# Invitation to Tender:

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| **Tender Name:**  Drilling of motorized boreholes, Construction of steel stanchions and water fetching points | **Tender No:** NIG/MDG/TEN32 |
| **Locations:** Bama, Mafa (Zannari) & Gwoza LGAs – Borno State | **Correspondence Language(s):** English |
| Brief Summary Description of Project:  Mercy Corps, an International Non-Governmental Humanitarian Organization is pleased to invite companies/Suppliers to submit bids for drilling of motorized boreholes in Bam, Mafa and Gwoza LGAs – Borno State, Nigeria.    Mercy Corps chooses to hold competitive bids for selection of companies/contractors which will implement our requirements. We believe that competitive bids are the only way to fairly select the best company for the job while ensuring good prices and preventing corruption. | |

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| **Tender Package Available from:**  **11th March, 2021** | **Tender Package Pickup Location:**  **Tenders can be accessed on** [www.mercycorps.org/tenders](http://www.mercycorps.org/tenders)  **or**  Mercy Corps Office in Maiduguri, Nigeria located at; No. 20 Mohammed Goni Street Old GRA Maiduguri, Borno State, Nigeria. |
| **Deadline for Offer Submission:**  **17th March, 2021** | **Submit Offers to:**   * + - 1. For Physical submissions**:** Full bidding document with attachments in sealed envelope to*Mercy Corps Office in Maiduguri, Nigeria located at; No 20 Mohammed Goni street, Old GRA Maiduguri, Borno State, Nigeria*      * + - 1. For electronic submissions: Email a full bid document with attachments to [**tenders@mercycorps.org**](mailto:tenders@mercycorps.org)   **Note:** Envelopes or emails should be marked;  *Tender No. NIG/MDG/TEN32*  *Tender Name: Drilling of boreholes in Bama, Mafa & Gwoza LGAs.* |

*Mercy Corps reserves the right to accept or reject any late offers*

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| **Questions and Answers (Q&A)** | |
| If any, Submit Questions in writing to: [**ng-inquiries-maiduguri@mercycorps.org**](mailto:ng-inquiries-maiduguri@mercycorps.org) or No. 20 Mohammed Goni Street, Behind Nipost, Old GRA Maiduguri, Borno State, Nigeria | |
| Last Day for Questions:  14th March, 2021; | Questions will be answered by:  15th March, 2021; |
| Questions will be answered through:  All prospective bidders will access consolidated questions and answers on the website alongside the tender package by 15th March, 2021 @3:00pm | |

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| **Documentation Checklist** | |
| These documents are contained within this tender package: | * Invitation to Tender * General Conditions for Tender * Criteria and Submittals * Price Offer Sheet * Supplier Information Form * Technical Specifications/BoQ * Sample Contract |

# General Conditions for Tender

Mercy Corps invites offers for the goods described and summarized in these documents, and in accordance with procedures, conditions and contract terms presented herein. Mercy Corps reserves the right to vary the quantity of work/materials specified in the Tender Package without any changes in unit price or other terms and conditions and to accept or reject any, all, or part of submitted offers. The supplier will be responsible to deliver the entire order to Mercy Corps Designated sites within Borno State.

**2.1 Mercy Corps’ Anti-Bribery and Anti-Corruption Statement**

**Mercy Corps strictly prohibits**:

* *Any form of bribe or kickback in relation to its activities*

This prohibition includes any *request* from any Mercy Corps employee, consultant or agent for anything of value from any company or individual in exchange for the employee, consultant or agents taking or not taking any action related to the award of a contract or the contract once awarded.  It also applies to any *offer* from any company or individual to provide anything of value to any Mercy Corps employee, consultant or agent in exchange for that person taking or not taking any action related to the award of the contract or the contract.

* *Conflicts of interests in the awarding or management of contracts*

If a company is owned by, whether directly or indirectly, in whole or in part, any Mercy Corps employee or any person who is related to a Mercy Corps employee, the company must ensure that it and the employee disclose the relationship as part of or prior to submitting the offer.

* *The sharing or obtaining of confidential information*

Mercy Corps prohibits its employees from sharing, and any offerors from obtaining, confidential information related to this solicitation, including information regarding Mercy Corps’ price estimates, competing offerors or competing offers, etc.  Any information provided to one offeror must be provided to all other offerors.

* *Collusion between/among offerors*

Mercy Corps requires fair and open competition for this solicitation.  No two (or more) companies submitting bids can be owned or controlled by the same individual(s). Companies submitting offers cannot share prices or other offer information or take any other action intended to pre-determine which company will win the solicitation and what price will be paid.

Violations of these prohibitions, along with all evidence of such violations, should be reported to:

[**integrityhotline@mercycorps.org**](mailto:integrityhotline@mercycorps.org)

Mercy Corps will investigate allegations fully and will take appropriate action.  Any company, or individual that participates in any of the above prohibited conduct, will have its actions reported to the appropriate authorities, will be investigated fully, will have its offer rejected and/or contract terminated, and will not be eligible for future contracts with Mercy Corps. Employees participating in such conduct will have his/her employment terminated.

Violations will also be reported to Mercy Corps’ donors, who may also choose to investigate and debar or suspend companies and their owners from receiving any contract that is funded in part by the donor, whether the contract is with Mercy Corps or any other entity.

**2.2 Tender Basis:**

* All offers shall be made in accordance with these instructions, and all documents requested should be furnished, including any required (but not limited to) supplier-specific information, technical specifications, drawings, bill of quantities, and/or delivery schedule. If any requested document is not furnished, a reason should be given for its omission in an exception sheet.
* No respondent should add, omit or change any item, term or condition herein.
* If suppliers have any additional requests and conditions, these shall be stipulated in an exception sheet.
* Each offeror may make one response only.
* Each offer shall be valid for the period of [120 days] from its date of submission.
* All offers should indicate whether they include taxes, compulsory payments, levies and/or duties, including VAT, if applicable.
* Suppliers should ensure that financial offers are devoid of calculation errors. If errors are identified during the evaluation process, the unit price will prevail. If there is ambiguity on the unit price, the Selection Committee may decide to disqualify the offer.
* Any requests for clarifications regarding the project that are not addressed in written documents must be presented to Mercy Corps in writing. The answer to any question raised in writing by any offeror will be issued to that offeror. In some cases Mercy Corps may choose to issue clarifications to all offerors. It is a condition of this tender that no clarification shall be deemed to supersede, contradict, add to or detract from the conditions hereof, unless made in writing as an Addendum to Tender and signed by Mercy Corps or its designated representative.
* This Tender does not obligate Mercy Corps to execute a contract nor does it commit Mercy Corps to pay any costs incurred in the preparation and submission of bids. Furthermore, Mercy Corps reserves the right to reject any and all offers, if such action is considered to be in the best interest of Mercy Corps.
* The supplier will be responsible to deliver the entire order to

Mercy Corps designated sites, Borno State - Nigeria.

**2.3 Supplier Eligibility**

Suppliers may not apply, and will be rejected as ineligible, if they:

* Are not registered companies
* Are bankrupt or in the process of going bankrupt
* Have been convicted of illegal/corrupt activities, and/or unprofessional conduct
* Have been guilty of grave professional misconduct
* Have not fulfilled obligations related to payment of social security and taxes
* Are guilty of serious misinterpretation in supplying information
* Are in violation of the policies outlined in Mercy Corps Anti Bribery or Anti-Corruption Statement
* Supplier (or supplier’s principals) are on any list of sanctioned parties issued by; or are presently excluded or disqualified from participation in this transaction by: The United States Government or United Nations by the United States Government, the United Kingdom, the European Union, the United Nations, other national governments, or public international organizations.

Additional eligibility criteria, if applicable, are stated in section 3.2 of this tender package.

**2.4 Response Documents**

Offerors must submit an offer in their own format and ensure it contains all the required documents and information specified in this tender. Where an itemized Price Offer Sheet is included in the tender package, the offeror must complete and submit it with the rest of their offer.

**2.5 Acceptance of Successful Response**

Documentation submitted by offerors will be verified by Mercy Corps. The winning offeror will be required to sign a contract for the stated, agreed upon amount.

**2.6 Certification Regarding Terrorism**

It is Mercy Corps’ policy to comply with humanitarian principles and the laws and regulations of the United States, the European Union, the United Nations, the United Kingdom, host nations, and other applicable donors concerning transactions with or support to individuals or entities that have engaged in fraud, waste, abuse, human trafficking, corruption, or terrorist activity. These laws and regulations prohibit Mercy Corps from transacting with or providing support to any individuals or entities that are the subject of government sanctions, donor rules, or laws prohibiting transactions or support to such parties.

# Criteria & Submittals

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| **3.1 Contract Terms**  Mercy Corps intends to issue acontract to one or several company(ies) or organization(s). The successful offeror(s) shall be required to adhere to the statement of work and terms and conditions of the resulting contract. The anticipated contract is incorporated in Section 6 herein. By submitting an offer, offerors certify that they understand and agree to all of the terms and clauses contained in Section 6. |
| **3.2 Specific Eligibility Criteria**  In keeping with Mercy Corps’ guiding principle for procurement, Mercy Corps Nigeria Uses only responsible suppliers who possess the ability to perform successfully under the terms and conditions of a proposed procurement. In addition to the ability to perform, Mercy Corps also consider minimum standards of responsibility to determine which suppliers Mercy Corps will do business with. These standards include;   * Being eligible business under applicable laws and regulations of the Federal Republic of Nigeria * Being in good standing with any taxation or legal authority in Nigeria * Having a satisfactory record of performance and business and ethics based on information available to Mercy Corps. |
| **3.3 Tender Submittals**  Documents and required information listed in tender submittals are necessary in order to support the eligibility criteria and to conduct technical evaluations of received offers (and due diligence). While absence of these documents and/or information does not denote mandatory disqualification of suppliers, the lack of these items has the potential to severely and negatively impact the technical evaluation of an offer.  **Documents supporting the Eligibility Criteria:**   * Legal Business Registration (**Certificate of business registration with Corporate Affairs Commission for companies or businesses operating in Nigeria)** * Latest Tax Registration Certificate (**From FIRS or Board of Internal Revenue**) * Must have an evidence of good track record for similar contracts executed with references from previous clients (**Please attach evidence to bid document)**   **Documents to conduct the Technical Evaluation and additional Due Diligence:**   * Company Profile, 2-page max. * Items Technical Specifications (refer to section 5.2 for the list of specifications). * Document confirming supplier agrees to delivery Time/Project Schedule (maximum delivery or completion time in order for suppliers to pass 15 calendar days from the date of signing purchase order). * Document confirming Corporate Capabilities. (Required minimum experience is at least 5 years). * Evidence of financial capability/banking statement to execute the contract if successfully selected * Verifiable evidence of experience and relevant qualification of key personal, copies of certificates * Verifiable evidence of relevant projects successfully executed in Nigeria and evidence of knowledge of relevant industry, this is to include letters of award, certificates of completion, references letter, list of projects and addresses of site locations**.**   **Price Offer:**  The Price offer is used to determine which offer represents the best value and serves as a basis of negotiation before award of a contract. As a Fixed-Price contract, the price of the contract to be awarded will be an all-inclusive fixed price basis, either in the form of a total fixed price or a per-unit/deliverable fixed price. No profit, fees, taxes, or additional costs can be added after contract signing. Offerors must show unit prices, quantities, and total price, as displayed in the Offer Sheet in Section 4. All items must be clearly labeled and included in the total offered price. The transportation cost should be included to total price up to. |
| **3.4 Currency**  Offers should be submitted in: **Nigeria Naira (NGN).**  Payments will be made in: **Nigeria Naira (NGN) through wire transfer.** |

