



RUMBIYE WATER SUPPLY AND SANITATION PROJECT – PHASE 2

TENDER DOCUMENT

**TENDER NAME: DRILLING AND EQUIPPING OF RUMBIYE
COMMUNITY BOREHOLE WATER
PROJECT IN RUMBIYE COMMUNITY–
PHASE 2 LOT-3**

TENDER NO: RC/RCWSP/LOT-03/2022

CATEGORY: OPEN

**Rotary Club of Busia
P.O Box 418 - 50400
Busia**

E-MAIL: rotaryclubofbusia@gmail.com, rumbiye@googlegroups.com

DECEMBER 2022

**TENDER CLOSING DATE & TIME: 3RD FEBRUARY 2022 AT 1200HRS (EAST AFRICAN
TIME)**



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1 SECTION I – INVITATION TO TENDER

TENDER NAME: DRILLING AND EQUIPPING OF RUMBIYE COMMUNITY BOREHOLE WATER PROJECT IN RUMBIYE COMMUNITY– PHASE 2 LOT-3

TENDER NO: RC/RCWSP/LOT-03/2022.

The **Rotary International** in conjunction with the host and international sponsor has allocated funds to the **Rotary Club of Busia** for the project; Rumbiye **Community Water Supply Project**, **Tender No. RC/RCWSP/LOT-03/2022.**

- 1.1 The Rotary Club of Busia now invites sealed bids from eligible bidders for the construction of **DRILLING AND EQUIPPING OF RUMBIYE COMMUNITY BOREHOLE WATER PROJECT IN RUMBIYE COMMUNITY.**
- 1.2 Interested eligible bidders may obtain further information from **Rotary Club of Busia, President**, rotaryclubofbusia@gmail.com/rumbiye@googlegroups.com during office hours from 0800 hours to 1700 Hours local time from Monday to Friday, except during lunch hour (1300 hours to 1400 hours), during weekends and public holidays at the address given below.
- 1.3 A complete set of bidding documents in English may be collected by interested eligible bidders upon request or can be downloaded from the Engineers without borders website; <https://ewb-kenya.org/tenders/>.
- 1.4 Prices quoted should be net inclusive of all taxes and delivery costs, must be expressed in Kenya Shillings shall remain valid for a period of one hundred and twenty (120) days from the closing date of the tender.
- 1.5 To be eligible to tender, in addition to the requirements given, the tenderer if previously contracted by Rotary Club of Busia or Engineers Without Borders Kenya to offer similar services, **must not** have had any negative evaluation for poor performance and/or delayed delivery of service. In addition, any contract terminated on grounds of integrity and/or fraud or corruption is ineligible to tender.
- 1.6 *In addition to Clause 2.11, eligible tenderers must provide the following **mandatory requirements** (preliminary evaluation). Non-submission of any of the documents will lead to disqualification from the tender process.*
 - a) Copy of certificate of Incorporation/Registration
 - b) Copy of **Valid** Tax compliance certificate.
 - c) Copy of CR 12
 - d) Copy of Certificate of Registration NCA 7 and above as a water contractor and Registration by Ministry of Water, Sanitation and Irrigation for borehole drilling, equipment and servicing as Class B or A.
 - e) Tender security of **Kshs 100,000.00 (Kenya Shillings Fifty Thousand Only)** in form of a bank guarantee from a bank registered in Kenya and recognized by the Central Bank of Kenya or a guarantee from an insurance company recognized by Public Procurement Oversight Authority.
 - f) Duly filled, signed and stamped Confidential Business Questionnaire (Section VIII).



g) Duly filled, signed and stamped Bidder's Declaration and Integrity Pact (Section VIII).

h) Properly bound, paginated and serialized document

- 1.7 Interested bidders shall be required to submit their tender documents **one (1) sealed envelope** clearly labeled **"DRILLING AND EQUIPPING OF RUMBIYE COMMUNITY BOREHOLE WATER PROJECT IN RUMBIYE COMMUNITY– PHASE 2 LOT-3 Tender Reference No. RC/RCWSP/LOT-03/2022.** with the instructions **"Do not open before 3rd February 2023 at 1200hrs (East Africa Time)"**

Tenderers to submit 1 (one) original and two (2) copies of the tender.

- 1.8 Completed tender documents are to be enclosed in plain sealed envelopes clearly marked **"DRILLING AND EQUIPPING OF RUMBIYE COMMUNITY BOREHOLE WATER PROJECT IN RUMBIYE COMMUNITY– PHASE 2 LOT– Tender Reference No. RC/RCWSP/LOT-03/2022."** and must be delivered to the address below on or before **12.00Noon East African Time on 3rd February 2023.** Late bids will be rejected. Bids will be publicly opened in the presence of the bidders' designated representatives and anyone who choose to attend at the address below on **3rd February 2023 at 12.00Noon** East African Time.

Addressed to:

The President

Rotary Club of Busia

P.O Box 418 – 50400 BUSIA

E-MAIL - rotaryclubofbusia@gmail.com

Submitted and registered at Rumbiye Primary School, Rumbiye sub-Location, Funyula Constituency, Busia County

- 1.2 Tenders will be opened immediately thereafter in the presence of the tenderer and/or their representatives who choose to attend the opening at **Rumbiye Primary School, Rumbiye sub-Location, Funyula Constituency, Busia County**



2 SECTION II – INSTRUCTIONS TO TENDERERS

2.1 Eligible Tenderers

- 2.1.1. This Invitation to tender is open to all tenderers eligible as described in the instructions to tenderers. Successful tenderers shall provide the services for the stipulated duration from the date of commencement (hereinafter referred to as the term) specified in the tender documents.
- 2.1.2. The mandatory documentation as given under the Appendix to Instructions to Tenderers – clause 2.29 must be submitted as they will be used for confirmation of eligibility of the tenders.
- 2.1.3. The procuring entity's employees, committee members, board members and their relative (spouse and children) are not eligible to participate in the tender unless where specially allowed under section 131 of the Act.
- 2.1.4. Tenderers shall provide the qualification information statement that the tenderer (including all members, of a joint venture and subcontractors) is not associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Procuring entity to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the services under this Invitation for tenders.
- 2.1.5. Tenderers involved in corrupt or fraudulent practices or debarred from participating in public procurement shall not be eligible.

2.2 Cost of Tendering

- 2.2.1 The Tenderer shall bear all costs associated with the preparation and submission of its tender, and the procuring entity, will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.
- 2.2.2 This tender document is not chargeable and is given to the tenderer selected by the Procuring entity.

2.3 Contents of Tender Document

- 2.3.1. The tender document comprises the documents listed below and addenda issued in accordance with clause 2.6 of these instructions to tenderers.
 - i) Invitation to Tender
 - ii) Instructions to Tenderers
 - iii) General Conditions of Contract
 - iv) Special Conditions of Contract



- v) Schedule of requirements
- vi) Technical Specifications
- vii) Tender Form and Price Schedules
- viii) Tender Security Form
- ix) Contract Form
- x) Performance Security Form
- xi) Bank Guarantee for Advance Payment Form
- xii) Manufacturer's Authorization Form
- xiii) Confidential Business Questionnaire Form
- xiv) Declaration form

- 2.3.2. The Tenderer is expected to examine all instructions, forms, terms, and specifications in the tender documents. Failure to furnish all information required by the tender documents or to submit a tender not substantially responsive to the tender documents in every respect will be at the tenderers risk and may result in the rejection of its tender.

2.4 Clarification of Tender Documents

- 2.4.1. A prospective tenderer making inquiries of the tender documents may notify the Procuring entity in writing or by post at the entity's address indicated in the invitation for tenders. The Procuring entity will respond in writing to any request for clarification of the tender documents, which it receives not later than seven (7) days prior to the deadline for the submission of tenders, prescribed by the procuring entity. Written copies of the Procuring entities response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective tenderers that have received the tender document.
- 2.4.2. The procuring entity shall reply to any clarifications sought by the tenderer within 3 days of receiving the request to enable the tenderer to make timely submission of its tender.

