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD15: Lifting Equipment for Mechanical Front Raked Screens | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD15: Lifting Equipment for Mechanical Front Raked Screens | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Type of Lifting Equipment | text | | | | | |
| 1.2 | Make and model | text | | | | | |
| 1.3 | Country of manufacture | text | | | | | |
| 1.4 | Spares supplier and address | text | | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Load Capacity (Safe Working Load) | ton | | | | | |
| 2.2 | Test Load | ton | | | | | |
| 2.3 | Maximum lifting height | mm | | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Hoist Control (electrical / manual) | text | | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Details of hoist (trolley and chain block) | text | | | | | |
| 4.2 | Details of locking mechanism | text | | | | | |
| | | | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Lifting chain | text | | | | | |
| 5.2 | Hoist | text | | | | | |
| 5.3 | Trolley | text | | | | | |
| 5.4 | Hook | text | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD15: Lifting Equipment for Mechanical Front Raked Screens

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD15: Lifting Equipment for Mechanical Front Raked Screens | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 6 | WEIGHT AND DIMENSIONS | | |
| 6.1 | Total equipment weight. | kg | |
| 6.2 | Chain length | m | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|-------------|---|------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD16: Lifting Equipment for Biofilter Pump Station | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | | By | Ckd | APP. | Aut. |
| A | | TD16: Lifting Equipment for Biofilter Pump Station | | AH | MD | NH | NH |
| | | | | | | | |
| | | | | | | | |
| Supplier: | | | | Quantity: | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Type of Lifting Equipment | | text | | | | |
| 1.2 | Make and model | | text | | | | |
| 1.3 | Country of manufacture | | text | | | | |
| 1.4 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Load Capacity (Safe Working Load) | | ton | | | | |
| 2.2 | Test Load | | ton | | | | |
| 2.3 | Maximum lifting height | | mm | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Hoist Control (electrical / manual) | | text | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Details of hoist (trolley and chain block) | | text | | | | |
| 4.2 | Details of locking mechanism | | text | | | | |
| | | | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Lifting chain | | text | | | | |
| 5.2 | Hoist | | text | | | | |
| 5.3 | Trolley | | text | | | | |
| 5.4 | Hook | | text | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

**TD16: Lifting Equipment for Biofilter Pump
Station**

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.



A

| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD16: Lifting Equipment for Biofilter Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 6 | WEIGHT AND DIMENSIONS | | |
| 6.1 | Total equipment weight. | kg | |
| 6.2 | Chain length | m | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____ **Signature:** _____

| | | | | | | | |
|---|--|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD17: Lifting Equipment for Raw Water Pump Station | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD17: Lifting Equipment for Raw Water Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Type of Lifting Equipment | text | | | | | |
| 1.2 | Make and model | text | | | | | |
| 1.3 | Country of manufacture | text | | | | | |
| 1.4 | Spares supplier and address | text | | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Load Capacity (Safe Working Load) | ton | | | | | |
| 2.2 | Test Load | ton | | | | | |
| 2.3 | Maximum lifting height | mm | | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Hoist Control (electrical / manual) | text | | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Details of hoist (trolley and chain block) | text | | | | | |
| 4.2 | Details of locking mechanism | text | | | | | |
| | | | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Lifting chain | text | | | | | |
| 5.2 | Hoist | text | | | | | |
| 5.3 | Trolley | text | | | | | |
| 5.4 | Hook | text | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD17: Lifting Equipment for Raw Water Pump Station

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.