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| **3.5 Tender Evaluation** (**LPTA Selection Method**)  Based on the above submittals, a Mercy Corps Tender Committee will conduct a tender evaluation process. Mercy Corps reserves the right to accept or reject any or all bids, and to accept the offer(s) deemed to be in the best interest of Mercy Corps. MC will not be responsible for or pay for any expenses or losses which may be incurred by any Offeror in the preparation of their tender.  Evaluations will be conducted as described in the following subsections: |
| **3.5.1 Technical Evaluation**  ***Lowest Price, Technically Acceptable (LPTA)***  Mercy Corps Tender Committee will conduct a technical evaluation which will grade technical criteria on a pass/fail basis. Supplier’s bids **must meet the minimum technical standard** established here in order to receive a passing mark. Any offerors who receive a failing mark on any criteria will be automatically disqualified from the tender process.  Only offerors who pass all criteria will move on to the next round of evaluation.  Pass/fail technical criteria are as follows:   |  |  | | --- | --- | | **Technical Criteria** | **Pass or Fail?** | | Evidence of previously done similarly project (service completion report, verifiable relevant contracts successfully executed within Borno State or the Northeast in general) |  | | Delivery Time/Project Schedule (maximum delivery or completion time in order for suppliers to pass 35 calendar days from the date of signing purchase order). |  | | Compliance to tender specification |  | | List the major items of construction plant and equipment proposed for use in carrying out the contract if successfully chosen. Only reliable plant in good working order and suitable for the work required will be considered (Attach clear pictures, prove of ownership, lease agreement signed or any relevant document) |  | | A draft Program of works in the form of a bar chart indicating time frame to execute the contract which shall form part of the contract if successfully selected. Any change in the Program or Schedule shall be subjected to the approval of the Engineer/supervisor |  | | Details of experience and past performance of the Bidder on the works of a similar nature within the past three years and details of current work at hand and other contractual commitments. |  | |
| 3**.5.2 Financial Evaluation and Price/Cost Analysis**  All suppliers who passed all technical criteria will move on to the financial evaluation where the lowest price offer(s) will be accepted as the winning offeror(s) assuming the price is deemed fair and reasonable and subject to the additional due diligence in section 3.5.3. |
| **3.5.3 Additional Due Diligence**  Upon completion of both the technical and financial evaluations Mercy Corps may choose to engage in additional due diligence processes with a particular offeror or offeror(s). The purpose of these processes is to ensure that Mercy Corps engages with reputable, ethical, responsible Suppliers with solid financials and the ability to fulfill the contract. Additional due diligence may take the form of the following processes (though it is not limited to):   * Reference Checks * Supplier’s facility visits * Analysis of audited financial statements * Determination of relations and affiliations between offerors * Other appropriate documented method giving Mercy Corps increased confidence in the supplier’s ability to perform * Samples will be checked by committee at the vendor’s shop for the quality of the goods. |

# Offer Form

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| **Offerors must submit their own independent offer including at least (but not limited to):**   * All documents requested in the “Eligibility Criteria” section of this Tender Package * All documents requested in the “Tender Submittals” section of this Tender Package * All information listed in the “Documents Comprising the Bid” section below   **All offers must be duly signed (including position and full name of the signer) and stamped, with the date of completion.** |

***Documents Comprising the Bid***

The following information must be included in the offer of any potential offeror:

* **Cover Letter** explaining interest to be a contracted vendor or supplier. The content of the cover letter shall include the following information:
* A detailed specification of the offered items if vary from the required specifications
* Warranty.
* Delivery time
* Price validity date (for this purpose and as stated on the advertisement, quote given shall remain unchanged for 180 working days)
* A Price Offer detailing the unit price only using the **Price Offer Sheet** template provided in section 7
* Completed and signed Mercy Corps **Supplier Information Form** (template provided in section 7)
* Other important documents offeror feels need to be attached to support their bid

The original bid shall be signed by the offeror or a person or persons duly authorized to bind the offeror to the contract. Financial offer pages of the bid shall be initialed by the person or persons signing the bid and stamped with the company seal.

Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

# Scope of Work/Technical Specifications

1. **Background:**

Mercy Corps is an international relief and development organization working in over 40 countries worldwide helping people build secure, productive and just communities. Mercy Corps in Nigeria implements a variety of programs with the ultimate goal of building productive, secure and just communities. Since 2013 Mercy Corps and Corporate Fund have been developing a strong and productive relationship that seeks to “power sustainable social and business progress through cross-sector collaboration and improve the lives of people and their communities in our shared geographies.” In recognition of the nearly two billion people now living in countries where our partnership goals are threatened by fragility, conflict and violence, corporate fund adopted Mercy Corps as one of its Global Emergency and Disaster Relief Partners.

1. **Scope of Work:** The Scope of Works (Sow) is in two parts; **part one** is for drilling and completion of boreholes and **part two** is for construction of steel storage PVC tanks and support

* Mercy Corps (MC) Nigeria Mission (herein referred to as the EMPLOYER) is planning to drill three (3) solar powered borehole (300m deep) in Bama LGA, One in Mafa LGA (Zannari) also 300m deep and seven in Gwoza LGA, 80m deep each.
* Hydro-geological survey has not been carried out to identify the exact drilling point. However based on hydrological data of Borno state the target is middle aquifer.
* MC is seeking for a contractor to provide for proper tools, machinery, materials and labor necessary for carrying out drilling and completion of the borehole, its development, test pumping, apron and other construction and Installation works as detailed in the technical Specification documents.
* The Contractor shall mobilize to site within two weeks of signing the contract. This should include taking over site, geophysics and drilling. The contractor shall take over site in the presence of the Supervisor, and Community.
* Contractor shall provide work schedule within one week after signing of the contract.

**1.1 Personnel and Equipment**

The contractor shall provide qualified and competent staff to successfully execute the works. The contractor shall be responsible for the hiring of and the transfer of his personnel as required during the contract period including procurement of entry visas and work permits for expatriates. He shall be responsible for arranging and providing housing and other logistics for his personnel.

Unless agreed otherwise by the Project Supervisor, the Contractor shall show evidence of the availability of a drilling rig and associated equipment capable of carrying out the same works and which can be mobilized and brought to the site within a period of not more than two weeks such that the contract period is not extended.

The Contractor shall provide and maintain a sufficient number of suitable equipment to complete the drilling or rehabilitation works within the period specified in the contract. The equipment should include but not limited to some or all of the following essential equipment:

* Geophysical Survey equipment
* Drilling Rig
* Air compressor
* Pumping test equipment
* Support vehicles
* Other accessories

**Section 1: Borehole Drilling**

**1.1 Site**

**1.1.1 Drilling Site**

Mercy Corps will provide location indicating the drilling site and relative distances from the IDP camps where the drilling will be carried out. It should be clear that this information does not hold MC responsible for the locally different conditions at the specific drilling site or for the particular constraints the contractor may encounter while carrying out this work. The contractor is expected to verify site conditions prior to commencement of drilling works. The contractor will clear all debris of any kind, and move from the site as far as is possible, in the original condition, once the work has been finished, the borehole developed and test-pumping done and the borehole installed with the solar pumping system

**1.1.2 Hydrogeology**

Because of the peculiar geological settings of each area which is complimented by hydrogeological surveys conducted by Borno state Rural Water Supply and Sanitation Agency (RUWASSA) groundwater is expected within the lower aquifer zone in Bama and Mafa whilst the upper subsurface conditions generally consist of clay or sandy clay aquicludes and fine to medium sand. The principal productive layers would generally be the middle and lower aquifers consisting of alluvial sand deposits medium to coarse grain size. Drilling conditions are expected to be difficult in sedimentary formations; therefore, the driller should be prepared to deal with unstable, collapsing water-bearing top formations.

**1.2 Drilling**

**1.2.1 Drilling Methodology**

The rig to be deployed must be capable of drilling to at least a depth of 25% beyond the anticipated final depth at the final required diameter. Temporary casing may be installed in the borehole to prevent formation heave, collapse or sloughing.

* The anticipated depth of the boreholes has been indicated on the BoQ (price offer sheet) and if the actual depth of the borehole being drilled justifies any additional depth in the specification, the contractor will request the authorization of Mercy Corps for such changes to be made.
* The Contractor will be required to state the specifications of the drilling equipment that he intends to use.
* The communications will be made in writing and shall be properly recorded by Mercy Corps. In every case, if the actual characteristic of the well differs from those indicated in this terms of reference, and once the changes have been authorized by Mercy Corps, a price adjustment may be made according to the final depth of the well, and the unit price rendered by the contractor in his original proposal.

**1.2.2 Selection of drilling method**

Although the Contractor shall be responsible for selecting the appropriate drilling methods, the boreholes may be drilled by any of the following drilling methods

* The rotary drilling method will be involve using mixture of chemical (drilling fluid) Bentonite, Antisol and or extender as may be needed, the contractor will be required to state the type of polymer to be used, and describe the means by which the selected fluid additive will be mixed.
* Air percussion method using compressed air to retrieve cutting from drilled hole to the surface, in basement formations like Gwoza, hammer will be used to crush weathered basement and will be flushed out using compressed air.
* The Contractor shall immediately after completion of the borehole pump out the drilling mud. The first step shall be the braking up of the mud with polyphosphates (terra sodium pyrophosphate, sodium pyrophosphate, sodium tripolysulphate, sodium hexametaphosphate or sodium heptaphosphate at a dosing rate of approximately 6g/l), surging or air lifting and finally the leaning and test-running with a submersible pump at the highest test pumping rate.

**1.2.3 Borehole Construction**

**(Drawing to be done by the contractor after actual construction based on the approved casing string)**

* The exact location of the borehole shall be identified in agreement with the local communities in consultation with the Mercy Corps WASH Team. The site should not be in a place that gets flooded in the rainy season and should be away from the flood plain area of any streams or rivers in the locality. Special care must be taken to ensure that the sites chosen are at least 50 meters away from toilet pits or any other sources of pollution such as grave yard, stagnant pools of dirty water or animal pens and should always be up the gradient (i.e at upper level than the contamination source).
* At least two alternative (2) sites shall be identified at each location, which the contractor can move to in the event of the first site borehole being considered dry; Mercy Corps shall approve movement to the alternative site and meet relative additional mobilization costs incurred for that particular location.
* Boreholes shall be drilled to such depths as to penetrate below the shallow water table aquifers and tap the potential deeper aquifer (Middle aquifer based on hydrogeology of Borno state by RUWASSA) or aquifers in confined/semi-confined conditions The depth to be drilled should be at least six (6) meters below the main aquifer to allow for open space during well construction
* The outer surface casing shall terminate not less than 0.1 metre above original ground level.
* Dry boreholes are defined as:
* A borehole having no water bearing zones/aquifers.
* A Borehole that has insufficient discharge minimum of 1.5 liters per seconds.
* A borehole that has failed verticality test (See 3.4 below)
* It will be the duty of Mercy Corps to inform the Local community members at least 48 hrs in advance as to when the commencement of the drilling will be.