2.5 Amendment of Tender Documents

- 2.5.1. At any time prior to the deadline for submission of tender, the procuring entity, for any reason, whether at its own initiative or in response to a clarification requested by a prospective tenderer, may modify the tender documents by issuing an addendum.
- 2.5.2. All prospective tenderers that have obtained the tender documents will be notified of the amendment in writing or by post and will be binding on them.
- 2.5.3. In order to allow prospective tenderers reasonable time in which to take the amendment into account in preparing their tenders, the Procuring entity, at its discretion, may extend the deadline for the submission of tenders.

2.6 Language of Tender

- 2.6.1. The tender prepared by the tenderer, as well as all correspondence and documents relating to the tender exchange by the tenderer and the Procuring entity, shall be



written in English language, provided that any printed literature furnished by the tenderer may be written in another language provided they are accompanied by an accurate English translation of the relevant passages in which case, for purposes of interpretation of the tender, the English translation shall govern.

2.7 Documents Comprising the Tender

- 2.7.1. The tender prepared by the tenderers shall comprise the following components.
- a) A Tender Form and a Price Schedule completed in accordance with clauses 2.8, 2.9 and 2.10 below.
 - b) Documentary evidence established in accordance with Clause 2.11 that the tenderer is eligible to tender and is qualified to perform the contract if its tender is accepted.
 - c) Tender security furnished is in accordance with Clause 2.12.
 - d) Confidential business questionnaire.

2.8 Form of Tender

- 2.8.1. The tenderer shall complete the Form of Tender and the appropriate Price Schedule furnished in the tender documents, indicating the equipment to be supplied, installed and commissioned and a brief description of the equipment, their country of origin, quantity, and prices.

2.9 Tender Prices

- 2.9.1. The tenderer shall indicate on the Price schedule the unit prices where applicable and total tender prices of the services it proposes to provide under the contract.
- 2.9.2. Prices indicated on the Price Schedule shall be the cost of the services quoted including all customs duties and VAT and other taxes payable.
- 2.9.3. Prices quoted by the tenderer shall remain fixed during the term of the contract unless otherwise agreed by the parties. A tender submitted with an adjustable price quotation will be treated as non-responsive and will be rejected, pursuant to clause 2.22.
- 2.9.4. Contract price variations shall not be allowed for contracts not exceeding one year (12 months)
- 2.9.5. Where contract price variation is allowed, the variation shall not exceed 10% of the original contract price.
- 2.9.6. Price variation requests shall be processed by the procuring entity within 30 days of receiving the request.

2.10 Tender Currencies

- 2.10.1 Prices shall be quoted in the either in Kenya Shillings or which will be converted to Kenya Shillings according to Clause 2.23.

2.11 Tenderers Eligibility and Qualifications

- 2.11.1 Pursuant to Clause 2.1 the tenderer shall furnish, as part of its tender, documents establishing the tenderers eligibility to tender and its qualifications to perform the contract



if its tender is accepted.

- 2.11.2 The documentary evidence of the tenderers qualifications to perform the contract if its tender is accepted shall establish to the Procuring entity's satisfaction that the tenderer has the financial and technical capability necessary to perform the contract.

2.12 Tender Security

- 2.12.1 The tenderer shall furnish, as part of its tender, a tender security for the amount and form specified in the Invitation to tender.
- 2.12.2 **The tender security shall be Kshs 100,000.00.**
- 2.12.3 The tender security is required to protect the Procuring entity against the risk of Tenderer's conduct which would warrant the security's forfeiture, pursuant to clause 2.12.7.

The tender security shall be denominated in a Kenya Shillings or in another freely convertible currency and shall be in the form of:

- a) A bank guarantee.
 - b) Cash.
 - c) Such insurance guarantee approved by the Authority.
- 2.12.4 Any tender not secured in accordance with clause 2.12.1 and 2.12.3 will be rejected by the Procuring entity as non-responsive, pursuant to clause 2.20.
- 2.12.5 Unsuccessful tenderer's security will be discharged or returned as promptly as possible as but not later than thirty (30) days after the expiration of the period of tender validity prescribed by the procuring entity.
- 2.12.6 The successful tenderer's tender security will be discharged upon the tenderer signing the contract, pursuant to clause 2.26, and furnishing the performance security, pursuant to clause 2.27.
- 2.12.7 The tender security May be forfeited:
- a) If a tenderer **withdraws** its tender **during** the period of tender validity specified by the procuring entity on the Tender Form; or
 - b) In the case of a successful tenderer, if the tenderer fails:
 - i) to sign the contract in accordance with clause 2.26; **or**
 - ii) to furnish performance security in accordance with clause 2.27.
 - c) If the tenderer rejects, correction of an error in the tender.

2.13 Validity of Tender

- 2.13.1 The tender shall remain valid for 120 days or as specified in the tender documents after date of tender opening prescribed by the Procuring entity, pursuant to clause 2.20. A tender valid for a shorter period shall be rejected by the Procuring entity as non-responsive.
- 2.13.2 In exceptional circumstances, the Procuring entity may solicit the Tenderer's consent to an extension of the period of validity. The request and the responses thereto shall



be made in writing. The tender security provided under clause 2.14 shall also be suitably extended. A tenderer may refuse the request without forfeiting its tender security. A tenderer granting the request will not be required nor permitted to modify its tender.

2.14 Format and Signing of Tender

- 2.14.1 The tenderer shall prepare two copies of the tender, clearly marking each “ORIGINAL TENDER” and “COPY OF TENDER,” as appropriate. In the event of any discrepancy between them, the original shall govern.
- 2.14.2 The original and all copies of the tender shall be typed or written in indelible ink and shall be signed by the tenderer or a person or persons duly authorized to bind the tenderer to the contract. All pages of the tender, except for unamended printed literature, shall be initialed by the person or persons signing the tender.
- 2.14.3 The tender shall have no interlineations, erasures, or overwriting except as necessary to correct errors made by the tenderer, in which case such corrections shall be initialed by the person or persons signing the tender.

2.15 Payment terms

- 2.15.1 The payment terms for this tender are for a credit period of thirty (30) days from the date when monthly invoices have been received at Engineers Without Borders Kenya, and after confirmation of satisfactory receipt of services. **The tenderer should clearly indicate the payment terms in their proposal if different.**

2.16 Sealing and Marking of Tenders

- 2.16.1 The tenderer shall seal the original and each copy of the tender in separate envelopes, duly marking the envelopes as “ORIGINAL” and “COPY.” The envelopes shall then be sealed in an outer envelope.
- 2.16.2 The inner and outer envelopes shall:
 - a) be addressed to the Procuring entity at the address given in the invitation to tender;
 - b) Bear tender number and name in the invitation to tender and the words: **“DO NOT OPEN BEFORE 3rd February 2023 at 1200hrs (East Africa Time)”**.
- 2.16.3 The inner envelopes shall also indicate the name and address of the tenderer to enable the tender to be returned unopened in case it is declared “late”.
- 2.16.4 If the outer envelope is not sealed and marked as required by clause 2.15.2, the Procuring entity will assume no responsibility for the tender’s misplacement or premature opening.

2.17 Deadline for Submission of Tenders

- 2.17.1 Tenders must be received by the Procuring entity at the address specified in the Invitation to Tender no later than, **3rd February 2023 at 1200hrs (East Africa Time)**.
- 2.17.2 The procuring entity may, at its discretion, extend this deadline for the submission of tenders by amending the tender documents in accordance with clause 2.5, in which case all rights and obligations of the procuring entity and candidates previously subject to



the deadline will thereafter be subject to the deadline as extended.

- 2.17.3 Bulky tenders which will not fit in the tender box shall be received by the procuring entity as provided for in the appendix.

