

# **PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

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## **BILLS OF QUANTITIES**

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11/9/2022

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**THE FOLLOWING BILLS OF QUANTITIES REFERRED TO IN THIS CONTRACT**

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## **PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

### **INSTRUCTIONS TO TENDERERS**

#### **1. Checking**

The Tenderer is required to check the numbers of the pages and should any be found to be missing or in duplicate or the figures or writing indistinct, he must inform the Quantity Surveyor immediately and have the same rectified. Should the Tenderer be in doubt about the precise meaning of any words or figures he must inform the Quantity Surveyor in order that the correct meaning may be decided upon before the date for the submission of the tender.

No liability whatsoever will be admitted nor claim allowed in respect of errors in the tender due to mistakes in the Bills of Quantities which should have been rectified in the manner spelt above.

#### **2. Alteration or Qualification of tender documents**

The Contractor shall not alter or otherwise qualify the text of these Bills of Quantities. Any alteration or qualification made without authority will be ignored and the text of the Bills of Quantities as printed will be adhered to.

Any alteration, qualification or addition made by the tenderer without authority may cause the tender to be disqualified.

#### **3. Queries during tendering**

Any doubt or perceived ambiguity as to the meaning or intention of the tender documents, or any other question arising shall be communicated in writing to the Quantity Surveyor before the tender is submitted. The Quantity Surveyor will upon receipt of any such query, set out the intent and meaning of any part. Written copies of the Quantity Surveyor's response including a description of the inquiry but without identifying its source, will be sent to all prospective tenderers who have been issued with the tender documents.

#### **4. Amendment of tender documents**

At any time prior to the deadline for submission of tenders, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective tenderer, modify the tender documents by the issuance of an Addendum.

## **INSTRUCTIONS TO TENDERERS -(CONTINUED)**

### **4. Amendment of tender documents - (continued)**

The Addendum will be sent in writing or by cable to all invited tenderers who have been issued with the tender documents and will be binding upon them. Prospective tenderers shall promptly acknowledge receipt thereof by letter or cable to the Employer.

In order to afford prospective tenderers reasonable time in which to take an addendum into account in preparing their tenders, the Employer may, at his own discretion, extend the deadline for the submission of tenders.

### **5. Completion and filling of BoQS and tender documents**

The excel documents has been linked with formulas and the contractors are needed to fill rates section as per the specified items and it would updates automatically on the grand summary page.

The section where the rates would be entered has been also highlighted in the **light greyish** for easier identification and filling.

The contractor would also need to enter the name on the first sheet of the BoQs of the Elevated Water Tank, top right corner greyish cell, and the contractors name would be captured on other sheet.

The contractor should make sure it has filled all the rates section before submission as well as other section highlighted or requested.

Lumpsum pricing and willfully omitting to price an item shall render the tender liable to disqualification and any item(s) not priced shall not in any case be taken into consideration.

The tenders shall be witnessed as to validity. Tenders not so witnessed shall be declared invalid and therefore non-responsive.

### **6 Modification and withdrawal of tenders**

A tenderer may modify or withdraw his tender after submission, provided that the modification or notice of withdrawal is received in writing prior to the prescribed deadline for submission of tenders

The tenderer's modification or notice of withdrawal shall be prepared, sealed, marked and delivered with the inner envelope additionally marked "**modification**" or "**withdrawal**" as appropriate.

No tender shall be modified or withdrawn after the deadline for submission of tenders. In the event of a tenderer withdrawing before the tenders are opened, his tender will be returned un-opened in an outer envelope bearing the name and address of the tenderer without any other markings.

## **INSTRUCTIONS TO TENDERERS -(CONTINUED)**

### **7. Determination of Responsiveness**

Prior to the detailed evaluation of tenders, the Employer will determine whether each tender is substantially responsive to the requirements of the tender documents.

For purposes of this instruction, a substantially responsive tender is one which conforms to all the terms and conditions and specifications of the tender documents without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way, inconsistent with the tender documents, the Employer's rights or the tenderer's obligations under the Contract, and the rectification of which deviation or reservation would affect unfairly the competitive position of other tenderers presenting substantially responsive tenders.

If a tender is not substantially responsive to the requirements of the tender documents, it will be rejected by the Employer and may subsequently be made responsive by the tenderer having corrected or withdrawn the non-conforming deviation or reservation.

### **8. Drawings**

Before presenting the tender, the tenderer shall examine the drawings which may be viewed at the offices of the Architect or Quantity Surveyor during normal working hours and shall satisfy himself regarding their detail as no claim by reason of ignorance in this connection will be allowed.

### **9. Correction of Errors**

Tenders that are substantially responsive will be checked by the Employer for any arithmetic errors in computation and summation. Errors will be corrected by the Employer as follows:

- .01 where there is a discrepancy between amount in figures and in words the amount in words will prevail, and
- .02 where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit rate and the quantity, the unit rate as quoted will prevail, unless in the opinion of the Employer there is an obvious gross misplacement of the decimal point in the rate, in which case the total amount as quoted will prevail and the unit rate will be corrected.

Notwithstanding the adjustments as foresaid, the amounts stated in the Form of Tender shall be taken as absolute and therefore shall not be changed.

## **INSTRUCTIONS TO TENDERERS - (CONTINUED)**

### **9. Correction of Errors - (continued)**

In the event of a discrepancy between the tender and the corrected tender figure as stated in the main summary of the Bills of Quantities the following shall be adopted:

- .01 The tender amount as stated in the Form of Tender shall override the tender amount in the Main Summary after correction. Such discrepancy will be notified to the tenderer who will then have the opportunity of confirming or withdrawing his tender.
- .02 The difference between the tender amount and the corrected tender sum shall be expressed as a percentage of the corrected tender sum nett of prime cost and provisional sums as a "**Correction factor**".
- .03 The above "**Correction factor**" shall be applied as a reduction or an addition as the case may be to adjust the contractor's rates in the Bills of Quantities for the evaluation of Variations, Valuations for interim certificates and measurements for final account.
- .04 Any discount given by the tenderer shall be treated as a discrepancy in accordance with sub-paragraph .03 above.