**1.3 Casting and Diameters**

* The drilling of the borehole will be carried out according to the characteristics specified in this SoW and appendix of the specifications (BoQ), using the proper drilling tools, drive pipes (Drilling Rods), casing pipes, gravel packs and sanitary protection (seals) should isolate the aquifers from other formations, which are considered improper for the exploitation of wholesome water.

**1.3.1 Screen Casing**

* The Contractor will use; Stainless steel JSS screen 150mm Diameter or uPVC of good quality for medium borehole only, the slot size and screen length depending on the aquifer materials and aquifer thickness. The Contractor will take sole responsibility of designing the well assembly and placing screen and casing at appropriate depths (Casing Tally) to match the positioning of the aquifer(s) which will be approved by Mercy Corps.

**1.3.2 Plain Casing**

* Casing pipe should be of API type for deep borehole, for medium boreholes, uPVC of high quality will be used. The joints are properly cleaned with the cleaning fluids and or brush wire and welder (connected) horizontally in the drilled hole.

**1.3.3 Permanent Casing**

* Outer permanent surface Casing pipe should be of API type, standard lengths, nominal inside diameter of 6 inches casing, The boreholes will be fully cased up to bottom of the borehole except for open hole
* The Contractor will take all necessary precautions during the transportation and storage of casing pipes up to drilling site to prevent distortions, bending or deformation of the pipe that could result in eccentricity along the length of the pipe.
* The borehole construction design including casing string will be authorized by Mercy Corps WASH Team before the plain casing; screen casings and gravel pack are introduced into the borehole.

**1.4. Gravel Packing, Development & Test Pumping**

**1.4.1 Development**.

* On completion of drilling, the Contractor will choose a suitable and appropriate borehole development method. The borehole shall be developed for a period of at least ten (10) hours in order to obtain a maximum yield of water that is free of suspended matter. Developing shall be carried out by airlift pumping and surging, jetting and block surging, or other techniques the contractor feels is more appropriate and efficient to suit the hydro-geological and drilling conditions prevailing in that borehole. Development will be considered complete only when less than 15 ppm of suspended solids remains in the water. It is recommended that flushing be done for a minimum of 10 hours. The boreholes shall be presented for testing free of any bridging or obstruction to the total depth.

**1.4.2 Gravel Packing**

* The contractor shall supply and install filter pack/formation stabilizer. The material shall be 2- 4mm diameter, clean well rounded siliceous gravel with no more than 5% non-siliceous material. The pack must be approved by Mercy Corps prior to installation. Installation of filter pack/formation stabilizer may be water wash down or reverse circulation methods. In the latter case a pump set or airlift string shall be installed in the borehole so as to encourage material settlement. The filter pack shall terminate not less than 3m above the uppermost screen when stabilized, or as otherwise directed by Mercy Corps. The Contractor shall provide a means by which this level may be measured.
* The gravel shall be rounded (not crushed) quarzitic types and the selection of the gravel shall be based on the results of grain size analysis of the borehole at the level of the aquifer. The recommended grain size for slot 20, if used, shall be 2-4mm and for slot 10, it shall be 1-3mm. The maximum percentage of permissible undersize is 3%. Samples of gravel shall be tested by the Contractor and test results and samples shall be submitted to the Supervisor for approval.
* Backfill material shall comprise fine or clayey drill cuttings and shall be installed from the top of the filter pack to 6m below ground level unless otherwise directed by Mercy Corps. The installation method must ensure that no bridging occurs within the annular space. The Contractor shall measure the depth to the top of the backfill and provide the means by which this level may be measured.
* Any casing and/or screen damage during installation, gravel packing and well development shall be the responsibility of the CONTRACTOR, who shall make the necessary corrections/repairs without additional cost to the Mercy Corps. When well development is completed, the gravel packing will be topped up if it is found settling below the required depth.

**1.4.3 Test Pumping and Recovery**

* Borehole yield tests shall be carried out in accordance with BS ISO 14686:2003 using pump sets provided by the Contractor. The tests are to be undertaken by the Contractor under the supervision of Mercy Corps or his authorized representative. The discharge, after measurement, shall be led away from the site to a suitable out fall. The Supervisor shall be informed a minimum of one week before the starting of the test.

The test shall be carried out to explore and determine:

- The aquifer characteristics;

- The maximum possible safe yield of the borehole.

The Contractor shall supply two submersible pumps for this purpose, one operating and one standby.

Drawdown shall be measured by an electrical probe accurate to one centimeter, or other methods proposed by the Contractor and approved by the supervisor. A temporary probe-across tube shall be installed down the borehole, if required. The Contractor shall record water levels at the appropriate intervals for subsequent plotting by the Contractor on logarithmic paper with a particular emphasis on the accuracy of early readings. During the test pumping of the borehole, water level measurements shall be carried out to specifications.

Water levels shall be recorded at the following intervals, or at other intervals approved by the Supervisor.

- Immediately before discharge is started;

- Every 30 seconds for the first 10 minutes;

- Every 15 minutes thereafter until the completion of 1 hour or pumping;

- Every 15 minutes thereafter until the completion of 4 hours or pumping;

- Every 30 minutes thereafter until the completion of 8 hours of pumping;

- Every hour thereafter until the completion of 24 hours of pumping.

The means used to measure time shall be accurate to the nearest second. During the first 10 minutes of the test, an error in time-keeping greater than 3 seconds should be avoided. Timing devices should be synchronized prior to the start of the test. The start and completion of events should be recorded in local time; the test should be started on the stroke of the hour.

The approximate discharge rate of each of the steps shall be determined by the Contractor and agreed with the Supervisor prior to the start of the test. The discharge rate shall be approximately adjusted to the following rates:

1. 30% of the agreed rate;

2. 60% of the agreed rates;

3. 90% of the agreed rate;

4. 120% of the agreed rate.

The degree to which the control valve shall be opened to establish the initial discharge rate shall be determined from pressure gauge readings or from the number of turns on the control valve.

The discharge rate shall be held as near constant as possible throughout the period of each step and, unless it is grossly at variance with the intended rate, no major adjustments need be made. If major adjustments are necessary, they shall be made during the first few minutes, or the test has to be started again after full recovery of the ground-water level.

* Pumping test will be for twenty four (24) hours, of which 8 hours is a step draw down test and 16 hours of continuous test. A pumping test is required on a routine basis for each borehole. The Contractor will estimate the discharge from the air lifting rates during borehole development. Based on the estimated discharge, the Contractor will certify the borehole as either "productive" or "abortive".
* The recovery shall be tested with the recovery test. The recovery test shall commence immediately upon the end of each step of the pumping test. The discharge shall be stopped at the designated moment by stopping the pump. The ground water level shall be measured in the borehole at the intervals stated above, commencing at the time discharge ceases. The recovery test shall be continued until a stable water level has been achieved. . The pump test data and the results of pump test is presented in the standard form attached (Annex 1, 2,3)
* Readings of flow and water level shall be taken at the intervals defined on the test pumping form. For accurate measurement, an electrical/ sonic water level indicator with graduated tape for taking water level readings. Recovery readings shall be taken until attest 80% recovery is attained, during which period airlifting or pumping equipment shall not be removed from the borehole.
* The Contractor can also use any other method approved by the Supervisor to measure the exact quantity of water pumped.

**1.4.4 Other specifications**.

The contractor will evacuate all pumped water in such a way that no impoundments are produced at distances less than 200 metres from the borehole. The contractor will provide all necessary elements for this purpose which include provision of all necessary implements and pumping equipment i.e. weirs, pipes, gauges etc for the proper measurement of discharge rates and water levels and disposal of extracts.

**1.5 Well Plumpness & Alignment**

**1.5.1 Tests.**

The borehole should be tested for plumpness and alignment by means of a 12 meter long, and perfectly straight, steel pipe that should be introduced along the whole borehole. The external diameter of this should, at most, be 13 mm less than the well casing inside diameter. This pipe will be supplied by the contractor.

**1.5.2 Minimum Requirements**.

Such a test pipe, as described above should easily move through the whole borehole. The loss of plumpness of the well’s axis should never be more than 2/3 of the smaller inside diameter of the casing. If these minimum requirements are not met by the well, the contractor will be required to correct the defects, otherwise Mercy Corps will reject the borehole and no payments will be made for its drilling and completion. This test should normally be done before pump testing the well in the presence of the agent appointed by Mercy Corps.

**1.6 Protection of WATER Quality, Disinfections & Sampling**

**1.6.1 Borehole Protection**.

The contractor will take maximum care to avoid the physical, chemical or bacteriological contamination of the borehole water, during the construction and after construction operations. In any case, where water is polluted due to the contractors neglect, he will be obliged to carry out all the necessary operations, at his own cost, in order to rectify such pollution of the borehole.

**1.6.2 Well sterilization.**

Once the well has been completed and tested, disinfection will be undertaken by introducing granular Calcium Hypo-chlorite, Sodium Hypochlorite into the annular space along with the gravel pack material at a concentration of 500 grams per cubic metre of pack. This will initiate the process of sterilizing the Borehole and the chlorine solution should stay in the well for at least four hours, at the specified concentration.

**1.6.3 Samples.**

* The contractor will take at least one sample every three meters of drilling, unless a change in formation is encountered by the driller. In such cases, additional samples should be taken. The minimum weight of each sample should be 100grams.
* The contractor will keep a complete record of the samples taken from the cuttings during the drilling operation, in properly packed and identified sample bags, and all will be made available to Mercy Corps upon request.
* The contractor will supply a detailed borehole geo-log data, in which all the relevant information and drilling velocity, well casing and other well construction operations will be recorded. The contractor will also annotate all information pertaining to the appearance of water filtrations and aquifer, types of rock found and sampling details (lithological data).
* The contractor will be required to complete the log forms for the borehole. (Ref Annex 4
* The contractor will provide the Borehole Completion Record immediately upon completion of the drilling work. (Annex 4) The Borehole Completion Record will also be accompanied by Water quality certificates capturing, chemical and physical water qualities
* For each rock sample that has not been taken the contractor will be fined a penalty amounting to 1 per cent of the total value of the well and this will be deducted from the final payment. If the total amount of samples not taken is more than 15% of the specified number, the well should be started again and Mercy Corps will not make any payments for this additional work.

**1.6.4 Water samples**.

A minimum of 2 litres each for chemical and bacteriological analysis shall be collected by the contractor in the presence of the Supervisor or his representative (2) litre samples in a clean plastic bottle from the borehole for reference to a Water Testing Authority recognized and authorized by Mercy Corps for laboratory analysis, after completion of test pumping. One sample will be used for each of these tests; physical and chemical analysis, which should be collected in clean, sterilized properly sealed and protected plastic containers. The samples so collected should reach the authorized water testing laboratories (MWR and NAFDAC), within 6 hours from the time of collection from the borehole unless otherwise. Specific parameters to be measured shall include;

* **Physical Parameters** – Colour, Odour, Taste, Turbidity, pH Value, Electrical Conductivity, Temperature
* **Chemical Parameters** – Nitrate, Nitrite, Total Hardness, Fluoride, Chloride, Sulphate, Copper, Manganese, TDS, Total Iron, Arsenic
* **Biological Parameters** – Faecal Coli Form Counts

**1.6.5 Particle Content in Pumped Water.**

The water drawn out of the well will be acceptable if it has a sand particle content of less than 5 milligrams per cubic metre. In case this allowed maximum limit is not met, the contractor will make all necessary adjustments to the well structure, at his own expense, in order to meet these specifications.