2.18 Modification and withdrawal of tenders

- 2.18.1 The tenderer may modify or withdraw its tender after the tender's submission, provided that written notice of the modification, including substitution or withdrawal of the tender's is received by the procuring entity prior to the deadline prescribed for the submission of tenders.
- 2.18.2 The Tenderer's modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of clause 2.15. A withdrawal notice may also be sent by cable, but followed by a signed confirmation copy, postmarked not later than the deadline for submission of tenders.
- 2.18.3 No tender may be modified after the deadline for submission of tenders.
- 2.18.4 No tender may be withdrawn in the interval between the deadline for submission of tenders and the expiration of the period of tender validity specified by the tenderer on the Tender Form. Withdrawal of a tender during this interval may result in the Tenderer's forfeiture of its tender security, pursuant to clause 2.12.7.
- 2.18.5 The procuring entity may at any time terminate procurement proceedings before contract award and shall not be liable to any person for the termination.
- 2.18.6 The procuring entity shall give prompt notice of the termination to the tenderers and on request give its reasons for termination within 14 days of receiving the request from any tenderer.

2.19 Opening of Tenders

- 2.19.1 The Procuring entity will open all tenders in the presence of tenderers' representatives who choose to attend at 1200hrs (East Africa Time) **on 3rd February 2023**, and in the location specified in the invitation to tender. The tenderers' representatives who are present shall sign a register evidencing their attendance.
- 2.19.2 The tenderers' names, tender modifications or withdrawals, tender prices, discounts, and the presence or absence of requisite tender security and such other details as the Procuring Entity, at its discretion, may consider appropriate, will be announced at the opening.
- 2.19.3 The procuring entity will prepare minutes of the tender opening which will be submitted to the tenderers that signed the tender opening register and will have made the request.

2.20 Clarification of tenders

- 2.20.1 To assist in the examination, evaluation and comparison of tenders the procuring entity may at its discretion, ask the tenderer for a clarification of its tender. The request for clarification and the response shall be in writing, and no change in the prices or substance shall be sought, offered, or permitted.



- 2.20.2 Any effort by the tenderer to influence the procuring entity in the procuring entity's tender evaluation, tender comparison or contract award decisions may result in the rejection of the tenderers tender.
- 2.20.3 Comparison or contract award decisions may result in the rejection of the tenderers' tender.

2.21 Preliminary Examination and Responsiveness

- 2.21.1 The Procuring entity will examine the tenders to determine whether they are complete, whether any computational errors have been made, whether required securities have been furnished whether the documents have been properly signed, and whether the tenders are generally in order.
- 2.21.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the candidate does not accept the correction of the errors, its tender will be rejected, and its tender security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.
- 2.21.3 The Procuring entity may waive any minor informality or nonconformity or irregularity in a tender which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any tenderer.
- 2.21.4 Prior to the detailed evaluation, pursuant to clause 2.22, the Procuring entity will determine the substantial responsiveness of each tender to the tender documents. For purposes of these clauses, a substantially responsive tender is one which conforms to all the terms and conditions of the tender documents without material deviations. The Procuring entity's determination of a tender's responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence.
- 2.21.5 If a tender is not substantially responsive, it will be rejected by the Procuring entity and may not subsequently be made responsive by the tenderer by correction of the nonconformity.
- 2.21.6 Conversion to a single currency
- 2.21.7 Where other currencies are used, the procuring entity will convert those currencies to Kenya shillings using the selling exchange rate on the date of tender closing provided by the Central Bank of Kenya.

2.22 Evaluation and comparison of tenders

- 2.22.1 The procuring entity will evaluate and compare the tenders which have been determined to be substantially responsive, pursuant to clause 2.20.



2.22.2 The comparison shall be of the price including all costs as well as duties and taxes payable on all the materials to be used in the provision of the services.

2.22.3 The Procuring entity's evaluation of a tender will take into account, in addition to the tender price, the following factors, in the manner and to the extent indicated in clause 2.22.4 and in the technical specifications:

- a) operational plan proposed in the tender; and
- b) deviations in payment schedule from that specified in the Special Conditions of Contract;

Pursuant to clause 2.22.3 the following evaluation methods will be applied:

2.22.1.1 a) **Operational Plan.**

The Procuring entity requires that the services under the Invitation for Tenders shall be performed at the time specified in the Schedule of Requirements. Tenderers offering to perform longer than the procuring entity's required delivery time will be treated as non-responsive and rejected.

2.22.1.2 b) **Deviation in payment schedule.**

Tenderers shall state their tender price for the payment on a schedule outlined in the special conditions of contract. Tenders will be evaluated on the basis of this base price. Tenderers are, however, permitted to state an alternative payment schedule and indicate the reduction in tender price they wish to offer for such alternative payment schedule. The Procuring entity may consider the alternative payment schedule offered by the selected tenderer.

2.22.4 The tender evaluation committee shall evaluate the tender within 30 days from the date of opening the tender.

To qualify for contract awards, the tenderer shall have the following:-

- a) Pass the preliminary evaluation having submitted all the mandatory documentation
- b) Score the minimum technical evaluation score as given in the evaluation criteria under the appendix to instructions to tenderers – clause 2.29.
- c) Necessary qualifications, capability experience, services, equipment and facilities to provide what is being procured.
- d) Legal capacity to enter into a contract for procurement
- e) Shall not be insolvent, in receivership, bankrupt or in the process of being wound up and is not the subject of legal proceedings relating to the foregoing
- f) Shall not be debarred from participating in public procurement.



2.23 Contacting the procuring entity

- 2.23.1 Subject to clause 2.19, no tenderer shall contact the procuring entity on any matter relating to its tender, from the time of the tender opening to the time the contract is awarded.
- 2.23.2 Any effort by a tenderer to influence the procuring entity in its decisions on tender evaluation tender comparison or contract award may result in the rejection of the tenderers tender.

2.24 Award of Contract

a) Post qualification

- 2.24.1 In the absence of pre-qualification, the Procuring entity will determine to its satisfaction whether the tenderer that is selected as having submitted the lowest evaluated responsive tender is qualified to perform the contract satisfactorily.
- 2.24.2 The determination will take into account the tenderer's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the tenderers qualifications submitted by the tenderer, pursuant to clause 2.1.2, as well as such other information as the Procuring entity deems necessary and appropriate.
- 2.24.3 An affirmative determination will be a prerequisite for award of the contract to the tenderer.
- 2.24.4 A negative determination will result in rejection of the Tenderer's tender, in which event the Procuring entity will proceed to the next lowest evaluated tender to make a similar determination of that Tenderer's capabilities to perform satisfactorily.

2.25 Award Criteria

- 2.25.1 Subject to clause 2.27 the Procuring entity will award the contract to the successful tenderer whose tender has been determined to be substantially responsive and has been determined to be the lowest evaluated tender, provided further that the tenderer is determined to be qualified to perform the contract satisfactorily.
- 2.25.2 The procuring entity reserves the right to accept or reject any tender and to annul the tendering process and reject all tenders at any time prior to contract award, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for the procuring entity's action. If the procuring entity determines that none of the tenderers is responsive; the procuring entity shall notify each tenderer who submitted a tender.
- 2.25.3 A tenderer who gives false information in the tender document about its qualification or who refuses to enter into a contract after notification of contract award shall be considered for debarment from participating in future public procurement.



2.26 Notification of award

- 2.26.1 Prior to the expiration of the period of tender validity, the Procuring entity will notify the successful tenderer in writing that its tender has been accepted.
- 2.26.2 The notification of award will signify the formation of the Contract subject to the signing of the contract between the tenderer and the procuring entity pursuant to clause 2.26. Simultaneously the other tenderers shall be notified that their tenders have not been successful.
- 2.26.3 Upon the successful Tenderer's furnishing of the performance security pursuant to clause 2.27, the Procuring entity will promptly notify each unsuccessful Tenderer and will discharge its tender security, pursuant to clause 2.12.

2.27 Signing of Contract

- 2.27.1 At the same time as the Procuring entity notifies the successful tenderer that its tender has been accepted, the Procuring entity will simultaneously inform the other tenderers that their tenders have not been successful.
- 2.27.2 Within fourteen (14) days of receipt of the Contract Form, the successful tenderer shall sign and date the contract and return it to the Procuring entity.
- 2.27.3 The parties to the contract shall have it signed within 30 days from the date of notification of contract award unless there is an administrative review request.