A

| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD17: Lifting Equipment for Raw Water Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 6 | WEIGHT AND DIMENSIONS | | |
| 6.1 | Total equipment weight. | kg | |
| 6.2 | Chain length | m | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____ **Signature:** _____

| | | | | | | | |
|---|--|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD18: Lifting Equipment for Booster Pump Station | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD18: Lifting Equipment for Booster Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Type of Lifting Equipment | | text | | | | |
| 1.2 | Make and model | | text | | | | |
| 1.3 | Country of manufacture | | text | | | | |
| 1.4 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Load Capacity (Safe Working Load) | | ton | | | | |
| 2.2 | Test Load | | ton | | | | |
| 2.3 | Maximum lifting height | | mm | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Hoist Control (electrical / manual) | | text | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Details of hoist (trolley and chain block) | | text | | | | |
| 4.2 | Details of locking mechanism | | text | | | | |
| | | | | | | | |
| 5 | MATERIALS AND COATINGS | | | | | | |
| 5.1 | Lifting chain | | text | | | | |
| 5.2 | Hoist | | text | | | | |
| 5.3 | Trolley | | text | | | | |
| 5.4 | Hook | | text | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD18: Lifting Equipment for Booster Pump Station

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD18: Lifting Equipment for Booster Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |



| Supplier: | | Quantity: | |
|-----------|------------------------------|-----------|---------|
| Item | | Unit | Offered |
| 6 | WEIGHT AND DIMENSIONS | | |
| 6.1 | Total equipment weight. | kg | |
| 6.2 | Chain length | m | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|------------------|---|------|------|----------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD19: Ventilation for Raw Water Pump Station | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD19: Ventilation for Raw Water Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Fan airflow (Min. / Max.) | | l/s [FAD] | | | | |
| 2.2 | Nominal speed of fans | | rpm | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Method of Ventilation system control | | text | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Ventilation Fans | | | | | | |
| 4.1.1 | Number of Fans | | No. | | | | |
| 4.1.2 | Description of Fans (make & model) | | text | | | | |
| 4.1.3 | Type of fans (axial flow, centrifugal, tangential flow) | | text | | | | |
| 4.1.4 | Type of fans drive (direct drive / belt drive / etc.) | | text | | | | |
| 4.1.5 | Fan diameter | | mm | | | | |
| 4.1.6 | Materials and coatings of fan casings | | text | | | | |
| 4.1.7 | Materials and coatings of fan blades | | text | | | | |
| 4.1.8 | Materials and coatings of base frame (centrifugal fans only) | | text | | | | |
| | | | | | | | |
| 4.2 | Ductwork | | | | | | |
| 4.2.1 | Materials and coatings of connections | | text | | | | |
| 4.2.2 | Materials and coatings of ductwork supports | | text | | | | |
| 4.2.3 | Materials and coatings of dampers | | text | | | | |
| | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|------------------|---|------|------|----------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD19: Ventilation for Raw Water Pump Station | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD19: Ventilation for Raw Water Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 4.3 | Louvres | | | | | | |
| 4.3.1 | No. of louvres | | No. | | | | |
| 4.3.2 | Rated face velocity through (each) louvre | | m/s | | | | |
| 4.3.3 | Maximum airflow rate through (each) louvre | | m³/s | | | | |
| 4.3.4 | Differential pressure across louvre (min. - max.) | | Pa - Pa | | | | |
| 4.3.5 | Materials and coatings of louvres | | text | | | | |
| 4.3.6 | Weight of louvre (each) | | kg | | | | |
| 4.3.7 | Dimensions | | mm x mm x mm | | | | |
| | | | | | | | |
| 4.4 | Sound attenuators | | | | | | |
| 4.4.1 | Made & model of sound attenuators | | text | | | | |
| 4.4.2 | Materials and coatings of sound attenuators | | text | | | | |
| 4.4.3 | Description of accoustic infill materials | | text | | | | |
| 4.4.4 | Maximum resistance losses across attenuators | | Pa | | | | |
| | | | | | | | |
| 5 | MOTORS | | | | | | |
| 5.1 | Description of fan motor | | text | | | | |
| 5.2 | Nameplate power | | kW | | | | |
| 5.3 | Voltage | | V | | | | |
| 5.4 | Rated load current | | Amps | | | | |
| 5.5 | Frequency | | Hz | | | | |
| 5.6 | Phase | | Ph. | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD19: Ventilation for Raw Water Pump Station