**1.7 Finishing Works & Reports**

**1.7.1 Temporary Lid**.

The contractor will pay close attention to the due protection of the aperture of the borehole against the entrance of water or any other pollutants while drilling or after the completion of the borehole. For this purpose, the contractor will provide a lid to be placed on the entrance of the well at any time the drilling rig is not in operation.

**1.7.2 Sanitary Protection Seal** **and Well Head Construction**

* The top of the casing shall be a minimum of 200mm above the original ground level and there shall be a flange for connection of the wellhead assembly. Around the casing, there shall be a 1m x 1m concrete slab. The slab shall be slightly cambered away from the borehole*.*
* After completion of the pumping test, removal of the test pumping unit and after the last water level recovery observations have been made, the level of the gravel pack will again be checked to see if there is any settlement below the required depth. If it is found below the required depth, it will be topped up to the appropriate level. Based on the actual situation, the annular space between the well and the permanent casing will be cement grouted down to at least 6m from the surface in order to prevent contamination of the borehole by surface run-off water
* The surface/outer permanent casing must protrude 0.1 meters above the ground label
* Specifications related with wellhead construction, installation of pumps have been indicated in the specifications and bill of quantities Part.

**1.7.3 Abandoned Borehole**.

* If the contractor is not able to finish the drilling or has to abandon the borehole due to loss of tools, accidents or any unforeseeable circumstances, the contractor should remove the casings or drive pipes already in the hole and refill it with clay or concrete. All materials extracted from the hole, after refilling it will be the property of the contractor.
* In case a situation described above occurs, Mercy Corps will not pay for any of the work carried out, and will authorize in advance the drilling of a new hole, at a site near the abandoned one if need be, at the contractor’s expenses.

**1.7.4 Report Compilation**

On successful completion of the borehole, three hard copies of detailed completion report and an electronic copy shall be submitted to the Employer. The report shall comprise but not limited to the following:

* Project completion summary sheet (as provided)
* Drilling method
* Driller’s log
* Rate of penetration
* Drilling bit diameter
* Lithological log
* Mud/additives used
* Materials installed
* Details of geophysical well logging (where applicable)
* Details of borehole design (composite log)
* Pumping test result
* Water quality result
* Pump installation details
* GPS Coordinates
* Incidents and accidents of any kind

**SECTION 2**

**2.1 Water Storage Tanks & Support**

**2.1.1 Steel Support**

* Steel support design should be submitted by contractor for approval prior to procuring materials.
* The Contractor shall supply and erect PVC tanks and Steel towers in accordance with the Mercy Corps drawings and BoQ.
* All structural steel work shall conform to BS 4 and all sections shall be at least equivalent to those shown in BS 5950 unless otherwise shown on the drawings or indicated in the BoQ.
* The Steel support structure shall be as specified in the drawing and BoQ complete with ladder to the top of catwalk and all nuts, bolts, washers as necessary for site erection. The tank steel support structure shall be painted with one coat of red oxide primer and one coat of aluminum paint before dispatch, and one coat of aluminum paint after installation
* Provision will be made for 450 mm wide catwalk complete with hand railing around the perimeter of the tank and 450 mm wide valve-operating platform with hand railing approximately 3 meters below the tank base.
* Supply, deliver and install all pipe work necessary to operate tank, inlet, outlet, washout, overflow and other fittings as shown on the drawings.
* Ends of beams and joints, including other members, shall be cut to exact lengths true and square and shall be cleaned of burrs or rough edges. Drilled or punched holes shall not be greater than 1/16” more than the bolt diameter and they shall be cleaned of burrs and rough edges.
* All fillet welds and gussets plates should not be less than 6mm thick unless otherwise stated. Holes on angles and gusset plates to be 18mm diameter. All welding is to be deslagged and wire-brushed. All bolts should be to be M16 (grade 4.6).
* Foundation bolts are to be properly levelled before casting. All nuts heads are to be covered to avoid cement setting on threads. Gravel should be crushed and not exceeding 19mm (0.75 inch)
* Reinforcement bars should be free from rust and of the correct type and size for concrete construction work (typically a characteristic yield stress of at least 210 N/mm²).
* 6m standard steel stanchion consisting of four numbers 200 x 100 x 4mm steel I-section braced with 50mm angle section.

**2.1.2 Support Foundation**

* Support foundation design shall be submitted to MC for approval prior to procuring materials
* Excavate foundation trench to a depth not below 1800mm at 4200 x 4200mm for footing as specified in drawings.
* Trim and level off surface of excavated surfaces under surface beds
* As preparation to receive foundation base and column, place a plastic film to bottom of excavation prior to placing concrete blinding of 50mm thickness with a concrete mix ratio of 1:2:4.
* Place reinforcement basket for column base on surface blinding. Basket should be of high yield steel diameter 16mm with a mesh of 150mm c/c in top and bottom as specified in drawing. Allow for column reinforcement of steel diameter 20mm centralized on footing basket and firmly secure with binding wire. Column dimension shall be 400 x 400mm and will be 1950mm high. Column links shall be spaced at 150mm using 6mm diameter stirrups.
* Supply materials, prepare and cast concrete Grade 20/19mm aggregates as footings, 3600 x 3600 x 500mm deep for each footing.
* Formwork to vertical strutting shall be provided for casting of columns and shall remain in position until the newly constructed work is due for curing.
* Cast concrete grade 20/19mm aggregates as column. Column dimension shall be 400 x 400mm and will be 1450mm high from footing as specified in drawing
* Concrete cover of 50mm should be used for all RC casting
* Allow at least 72 hours for curing before removing formworks
* Backfill to trench and compact
* Prepare and cast oversite concrete 3600 x 3600mm and 150mm thick using mix ratio 1:6.

**2.1.3 Access Ladders**

* Supply and fix 50 x 50 x 2mm flat bar as balustrade (ladder)
* An outside tank caged ladder shall be furnished and installed as shown in drawings.
* An interior ladder shall be furnished and installed as shown in drawings.
* Ladders shall be fabricated of hot-dipped galvanized carbon steel.
* Safety cage as well as intermediate and top step–off platforms shall be fabricated of hot-dipped galvanized carbon steel.

**2.2 Disinfection**

* Provide for the disinfection of the tanks after installation.
* Fill the tanks a quarter full with clean water. Sprinkle 80 grams of granular high-strength calcium hypochlorite HSCH into the tank for every 1000 litres total capacity of the tank. Fill the tank completely with clean water, close the lid and leave to stand for 24 hours.
* Completely empty the tank and carefully dispose of the disinfecting water as it will contain a high concentration of chlorine. Fill the tank with drinking water; allow standing for about an hour then empty the tank again.
* Care must be taken when disposing of all liquids used for cleaning and disinfecting the tanks. Sudden discharge of water will cause localized erosion or flooding. Make sure the water follows a channel to its final disposal point.
* Liquid waste should not be disposed of in rivers and ponds as the organic materials and high chlorine levels may kill fish and plant life.

**SECTION 3**

**3.1 Solar System;**

* The Contractor shall provide installation design based on borehole yield and dynamic water level which will be approved by MC before procurement of materials. All the solar modules must be approved to IEC/EN 61215 and 61730 or UL 1703 and shall be made of crystalline silicon solar cells.
* All systems shall be fully operational (turnkey installations). Contractor shall make their own assessment of the sites and suggest a suitable location for installation of the PV systems on the ground. The location chosen for system installation for each site shall be approved by MC Supervisor.
* According to the Supervisor’s technical assessment of the water points, all the facilities have adequate unshaded space. The Contractor shall make own assessments for enough space available for unshaded array: The array will be installed where shading is avoided from 6am – 6pm “solar time” each day of the year. This will be verified during the pre-installation and the acceptance test.
* The installed system must meet applicable national standards and codes. Plastic laminated safety signage placards should be provided for each installation. Contractor shall install the same at designated locations as per instructions.
* For each water point, PV modules must be procured for same make (manufacture) and same wattage rating.

**3.1.1 PV System Mechanical Design Specifications**

* The installed system shall include all hardware required for assembling the photovoltaic array, balance of system components, and structural attachments to mounting frames
* The PV array shall be installed on a fixed frame mounting with slope and orientation being designed by the contractor and approved by MC.
* The PV array mounting structure, including modules, and balance of system components shall be designed to withstand wind loads of at least 60 mph.
* Adequate spacing, about 4 to 6 inches, between the ground surface and PV mount frame shall be maintained to allow air circulation to cool the module back sheet.
* Array mounting frames supplied shall be compatible with the site considerations and environment.
* Mounting frames shall be made of 50mm by 50mm angle iron of 2mm thickness.
* Mounting frames for ground based PV modules should be placed on 2” GI pipe stanchion buried 50mm below ground level in concrete of mix ratio 1:3:6. Concrete mould should be 50mm above ground level for each stanchion. Stanchions should be spaced at 3460mm spacing horizontally while allowing 300mm hangover at both sides and 1600mm vertically.
* Special attention shall be paid to minimizing the risk from exposed fasteners, sharp edges, and potential damage to the modules or support structure. All potentially hazardous hardware shall be protected or shielded for safety.
* Mechanical hardware, conduit, and other equipment shall be concealed beneath and/or behind the array. Contractor shall provide combiner boxes if required
* The array layout shall be consistent with the ordering (and labeling) of source circuits in the array combiner boxes. Accessibility to perform array troubleshooting and maintenance is required by allowing access to the back of the array.
* The PV systems will be installed in communities; therefore, population safety is critical. Contractor must minimize the risk of vandalism, theft and personal injury in the installation and operation of the system.

**3.1.2 PV System Electrical Design Specifications**

* A grounding electrode shall be installed for the arrays.
* All inverters shall be commercially-available models and must include ground-fault protection with a visible indicator. The inverter size shall be 4KW RSI
* Inverter/Charger shall be installed at the same location or within close proximity.
* All outdoor wiring must be listed to a temperature rating of 90°C in wet locations, and it shall be listed as sunlight resistant where run outdoors and outside of conduit. All AC wiring shall be ducted in metal conduits. DC wiring can be ducted in PVC conduits.
* Outdoor-rated, visible-break lockable disconnects shall be installed on each set of current carrying conductors entering or leaving the array area.
* The wiring shall be sized appropriately in order to avoid more than 1% voltage drop.

**3.2 System Warranties & Maintenance**

* The supplier/Contractor must provide warranties to Mercy Corps on both the complete system and individual components. The methods for implementing and terms of the warranty provisions must be clearly established, and handled by the system supplier/Contractor as the single point-of contact for warranty service with the end-user.
* At a minimum, the following warranties are required:
  + One (1) year complete system-level warranty and service contract for no-cost replacement of any defective component required for safe and as-specified system operation.
  + Ten (10) years warranty is required for solar panels.
  + Inverter must have a minimum five (5) year warranty.