2.28 Performance Security

- 2.28.1 Within fourteen (14) days of the receipt of notification of award from the Procuring entity, the successful tenderer shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the tender documents, or in another form acceptable to the Procuring entity.
- 2.28.2 Failure of the successful tenderer to comply with the requirement of clause 2.26 or clause 2.27.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the tender security, in which event the Procuring entity May make the award to the next lowest evaluated or call for new tenders.

2.29 Corrupt or Fraudulent Practices

- 2.29.1 The Procuring entity requires that tenderers observe the highest standard of ethics during the procurement process and execution of contracts. A tenderer shall sign a declaration that he has not and will not be involved in corrupt or fraudulent practices.
- 2.29.2 The procuring entity will reject a proposal for award if it determines that the tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;



2.29.3 Further, a tenderer who is found to have indulged in corrupt or fraudulent practices risks being debarred from participating in public procurement in Kenya.



2.30 APPENDIX TO INSTRUCTIONS TO TENDERERS

The following information for procurement of services shall complement or amend the provisions of the instructions to tenderers. Wherever there is a conflict between the provisions of the instructions to tenderers and the provisions of the appendix, the provisions of the appendix herein shall prevail over those of the instructions to tenderers.

Instruction s to tenderers	Particulars of appendix to instructions to tenderers
2.1	Particulars of eligible tenderers <i>The tenderer shall provide the following mandatory requirements (failure to submit the mandatory requirements will lead to disqualification from the tender process) to be used on the preliminary evaluation</i> i) Copy of certificate of Incorporation/Registration ii) Copy of Valid Tax compliance certificate. iii) Copy of CR 12 iv) Copy of Certificate of Registration NCA 7 and above as a water contractor and /or Registration by Ministry of Water, Sanitation and Irrigation for borehole drilling, equipment and servicing Class B or A. v) Tender security of Kshs 100,000.00 (Kenya Shillings Hundred Thousand Only) in form of a bank guarantee from a bank registered in Kenya and recognized by the Central Bank of Kenya or a guarantee from an insurance company recognized by Public Procurement Oversight Authority. vi) Duly filled, signed and stamped Confidential Business Questionnaire (Section VIII). vii) Duly filled, signed and stamped Bidder's Declaration and Integrity Pact (Section VIII). viii) Properly bound ,paginated and serialized document The successful tenderer may be asked to present certified copies of any legal documentation to enable contract preparation. Other requirements i) Is not limited or debarred under any of the provisions of the Public Procurement and Asset Disposal Act, 2015 and the Public Procurement and Disposal Regulation, 2006 to enter into a Contract; ii) Must not be bankrupt or in the process of being wound-up and is not the subject of legal proceedings for the purposes hereof; iii) Provide information regarding current litigation(s) in which the



	a) <i>If the bidder has been a previous contractor for Engineers Without Borders Kenya but with a negative evaluation for works done, they shall not be considered for evaluation or award for</i>																	
1.6	Tenders will be received at Rumbiye primary school on or before 3 rd February 2023 at 12.00 Noon																	
2.10	The currency to be used is Kenya Shillings (KShs)																	
2.11	Eligibility To be eligible to tender, in addition to the requirements given, the tenderer if previously contracted by Rotary Club of Busia or Engineers Without Borders Kenya to offer similar services, must not have had any negative evaluation for poor performance and/or delayed delivery of service. In addition, any contract terminated on grounds of integrity																	
2.12	Tender Security Tender Security to be issued by the tenderers is Kenya Shillings One hundred Thousand (Kshs. 100,000) in form of a bank guarantee issued by a bank licensed and operating in Kenya. Tender Security from an insurance company recognized by the Public Procurement Regulatory Authority (PPRA) of Kenya is also acceptable.																	
2.22	Evaluation and comparison of tenders - Tenderers will be required to pass the preliminary evaluation having submitted all the mandatory documentation before being considered for technical evaluation. - The evaluation criteria below will be used to evaluate the technical responsiveness of the tenders: TECHNICAL EVALUATION CRITERIA: <table><tr><td>No.</td><td>Evaluation Criteria</td><td>Points (Max)</td></tr><tr><td>1</td><td>Company Past relevant Experience</td><td></td></tr><tr><td></td><td>Provide evidence of Past performance for (5Nos) five different projects for different clients in works of a similar nature within the past 5 years. (Attach award letters, Local Purchase Orders, signed contracts or completion certificates as evidence) a)List of projects undertaken in the last three years(Title of the project, client name and contact details) 5 marks b)5LPOs/completion certificate/Reference letters from different corporate clients @4Marks</td><td>F25</td></tr><tr><td>2</td><td>Equipment Ownership</td><td></td></tr><tr><td></td><td>Major items of Contractor's Equipment proposed for carrying</td><td></td></tr></table>			No.	Evaluation Criteria	Points (Max)	1	Company Past relevant Experience			Provide evidence of Past performance for (5Nos) five different projects for different clients in works of a similar nature within the past 5 years. (Attach award letters, Local Purchase Orders, signed contracts or completion certificates as evidence) a)List of projects undertaken in the last three years(Title of the project, client name and contact details) 5 marks b)5LPOs/completion certificate/Reference letters from different corporate clients @4Marks	F25	2	Equipment Ownership			Major items of Contractor's Equipment proposed for carrying	
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2	Equipment Ownership																	
	Major items of Contractor's Equipment proposed for carrying																	



	Each lump sum rate inserted in the Schedule of Prices shall be a realistic estimate of the execution of the works to completion described under the particular item including allowance for overheads, profits and the like. Should a tender be seriously unbalanced in relation to the Employer's estimates under any item or groups of items, the tender shall be deemed not responsive.
2.24.4	Award of contract Award of contract will be to the eligible tenderer (in line with the eligibility clause); i) who has submitted the tender document in line with the tender requirements; ii) who has been successfully evaluated in preliminary evaluation and attained the technical evaluation pass mark of 70 points and above; iii) Who, having qualified in (ii) above, emerges between ranks one (1) to (3) in the financial evaluation. iv) Who, having qualified in (iii) above, is invited for Competitive Negotiations and submits the lowest evaluated Best and Final Offer for the project.
2.27	Particulars of performance security The amount of Performance Security shall be 10% of the Contract Price in the format of the Performance Security Form provided in the tender document in the form of a bank guarantee drawn by a bank licensed and operating in Kenya or a bank recognized by the Central Bank of Kenya.
2.28	In addition to clause 2.28, the ethics as described below will apply: Ethics It is a requirement that both Rotary Club of Busia and prospective suppliers of goods, services and works observe the highest standards of ethics during the procurement and execution of contracts. In pursuance of this policy, Rotary Club of Busia requires that all bidders concerned take measures to ensure that no transfer of gifts, To officials of Rotary Club of Busia and/or procurement/management staff with decision making responsibility or influence occurs. In this regard, Rotary Club of Busia will require all tenderers to sign, as part of the tender documents, an Integrity Pact (Section VII – Standard forms). Non-delivery of the Bidders Declaration and Integrity Pact (Section VII – Standard forms) duly undersigned by the chief executive or legal representative of the tendering party will result in exclusion of the bid/ quotation from the procurement process. Rotary Club of Busia reserves the right to suspend or cancel a tender/quotation if corrupt practices of any kind are discovered at any stage of the award process.



3 SECTION III – GENERAL CONDITIONS OF CONTRACT

3.1 Definitions

3.1.1 In this Contract, the following terms shall be interpreted as indicated:

- a) “The contract” means the agreement entered into between the Procuring entity and the tenderer as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- b) “The Contract Price” means the price payable to the tenderer under the Contract for the full and proper performance of its contractual obligations.
- c) “The services” means services to be provided by the contractor including materials and incidentals, which the tenderer is required to provide to the Procuring entity under the Contract.
- d) “The Procuring entity” means the organization sourcing for the services under this Contract.
- e) “The Project Manager is Engineers Without Borders Kenya.
- f) “The contractor means the individual or firm providing the services under this Contract.
- g) “GCC” means general conditions of contract contained in this section
- h) “SCC” means the special conditions of contract
- i) “Day” means calendar day

3.2 Application

These General Conditions shall apply to the extent that they are not superseded by provisions of other part of contract

3.3 Joint Drafting

The parties have participated jointly in the negotiation and drafting of this agreement. In the event an ambiguity or question of intent or interpretation arises, this agreement shall be construed as if drafted jointly by the parties and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any of the provisions of this agreement.