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD19: Ventilation for Raw Water Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |



| Supplier: | | Quantity: | |
|-----------|--------------------|-----------|---------|
| Item | | Unit | Offered |
| 5 | MOTORS (CONTINUED) | | |
| 5.7 | Number of poles | No. | |
| 5.8 | Service factor | text | |
| 5.9 | Ingress Protection | IP | |
| 5.10 | Weight | kg | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|------------------|---|------|------|----------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD20: Ventilation for Booster Pump Station | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD20: Ventilation for Booster Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Fan airflow (Min. / Max.) | | l/s [FAD] | | | | |
| 2.2 | Nominal speed of fans | | rpm | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Method of Ventilation system control | | text | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Ventilation Fans | | | | | | |
| 4.1.1 | Number of Fans | | No. | | | | |
| 4.1.2 | Description of Fans (make & model) | | text | | | | |
| 4.1.3 | Type of fans (axial flow, centrifugal, tangential flow) | | text | | | | |
| 4.1.4 | Type of fans drive (direct drive / belt drive / etc.) | | text | | | | |
| 4.1.5 | Fan diameter | | mm | | | | |
| 4.1.6 | Materials and coatings of fan casings | | text | | | | |
| 4.1.7 | Materials and coatings of fan blades | | text | | | | |
| 4.1.8 | Materials and coatings of base frame (centrifugal fans only) | | text | | | | |
| | | | | | | | |
| 4.2 | Ductwork | | | | | | |
| 4.2.1 | Materials and coatings of connections | | text | | | | |
| 4.2.2 | Materials and coatings of ductwork supports | | text | | | | |
| 4.2.3 | Materials and coatings of dampers | | text | | | | |
| | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|------------------|---|------|------|----------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD20: Ventilation for Booster Pump Station | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD20: Ventilation for Booster Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 4.3 | Louvres | | | | | | |
| 4.3.1 | No. of louvres | No. | | | | | |
| 4.3.2 | Rated face velocity through (each) louvre | m/s | | | | | |
| 4.3.3 | Maximum airflow rate through (each) louvre | m³/s | | | | | |
| 4.3.4 | Differential pressure across louvre (min. - max.) | Pa - Pa | | | | | |
| 4.3.5 | Materials and coatings of louvres | text | | | | | |
| 4.3.6 | Weight of louvre (each) | kg | | | | | |
| 4.3.7 | Dimensions | mm x mm x mm | | | | | |
| | | | | | | | |
| 4.4 | Sound attenuators | | | | | | |
| 4.4.1 | Made & model of sound attenuators | text | | | | | |
| 4.4.2 | Materials and coatings of sound attenuators | text | | | | | |
| 4.4.3 | Description of accoustic infill materials | text | | | | | |
| 4.4.4 | Maximum resistance losses across attenuators | Pa | | | | | |
| | | | | | | | |
| 5 | MOTORS | | | | | | |
| 5.1 | Description of fan motor | text | | | | | |
| 5.2 | Nameplate power | kW | | | | | |
| 5.3 | Voltage | V | | | | | |
| 5.4 | Rated load current | Amps | | | | | |
| 5.5 | Frequency | Hz | | | | | |
| 5.6 | Phase | Ph. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD20: Ventilation for Booster Pump Station

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD20: Ventilation for Booster Pump Station | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |



| Supplier: | | Quantity: | |
|-----------|--------------------|-----------|---------|
| Item | | Unit | Offered |
| 5 | MOTORS (CONTINUED) | | |
| 5.7 | Number of poles | No. | |
| 5.8 | Service factor | text | |
| 5.9 | Ingress Protection | IP | |
| 5.10 | Weight | kg | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|------------------|---|------|------|----------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD21: Ventilation for Inlet Works MCC Room | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD21: Ventilation for Inlet Works MCC Room | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Fan airflow (Min. / Max.) | | l/s [FAD] | | | | |
| 2.2 | Nominal speed of fans | | rpm | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Method of Ventilation system control | | text | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Ventilation Fans | | | | | | |
| 4.1.1 | Number of Fans | | No. | | | | |
| 4.1.2 | Description of Fans (make & model) | | text | | | | |
| 4.1.3 | Type of fans (axial flow, centrifugal, tangential flow) | | text | | | | |
| 4.1.4 | Type of fans drive (direct drive / belt drive / etc.) | | text | | | | |
| 4.1.5 | Fan diameter | | mm | | | | |
| 4.1.6 | Materials and coatings of fan casings | | text | | | | |
| 4.1.7 | Materials and coatings of fan blades | | text | | | | |
| 4.1.8 | Materials and coatings of base frame (centrifugal fans only) | | text | | | | |
| | | | | | | | |
| 4.2 | Ductwork | | | | | | |
| 4.2.1 | Materials and coatings of connections | | text | | | | |
| 4.2.2 | Materials and coatings of ductwork supports | | text | | | | |
| 4.2.3 | Materials and coatings of dampers | | text | | | | |
| | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|------------------|---|------|------|----------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD21: Ventilation for Inlet Works MCC Room | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD21: Ventilation for Inlet Works MCC Room | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 4.3 | Louvres | | | | | | |
| 4.3.1 | No. of louvres | No. | | | | | |
| 4.3.2 | Rated face velocity through (each) louvre | m/s | | | | | |
| 4.3.3 | Maximum airflow rate through (each) louvre | m³/s | | | | | |
| 4.3.4 | Differential pressure across louvre (min. - max.) | Pa - Pa | | | | | |
| 4.3.5 | Materials and coatings of louvres | text | | | | | |
| 4.3.6 | Weight of louvre (each) | kg | | | | | |
| 4.3.7 | Dimensions | mm x mm x mm | | | | | |
| | | | | | | | |
| 4.4 | Sound attenuators | | | | | | |
| 4.4.1 | Made & model of sound attenuators | text | | | | | |
| 4.4.2 | Materials and coatings of sound attenuators | text | | | | | |
| 4.4.3 | Description of accoustic infill materials | text | | | | | |
| 4.4.4 | Maximum resistance losses across attenuators | Pa | | | | | |
| | | | | | | | |
| 5 | MOTORS | | | | | | |
| 5.1 | Description of fan motor | text | | | | | |
| 5.2 | Nameplate power | kW | | | | | |
| 5.3 | Voltage | V | | | | | |
| 5.4 | Rated load current | Amps | | | | | |
| 5.5 | Frequency | Hz | | | | | |
| 5.6 | Phase | Ph. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES

31300-5W

TD21: Ventilation for Inlet Works MCC Room

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A



| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|--|----|-----|------|------|----------|
| A | | TD21: Ventilation for Inlet Works MCC Room | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |



| Supplier: | | Quantity: | |
|-----------|--------------------|-----------|---------|
| Item | | Unit | Offered |
| 5 | MOTORS (CONTINUED) | | |
| 5.7 | Number of poles | No. | |
| 5.8 | Service factor | text | |
| 5.9 | Ingress Protection | IP | |
| 5.10 | Weight | kg | |
| | | | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____

| | | | | | | | |
|---|--|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD22: Ventilation for Biofilter Pump Station MCC Room | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD22: Ventilation for Biofilter Pump Station MCC Room | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | | Unit | Offered | | | |
| 1 | GENERAL | | | | | | |
| 1.1 | Spares supplier and address | | text | | | | |
| | | | | | | | |
| 2 | PERFORMANCE REQUIREMENTS | | | | | | |
| 2.1 | Fan airflow (Min. / Max.) | | l/s [FAD] | | | | |
| 2.2 | Nominal speed of fans | | rpm | | | | |
| | | | | | | | |
| 3 | OPERATION AND CONTROL | | | | | | |
| 3.1 | Method of Ventilation system control | | text | | | | |
| | | | | | | | |
| 4 | CONSTRUCTION AND DESIGN | | | | | | |
| 4.1 | Ventilation Fans | | | | | | |
| 4.1.1 | Number of Fans | | No. | | | | |
| 4.1.2 | Description of Fans (make & model) | | text | | | | |
| 4.1.3 | Type of fans (axial flow, centrifugal, tangential flow) | | text | | | | |
| 4.1.4 | Type of fans drive (direct drive / belt drive / etc.) | | text | | | | |
| 4.1.5 | Fan diameter | | mm | | | | |
| 4.1.6 | Materials and coatings of fan casings | | text | | | | |
| 4.1.7 | Materials and coatings of fan blades | | text | | | | |
| 4.1.8 | Materials and coatings of base frame (centrifugal fans only) | | text | | | | |
| | | | | | | | |
| 4.2 | Ductwork | | | | | | |
| 4.2.1 | Materials and coatings of connections | | text | | | | |
| 4.2.2 | Materials and coatings of ductwork supports | | text | | | | |
| 4.2.3 | Materials and coatings of dampers | | text | | | | |
| | | | | | | | |
| | | | | | | | |