**3.3 Other Requirements**

**3.3.1 Inspections and Acceptance Testing**

* Contractor shall ensure that all project specifications have been met. MC will verify compliance through a site inspection and acceptance tests. The contractor shall be available and present for the acceptance tests, which will be scheduled with reasonable advance notice (notwithstanding delays due to weather). Acceptance testing will verify that the system and equipment specified in the bid was installed in a safe and code-compliant manner, and is operating properly under all conditions.
* All charges incurred as a result of non-compliance on the part of the Contractor shall be borne entirely by the Contractor and shall be deducted from the final payment.
* Acceptance testing forms will be made available to the contractor as early as possible after award but no later than before system construction begins.

**SECTION 4:**

**4.1 Tap Stands**

* From the overhead tank a 2” GI pipe, with an approximate length of 10m will be installed to reach the ground.
* A 2” flow meter will be installed in a box for protection.
* On the ground a 2” UPVC 10 bars resistance pipe of 40m will be laid into a trench (same trench as the supply trench).
* In order to protect the pipes in the run off drainage channel, the supply and the distribution pipes will be protected in a bigger GI pipes.
* A connection box will be installed. Two 1\*1/4” GI valves will be installed and two lines will be created.
* Two lines on 1\*1/4” UPVC 10 bars resistance will be laid to each water point, the total length of the two lines will be 1000m.
* The foundation for the tap stands will be done with two layers of 6” sandcretes, with a dimension of 1.6 x 3.5 m (5.6m2) and will be laid on a blinding of 50mm using mix ratio of 1:6 cement to sand.
* Medium mortar (300Kg of cement /m3) will be used for joints.
* Two layers of sandcretes will be line up to realize the slab (surface).
* A layer of one sandcretes will be laid on the edge in order to realize a curbstone. To facilitate the access and formalize the entrance and the exit two sandcretes will be remove of the edge one at the front the other at the back.
* The floor of the drinking water point will be plastered with a mix ratio of 1:4 with a thickness between 0.010m and 0.08m
* A slop toward the outlet will be realized in order to evacuate runoff water
* Steps will be realized with sandcretes in order to facilitate the access to the infrastructure.
* A valve box will be installed at the entrance of infrastructure with a dimension of 1\*1/4”
* A GI 1\*1/4” pipe embedded into concrete will be installed on the structure.
* Six (6) stand pipes of 1”1/4 will be connected to the embedded piped and reduced by ¾”.
* The six stands pipes will be protected by a 4” UPVC pipe filled with concrete with a ration of 300Kg/m3 minimum.
* A 3/4” GI heavy duty tape will be connected to the 6 stand pipes

**4.2 Soak Pits**

* The excavation of the pit will have to reach the layer of sand (approximately 3m deep)
* The soak pit will be done by lining sandcretes block 9’’ with a dimension of 1500x1500x1500mm on purpose to facilitate the infiltration. Depth of the soak pit is subject to change by MC supervisor.
* Sandcretes will be perforated, with 2” UPVC pipe tilted to facilitated infiltration of water and reduce the sand to come into the soak-pit. UPVC pipe will be installed only on the sandy layer spaced by 0.25m.
* The sandcretes will be laid on a blinding of 50mm using mix ratio of 1:6 cement to sand.
* Cast soak pit cover of dimensions 1450x1450mm and cure for 48hours before placing on soak pit. Slab thickness should not exceed 100mm with 10mm diameter iron bar spaced at 200mm center to center top and bottom. Concrete grade 20 of mix 1:2:4 – 20mm coarse aggregate). The cast soak pit will be seal to his base.
* Backfilling around the soak pit will be done with sand in order to increase the infiltration capacity by increasing the contact surface.

**SECTION 5:**

**Fencing & Landscaping**

* 1.8m high by 14-gauge chain link tied to stretching wire at 3- steps through the post
* Chain link Mesh wire fencing 1800mm high overall fixed to 3 No strands of galvanized straining wire spaced at 500mm spacing.
* Tension wire to run in a straight line in each line of fence between corner posts.
* The chain link is tied with stretching wire.
* All wire clips to be secured so that pointed or jagged ends do not protrude from fencing
* Construct and install metal gate with overall width of 3m and with 1.8m height
* The gate shall be constructed with rectangular section G.I pipe: complete with locking devices.
* Gates to be of overall standard widths and heights unless otherwise noted on drawings. The vertical members for the gate should not exceed 1.8m with rectangular section metal of 80mmx40mm. While the bracing members should not be less than 40mm x 40mm rectangular section with galvanized malleable iron hinges, latch and all necessary hardware attached.
* Apply 3 coats of white paint to all the constructed work
* Razor fence galvanized barb wire installed at the top of fence along the entire perimeter inclusive of metal anchorage, "Y"
* Spray zinc oxide as first coat and second coats of silver paint to protect the poles from corrosion.
* Level perimeter area to receive one layer of 20mm nominal size gravel
* Spread and level gravel all over perimeter

**PART 2: Scope of Works for Steel Support PVC Tanks & Support**

**Material Quality requirement**

* Pressed steel water tank to BS 1564 part 2
* Steel tower to BS 449
* Steel Ladder to BS 4211
* All fillet welds not less than 6mm unless otherwise stated.
* All gusset welded plates should be 6mm thick.
* Holes on angle and gusset plates to be 18mm diameter.
* All welding should be deluged and wired brushed.
* Tank and tower to be painted one coat of red oxide primer and one coat of aluminum paint before dispatched, with one coat of aluminum paint after installation.
* All steel shall be grade 43
* All bolts should be M16 (grade 4.6)
* All builders work to be done to suite structural engineers details
* Foundation based to be on stable undisturbed soil.
* Foundation bolts to be properly levelled before casting.
* All nuts head are to be covered to avoid cement setting on threads
* All steel members shouldn’t be rusted.
* Gravel should be crushed not less than 19mm (0.75 inch)
* Sand should be sieved, maximum diameter 6mm (0.25inch)
* Water for construction should be non-saline and free from organic matter.
* Reinforcements bars should be free from rust and of correct type and size for concrete construction work (typically a characteristic yield stress of at least 210 N/mm2)

**Steel Support**

* The Contractor shall supply and erect PVC tanks and Steel towers in accordance with the Mercy Corps drawings and BoQ.
* All structural steel work shall conform to BS 4 and all sections shall be at least equivalent to those shown in BS 5950 unless otherwise shown on the drawings or indicated in the BoQ.
* The Steel support structure shall be as specified in the drawing and BoQ complete with ladder to the top of catwalk and all nuts, bolts, washers as necessary for site erection. The tank steel support structure shall be painted with one coat of red oxide primer and one coat of aluminum paint before dispatch, and one coat of aluminum paint after installation
* Provision will be made for 450 mm wide catwalk complete with hand railing around the perimeter of the tank and 450 mm wide valve-operating platform with hand railing approximately 3 meters below the tank base.
* Supply, deliver and install all pipe work necessary to operate tank, inlet, outlet, washout, overflow and other fittings as shown on the drawings.
* Ends of beams and joints, including other members, shall be cut to exact lengths true and square and shall be cleaned of burrs or rough edges. Drilled or punched holes shall not be greater than 1/16” more than the bolt diameter and they shall be cleaned of burrs and rough edges.
* All fillet welds and gussets plates should not be less than 6mm thick unless otherwise stated. Holes on angles and gusset plates to be 18mm diameter. All welding are to be deslagged and wire-brushed. All bolts should be to be M16 (grade 4.6).
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* 6m standard steel stanchion consisting of four numbers 200 x 100 x 4mm steel I-section braced with 50mm angle section.

**Support Foundation**

* Excavate foundation trench to a depth not below 1800mm at 4200 x 4200mm for footing as specified in drawings.
* Trim and level off surface of excavated surfaces under surface beds
* As preparation to receive foundation base and column, place a surface blinding of 50mm thickness with a concrete mix ratio of 1:2:4.
* Place reinforcement basket for column base on surface blinding. Basket should be of high yield steel diameter 16mm with a mesh of 150mm c/c in top and bottom as specified in drawing. Allow for column reinforcement of steel diameter 20mm centralized on footing basket and firmly secure with binding wire. Column dimension shall be 400 x 400mm and will be 1950mm high. Column links shall be spaced at 150mm using 6mm diameter stirrups.
* Supply materials, prepare and cast concrete Grade 20/19mm aggregates as footings, 3600 x 3600 x 500mm deep for each footing.
* Formwork to vertical strutting shall be provided for casting of columns and shall remain in position until the newly constructed work is due for curing.
* Cast concrete grade 20/19mm aggregates as column. Column dimension shall be 400 x 400mm and will be 1450mm high from footing as specified in drawing
* Concrete cover of 50mm should be used for all RC casting
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**Access Ladders**

* Supply and fix 50 x 50 x 2mm flat bar as balustrade (ladder)
* An outside tank caged ladder shall be furnished and installed as shown in drawings.
* An interior ladder shall be furnished and installed as shown in drawings.
* Ladders shall be fabricated of hot-dipped galvanized carbon steel.
* Safety cage as well as intermediate and top step–off platforms shall be fabricated of hot-dipped galvanized carbon steel.

**Disinfection**

* Provide for the disinfection of the tanks after installation.
* Fill the tanks a quarter full with clean water. Sprinkle 80 grams of granular high-strength calcium hypochlorite HSCH into the tank for every 1000 litres total capacity of the tank. Fill the tank completely with clean water, close the lid and leave to stand for 24 hours.
* Completely empty the tank and carefully dispose of the disinfecting water as it will contain a high concentration of chlorine. Fill the tank with drinking water; allow standing for about an hour then empty the tank again.
* Care must be taken when disposing of all liquids used for cleaning and disinfecting the tanks. Sudden discharge of water will cause localized erosion or flooding. Make sure the water follows a channel to its final disposal point.
* Liquid waste should not be disposed of in rivers and ponds as the organic materials and high chlorine levels may kill fish and plant life.

**Technical drawings and sketches**

See attached Annex 1

**Quality Control plan**

See attached Annex 2

# Sample Contract

This is the anticipated contract. However, if required, additional terms and conditions may be added by Mercy Corps in the final contract.