3.4 Effectiveness of Contract

This Contract shall come into effect upon signing of the contract by the tenderer.



3.5 Commencement of services

The Tenderer shall begin carrying out the Services immediately the Contract becomes effective or at such other date as may be specified.

3.6 Standards

- 3.6.1** The services provided under this Contract shall conform to the 7 standards mentioned in the Schedule of requirements

3.7 Patent right's

- 3.7.1** The tenderer shall indemnify the Procuring entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the services under the contract or any part thereof.

3.8 Performance Security

- 3.8.1** Within twenty eight (28) days of receipt of the notification of Contract award, the successful tenderer shall furnish to the Procuring entity the performance security where applicable in the amount specified in Special Conditions of Contract.
- 3.8.2** The proceeds of the performance security shall be payable to the Procuring entity as compensation for any loss resulting from the Tenderer's failure to complete its obligations under the Contract.
- 3.8.3** The performance security shall be denominated in the currency of the Contract, or in a freely convertible currency acceptable to the Procuring entity and shall be in the form of :
- a) Cash.
 - b) A bank guarantee.
 - c) Such insurance guarantee approved by the Authority.
 - d) Letter of credit.
- 3.8.4** The performance security will be discharged by the procuring entity and returned to the candidate not later than thirty (30) days following the date of completion of the tenderer's performance of obligations under the contract, including any warranty obligations under the contract.

3.9 Inspections and tests

- 3.9.1** The Procuring entity or its representative shall have the right to inspect and/or to test the services to confirm their conformity to the Contract specifications. The Procuring entity shall notify the tenderer in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 3.9.2** The inspections and tests may be conducted on the premises of the tenderer or its subcontractor(s). If conducted on the premises of the tenderer or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring entity.
- 3.9.3** Should any inspected or tested services fail to conform to the Specifications, the Procuring entity may reject the services, and the tenderer shall either replace the rejected services or make alterations necessary to meet specification requirements free



of cost to the Procuring entity.

- 3.9.4** Nothing in clause 3.9 shall in any way release the tenderer from any warranty or other obligations under this Contract.

3.10 Payment

- 3.10.1** The method and conditions of payment to be made to the tenderer under this Contract shall be specified in SCC.
- 3.10.2** The payment terms are for a credit period of thirty (30) days from the date when the monthly invoices have been received at Engineers Without Borders Kenya; and after confirmation of satisfactory receipt of services.

3.11 Monitoring & Evaluation

The Tenderer's and Engineers Without Borders Kenyas representative shall meet as frequently as will be agreed to evaluate performance of the tenderer. The tenderer shall issue reports to Engineers Without Borders Kenya covering the the tenderer is to carry out.

3.12 Prices

Prices charged by the contractor for services performed under the Contract shall not, with the exception of any Price adjustments authorized in SCC, vary from the prices by the tenderer in its tender or in the procuring entity's request for tender validity extension as the case may be. No variation in or modification to the terms of the contract shall be made except by written amendment signed by the parties.

3.13 Assignment

The tenderer shall not assign, in whole or in part, its obligations to perform under this contract, except with the procuring entity's prior written consent.

3.14 Termination for default

The Procuring entity may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the tenderer, terminate this Contract in whole or in part:

- a) if the tenderer fails to provide any or all of the services within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring entity;
- b) if the tenderer fails to perform any other obligation(s) under the Contract;
and
- c) If the tenderer, in the judgment of the Procuring entity has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- d) In the event the Procuring entity terminates the Contract in whole or in part, it may procure, upon such terms and in such manner as it deems appropriate, services similar to those undelivered, and the tenderer shall be liable to the Procuring entity for any excess costs for such similar services.



3.15 Termination of insolvency

The procuring entity may at any time terminate the contract by giving written notice to the contractor if the contractor becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the contractor, provided that such termination will not produce or affect any right of action or remedy, which has accrued or will accrue thereafter to the procuring entity.

3.16 Termination for convenience

3.16.1 The procuring entity by written notice sent to the contractor may terminate the contract in whole or in part, at any time for its convenience. The notice of termination shall specify that the termination is for the procuring entity convenience, the extent to which performance of the contractor of the contract is terminated and the date on which such termination becomes effective.

3.16.2 For the remaining part of the contract after termination the procuring entity may elect to cancel the services and pay to the contractor on agreed amount for partially completed services.

3.17 Resolution of disputes

The procuring entity's and the contractor shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the contract.

If after thirty (30) days from the commencement of such informal negotiations both parties have been unable to resolve amicably a contract dispute either party may require that the dispute be referred for resolution to the formal mechanisms specified in the SCC.

3.18 Governing language

The contract shall be written in the English language. All correspondence and other documents pertaining to the contract, which are exchanged by the parties, shall be written in the same language.

3.19 Force Majeure

The contractor shall not be liable for forfeiture of its performance security, or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

3.20 Applicable law

The contract shall be interpreted in accordance with the laws of Kenya unless otherwise specified in the SCC.

3.21 Notices

Any notices given by one party to the other pursuant to this contract shall be sent to the other party by post or by fax or E-mail and confirmed in writing to the other party's address specified in the SCC.

A notice shall be effective when delivered or on the notices effective date, whichever is later.

3.22 Confidentiality

- i) "Confidential Information" shall, for the purposes of this Agreement, include without limitation any financial, strategic, technical, commercial, geological and scientific information, know-



how, trade secrets and data in whatever form, communicated to the Tenderer or acquired by the Ministry of Energy or Engineers Without Borders Kenya during the course of the tenderer carrying out his duties as contemplated in this Agreement.

- ii) The Tenderer agrees that he will not, during the course of carrying out his duties as contemplated in this Agreement or thereafter into perpetuity, disclose the Confidential Information to any third party for any reason or purpose whatsoever without the prior written consent of the Ministry of Energy or Engineers Without Borders Kenya, save in accordance with the provisions of this Agreement.
- iii) The Tenderer agrees not to utilize, exploit or in any other manner whatsoever use the Confidential Information disclosed pursuant to the provisions of this Agreement and the terms of any subsequent Agreement made by parties, for any purpose whatsoever without the prior written consent of the Ministry of Energy or Engineers Without Borders Kenya.
- iv) The Tenderer undertakes not to use the Confidential Information for any purpose other than that for which it is disclosed; and in accordance with the provisions of this Agreement and any subsequent Agreement made by parties.
- v) The Tenderer shall be held liable for disclosing confidential information unless he proves that:
 - a) Such information and data was in the public domain prior to such disclosure;
 - b) Such information and data has become part of the public domain through no fault of the Tenderer; or
 - c) Such disclosure was required by any written Kenyan law.

3.23 Corrupt gifts and payments of commission

- i) The Client is an institution that fosters zero tolerance to fraud and corruption. The Tenderer hereby agrees to avoid fraud and corruption and to report any suspected fraud, corruption, or any activity that jeopardizes the integrity of the Client and its staff to its – Corruption Prevention and Integrity Committee (COPIC).
- ii) The Tenderer shall not;
 - a) Offer or give or agree to give to any person in the service of the Client any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other Contract with the Client or for showing or forbearing to show favour or disfavour to any person in relation to this or any other contract with the Client.



- b) Enter into this or any other contract with the Client in connection with which commission or consideration has been paid or agreed to be paid by it or on his behalf or to his knowledge, unless before the Contract is made particulars of any such commission or consideration and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing by the Client.

Any breach of this Condition by the Tenderer or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the Tenderer) shall be an offence under the provisions of the Public Procurement and Disposal Act 2015 issued under The Exchequer and Audit Act Cap 412 of the Laws of Kenya, Anti-corruption & Economic Crimes Act (2003), Public officer Ethics Act (2003), Government Financial Management Act 2004, and the Performance Contract with the Government.