| | | | | | | | |
|---|---|---|------------------|---|-------------|-------------|-------------|
|  | |  | | ISIPINGO WASTEWATER TREATMENT WORKS: CONSTRUCTION OF FUNCTIONAL IMPROVEMENTS TO SELECTED PROCESSES | | | |
| | | | | 31300-5W | | | |
| TD22: Ventilation for Biofilter Pump Station MCC Room | | | | CLIENT N°. | | PAGE | |
| | | | | Y6975 | | | |
| | | | | ZUTARI N°. | | REV. | |
| | | | | 1002680 | | A | |
| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
| A | | TD22: Ventilation for Biofilter Pump Station MCC Room | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |
| Supplier: | | | Quantity: | | | | |
| Item | | Unit | Offered | | | | |
| 4.3 | Louvres | | | | | | |
| 4.3.1 | No. of louvres | No. | | | | | |
| 4.3.2 | Rated face velocity through (each) louvre | m/s | | | | | |
| 4.3.3 | Maximum airflow rate through (each) louvre | m³/s | | | | | |
| 4.3.4 | Differential pressure across louvre (min. - max.) | Pa - Pa | | | | | |
| 4.3.5 | Materials and coatings of louvres | text | | | | | |
| 4.3.6 | Weight of louvre (each) | kg | | | | | |
| 4.3.7 | Dimensions | mm x mm x mm | | | | | |
| | | | | | | | |
| 4.4 | Sound attenuators | | | | | | |
| 4.4.1 | Made & model of sound attenuators | text | | | | | |
| 4.4.2 | Materials and coatings of sound attenuators | text | | | | | |
| 4.4.3 | Description of accoustic infill materials | text | | | | | |
| 4.4.4 | Maximum resistance losses across attenuators | Pa | | | | | |
| | | | | | | | |
| 5 | MOTORS | | | | | | |
| 5.1 | Description of fan motor | text | | | | | |
| 5.2 | Nameplate power | kW | | | | | |
| 5.3 | Voltage | V | | | | | |
| 5.4 | Rated load current | Amps | | | | | |
| 5.5 | Frequency | Hz | | | | | |
| 5.6 | Phase | Ph. | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |



ZUTARI

**ISIPINGO WASTEWATER
TREATMENT WORKS:
CONSTRUCTION OF FUNCTIONAL
IMPROVEMENTS TO SELECTED
PROCESSES**

31300-5W

TD22: Ventilation for Biofilter Pump Station MCC Room

CLIENT N°.

Y6975

PAGE

ZUTARI N°.

1002680

REV.

A

| Rev. | TI | Description | By | Ckd | APP. | Aut. | Date |
|------|----|---|----|-----|------|------|----------|
| A | | TD22: Ventilation for Biofilter Pump Station MCC Room | AH | MD | NH | NH | MAY 2025 |
| | | | | | | | |

| Supplier: | | Quantity: | |
|-----------|--------------------|-----------|---------|
| Item | | Unit | Offered |
| 5 | MOTORS (CONTINUED) | | |
| 5.7 | Number of poles | No. | |
| 5.8 | Service factor | text | |
| 5.9 | Ingress Protection | IP | |
| 5.10 | Weight | kg | |

Regardless of any information provided in this technical detail sheet, the equipment to be provided will comply with the specified requirements.

Name (Print): _____

Signature: _____