**INTERMEDIATE WORKS CONTRACT**

**Contract No. \_\_\_\_\_\_**

THIS WORKS CONTRACT entered into as of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by and between MERCY CORPS, a State of Washington, U.S.A. nonprofit corporation having its principal office in Portland, Oregon, U.S.A. (“**Mercy Corps**” or “**MC**”), and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (“**Contractor**”) is as follows

1. **Additional Terms and Defined Terms**. Additional Terms are specified in Schedule I hereto (the “Additional Terms”). The terms in Schedule I are incorporated in this Contract by this reference. The following additional defined terms are included in Schedule I: Authorized Representative, Owner, Payment Terms and Subcontractor Percentage Limit. “**Contract**” means this Works Contract as amended, modified or supplemented from time to time together with its Schedules and appendixes (if any). “**Statement of Work**” means the Statement of Work attached as Schedule II. “**Work**” or **“Works**” means all the goods and services described in the Statement of Work. Other terms may be defined throughout this Contract as specified.
2. **The Work.** Contractor, together with its Subcontractors (if any), will fully execute and complete the Work in accordance with the terms and conditions set forth in this Contract. The Contractor will perform and complete the Work strictly in accordance with this Contract. Contractor warrants that all Work will be completed in strict adherence to the approved design and engineering plans, any relevant government issued permits and authorizations, and any Mercy Corps approved Bills of Quantity as applicable per the Statement of Work collectively the **“Specifications”**). Each Statement of Work will list out the documents that will be used as the Specifications. No deviation, substitution or change is permitted without Mercy Corps’ prior written consent following the Change Order processes required in this Contract.
3. **Subcontractors**.
   1. Contractor is only allowed to subcontract components of the work if Schedule I indicates that subcontracting is allowed. **“Subcontractor”** means a person or entity that has a direct contract with Contractor (or with another Subcontractor) to perform a portion of the Work or to supply materials or equipment for the Work. **“Subcontract”** means an agreement between Contractor and a subcontractor.
   2. Even when allowed, Contractor must notify in writing MC’s Authorized Representative in advance of any subcontractor it intends to hire. MC’s authorized representative may reject any subcontractor if MC has reasonable grounds to believe that the subcontractor is not qualified to perform the work, is charging more than the market rate or would violate any of the warranties and representations in this Contract. In no event will Contractor be reimbursed or paid by Mercy Corps for any amounts paid or owed to subcontractors that exceeds the Subcontracting Percentage Limit in Schedule I.
   3. Contractor will be solely responsible, and Mercy Corps will not have responsibility, for all aspects of safety related to the Work. Contractor will take all necessary precautions for the safety of, and will provide protection to prevent damage, injury or loss to, persons or property whether it be their own, Mercy Corps’ or community.

SCHEDULE III. Other Contract Provisions Required by Law or MC’s Donor

**A: DFID funded Program**

Mercy Corps, in accordance with donor regulations, requires certain certifications and provisions, set forth herein, to be included in all contracts.

**Liability/Indemnity**

The Contractor acknowledges that DFID will not be held responsible for or in relation to the activities of the Contractor under this Contract.

**Right of Access/ Audit**

The Contractor shall permit Mercy Corps, its donor, DFID (UK), and/or the UK’s National Audit Office and/or any of their duly authorized representatives, access to project sites and relevant records, including books, documents, papers (including in electronic format) for the purpose of monitoring, evaluation and audit. Such verification or audit may take place at any time during this Contract and up to seven years after final payment made under this Contract.

**Anti-Corruption and Anti-Bribery**

The parties recognize that Mercy Corps has a zero tolerance approach to bribery and corruption. The Contractor will comply with all relevant anti-bribery and anti-corruption laws (including the UK Bribery Act 2010) and comply with the principles of Mercy Corps’ Anti-Corruption and Anti-Bribery Policies, or equivalent policies, including: (a) not accepting or offering a bribe of facilitation payment; and (b) reporting immediately to Mercy Corps any bribery issues which the Contractor becomes aware of during this Contract; and, at the reasonable request of Mercy Corps, confirming in writing that they have complied with this clause and provide any information reasonably requested in support of such compliance. MC recognizes that in complying with this clause, the Contractor is not expected to risk life, limb or freedom.

**Cancelation of the Contract**

If any illegal or corrupt practices were or are committed in the award or execution of this Contract, including if any offer, gift, payment, contribution or benefit of any kind was accepted as an inducement or reward for the award or execution of this Contract, this Contract will be cancelled with immediate effect, in which case Mercy Corps will return to the Contractor any items delivered and the Contractor will return to Mercy Corps any funds paid (at each of their own cost, unless otherwise agreed).

**Confidentiality**

The Contractor acknowledges that Mercy Corps has reporting obligations to DFID. Accordingly, the Contractor consents to Mercy Corps sharing information about the Vendor or the Services with DFID as required.

**Conflict of Interest**

1. The Vendor shall take all reasonable precautions to avoid any conflict of interests and shall inform MC without delay of any situation constituting or likely to entail a conflict of interests.
2. There is a conflict of interests where the impartial and objective exercise of the functions, tasks and activities under this Contract is compromised for reasons involving family, emotional life, political or national affinity, economic interest or any other shared interest with another person or party.

**Principal of Ethical Procurement**

The Contractor acknowledges that Mercy Corps must comply with DFID’s principle of Ethical Procurement including adhering to the minimum ethical standards of the avoidance of child labour, and the respect of basic social rights and working conditions based on international labour standards.

**Child Protection**

The Contractor acknowledges that, under the Donor Contract, the recipients of funds are required to have a robust child protection policy and mechanisms to monitor its adherence and that it is important that a focus on child protection is maintained throughout the lifecycle of the Project. The Donor reserves the right to ask for the relevant child protection policy and mechanisms and test that they are implemented during the life of the Project.

**B: DOS funded Program**

Mercy Corps, in accordance with donor regulations, requires certain certifications and provisions, set forth herein, to be included in all contracts.

1. The Contractor is reminded that U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of the Contractor to ensure compliance with these Executive Orders and laws.
2. Contractor certifies that neither it nor its principals is presently excluded or disqualified from participation in this transaction by any US Government department or agency.
3. Contractor certifies that it will not and has not used any funds received directly or indirectly from the U.S. Government has been paid or will be paid to any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of U.S. Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining this Contract or any other U.S. government funded project.
4. Mercy Corps, the US Department of State, the Inspector General of the United States, and the Comptroller General of the United States, or any of their duly authorized representatives have the right of timely and unrestricted access to any books, documents, papers and records of Contractor that are pertinent to this Contract, in order to make audits, examinations, excerpts and transcripts and copies of such documents. This right also includes timely and reasonable access to a Contractor’s personnel for the purpose of interview and discussion related to such documents.
5. The U.S. Government is opposed to prostitution and related activities, which are inherently harmful and dehumanizing, and contribute to the phenomenon of trafficking in persons. None of the funds made available under this contract may be used to promote, support, or advocate for the legalization or practice of prostitution. Nothing in the preceding sentence shall be construed to preclude assistance designed to ameliorate the suffering of, or health risks to, victims while they are being trafficked or after they are out of the situation that resulted from such victims being trafficked. The Contractor does not promote, support, or advocate the legalization or practice of prostitution.
6. Mercy Corps has the right to terminate this Contract, without penalty, if Contractor or its employees, or any Subcontractor or its employees, engage in any of the following conduct:
7. Trafficking in persons (as defined in the Protocol to Prevent, Suppress, and Punish Trafficking in Persons, especially Women and Children, supplementing the UN Convention against Transnational Organized Crime) during the period of this Contract;
8. Procure a commercial sex act during the period of time that this Contract is in effect; or
9. Use forced labor in the performance of the Contract.
10. The Contractor agrees to incorporate the terms of “Exhibit C” word-for-word in all of its sub-contracts funded under this Contract, if any.

**C: European Funded Programs**

Mercy Corps has received funding from European Union, designated herewith as the Donor. Mercy Corps, in accordance with the Donor regulations under which this contract is executed, requires certain certifications and provisions, set forth herein, to be included in all contracts.

**Liability/Indemnity**

Under no circumstances nor for any reason whatsoever will the Donor be held liable for damages as a result of the work pursuant to this Contract.

**Right of Access/ Audit**

1. The Contractor will be responsible for holding all invoices, receipts and financial and accounting documents relating to this Contract for at least seven years following final payment made under this Contract.
2. The Contractor will allow Mercy Corps or the Donor (or any other organisation authorised by the Donor) access to the location where the Contractor is based or any location where the Services are being implemented and to all documents, information and other material related to this Contract (including in electronic format), necessary to assess, or audit the implementation of the project and compliance with this Contract. Such audit may take place at any time during this Contract and up to seven years following final payment made under this Contract.

**Confidentiality**

The Contractor acknowledges that Mercy Corps has reporting obligations to the Donor.  Accordingly, the Contractor consents to Mercy Corps sharing information about the Contractor or the Services with the Donor as required.

**Anti-corruption**

The Parties recognize that Mercy Corps has a zero tolerance approach to bribery and corruption. The Contractor will comply with all relevant anti-bribery and anti-corruption laws (including the UK Bribery Act 2010) and comply with the principles of Mercy Corps’ Anti-Corruption and Anti-Bribery Policies, or equivalent policies, including: (a) not accepting or offering a bribe of facilitation payment; and (b) reporting immediately to Mercy Corps any bribery issues which the Contractor becomes aware of during this Contract; and, at the reasonable request of Mercy Corps, confirming in writing that they have complied with this Clause and provide any information reasonably requested in support of such compliance.

Mercy Corps recognizes that in complying with this Clause, the Contractor is not expected to risk life, limb or freedom.

**Principal of Ethical Procurement**

The Contractor acknowledges that Mercy Corps must comply with the Donor’s principle of Ethical Procurement including adhering to the minimum ethical standards of the avoidance of child labour, and the respect of basic social rights and working conditions based on international labour standards.

**D: USAID Funded Programs**

Mercy Corps, in accordance with donor regulations, requires certain certifications and provisions, set forth herein, to be included in all contracts.

1. The recipient must not engage in transactions with, or provide resources or support to, individuals and organizations associated with terrorism, including those individuals or entities that appear on the Specially Designated Nationals and Blocked Persons List maintained by the U.S. Treasury (online at: http://www.treasury.gov/resource-center/sanctions/SDNList/Pages/default.aspx) or the United Nations Security designation list (online at: http://www.un.org/sc/committees/1267/aq\_sanctions\_list.shtml).
2. Contractor certifies that neither it nor its principals is presently excluded or disqualified from participation in this transaction by any US Government department or agency.
3. Contractor certifies that it will not and has not used any funds received directly or indirectly from the U.S. Government to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of U.S. Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining this Contract or any other U.S. government funded project.
4. Mercy Corps, USAID, and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers and records of Contractor which are directly pertinent to this Contract for the purpose of making audits, examinations, excerpts and transcriptions.
5. The Contractor or its employees, or any Subcontractor or its employees, must not engage in any of the following conduct:

(i) Trafficking in persons (as defined in the Protocol to Prevent, Suppress, and Punish Trafficking in Persons, especially Women and Children, supplementing the UN Convention against Transnational Organized Crime) during the period of this Contract;

(ii) Procure a commercial sex act during the period of this Contract;

(iii) Use forced labor in the performance of the Contract; or

(iv) Commit acts that directly support or advance trafficking in persons, including the following acts:

a. Destroying, concealing, confiscating, or otherwise denying an employee access to that employee's identity or immigration documents;

b. Failing to provide return transportation or pay for return transportation costs to an employee from a country outside the United States to the country from which the employee was recruited upon the end of employment if requested by the employee, unless:

* exempted from the requirement to provide or pay for such return transportation by Mercy Corps under this award; or
* the employee is a victim of human trafficking seeking victim services or legal redress in the country of employment or a witness in a human trafficking enforcement action;

c. Soliciting a person for the purpose of employment, or offering employment, by means of materially false or fraudulent pretenses, representations, or promises regarding that employment;

d. Charging employees’ recruitment fees; or

e. Providing or arranging housing that fails to meet the host country housing and safety standards.