3.24 Expiration of contract

Unless terminated earlier pursuant to Clause, this Contract shall terminate on after satisfactory completion of services and submission of a report by the Tenderer as required by this contract.



4 SPECIAL IV – SPECIAL CONDITIONS OF CONTRACT

Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, between the GCC and the SCC, the provisions of the SCC herein shall prevail over these in the GCC.

4.1 Site visit

- a. The Employer has organized a pre-tender site visit on 20th January 2023 from 10.00 a.m at Rumbiye Primary School, Funyula Constituency, Busia County. A representative of the Employer will be available to meet the intending tenderers at the Site on the indicated dates.
- b. The tenderer is advised to examine the Site and its surroundings and obtain for himself on his own responsibility, all information that may be necessary for preparing the tender and entering into a contract. The costs of visiting the Site shall be the tenderer's own responsibility.
- c. Tenderers must provide their own transport. The representative will not be available at any other time for site inspection visits.
- d. The tenderer and any of his personnel or agents will be granted permission by the Employer to enter upon premises and lands for the purpose of such inspection, but only upon the express condition that the tenderer, his personnel or agents, will release and indemnify the Employer from and against all liability in respect of, and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which but for the exercise of such permission, would not have arisen.

4.2 Special conditions of contract as relates to the GCC

General conditions of contract reference	Special conditions of contract
3.5	Particulars of performance security The amount of Performance Security shall be 10% of the Contract Price in the format of the Performance Security Form provided in the tender document in the form of a bank guarantee drawn by a bank licensed and operating in Kenya.
3.7	The payments will be done monthly within 30 days upon receipt of invoice by the project manager and confirmation of satisfactory receipt of services.
3.13	The provisions of the arbitration act of the laws of Kenya shall apply.



5 SECTIONV–SCHEDULE OF REQUIREMENTS AND PRICES

5.1 Notes for preparing the schedule of requirements

The schedule of requirements for the services shall be included in the tender documents by the procuring entity and shall cover at the minimum a description of the goods and services to be supplied and the delivery schedule.

The objectives of schedule of requirements is to provide sufficient information to enable tenderers to prepare their tenders efficiently and accurately, in particular, the price schedule, for which information is provided.

In addition, the schedule of requirements, together with the price schedule, should serve as a basis in the event of quantity variations at the time of award of contract pursuant to instructions to tenderers clause 26.

The date or period of delivery should be carefully specified, taking into account the date prescribed herein from which the procuring entity's delivery obligations start (notice of award).

This part will include any deliverables under the service contract

Number	Description	Quantity	Delivery Time
			Start_____
			End_____

(The tenderer should amend as appropriate)



6 SECTION VI–TECHNICAL SPECIFICATIONS

6.1 Specifications

TERMS OF REFERENCE.

Background

Rotary Club of Busia intends to Contract eligible firms to drill borehole, Supply required temporary and permanent casings, provide attendance to installation of hand pump, piping and commission amongst any other supporting works

6.2 Scope of Works.

The scope of Works shall include but not limited to,

- 1) Drilling of a shallow borehole to specification
- 2) Supply and installation of uPVC casing including screens
- 3) Supply of gravel pack at aquifer zone
- 4) Well construction and development
- 5) Well testing
- 6) Construction of Concrete slab at ground level
- 7) Installation of hand pump
- 8) Supply of borehole completion data and water chemical analysis report

6.3 Specifications.

The successful drilling contractor shall inform Water Resources Management Offices in good time before starting drilling works so that they can send an officer to be present during drilling construction and test pumping exercise.

6.4 Drilling

Drilling should be carried out at a diameter of not less than 8", using either a rotary type machine or percussion method. The drilling rig should be able to drill to the recommended depth, at the specified diameter of 8". The rig and the drilling method adopted must be suitable for drilling through both unconsolidated material, and hard, compact rocks. The rotary drilling technique offers very high penetration rates in all types of materials, rig mobilization and demobilization are rapid, minimal casings are required during drilling exercise and reliable yield estimates can easily be made during drilling.

Drilling additives to be used (e.g. foam or polymer) must be non-toxic and bio-degradable. In no circumstances will bentonic additives considered to be acceptable, as they may plug the aquifer zones and are extremely difficult to remove during development.



Geological rock samples should be collected at 2 metre intervals. Water struck and rest levels should be carefully recorded, as well as water quality and estimates of the yield of individual aquifers encountered.

Great care should be taken that the water quality of the different aquifers is accurately determined. Upon the first strike, drilling fluids should be effectively flushed, and after sufficient time, a water sample should be taken of the air-blown (rotary) or bailed (percussion) yield. On-site analysis using an EC meter, and preferably a portable laboratory, is recommended.

6.5 Borehole Design

The design of the borehole should ensure that screens are placed against the optimum aquifer zones. The final design should be made by an experienced hydrogeologist.

6.6 Casing and Screens

Aquifer zones shall be completely or partly lined with uPVC screen as approved by the Engineer. The uPVC casings and screens to be supplied by the Contractor shall have a minimum wall thickness of 6mm for 8" ND casing. The Engineer however reserves the right to vary these specifications and reject materials if found substandard. The permanent casing shall comply with DIN 8061 2016-5 and DIN 8062: 2009-10 or (ISO 161/1) standards. The casings shall be minimum 102 mm nominal diameter and shall have a minimum thickness of 6 mm and tensile strength of at least 45MN/m². Screens shall be of slotted uPVC, complying with DIN 4925-1: 2017-10 and IS 12818: 1995. Sections of the screen shall be provided in maximum 3m length and joined water tight by either flush threaded connections or by an appropriate method recommended by the screen manufacturer or an equivalent standard, so that the resulting joint shall be strong and have the same structural integrity as the casings and screens. In particular cases the lower end of the screen should be completed with a sump of minimum 0.5 m and maximum 2 m length. The bottom end should be sealed with an uPVC bottom cap.

6.7 Verticality

All boreholes shall be vertical, shall be drilled and cased straight, and all casings/screens shall be set round, plumb and true to line. If required by the Engineer, the Contractor will make a verticality test during and after drilling by approved methods and at his own expense to demonstrate that the departure from the vertical does not exceed 3 mm per 1,000 mm between ground level and the bottom of the borehole. If this departure is exceeded, the Contractor shall make the necessary corrections to the approval of the Engineer, without additional payment. If the error cannot be corrected, then drilling shall cease, and a new borehole shall be drilled at a position nearby, indicated by the Engineer. The abandoned borehole shall be backfilled and/or capped by methods approved by the Engineer. No payment will be made for the re-drilling, the sealing/backfilling of the abandoned borehole, or for moving to the new site. Any materials (i.e. Casing, screens, gravel pack, cement, etc.) lost in the abandoned borehole will be to the Contractors cost.

6.8 Gravel Pack

The use of a gravel pack is recommended within the aquifer zone, because the aquifer could contain sands or silts, which are finer than the screen slot size. An 8" diameter borehole screened at 6"



will leave an annular space of approximately 1", which is sufficient to allow the insertion of fine, quartzitic gravel. The grain size of the gravel pack should be within the range of 2 to 4 mm, and granules should be rounded to well round. Over 95% should be siliceous.

Gravel pack should be washed down with copious volumes of water to avoid bridging. The best method, which is unfortunately rarely used, involves the insertion with a tremie pipe.

Prior to delivery, the Contractor shall subject samples of the gravel to a grain size analysis at the Contractor's expense and the results submitted together with a sample of the gravel to the Engineer for approval. The Engineer shall approve the gravel before its installation. Sufficient gravel pack shall be installed to cover completely the uppermost screen, including an additional 2m length (to allow for settling). Emplacement should be by means of a conductor pipe, and a good supply of water should be introduced with the gravel to prevent "bridging". The tremie (conductor) pipe should be raised gradually as the level of the gravel builds up. The gravel pack should be capped with a clay seal to prevent contamination. The annular space above this seal can be backfilled with inert drill cuttings up to 3 meters below the ground level.