### **10. Preliminaries Section**

Whereas this section should be carefully priced, no front loading shall be allowed. Any amount, which in the opinion of the Employer has been front loaded shall be relocated in the measured section of the Bills of Quantities at the discretion of the Employer, otherwise the tender shall be liable to disqualification as irresponsible.

### **11. Tender Validity**

The tender shall remain valid for a period of one hundred and eighty days (180) days from the date of submission of tenders

### **12. Site Visit**

The tenderers are highly advised to visit the site and acquaint themselves with the conditions on site before presenting their tenders. Where works are described as "to match existing, the Contractor must ensure that. No claim for want of knowledge arising from failure to ascertain the site conditions will be entertained or allowed under any circumstances.

**NAWIRI - A USAID FUNDED PROGRAM**

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**GENERAL PRELIMINARIES**

A	<p><b><u>PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</u></b></p> <p>The Preliminaries items are <b><u>NOT TO BE PRICED individually</u></b>, rather the contractor's rates in the construction works are deemed to be inclusive of preliminaries, general items and preambles.</p> <p>Any item indicated in this part of the Bills of Quantities and is required to be done by the Contractor, shall be so executed without any rate against that particular item. The Contractor is advised to include appropriate cost in the work rates to include such additional costs.</p> <p>The Contractor shall defend, indemnify and hold harmless the Employer and its agents employees, from and against claim, cost, expense, damage, loss, or liability (including attorneys' fees) due to costs associated in execution Preliminaries work items. However, the Contractor shall never be negligent on its part in execution of works of Preliminary nature.</p>
B	<p><b><u>PROVISIONAL WORKS</u></b></p> <p>In case of any omission of part of the contractual work, the contractor shall not be liable to claim any additional costs relating to loss of profit or any other cost</p>
C	<p><b><u>ABBREVIATIONS</u></b></p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows:</p> <p>mm shall mean millimetre M or m shall mean linear metre sm shall mean square metre M2 shall mean square metre m<sup>2</sup> shall mean square metre cm shall mean cubic metre M3 shall mean cubic metre m<sup>3</sup> shall mean cubic metre kg shall mean kilogram N shall mean Newton KN shall mean Kilonewton in/” shall mean inches lf shall mean linear foot sf shall mean square foot cf shall mean cubic foot lb shall mean pound avoirdupois No. shall mean number Prs shall mean pairs m/s. shall mean measured separately</p>



**GENERAL PRELIMINARIES (CONTD.)**

**METHOD OF MEASUREMENT (Cont'd)**

B.S. shall mean the current British Standard Specification published by the British Standard Institution, 2 Park Street, and LONDON W.I., ENGLAND.

K.S. shall mean the current Kenya Standard Specification published by the Kenya Bureau of Standards, P. O. Box 54974, NAIROBI, Kenya.

'As Described' shall mean as described in these Bills of Quantities.

'As before described' shall mean in all respects as described in a previous item.

A **METHOD OF MEASUREMENT**

The Bills of Quantities have been prepared in accordance with the general principles of the Standard Method of Measurement of Building and Associated Civil Works for East Africa, Second Edition (Metric), published by the Architectural Association of Kenya, Chapter of Quantity Surveyors in June 2008. The quantities are measured net of the built dimension and no working space is allowed

The exceptions to the Standard Method of Measurement are as follows:

Clause B 19 (b) of the Standard Method of Measurement is deleted and the following clause substituted:

Attendance on nominated sub-contractors shall be given as an item in each case and shall be deemed to include allowing use of standing scaffolding, messrooms, sanitary accommodation and welfare facilities; providing space for office accommodation and for storage of plant and materials; providing light and water for their work; clearing away rubbish; unloading facilities for storage (as specified under "Storage of Material" in these Preliminaries) hoisting, providing water and power (as specified under "water and Electricity Supply for the Works" in these Preliminaries) and removing and replacing duct covers, pipe casings and the like

B **FORM OF CONTRACT**

Special Contract conditions supplied together with these tender documents shall be the form of contract.

All the payment of other items that are not included in these General Preliminaries or elsewhere under Particular Preliminaries but included in the contract provisions, shall be part of the form of contract. The contractor can prepare its separately but it payments shall be deemed to have been included in the rates and shall not therefore form parts of the Contract Sum

**GENERAL PRELIMINARIES (CONTD.)**

**A PROGRAM OF THE WORKS**

The Contractor shall provide, within two weeks of the date for possession of the site and in agreement with the Architect and Employer a Progress Chart for the whole of the Works including the Works of Nominated Sub-Contractors. One copy shall be forwarded to the Architect and another to the Employer and a further copy shall be retained on the site on which the Contractor shall record the progress. Should any circumstances arise affecting the programme or progress, the chart shall be modified as necessary and the Architect and Employer informed.

The contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the contractor's obligations

**B MATERIALS AND WORKMANSHIP**

All materials and workmanship used in the execution of the works shall be of the best quality and description unless otherwise described.

The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that they are on site when required for use in the works. The Bills of Quantities shall not be used for the purposes of ordering materials. Any additional cost incurred due to exchange rates for imported goods/materials will be deemed to be included in the rates except where the exchange rate differs with more than 10% from the Base date. The base date will be agreed between the Employer and the main contractor

**C STORAGE OF MATERIALS**

The Contractor shall provide at his own risk and cost where directed on the site weatherproof lockup sheds for the safe storage and custody of materials for the works and for the use of workmen engaged thereon and shall remove such sheds and make good damaged for disturbed surfaces upon completion to the satisfaction of the Architect. Nominated Sub-Contractor are to be liable for the cost of any storage accommodation provided especially for their use.

**GENERAL PRELIMINARIES (Cont'd)**

**A SAMPLES AND TESTING**

The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the Architect for his approval or rejection until such samples are approved by the Architect and the Architect may reject any materials or workmanship not in his opinion up to the approved samples.

The Contractor shall arrange for the testing of such materials as directed by the Architect. The Contractor shall pay all charges in connection with the tests and such costs are deemed to be included in his tender. Notwithstanding the results of the tests the Architect may reject any materials that in his opinion are not in accordance with the specification.