The Contractor agrees to report in a timely manner to Mercy Corps any credible information from any source that alleges the contractor or any sub-contractor has engaged in any of the prohibited activities identified in this provision.

1. The Contractor must inform its employees working under this contract in the predominant native language of the workforce that they are afforded the employee whistleblower rights and protections provided under 41 U.S.C. § 4712; and
2. Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements
   * + - 1. The Contractor must not require its employees or sub-contractors to sign or comply with internal confidentiality agreements or statements that prohibit or otherwise restrict employees or sub-contractors from lawfully reporting waste, fraud, or abuse related to the performance of this contract to Mercy Corps or to USAID’s Office of the Inspector General.
         2. The Contractor must notify current employees and sub-contractors that prohibitions and restrictions of any preexisting internal confidentiality agreements or statements covered by this provision, to the extent that such prohibitions and restrictions are inconsistent with the prohibitions of this provision, are no longer in effect.
         3. If Mercy Corps, USAID or other authorized officials of the US Government determines that the Contractor is not in compliance with the requirements of this provision, Mercy Corps may, at its sole discretion, suspend or terminate the contract. Further, Mercy Corps may, at its sole discretion, decide not pay a portion or all of amounts invoiced or expenditures incurred, as applicable, by the Contractor with funds provided under this contract, and also may require the Contractor to refund a portion or all of any amounts paid to the Contractor under this contract.
         4. Definitions:

Terms in this clause will have the meaning defined in this section or as defined in 2 CFR 200.

“Internal confidentiality agreement or statement” means a confidentiality agreement or any other written statement that the Contractor requires any of its employees or sub-contractors to sign regarding nondisclosure of recipient information, except that it does not include confidentiality agreements arising out of civil litigation or confidentiality agreements that Contractor employees or sub-contractors sign at the behest of a US government agency.

* + - * 1. The Contractor must include this provision, including this paragraph (e), in subawards and sub-contracts funded under this contract.

1. Contractor must disclose, in a timely manner, in writing to the USAID Office of Inspector General and Mercy Corps all violations of US government criminal law involving fraud, bribery or gratuity violations potentially affecting this Contract.

Disclosures to USAID must be sent to:

U.S. Agency for International Development

Office of the Inspector General

P.O. Box 657

Washington, DC 200044-0657

Phone: 1-800-230-6539 or 202-712-1023

Email: [ig.hotline@usaid.gov](mailto:ig.hotline@usaid.gov)

URL: <https://oig.usaid.gov/content/usaid-contractor-reporting-form>

1. USAID policy requires that the contractor not discriminate against any beneficiaries in implementation of this contract, such as, but not limited to, by withholding, adversely impacting, or denying equitable access to the benefits provided through this contract on the basis of any factor not expressly stated in the contract. This includes, for example, race, color, religion, sex (including gender identity, sexual orientation, and pregnancy), national origin, disability, age, genetic information, marital status, parental status, political affiliation, or veteran's status. Nothing in this provision is intended to limit the ability of the contractor to target activities toward the assistance needs of certain populations as defined in the contract.
2. The Contractor agrees to incorporate the terms of “Schedule II – subsection C” word-for-word in all of its sub-contracts funded under this Contract, if any.

**E.** **Reporting of currency and cash-based transaction required under Nigerian laws.**

1. The special control unit against money laundering (SCUML) as well as Federal Ministry of Industry, trade and investment, in line with the provision of the “Money Laundering

(Prohibition) Act (TPA)” 2011 (as amended) and Federal Ministry of Industry, Trade and Investment (designation of Non-Financial institutions) 2013 and 2016 respectively, requires designated non-financial institutions to report all currency transactions of N5,000,000 and above, in case of an individual or N10,000,000 and above, in the case of a body corporate within seven (7) days from the date of transaction.

1. The laws also require designated non-financial institutions to report all cash-based transactions in excess of $1,000 or its equivalent within seven (7) days to SCUML through its online platform.
2. Accordingly, Mercy Corps, being a registered and designated non-financial institution, in compliance with above requirements in clause a and b of this document is obliged to report all transaction to SCUML.
3. By signing this document, the vendor/contractor/service provider unconditionally allows Mercy Corps to share necessary data and documents with SCUML and the “Economic and Financial Crimes Commission (EFCC).
4. Vendor/contractor/service provider also agrees to allow SCUML and EFCC the unconditional access to his bank account(s), account books and daily ledger with regard to the amount paid against this contract.

# Attachments to the Tender Package

**Attachment 1 -Supplier Information Form.**

**This document must be submitted with your bid**

***The information provided will be used to evaluate the Company before contracting with the Mercy Corps.***

***Please complete all fields.***

**Supplier Information**

|  |  |
| --- | --- |
| Company Name |  |
| Any other names company is operating under (Acronyms, Abbreviations, Aliases) |  |
| Previous names of the company |  |
| Address |  |
| Website |  |
| Phone/Fax Numbers | Phone: Fax: |
| Primary Contact | Name:  Phone Number:  Email Address: |
| Government - owned (yes/no) |  |
| Name(s) of Board of Directors |  |
| Name(s) of Company Owner(s) |  |
| Parent companies, if any |  |
| Subsidiary or affiliate companies, if any |  |
| **Vendor Capacity** | |
| Number of qualified Staff. |  |
| Do you operate in Borno State or the Northeast Nigeria? |  |
| Do you operate in the Deep Field Locations within Borno State e.g. Bama, Gwoza or Mafa LGAs? |  |
| Do you have experience in drilling motorized borehole, water supply overhead steel stanchion and water fetching point? If yes, attach similar contract(s) successfully completed with evidence works completion |  |
| Do you have the equipment and the relevant personal to deliver works? If Yes, attach CVs of relevant personal and evidence of equipment ownership or least agreement |  |
| **Vendor Experience:** | |
| What is your primary area of business? |  |
| How many years of experience do you have in this field? |  |
| Provide examples of similar work executed i.e. Contracts or service completion certificates from INGO, UN or government agencies |  |
| Please mention previous similar works done. (attach contract if possible) | 1.  2.  3. |
| Will you subcontract other companies for the project? |  |
| **Other:** | |
| Do you understand the security situation between these routes? Bama, Mafa and Gwoza LGAs – Borno State. |  |
| Can you get approval from Authorities to move equipment and personale to deliver works in Bama, Gwoza and Mafa LGAs? Please attach acknowledgement. |  |

**Financial Information**

|  |  |
| --- | --- |
| Bank Name and Address |  |
| Bank Account Number |  |
| Name under which company is registered at bank |  |
| Payment Terms; Payment will be done in wire transfer. |  |
| MC will do the payment after the completion of works, do you agree on this terms? |  |
| Mercy Corps will withhold 10% of the entire contract value for six months after service completion and acceptance to ensure the works delivered is according to standard or the contractor will provide a bond equivalent to 10% value of the contract, whichever retention method Mercy Corps chose |  |

**Delivery Time/Completion Time**

|  |  |
| --- | --- |
| How many days, from the time of contract signature will it take you to mobilize to site, commence work, complete and handover works to Mercy Corps? |  |

**References**

This information is required; references should be a former client whom the company have rendered similar service(s)

|  |  |
| --- | --- |
| Client Name: | Contact Name, Phone, Email Address: |
| Client Name: | Contact Name, Phone, Email Address: |
| Client Name: | Contact Name, Phone, Email Address: |

**Supplier Self-Certification of Eligibility**

Company certifies that:

1. It, its affiliates and subsidiaries, owners, officers, directors and key employees (to the best of its knowledge) are not the subject of any government’s sanctions, designations, donor rules or prohibitions, or laws prohibiting transactions with it/them. It is not the subject of any donor government investigation into its misconduct with any other recipient of that donors funding.
2. It, its affiliates and subsidiaries, owners, officers, directors and key employees have not and do not engage in any form of terrorism or attacks on civilians and do not provide any form of material support or financial resources for individuals or organizations that do engage in any form of terrorism or deliberate attacks on civilians.
3. It, its affiliates and subsidiaries, owners, officers, directors and key employees have not and do not engage in weapons or drugs manufacture, transport, sale or distribution.
4. It is not in default on any material credit agreement, bankrupt or being wound up, are having its affairs administered by the courts, have entered into arrangements with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations.
5. It is has not been determined to be in breach of a material contract by any legal body anytime within the past 2 years.
6. It pays taxes as and when due and is not currently the subject of any investigation or proceeding related to back-owed taxes.
7. It provides workers compensation insurance to its workers in accordance with the laws of the countries where it operates.
8. It pays social security obligations as required in the countries where it operates.
9. It, its owners, officers and directors have not been convicted of an offense concerning its professional conduct and has not engaged in grave professional misconduct.
10. It, its affiliates and subsidiaries, owners, officers, directors and key employees have not been the subject of criminal investigation or judgement for fraud, corruption, human trafficking, spying, weapons transport or smuggling, sexual exploitation or abuse, involvement in a criminal organization or any other criminal activity.
11. It treats its employees with dignity and respect and maintains social operating standards, including: working conditions and social rights: avoidance of child labor, bondage, forced labor, human trafficking or exploitation; assurance of safe and reasonable working conditions; freedom of association; freedom from exploitation, abuse, and discrimination; protection of basic social rights of its employees and Mercy Corps beneficiaries.
12. To the best of its knowledge, no Mercy Corps employee, officer, consultant or other party related to Mercy Corps has a financial interest in the Company’s business activities, nor is any Mercy Corps employee related to any owner, officer, director or employee of the company, and, if so, it will ensure that the relationship is disclosed to Mercy Corps and will not used for improper influence. Discovery of an undisclosed Conflict of Interest will result in immediate revocation of the Company’s Authorized Supplier status and disqualification of Company from participation in future Mercy Corps procurement.
13. It understands that attempting to or agreeing to provide anything of value to any Mercy Corps employee, agent or representative for the purpose of encouraging that person to award Company a contract or take or not take any action related to any contract will result in immediate termination of any agreement. Company certifies that it does not engage in such conduct.
14. It understands that Mercy Corps seeks fair and open competition and the fairest price available and that any attempt by company to subvert fair and open competition, including working with other bidders to fix prices, working to exclude competition, seeking confidential information from Mercy Corps or other bidders, using multiple related or controlled companies to give the appearance of competition, or any similar activity, will result in termination of any agreement. Company certifies that it does not engage in such conduct.
15. It understands that Mercy Corps prohibits any of its partners or suppliers from bribing public officials and certifies that it does not do so.
16. It is not conducting business under other names or aliases that have not been declared to Mercy Corps.

If the Company cannot certify to any of the above, it should explain why not. Mercy Corps may take the individual circumstances into account for some situations. However, any false certification could be grounds for immediate disqualification and termination of any future agreement.

By signing the Supplier Information Form, you certify that your Company is eligible to supply goods and services to major donor funded organizations and that all of the above statements are accurate and factual.