6.9 Borehole Construction

In installing screen and casing, centralizers at 6 metre intervals should be used to ensure centrality within the borehole. This is particularly important to insert the artificial gravel pack all around the screen. If installed, gravel packed sections should be sealed off at the top and bottom with clay or bentonite seals (2 m). In this case, it is also recommended to install a 3 m long, cement grout plug at the surface, to prevent contamination from entering the borehole. The remaining annular space should be backfilled with inert material (drill cuttings may be used), and the top five metres grouted with cement to ensure that no surface water at the well head can enter the well bore and thus prevent contamination.

6.10 Borehole Development

Once screen, gravel pack, seals and backfill have been installed, the well should be developed. Development is the term used to describe the procedures designed to maximise well yield. Although an expensive element in the completion of a well, the additional costs are usually justified by longer well life, greater efficiencies, lower operational and maintenance costs and a more constant yield.

Development has two broad objectives, which can be divided into borehole and aquifer stimulation:

- To repair the damage done to the aquifer material during drilling and restore the natural hydraulic properties.

In both cable tool (i.e. percussion) and air hammer drilling, the bit action chips and crushes the rock, and mixes it with water and other fine material into thick mud slurry.

The pounding of the bit forces this slurry into the openings in the wall of the borehole, thus blocking the pores and impeding the flow of water from the aquifer. A thick "wallcake" may form, especially when clay additives (such as bentonite) are used during drilling or where natural clays occur in the penetrated formations. This cake, if not removed, may virtually plug the borehole, and significantly reduce the discharge. It should be noted that the maximum yield of a formation can



only be realised if all the fractures and crevices are unblocked and able to supply water to the well. Borehole development techniques are applied to break down and remove the impermeable layer of clayey material from the borehole wall. Swabbing, wall- scratching, airlift rawhiding and polyphosphate dosing are all borehole development techniques.

- To alter the characteristics of the aquifer volume in the vicinity of the borehole, by improving hydraulic contact between the aquifer and the hole. This is essentially aquifer development, and is also known as aquifer stimulation. Polyphosphate dosing, hydro fracturing and acidification are examples of aquifer stimulation techniques.

Development with a percussion rig: if a cable tool rig has been deployed the available development techniques are relatively simple, but less effective than the methods used in modern rotary drilling. The following measures are recommended:

- Backwashing and bailing: using a surge block with rubber flaps slightly smaller than the internal diameter of the hole, start near the top of the water bearing zones and surge downwards (surging upwards may lead to the surge block sand-locking, which can jeopardise the hole). Bail the borehole clean periodically. Repeat this cycle until no more material is brought up, bailed water is clear and electrical conductivity is stable.
- Polyphosphate dosing: percussion equipment does not include mudpumps and drillpipe, so jetting is impossible. Polyphosphate dosing comprises no more than simply pouring water with dissolved sodium hexametaphosphate and calcium hypochlorite into a pipe, the base of which is located near the bottom of the hole. The polyphosphate is allowed to act for 12 hours or overnight.
- Repeat the backwashing and bailing cycle until the water is clear and electrical conductivity stable.

If a rotary rig equipped with a strong air compressor is available, more effective development techniques can be applied:

- Airlift rawhiding, into and through the aquifer zones. This should continue until the water lifted is clean and clear, with electrical conductivity stable. Rawhiding comprises cyclic airlifting: once the airlift has been established, air supply is cut off and water allowed to cascade down the hole. This creates overpressures across the borehole wall, which agitates the formation and enhances cleaning. The airlift is then started again and the cycle repeated.
- Water jetting with an on-wall velocity of 30 m/s: at least 0.3 m³ of fluid should be jetted per linear metre of screen. The water used for jetting must be absolutely clean, and it is dissolved as in the polyphosphate dosing described under Section 4.2. The jetting tool should be so constructed that the jet openings are not more than 1" (25 mm) from the borehole wall. Jetting should start from the top of the water bearing formation rotating downwards. After the entire saturated zone has been jetted, the hole should be left for at least 12 hours or overnight, to allow the hexametaphosphate to work on the "wall cake" and any clayey material in the aquifer material.
- Airlift rawhiding again, from the bottom of the hole, until airlifted water is absolutely clean



and electrical conductivity stable.

- During development, an estimate of the bailed or air-blown yield should be made. This usually gives a fair indication of the final range of abstraction that can be expected from the borehole. The use of overpumping as a means of development is not advocated, since it only increases permeability in zones, which are already permeable.

6.11 Well Testing

After development and preliminary tests, a step-drawdown test and a 24-hour long-duration well test at constant discharge rate should be carried out. Well tests have to be performed on all newly-completed wells: apart from providing information on the quality of drilling, design and development, it also enables the hydrogeologist to compute sustainable abstraction rates, design drawdown, and other important well and aquifer parameters.

During the test, the well is pumped from a measured static water level (SWL) at a known yield. Simultaneously, the discharge rate and the pumped water level (PWL) as a function of time are recorded. After stopping the pump, recovery is measured until the water level has returned within 5% of the original level, in comparison with the total pumped drawdown. The specific capacity and the efficiency of a borehole are determined during a step-drawdown test. Simultaneously, target yields for the constant discharge test can be set. The step-drawdown test usually comprises 4 to 6 steps of 60 to 90 minutes each. The pumping rates are increased step-by-step, e.g. by gradually opening a gate valve. Recovery may be measured after the last step, but this is not really necessary if a constant discharge test is conducted as well. However, before starting the constant discharge test, 95% of the pumped drawdown must be recovered, or, alternatively, no increase in level must be observed for a period of more than 4 hours.

The constant discharge test allows calculation of specific aquifer parameters, such as transmissivity, hydraulic conductivity and storage coefficient. In addition, the sustainable volume of abstraction, the design drawdown and the final pump specification and setting can be determined. The minimum duration of the test should be 24 hours, followed by 12 hours of recovery observations, or alternatively until 95% of the total drawdown has been regained.

6.12 Legal Requirements

It is a legislated condition imposed by the Water Act 2016 that all boreholes in Kenya be equipped with a master/flow meter and a means by which water levels can be measured. These measures have been designed to allow the collection of data, which will enable both the authorities and the borehole operators to learn more about the reliability and limitations of their groundwater resources.

The easiest method of water level monitoring is through a narrow (1.25" to 2") dipper line which is installed along the rising main. An electric dipper should be used to measure water levels directly, with an accuracy of approximately 1 cm. An electrical dipper should also be equipped in the borehole to monitor water rest level.

6.13 Drilling location:

Tenderers should clearly demonstrate their capacity and capability to undertake and successfully complete the borehole drilling works. The scope of works is as indicated in the Bill of quantities.