The procedure for submitting samples of materials for testing and the method of marking for identification shall be as directed by the Architect.

The Contractor shall allow in his Tender for making and delivering samples for testing and paying all charges of the approved testing laboratory.

**B PLANT, TOOLS AND VEHICLES**

Allow for providing all scaffolding, plant, tools and vehicles required for the works except insofar as may be stated otherwise herein and except for such items specifically and only required for the use of the nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.

**C GOVERNMENT ACTS REGARDING WORKPEOPLE, ETC.**

Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act of 1950, and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulations relating to Insurance, Pensions and Holidays for workpeople or the safety, health or welfare of work people.

The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc. It is most important that the Contractor before tendering, shall obtain from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc., and allow accordingly in his tender. No claim in respect of want of knowledge in this connection will be entertained.

**GENERAL PRELIMINARIES (Cont'd)**

**A SECURITY GENERALLY**

The Contractor shall be entirely responsible for the security of the works and shall provide all necessary watching, lighting and other precautions necessary to ensure security against theft, loss or damage and the protection of the public.

The Contractor shall also be entirely responsible for the security of the stores, materials, plants personnel, etc., both his own and the Sub-Contractors' and shall take all measures and precautions as necessary.

The Contractor shall leave works secure at completion with all accesses locked, account for all keys and hand over to the Architect with an itemized schedule, retaining a duplicate schedule signed by the Architect as receipt.

**B SIGN FOR MATERIALS SUPPLIED**

The Contractor will be required to sign a receipt for all articles and materials supplied by the Employer at the time of taking delivery thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacement of any such loss or damage with articles and/or materials which will be supplied by the Employer at current

**C PUBLIC AND PRIVATE ROADS**

Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local or other competent authority and the Architect.

**D EXISTING PROPERTY**

The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services, and he shall be held responsible for and shall make good all such damage arising from the execution of this Contract at his own expense to the satisfaction of the Architect.

**GENERAL PRELIMINARIES (Cont'd)**

**A VISIT SITE AND EXAMINE DRAWINGS**

The Contractor is recommended to examine the drawings and visit the site, the location of which is described herein before. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which may affect this tender. No claim arising from his failure to comply with this recommendation will be considered.

**B ACCESS TO SITE AND TEMPORARY ROADS**

Means of access to the site shall be agreed with the Employer prior to commencement of the work the Contractor must allow for building any necessary temporary access roads for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossing, bridges, or any other means of gaining access to the site

Upon completion of the works, the Contractor shall remove such temporary access roads, temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the Architect.

The contractor is advised that the site is located in a remote area of the Marsabit County and shall therefore be responsible for delivery of construction materials to the site. This shall be deemed to be included in the contractor's rates.

Should there be adverse weather condition, the contractor shall continue working normally and any difficulty/additional costs resulting from effect of adverse weather shall be deemed to be included in the contractor's rates.

**C AREA TO BE OCCUPIED BY THE CONTRACTOR**

The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on the site by the Architect.

**D WATER AND ELECTRICITY SUPPLY FOR THE WORKS**

The Contractor shall provide at his own risk and cost all necessary water, electricity light and power required for use in the works.

He must also provide temporary storage tanks and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the Architect. The Contractor shall pay all charges in connection therewith.

Nominated Sub-Contractors are to be made liable for the cost of any water or electric current used for any installation whatsoever provided especially for their own use.

**GENERAL PRELIMINARIES (Cont'd)**

**A SUPERVISION AND WORKING HOURS**

The works shall be executed under the direction and to the entire satisfaction in all respects of the Architect who shall at all times during normal working hours have access to the works and to the yards and workshops of the Contractor and Sub-Contractor or other places where work is being prepared for the Contract.

The working hours shall be those generally worked by good employers in the Building and Civil Engineering Trades in Kenya. No work shall be carried out at night or on gazetted holidays unless the Architect shall so direct. No work shall be covered up nor shall any concreting be carried out in the absence of the Clerk of Works without the prior approval of the Architect in writing.

**B SANITATION OF THE WORKS**

The sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department, and the Architect.

**C PROVISIONAL SUMS**

The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A, Item A7 (i) of the Standard Method of Measurement. Such sums are net and no addition shall be made to them for profit.

**D PRIME COST (P.C.) SUMS**

The term "Prime Cost Sum" or "P.C Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A Item A7 (ii) of the Standard Method of Measurement.

Persons or firms nominated by the Architect to execute work or to provide and fix materials or goods as stated in clause 31 and 32 of the Conditions of Contract are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described herein as Nominated Suppliers.

**GENERAL PRELIMINARIES (Cont'd)**

**A ADJUSTMENT OF P.C. SUMS**

In the final account all P.C. Sums shall be deducted and the amount properly expended upon the Architect's order in respect of each of them added to the Contract sum.

The Contractor shall produce to the Architect such quotations, invoices or bills, properly receipted as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid.

Items of "attendance" and "special attendance" following P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of them.

Should the Contractor be permitted to tender and his tender be accepted for any work for which a P. C. Sum is included in these Bills of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a nominated Sub-Contractor.

**B ADJUSTMENT OF PROVISIONAL SUMS**

In the final account all Provisional Sums shall be deducted and value of the work properly executed in respect of them upon the Architect's order added to the Contract Sum.

Such work shall be valued as described for Variations in Clause No. 30 of the Conditions of Contract, but should any part of the work be executed by a Nominated Sub-Contractor or any articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for a similar items added.

**C NOMINATED SUB-CONTRACTOR**

When any work is ordered by the Architect to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts as described in Clause No. 31 of the Conditions of Contract and shall thereafter be responsible for such sub-contractors in every respect.

Unless otherwise described the contractor is to provide for such sub-contracts any or all of the facilities described in these Preliminaries.

The Contractor should price for these with the nominated sub-contractor's work concerned in the P.C. Sums under the description "Add for Attendance".

**GENERAL PRELIMINARIES (Cont'd)**

**A ATTENDANCE UPON NOMINATED SUB-CONTRACTORS**

The term “attendance” following P.C. Sums for Nominated Sub-Contractors’ work in these Bills of Quantities shall be deemed to include both attendance and items of special attendance.