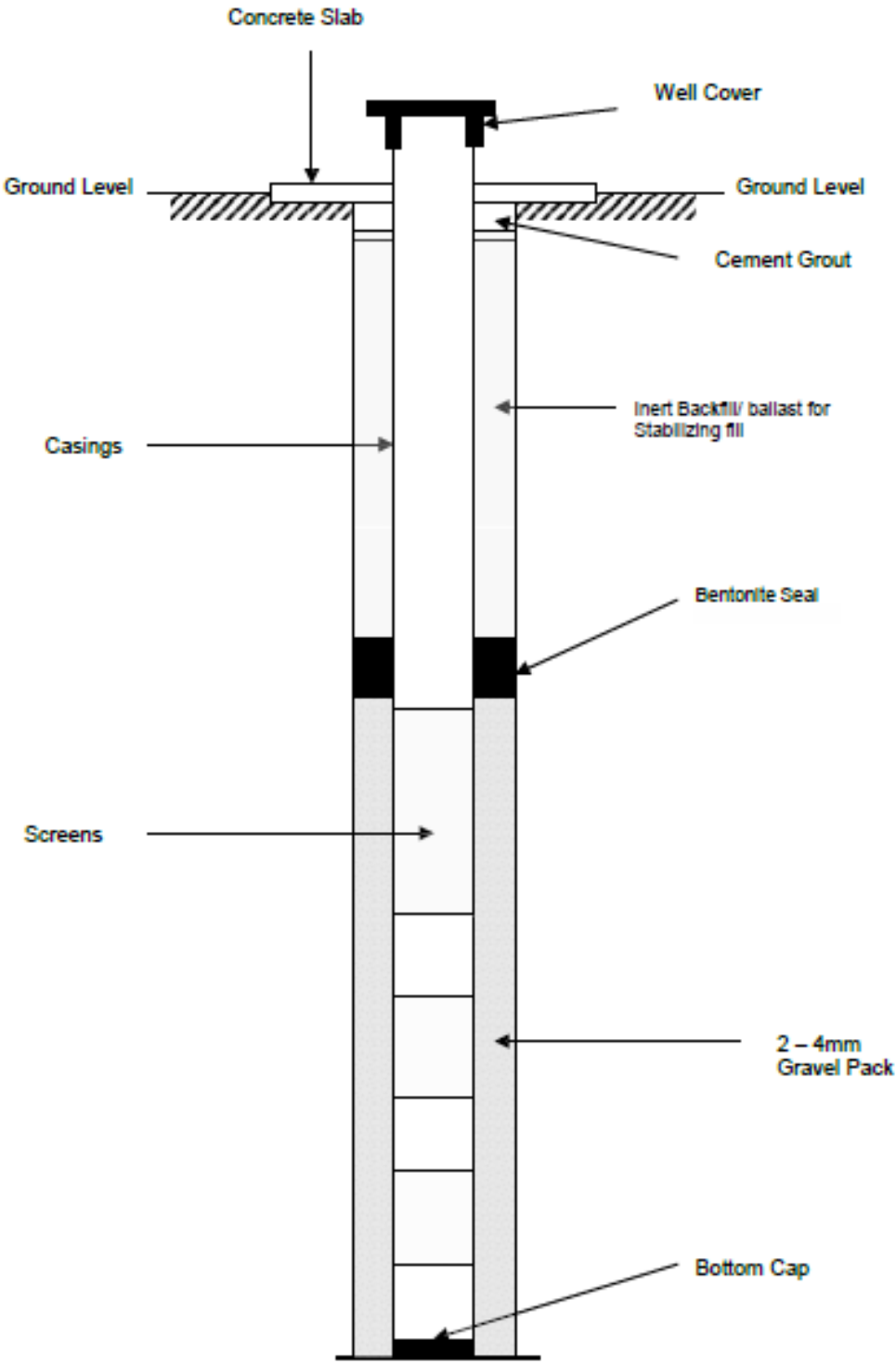


6.14 DRAWINGS

Notes on drawings

- 6.14.1 A list of drawings should be inserted here
- 6.14.2 The actual drawings including Site plans should be annexed in a separate booklet – these will to be shared with the successful tenderer where need be.

TYPICAL BOREHOLE SECTION





7 BILL OF QUANTITIES

7.1 Preamble to Bills of Quantities

The objectives of the Bills of Quantities are;

- a) to provide sufficient information on the quantities of Works to be performed to enable tenders to be prepared efficiently and accurately; and
- b) When a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

The Bills of Quantities should be divided generally into the following sections:

7.2 Preliminaries

The preliminaries should indicate the inclusiveness of the unit prices, and should state the methods of measurement which have been adopted in the preparation of the Bill of Quantities and which are to be used for the measurement of any part of the Works.

The number of preliminary items to be priced by the tenderer should be limited to tangible items such as site office and other temporary works, otherwise items such as security for the Works which are primarily part of the Contractor's obligations should be included in the Contractor's rates.

7.3 Work Items

- i) The items in the Bills of Quantities should be grouped into sections to distinguish between those parts of the Works which by nature, location, access, timing, or any other special characteristics may give rise to different methods of construction, or phasing of the Works, or considerations of cost. General items common to all parts of the Works may be grouped as a separate section in the Bill of Quantities.
- ii) Quantities should be computed net from the Drawings, unless directed otherwise in the Contract, and no allowance should be made for bulking, shrinkage or waste. Quantities should be rounded up or down where appropriate.
- iii) The following units of measurement and abbreviations are recommended for use:

<i>Unit</i>	<i>Abbreviation</i>	<i>Unit</i>	<i>Abbreviation</i>
cubic meter	m ³ or cu m	millimeter	Mm
Hectare	Ha	Month	Mon
Hour	H	Number	Nr
Kilogram	Kg	square meter	m ² or sq m
lump sum	Sum	square millimeter	mm ² or sq mm
Meter	M	Week	Wk
metric ton (1,000 kg)	T		



- iv) The commencing surface should be identified in the description of each item for Work involving excavation, boring or drilling, for which the commencing surface is not also the original surface. The excavated surface should be identified in the description of each item for Work involving excavation for which the excavated surface is not also the final surface. The depths of Work should be measured from the commencing surface to the excavated surface, as defined.

7.4 Day-work Schedule

- i) A Daywork Schedule should be included if the probability of unforeseen work, outside the items included in the Bill of Quantities, is relatively high. To facilitate checking by the Employer of the realism of rates quoted by the tenderers, the Daywork Schedule should normally comprise:
 - ii) a list of the various classes of labour, and materials for which basic Day work rates or prices are to be inserted by the tenderer, together with a statement of the conditions under which the Contractor will be paid for Work executed on a Day work basis; and
 - iii) a percentage to be entered by the tenderer against each basic Day work Subtotal amount for labour, materials and plant representing the Contractor's profit, overheads, supervision and other charges.

7.5 Provisional Quantities and Sums

- i) Provision for quantity contingencies in any particular item or class of Work with a high expectation of quantity overrun should be made by entering specific "Provisional Quantities" or "Provisional Items" in the Bill of Quantities, and not by increasing the quantities for that item or class of Work beyond those of the Work normally expected to be required. To the extent not covered above, a general provision for physical contingencies (quantity overruns) should be made by including a "Provisional Sum" in the Summary of the Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a "Provisional Sum" in the Summary of the Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises.
- ii) Provisional sums to cover specialized works normally carried out by Nominated Sub Contractors should be avoided and instead Bills of Quantities of the specialized Works should be included as a section of the main Bills of Quantities to be priced by the Main Contractor. The Main Contractor should be required to indicate the name (s) of the specialised firms he proposes to engage to carry out the specialized Works as his approved domestic sub-contractors. Only provisional sums to cover specialized Works by statutory authorities should be included in the Bills of Quantities.



7.6 Bill of Quantities

LOT 3 - DRILLING OF NEW BOREHOLE FOR RUMBIYE COMMUNITY PROJECT

S/No.	Description	Unit	Quantity	Rate (Ksh)	Amount (Ksh)
1	Equipment mobilization and personnel to the site and demobilization after work	Sum	1		
2	a) Drilling 8" diameter Borehole from 0 - 60M depth	Mtr	60		
3	b) Drilling 8" diameter Borehole from 60M depth	Mtr	1		Rate Only
4	Water for Field Camp and drilling	Sum	1		
5	a) Supply and Installation of 6" Upvc Plain Casings	Mtr	40		
6	b) Supply and Installation of 6" Upvc Slotted casings	Mtr	20		
7	a) Supply and Installation of 6" Steel Plain Casings	Mtr	40		Rate Only
8	b) Supply and Installation of 6" Steel Slotted casings	Mtr	20		Rate Only
9	Supply and insertion of gravel pack	Tons	3		
10	Borehole development by air jetting using compressor	Hrs	2.5		
11	Test Pumping, Step test, constant and discharge test & Recovery test after test pumping	Sum	1		
12	Borehole capping and slab construction	Sum	1		
13	Water Chemical Analysis and Borehole Completion report and WRA permits. Any additional costs (Rate only)	Sum	1		
14	(a) Installation Of 8"-Non- Removable Surface Casings In the Collapse Zones.	Mtr	2		
15	Installation India Mark 2 Pump - With all required pipes and fittings. Includes supply of 1.5 Inches uPVC Draw off pipes and installation of existing hand pump. Rate inclusive of all required concrete works	Item	1		
Subtotal 1 (KSh)					
Add 16% VAT (16%* Sub-Total 1) (Ksh)					
Sub-total 2 (KSh)					
Grand Total to the form of bid (Sub-Total 2) (Ksh)					