**B DIRECT CONTRACTS**

Notwithstanding the foregoing conditions, the Employer reserves the right to place a “Direct Contract” for any goods or services required in the works which are measured or covered by a P.C. or Provisional Sum in the Bills of Quantities and to pay for the same direct. In any such instance, profit relative to the P.C. Sums in the priced Bills of Quantities will be adjusted as described for P.C. Sums.

**C ATTENDANCE UPON OTHER TRADESMEN, ETC.**

The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other person employed for the execution of any other work not included in this contract every facility for carrying out their work and also for the use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them.

The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the Architect and the work will be measured and paid for the extent executed at rates provided in these Bills.

**D INSURANCE**

The Contractor shall insure the works and provide a copy of the insurance policy to the Engineer/Architect for his comments and recommendations before handing the rectified policy copy to the Employer

No payment on account of the work executed will be made to the Contractor until he has satisfied the Architect and Employer either by production of an Insurance Policy or an Insurance Certificate that the provisions of the foregoing Insurance Clauses have been complied with in all respects and to their satisfaction.

Thereafter the Architect shall from time to time ascertain that Premiums are duly paid up by the Contractor who shall, if called upon to do so produce receipted premium renewals for the Architect’s inspection.



**GENERAL PRELIMINARIES (Cont'd)**

**A PROVISIONAL WORK**

All work described as "Provisional" in these Bills of Quantities is subject to re-measurement in order to ascertain the actual Quantity executed for which payment will be made.

All "Provisional" and other work liable to adjustment under this contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the Quantity Surveyor. Immediately the work is ready for measuring, the contractor shall give notice to the Quantity Surveyor.

If the Contractor makes default in these respects he shall uncover at his expense the work to enable all measurements to be taken and afterwards reinstate at his own expense.

**B ALTERATIONS TO BILLS, PRICING, ETC.**

Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored.

The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they are accepted. Lump Sums to cover any items of Preliminaries shall likewise be broken down if so required.

**C BLASTING OPERATIONS**

Blasting will only be allowed with the express permission of the Architect in writing.

All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Architect governing the use and storage of explosives.

**GENERAL PRELIMINARIES (Cont'd)**

**A MATERIALS ARISING FROM EXCAVATIONS**

Materials of any kind obtained from the excavations shall be the property of the Employer. Unless the Architect directs otherwise, such materials shall be dealt with as provided in the contract.

Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the Architect. Should such permission be given the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.

**B PROTECTION OF THE WORKS**

Provide protection of the whole of the works contained in the Bills of Quantities, including casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the Architect and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Employer.

**C REMOVAL OF RUBBISH, ETC.**

Remove all rubbish and debris from the buildings and site as it accumulates and at completion of the works and remove all plant, scaffolding and unused materials at completion.

**D WORKS TO BE DELIVERED UP CLEAN**

Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works which may require it; remove all marks, blemishes, stains and defects from joinery fittings and decorated surfaces generally, polish door furniture and bright parts of metal work and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the Architect.

**E TRADE PREAMBLES**

For the full description of material and workmanship method of the work and notes for pricing the Contractor is referred to the specification and preambles which follow in this document, and which shall be followed in all respects unless they conflict with the Preliminaries, or other items in these Bills of Quantities in which case the contents of the Bills of Quantities shall apply.

**GENERAL PRELIMINARIES (Cont'd)**

**A TRAINING LEVY**

The Contractor's attention is drawn to the Legal Notice No. 237 of October, 1971 (and subsequent amendments) which requires payment of a Training Levy on all contracts of more than Kenya Shillings Fifty Thousand (Kshs.50,000/=) in value and his tender must include for all cost arising or resulting therefrom.

**B VALUE ADDED TAX**

The Contractor's attention is drawn to Value Added Tax Act, Particularly the Contractors' VAT effective September, 1993 and Any other amendments thereafter and his tender is deemed to include for all costs arising or resulting therefrom.

The rates included in the Bills of Quantities will be deemed to include VAT, if the contractor fails to captured it in the grand summary and the Contractor will be required to remmit the same to Kenya Revenue Authority

**C WITHHOLDING TAX**

The Contractor's attention is drawn to the Withholding Tax which will be paid by the Employer and deducted from the contractor's amount. The current value of Withholding Tax is 3% but if the regislation is changed, it will be communicated to the Contractor. The contractor's rates are deemed to include Withholding Tax and no claim shall arise therefrom from the payment of Withholding Tax

**D DISPOSAL OF WATER**

Allow for keeping excavations free of all water, including spring and running water by pumping or any other means necessary

**E MAINTAINING SIDES OF EXCAVATIONS**

Allow for maintaining the sides of excavations by planking and strutting or other means required. Additional works caused by the collapse of excavations through inadequate planking and strutting will be at the Contractor's expense.

**F WHITE ANTS**

Allow for destroying of any white ants' nests found in the vicinity of the buildings, destroy Queen Ants, depositing cyanide lumps in holes and tunnels and filling with approved filling and sealing as appropriate.

**G APPENDICES**

The Appendices to these Bills of Quantities shall be regarded for Contract purposes as part of the Bills and shall be read and construed with appropriate sections of the Bills as if contained therein.

**NAWIRI - A USAID FUNDED PROGRAM**

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**GENERAL PRELIMINARIES**

**A SCOPE OF THE CONTRACT**

The works to be carried out under this contract 'Proposed Lkwasi Water Systems rehabilitation works' with and including all associate features for Lkwasi in Wamba North Ward, Samburu East sub-county, Samburu County

**B GENERAL DESCRIPTION OF WORKS**

The works shall comprise several structures/facilities including but not limited to the following:

- Project signboard
- Pipeline extension
- pump
- 50 cubic Elevated steel section water tank on a 12M steel tower
- Animal watering trough
- Water Kiosks
- River crossing
- Protection chamber

**PARTICULAR PRELIMINARIES (Cont'd)**

**GENERAL DESCRIPTION OF WORKS - CONTINUED**

**A DEMOLITIONS AND ALTERATIONS GENERALLY**

The items of pulling down and alterations are to include for both labour and materials and for any shoring, needling, strutting and temporary works in connection therewith.

**B LOCATION OF SITE**

The site of the proposed works will be in Lwasi in Wamba North Ward, Samburu East sub-county, Samburu County. The Contractor is advised to liaise with the Employer to be provided with complete details of the site and take as much details as possible since no extra cost shall be allowed for delivery/transport of materials to remote areas.

**C ENGINEER/ARCHITECT**

The term 'The Engineer' or 'The Architect' shall be used simultaneously and whenever referred to in the Bills of Quantities shall be deemed to have similar meaning.

**D CONSULTANT**

The term "The Consultant" shall be deemed to mean any external person engaged by the Employer to oversee the construction other than the Clerk of Works and the Engineer/Architect described above

**PARTICULAR PRELIMINARIES (Cont'd)**

**A LABOUR CAMPS**

The contractor will not be allowed to erect labour camps on site and shall take full responsibility for transporting labourers daily to and from the site as required, and the cost of this shall be included in his tender.

**B SIGNBOARD**

The contractor will construct a signboard that will include the names of the County Government, project name, contract number and NEMA Licence number, financier and the contractor as shown on the signboard drawing attached to this BoQ. In addition, he will be required to maintain the signboard during the construction period

The signboard shall be constructed with 3 No. 75 x 75 x 3mm vertical SHS members supported with 3 No. 75 x 75 x 3mm SHS braces. All the steel members shall be put in concrete base of 600 x 400 x 600mm and shall include all the necessary lugs and the concrete shall be mass concrete class 25 (20mm aggregates).

The signboard will also have 25mm thick smooth planed timber fixed to the SHS with 50 x 50mm timber and all necessary screws and bolts. The contractor shall paint the timber background and the backside before placing the names and the numbers described above. The names shall be printed on a waterproof paper in a font type and size as directed by the Architect/Engineer and shall be affixed to the timber members with strong adhesive thus will be required to remain in contact for the whole period of the contract

The full specifications of the signboard are as contained in the site construction board drawing. The contractor's price for the signboard shall include all items required as per the said drawing whether described here or not

Whenever the local authorities demand payment arising from the erection of the signboard, the contractor shall pay as required and will not be covered under any other item in the Bills of Quantities

**PARTICULAR PRELIMINARIES (Cont'd)**

**A OFFICE FOR THE CONSULTANTS**

The contractor will construct a well ventilated site office to be utilised by the Engineer/Architect/Consultants with plinth area of approximately 100m<sup>2</sup>. In addition, the following will be provided in the office:

- Office furniture to sit fifteen (15) persons
- Notice board size 5m x 2m
- Storage cabinet

The contractor will provide sanitation facilities in addition to the above site office

**B INSURANCE OF THE WORKS AGAINST FIRE, etc.**

The Contractor shall insure the works against fire and any other eventualities that may arise therefrom and which may disrupt regular progress of the works.

**C POSSESSION AND COMMENCEMENT**

The contractor shall take possession of the site on the date indicated in the acceptance letter. The date of commencement of the works shall be as indicated in the acceptance letter.

The contractor is expected to utilize the period between possession and commencement to mobilize his resources to ensure smooth running of the works from the commencement date.

**D TELEPHONE**

Allow for providing and maintaining a telephone upon the site during the contract period and for paying all charges.

**PARTICULAR PRELIMINARIES (CONTD.)**

**A FIXED PRICE CONTRACT**

This is a fixed price contract. The Contractor must allow in his tender for any fluctuations in his prices for any reason whatsoever during the currency of the Contract. No fluctuations shall be allowed under this contract

**B PRICING OF ITEMS IN PRELIMINARIES AND/OR PREAMBLES**

Wherever in the Contractor's priced Bills of Quantities no price appears against an item of Preliminaries or Preambles, the value of such item shall be deemed to be included in his prices for other items in the Bills of Quantities.

**C DOMESTIC SUBCONTRACTORS**

Any domestic sub-contractor shall be approved by the Architect in writing before the contractor sublets any portion of the works. The contractor should especially note this for Civil Works, Structural Steel Work and Plumbing and Drainage Installations and Electrical Installations which will be part of this contract.

**D NOMINATED SUB-CONTRACTORS**

The Contractor must as soon as practicably possible enter into sub-contracts with Nominated Sub-Contractors on the standard 'Agreement and Schedule of Conditions of Building Sub-Contract' form published by the Kenya Association of Building and Civil Engineering Contractors. He must incorporate therein conditions approved by the Architect and if he fails to do so must accept full responsibility for any omissions, delays, bad workmanship, claims, expenses arising from the absence of such Sub-Contract. The Sub-Contract must cover such matters as payments on account, retention sums, maintenance period, facilities, dates for completion of each portion of the works together with liquidated and ascertained damages clause in the event of non-completion and indemnity of the Contractor against any such claims arising out of misuse of any such Sub-Contractor or his workmen of any scaffold erected or plant employed by the Contractor, or that may be made against the Contractor in consequence of any act, omission or default of the Sub-Contractor, his servants or agents, or in respect of injury to workmen employed on the works.



**PARTICULAR PRELIMINARIES (CONTD.)**

**A NOMINATED SUPPLIERS AND SUB CONTRACTORS MATERIALS**

Nominated Sub-Contract and Nominated Supply Agreements will be finalised as soon as possible after the Contract is signed. The Contractor will be deemed to have taken into account of this in his allowance for the provision of space for storage of Nominated Sub-Contractor's Materials and for the provision of storage facilities on or off site for Nominated Suppliers' materials until required.

**B ADVANCE PAYMENT**

No advance payment will be allowed under this contract. The contractor will be required to finance the project until when the payment certificate will become due

**C PERFORMANCE BOND**

The contractor shall provide a performance bond from a reputable Bank. The value of the performance bond will be 10% of the contract sum

**D RETENTION**

Contractor's attention is drawn to the retention which will be equivalent to 10% of the value of each certificate upto the completion of the project. Upon completion, the contractor will be paid half of the retention and the other half will be paid upon expiry of the Defects liability period

**E DEFECTS LIABILITY PERIOD**

The defects liability period will be twelve (12) months from the date of practice completion.

**F SPECIFICATIONS**

The contractor's attention is drawn to the Ministry of Public Works Specifications. The contents of the said document will be required to be minimum and where an item specified in the Bills of quantities has higher specifications, the contractor will execute the item as specified in the Bills of Quantities. Where an item specification is lower than those contained in the said document, the contractor will execute the works in accordance with the said document.

The contractor will be responsible in obtaining the Ministry of Public Works Specifications document

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**CONTRACTOR'S NAME**

**BILL NO. 1: BILLED PRELIMINARIES**

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ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
A	Allow provision for power and water supply	ITEM	1		
B	Provide sign board for the work as required by law	ITEM	2		
	<b>TOTAL BILL NO. 1 CARRIED TO SUMMARY</b>				-

PROPOSED LKWASI WATER SYSTEMS REHABILITATION				CONTRACTOR'S NAME	
BILL NO. 2: PROVISIONAL SUMS					
ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
	The tenderer shall include the following Provisional Sums to be expended in whole or part thereof at the discretion and on instructions of the Project Manager.				
1	Allow a Provisional sum of Kenya Shillings one hundred thousand (Kshs.100,000/=) for Project Supervision and Administrative expenses.	ITEM	1	100,000.00	100,000.00
	<b>SUB-TOTAL</b>				
2	Allow for contractor's attendance	%	15%		
	<b>TOTAL BILL NO. 2 CARRIED TO SUMMARY</b>				-

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION****CONTRACTOR'S NAME****BILL NO. 3: WATER PIPELINE EXTENSION**

ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
3.1	Mobilization, transportation of machinery, erection of camps and sanitary facilities and demobilization	LS	1		
3.2	Marking out the pipeline for excavation works	LS	1		
	<b>Excavation works and installation of pipes</b>				
3.3	Excavate a 300 x 600mm channel for pipeline laying	M	1500		
3.4	Installation of 38mm diameter HPDE pipe	M	1500		
3.5	Install air valve as shall be instructed by the engineer	No	1		
3.6	Allow for connections to the temporary storage tank	LS	1		
3.7	Take water samples for laboratory analysis (1 No. sample for Bacteriological and 1 No. for Chemical each 10 litres).	LS	1		
3.8	Supply and install pipeline route markers	No	20		
3.9	Allow for making good and surface reinstatement at the well location to the Project Manager's satisfaction.	LS	1		
	<b>TOTAL BILL NO. 3 CARRIED TO SUMMARY</b>				-

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**CONTRACTOR'S NAME**

**BILL NO. 4: PUMP**

ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
	<b>SUPPLY AND INSTALLATION OF GRUNDFOS SOLAR PUMP- Assumed Head =150m (PUMP TYPE SP5A-33 with DISCHARGE as shall be determined Powered Solar PANNELS</b>				
A	Supply, deliver to site and install Submersible Pump, SP5A-33 complete with 3kw sub motor or its approved equivalent to serve as a boost pump to a head not less than 100m .	UNIT	1		
B	Supply, delivery of Monocrystalline Photo Voltaic Solar Modules connected in Panels of 345Watts	UNIT	10		
C	Erect an appropriate stand for the panels made of 75mm stand pipes, 50 mm SHS members to support the panels, guard rails, permanent and movable ladders as shall be approved by the PM	ITEM	1		
D	Supply, deliver to site and install Pump control panel sunverter SV2 - 5.5KW Or approved equivalent as shall be found suitable for the pump	UNIT	1		
E	Supply, deliver to site and install matching solar disconnect switch.	UNIT	1		
F	Submersible cable- 4.0mm2/4-core flexible tough rubber	M	40		
G	UG Cable- 4.0mm2/4-core cable	M	10		
H	Electrode Cable- 1 mm2 (Red and Black)	M	10		
I	Supply, deliver to site and install Submersible PVC pipes 25mm diameter	M	10		
J	Supply, deliver to site and install DN65 uPVC Class B Water pipes	M	30		
K	Supply, deliver to site and install PN6xDN65 GS non-return valve (threaded)	No.	1		
L	Supply, deliver to site and install P PN6Xdn65 gate valve (Female threaded Pegler)	No.	1		
M	Supply, deliver to site and install and test 1.2m metre copper Earth electrode	No.	1		
N	Supply, deliver to site, install and test D6 x 120mm stainless steel Electrodes	No.	2		
O	Install Earth electrode wire, 6.0mm2 Copper cable (Green)	M	5		
P	Supply and Install GS Cable termination box of size 150mmx150mmx100mm depth with 35 amps, 2-way plastic cable connector terminal blocks	No.	1		
q	Supply, deliver to site and install DN40 Water metre, (threaded), type ABB, Range 0 – 20 m3/hour	No.	1		
S	Supply, deliver to site, install and test pressure gauge, approved type as Kent, Range 0 – 15.0 kg/cm2	No.	1		
T	Supply, deliver to site and install RC cable route markers	ITEM	1		
V	Carry out electrical earth bonding and wiring connections and connect to the earth led as directed by the Engineer.	ITEM	1		
<b>TOTAL BILLNO.04 CARRIED TO SUMMARY</b>					-

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**CONTRACTOR'S NAME**

**BILL NO. 5: WATER KIOSK**

ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
<b>1</b>	<b>SETTING OUT AND EARTH WORKS</b>				
1.01	General site clearance and setting out	m <sup>2</sup>	16.00		
1.02	Excavate oversite 200mm to remove vegetable soil and remove from site.	M <sup>2</sup>	2.45		
1.03	Excavate fdn trench to a depth n.e. 0.7m.	m <sup>3</sup>	3.50		
	<b>Sub-Total</b>				-
<b>1.1</b>	<b>WATER KIOSK CONSTRUCTION</b>				
1.1.1	Supply materials, transport to site and construct strip foundation	m <sup>3</sup>	0.95		
1.1.2	Supply materials, transport to site, fill and compact 300mm thick approved hardcore materials on firm foundation base.	M <sup>3</sup>	3.70		
1.1.3	Ditto 50 mm thick blinding layer.	M <sup>2</sup>	12.25		
1.1.4	Supply materials, transport, place and compact concrete class 20 in floor slab.	M <sup>3</sup>	1.90		
1.1.5	Supply materials and construct 150mm masonry wall	m <sup>2</sup>	36.00		
1.1.6	Supply materials and construct formwork to roof slab.	M <sup>2</sup>	12.25		
1.1.7	Supply, transport, cut, bend and fix D- 12 roof beams as per the drawing	kg	30.00		
1.1.8	Supply, transport, cut, bend and fix D- 10 roof slab @ 150mm c/c	kg	55.00		
1.1.9	Supply material and place concrete class 20 to roof	M <sup>3</sup>	1.90		
1.1.10	Ditto and plaster internal surfaces with 25mm thick c/c screed.	M <sup>2</sup>	36.40		
1.1.11	Ditto and plaster external surfaces with 25mm thick c/c screed.	M <sup>2</sup>	36.40		
	<b>Sub-Total</b>				-
<b>1.2</b>	<b>EXTRA OVER ITEMS</b>				
1.2.1	Supply materials fabricate and fix on walling a burglar proof door of size 2100mm x 900mm.	No	1.00		
1.2.2	Supply materials fabricate and fix on walling a burglar proof window of size 1200mm x 900mm.	No	1.00		
1.2.3	Allow for painting as directed by the site engineer	l.s	1.00		
	<b>Sub-Total</b>				
<b>1.3</b>	<b>ROOFING</b>				
1.3.1	Timber Truss and Wallplate 50mmx100mm	M	16		
1.3.2	Timber purlings 75mmx50mm	M	10		
1.3.3	Fascia board 200mm x 25mm	M	15		
1.3.4	Supply and fix gauge 28 Roofing iron sheets covering with one and a half corrugation side laps fixed to timber members purlins with roofing nails	M <sup>2</sup>	9		
	<b>Sub-Total</b>				

<b>1.4</b>	<b>GOODS HOLDING SHELVE</b>				
1.4.1	Wall mounted shelves for holding shop items as directed by the Project Engineer	LS	1		
	<b>Sub- Total for Roofing</b>				-
<b>1.5</b>	<b>GOODS HOLDING SHELVE</b>				
1.5.1	Allow for renovation of Tullow Kiosk	LS	1		
	<b>Sub-Total</b>				
	Add 5% for plumping works				
	<b>Grand total for 1No. Kiosk</b>				
	<b>Grand total for 2No. Kiosks</b>				
	<b>TOTAL BILLNO.05 CARRIED TO SUMMARY</b>				-

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**CONTRACTOR'S NAME**

**BILL NO. 6: RIVER CROSSING**

ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
<b>1</b>	<b>Concrete works</b>				
1.1	Excavation foundation 1000mm x1000mm x 1500mm x 2NO	M3	3		
<b>1.2</b>	provide formwork to the top part to shape the concrete as shall be directed by the supervising engineer to the above works	No	2		
1.3	place grade 20/20 RC concrete while fixing anchoring bolts at points and nuts which shall be shown by the supervising Engineers	M3	4		
<b>2</b>	<b>Steel works</b>				
<b>2.1</b>	Supply bolts and nuts of length 500mm and diameter 20mm (welt wall passes as shall be instructed)	No	8		
<b>3</b>	<b>Fabricate a steel flyover bridge as per the drawing, supply and fix in two sets to carry pipe over the rivers as will be instructed</b>				
3.1	400x 400 x 4mm	m	25		
3.2	300 x 300 x 4mm	m	25		
3.3	Drill 20mm holes at strategic points to allow fixing of tightening bolts as per the drawing to support all cross members	No	260		
3.4	Procure and fix the above holes with bolts	No	260		
3.5	Supply 22m and fix a 7.8mm twisted tension cable as shall be instructed	No	4		
	<b>TOTAL BILL NO. 6 CARRIED TO GRAND SUMMARY</b>				



**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**CONTRACTOR'S NAME**

**BILL NO. 7: WATER TROUGH**

ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
	<b>WATER TROUGH</b>				
	<b>SUBSTRUCTURES</b>				
	<b>(ALL PROVISIONAL)</b>				
A	Excavate oversite to remove vegetable soil average 150mm deep;wheel and deposit on site n.e. 100M away in permanent spoils heaps	SM	72.1		
	<b>Hardcore</b>				
D	250mm thick filling: deposit, spread, level and compact: to receive blinding	SM	72.1		
E	50mm murram blinding to surface of hardcore.	SM	72.1		
	<b>Anti-Termite Treatment</b>				
F	Chemical anti-termite treatment executed by Rentokil Laboratoties Limited or equal and approved pest control firm under a ten year gurantee, applied to surface of excavation and floor	SM	72.1		
	<b>Damp-Proof Membrane</b>				
G	500mm Gauge polythene damp-proof membrane laid on blinded hardcore with 100mm folded side and end laps (measured net-allow for laps)	SM	72.1		
	<b>Reinforced Concrete 1:2:4- 20mm gauge mix in</b>				
H	150 mm floor slab	SM	72.1		
I	150 mm thick Rc Walls	CM	3.85		
	<b>Reinforcement</b>				
	<b>High Tensile Steel Reinforcement to B.S. 4483</b>				
	<b>Mesh Fabric Reinforcement to B.S.4483</b>				
J	Mesh reinforcement reference A 142 weighing 2.22kg per square metre laid in bed with 300mm side and end laps (Measured net allow for laps)	SM	159.5		
	<b>PLUMBING</b>				
K	Supply and fit 32mm gate valve and connect to supply main	NO	1		
L	Supply and fit Ball Valve	NO	1		
	<b>STEEL COVER</b>				
M	Access cover	NO	1		
	<b>PROTECTION CHAMBER</b>				
A1	STEEL COVER FOR PROTECTION CHAMBER	No.	1		
B	Excavate oversite to remove vegetable soil average 150mm deep;wheel and deposit on site n.e. 100M away in permanent spoils heaps	SM	2.25		
	Excavate for strip footing not exceeding 1.50m deep.	CM	2.25		
C	Back filling selected excavated materials around foundation.	CM	2.25		
	<b>Hardcore</b>				
D	250mm thick filling: deposit, spread, level and compact: to receive blinding	SM	2.25		
E	50mm murram blinding to surface of hardcore.	SM	2.25		
F	Polythene sheet damp proofing;500gauge	SM	2.25		
	<b>MASONRY</b>				

G	Medium quarry dressed stone walling in cement and sand (1:3)mortar:20 gauge x 25mm wide hoop iron reinforcement and column-wall ties in every alternate course: to 200mm walling	SM	4		
	<b><i>WALLINGS FINISHES</i></b>				
	<b><i>15mm lime plaster:steel trowelled finish:on blockwork:to</i></b>				
E	Walls(internals)	SM	4		
	<b>TOTAL BILL NO. 7 CARRIED TO GRAND SUMMARY</b>				

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**CONTRACTOR'S NAME**

**BILL NO. 8: PRESSED STEEL SECTION WATER TANK**

ITEM	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
	<b>SECTIONAL MATERIAL SPECIFICATION</b>				<b>KES</b>
	1) Hot rooled section to BS 4360 Grade 43A or equivalent				
	2) Coldformed section to BS 5950 part 5: 1997 or equivalent				
	3) Bolt and nuts to BS 3692 and BS 4190 or equivalent				
	4) Welding specifications to BS 5135 or equivalent				
	5) Welding electrodes to BS 635 or equivalent				
	6) Wind load to CP3 chapter V part 2				
	NOTE: Shop drawings to be approved before fabrication				
	<b>DESIGN, FABRICATE, DELIVER, ASSEMBLE / ERECT &amp; TEST PRESSED STEEL TANK</b>				
<b>A</b>	Supply and Install <b>Hot dip Galvanized</b> Pressed steel section water tank 50m <sup>3</sup> <b>5x5x2M</b> out of embossed <b>4.5mm</b> thick mild steel panels, complete with roof cover, internal bracings access ladder, level indicator brackets inclusive ladder of all the necessary fixtures for our erection	ITEM	1		
	<b>Tower</b>				
<b>B</b>	Supply the Materials and Construct a Structural steel tower for 12mtrs <b>high</b> tower to support 50m <sup>3</sup> steel tank, Made up of thick SHS columns, RSAs horizontal ties, RSAs diagonal bracings UB and 25 leveling pad grouting to 4 NO SHS Columns, mild steel handrails, chequered plate on 600mm wide walkway around tank and cat ladder	ITEM	1		
	<b>FOUNDATION</b>				
<b>C</b>	Foundation to CESWI 5 and BS 8004 for the 12mtrs high tower including excavation in all materials to a depth not less than 2.0m depth of bases not exceeding 1.0m deep made of vibrated Reinforced concrete with capability to hold the load of tower and tank when full to capacity	ITEM	1		
	<b>Connector pipes</b>				
<b>D</b>	Purchase, supply and install 2" Galvanised iron inlet/outlet/scour pipe to the tank (The Rates to be inclusive of the accessories and fittings)	No.	7		
	<b>TOTAL BILL NO. 8 CARRIED TO GRAND SUMMARY</b>				

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION**

**CONTRACTOR'S NAME**

**BILL NO. 9: MASONRY CHAMBERS**

ITEM	ITEM DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (Kshs.)
A	Excavate foundation trench of size 1.0M depth (1 meter square hole) in normal soil around the borehole and compact the floor, place concrete (1:3:6) of thickness 250mm in the trench.	L.S	Item		
B	Supply, deliver to site dressed building stones and erect a course of a wall around the borehole to 750 mm above the ground level.	L.S	Item		
C	Place 50mm thick compacted concrete blinder (1:6:9) and place 200mm thick 1:3:6 floor slab concrete.	L.S	Item		
D	Supply, deliver materials to site, plaster the inside of the chamber and finish the top with nilo.	1.25	M		
E	Supply, deliver to site and install lockable 2 flap lockable, water tight chequered steel top lid of dimensions 1200x1200x2.0 mm thickness to fit borehole protection chamber. It shall be in a GS frame c/w heavy duty stainless steel padlock	1	No		
F	Supply, deliver to site and install RC cable and pipe route marker as <b>per the specification 1.11</b> and of size 1100x200x80mm thick. Use 0.13 M <sup>3</sup> concrete (1:3:6) to install each marker. The cost should be inclusive of concrete and excavation of a square hole of size 450x450x600mm depth hole.	6	No		
<b>TOTAL BILL NO. 9 CARRIED TO GRAND SUMMARY</b>					

**PROPOSED LKWASI WATER SYSTEMS REHABILITATION****GRAND TENDER SUMMARY PAGE****CONTRACTOR'S NAME**

ITEM	DESCRIPTION	AMOUNT (KSHS)
1	INSTRUCTIONS TO TENDERS & GENERAL ITEMS	<b>INCLUDED IN THE RATES</b>
2	BILL NO 1: BILLED PRELIMINARIES	-
3	BILL NO. 2: PROVISIONAL SUMS	-
4	BILL NO. 3: PIPELINE EXTENSION	-
5	BILL NO. 4: PUMP	-
6	BILL NO. 5: WATER KIOSK	-
7	BILL NO. 6: RIVER CROSSING	-
8	BILL NO. 7: ANIMAL WATERING TROUGH	-
9	BILL NO. 8: PRESSED STEEL SECTION WATER TANK	-
10	BILL NO. 9: PROTECTION MASONRY CHAMBERS	-
	<b>SUB-TOTAL EXCLUSIVE OF V.A.T</b>	-
	<b>ADD 16% VAT</b>	-
	<b>TOTAL CARRIED TO FORM OF TENDER INCLUSIVE OF VAT @ 16%</b>	-

CONTRACT COMPLETION TIME :

.....

Contractor's Name

.....

Address:

.....

Date:

.....

Witness's Name:

.....