Company Name:

Name of Representative:

Title:

Signature:

Date:

***MERCY CORPS USE ONLY***

**Following documents have been provided:**

|  |  |
| --- | --- |
| **Documents** | |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ an employee of Mercy Corps having completed and reviewed this form confirm the accuracy of information provided:**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date\* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attachment 2 - Price Offer Sheet**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| * + - 1. **Bill of Quantities for Borehole Construction and Completion at Bama & Mafa (Zannari) LGAs – Borno State** | | | | | |
| 1. **Site Clearing and Mobilization** | | | | | |
| **Description** | **Unit** | **Qty** | **Unit Rate** | **Total** | |
| Conduct geophysical survey (field work, interpretation and report) for the location of borehole at a suitable site including proposed borehole design based on survey data and also suggest means/method of drilling which will be reviewed and approve by MC. | Item | 1 |  |  | |
| Mobilization of drilling rigs and necessary tools, equipment’s and machines to site | Item | 1 |  |  | |
| ***DRILLING*** |  | | | | |
| Using 8-inch diameter bit with Percussion or rotary drill method by using appropriate rigs, cutter, pipes, machine and other equipment’s capable of drilling up to a depth up to 300 meter (depending on the availability of appropriate soil layer) through all sorts of strata.  Protection of caving by supplying necessary casing pipe, collection of soil samples at every change of strata and preserve them for analysis, withdrawal of boring & casing pipes etc. | M | 300 |  |  | |
| ***CASING*** |  | | | | |
| Provide and install 150mm diameter internal casing API type as per particular specification | M | 260 |  |  | |
| Provide and install 150mm diameter Screen (Johnson stainless steel) slot sizes per the design report. | M | 40 |  |  | |
| ***GRAVEL PACKING*** |  | | | | |
| Provision of suitable gravel pack to fill the annular space between the sides of the borehole and the screen. The gravel pack grain sizes are to be defined by the grain size of the aquifer and can ranged from 2-4mm in diameter.  Reasonably homogenous, calibrated, clean from debris, round and preferably siliceous available from river bed, free from soil and other materials; including supply, delivery, casting and cleaning. Sufficient amount of gravel pack shall be installed to completely cover the uppermost screen and yonder by an additional 2-metres to allow for settling. A good supply of water should be introduced with the gravel to prevent bridging. The gravel pack shall be capped with a 2-metre vertical column of clay seal to prevent any seepage that may contaminate aquifers with subsequent pollution of ground water | LS | 1 |  |  | |
| ***GROUTING*** |  | | | | |
| Grouting with clay or with a mixture of bentonite and cement.  The first clay grout of 2 meters length must be placed on top of the gravel pack in order to stop the grout from plugging the gravel pack. Including supply, delivery, fitting and fixing.  Clay back filling for the intermediate space between the clay plug and the concrete plug, fill up with sand and clay.  The last 10 meters should be filled up with a mixture of water and cement grout up to the ground level.  The procedure involves filling the annular space up to the ground level and then leaving to set for a minimum of 12 hours before starting further development; all costs including supply, delivery, casting and cleaning. | M | 22 |  |  | |
| ***BOREHOLE DEVELOPMENT*** |  | | | | |
| The service provider shall carry out development and cleaning of borehole by airlifting and air jetting methods upon completion of installation of casing and gravel pack. This shall be done to remove silts, clays and fluid residues deposited on the borehole wall and adjacent portions of the aquifer during the rehabilitation process. The service provider should make arrangement of water level measuring kits including transportation of air compressor unit to site (For the purpose of air compressor of evaluation 24 hrs is considered) | Item | 1 |  |  | |
| ***TEST PUMPING*** |  | | | | |
| Establish borehole parameters by test pumping the borehole for 12 hours and provide borehole data such as yield, draw-down. The following elements will be contained in the test pumping;  a) A period of recovery after production pumping/development;  b) A pre-test (calibration, typically 2 to 3 hours);  c) A period of recovery after pre-test  d) A step draw-down test (typically five steps, each of 2 hours duration; total 10 hours);  e) A period of recovery after step draw-down test | Item | 1 |  |  | |
| ***WATER QUALITY TEST*** |  | | | | |
| A minimum of 2 litres each for chemical and bacteriological analysis shall be collected by the contractor in the presence of the Engineer or his representative. (3) Water samples should be collected in clean, sterilized properly sealed and protected plastic containers from the borehole for reference to a Water Testing Authority recognized and authorized by Mercy Corps for laboratory analysis, after completion of test pumping. One sample will be used for each of these tests; physical, chemical and bacteriological analyses. The samples so collected should reach the authorized Water Testing Laboratories (Ministry of Water Resources and National Agency for Food and Drug Law and Control (NAFDAC)), within 6 hours from the time of collection from the borehole unless otherwise. Specific parameters to be measured shall include;   * **Physical Parameters** – Colour, Odour, Taste, Turbidity, pH Value, Electrical Conductivity, Temperature * **Chemical Parameters** – Nitrate, Nitrite, Total Hardness, Fluoride, Chloride, Sulphate, Copper, Manganese, TDS, Total Iron, Arsenic * **Biological Parameters** – Faecal Coli form Counts | No | 2 |  |  | |
| ***BOREHOLE COMPLETION REPORT*** |  | | | | |
| A full borehole completion report shall be prepared by the service provided and submitted to the Mercy Corps within ten days of the completion of the pumping tests. The borehole completion report shall include the following:  a. A borehole log, showing: borehole location, ground surface elevation, measuring point elevation, soil strata, static water level and dimensions of casing, screen, grounding and cap.  b. Pumping tests reports  c. Result of analysis of water  d. All other records as specified | Report | 1 |  |  | |
| ***BOREHOLE CLEANING AND DISINFECTION*** |  | | | | |
| Provide for the disinfection of well by introducing granular Calcium Hypo-chlorite or Sodium Hypochlorite into the annular space along with the gravel pack material at a concentration of 500grammes per cubic meter of pack. | LS | 1 |  |  | |
| ***SANITARY SEAL AND CAPPING*** |  | | | | |
| To provide an effective seal to the entry of contaminants, up to 10-metres depth of the borehole from the surface shall be grouted using cement slurry 1.85-2.15 kg / liter  For Sanitary seal and well head construction, the top of the casing shall be a minimum of 0.5m above the original ground level and there shall be a flange for connection of the wellhead assembly. The conductor pipe (surface casing) around the inner casing shall be raised at least 30 cm above the inner casing and then capped properly by welding 6mm Ø thick 8-inch steel plate to secure the well. Around the casing, there shall be a 1.5m x 1.5m x 1m concrete slab. | No | 1 |  |  | |
| **Sub Total** | | | |  | |
|  | | |
| 1. **Supply and Installation of Solar Pump** | | | | | |
| **DESCRIPTION** | **Unit** | **Qty** | **Unit Rate** | | **Total** |
| Depending on yield of borehole supply and install suitable size of solar pump grundfos or equivalent submersible, vertical turbine pump with stainless steel impellers, overheat protection, run-dry protection including a well water level sensor tied to a shut-off to prevent aquifer and/or pump damage which will be approved by MC before procurement. | No | 1 |  | |  |
| Provision for the well head including air valve, sluice valve, non-return valve, flow meter and support anchor as directed by the Engineer | Item | 1 |  | |  |
| **Sub Total** | | | | |  |
|  | | | | | |
| 1. **Supply and Installation of Solar Powere System** | | | | | |
| **DESCRIPTION** | **Unit** | **Qty** | **Unit Rate** | | **Total** |
| Depending on power requirement, Solar photovoltaic panels, 240-300 watts “Siemens” or approved equivalent, complete with accessories, to be executed in whole or part all installed steel frames above ground based on designed to be submitted and approved by MC. All panels must be approved to IEC/EN61215 and 61730 or UL 1703 certified.  a) Hybrid inverter 4kw  b) Charge controller  c) Solar panel steel frame  d) Solar panel  e) Set up connector  f) DC disconnection 16A/16, to be executed in whole or part all installed steel frames above ground accessories, | Item | 1 |  | |  |
| Drop cable HT-TKN-F | M | 120 |  | |  |
| Supply and install 50mm diameter rising main GMS water pipe, Class C. | M | 120 |  | |  |
| 50mm diameter gate valve as ‘pegler’ or approved equivalent | No | 1 |  | |  |
| **Sub Total** | | | | |  |
|  |  | | | | |
| 1. **Supply and Installation of 20M3 PVC Overhead Tank** | | | | | |
| **DESCRIPTION** | **Unit** | **Qty** | **Unit Rate** | | **Total** |
| Supply and Installation of 4 No. 5 cubic meters black PVC tank installed on a 6 meters above the ground steel stanchion with 32mm outlet pipe, gate valves, water gauge and float valves. Provide for disinfection of the tanks after installation. Provide steel name plate branded with Mercy Corps logo. | No | 1 |  | |  |
| **Sub-total** | | | | |  |
|  | | | | | |
| 1. **Construction of Tap Stands & Soak Pits** | | | | | |
| **Description** | **Unit** | **Qty** | **Unit Rate** | | **Total** |
| Provide for water distribution network 2 tapstands with 6 taps each complete with concrete slabs and soak pit according to specification. | No | **1**1 |  | |  |
| **Sub-total** | | | | |  |
|  | | | | | |
| 1. **Security Fencing and Landscaping** | | | | | |
| **Description** | **Unit** | **Qty** | **Unit Rate** | | **Total** |
| Provide and fix perimeter fence, complete with gate and lock according to specification. | LS | 1 |  | |  |
| Landscape fenced area and finish with 12/15mm granite chippings | LS | 1 |  | |  |
| **Sub Total:** | | | | |  |
| |  |  | | --- | --- | | **Total summary for all works** | **Price in NGN** | | **Total summary for A** |  | | **Total summary for B** |  | | **Total summary for C** |  | | **Total summary for D** |  | | **Total summary for E** |  | | **Total summary for F** |  | | **Total for one (1) borehole construction & completion works at Bama & Mafa:** |  | | **Total for four (4) borehole construction & completion works at Bama & Mafa** |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | * + - 1. **Bill of Quantities for Borehole Construction & Completion at Gwoza LGA – Borno State** | | | | | | | 1. **Site clearing and Mobilization** | | | | | | | **Description** | **Unit** | **Qty** | **Unit Rate** | **Total** | | | Conduct geophysical survey (field work, interpretation and report) for the location of borehole at a suitable site including proposed borehole design based on survey data and also suggest means/method of drilling which will be reviewed and approve by MC. | Item | 1 |  |  | | | Mobilization of drilling rigs and necessary tools, equipment’s and machines to site | Item | 1 |  |  | | | ***DRILLING*** |  | | | | | | Using 8-inch diameter bit with Percussion or rotary drill method by using appropriate rigs, cutter, pipes, machine and other equipment’s capable of drilling up to a depth up to 80 meter (depending on the availability of appropriate soil layer) through all sorts of strata.  Protection of caving by supplying necessary casing pipe, collection of soil samples at every change of strata and preserve them for analysis, withdrawal of boring & casing pipes etc. | M | 80 |  |  | | | ***CASING*** |  | | | | | | Provide and install 150mm diameter internal casing API type as per particular specification | M | 70 |  |  | | | Provide and install 150mm diameter Screen (Johnson stainless steel) slot size 0.5-1.0mm (factory slotted) | M | 10 |  |  | | | ***GRAVEL PACKING*** |  | | | | | | Provision of suitable gravel pack to fill the annular space between the sides of the borehole and the screen. The gravel pack grain sizes are to be defined by the grain size of the aquifer and can ranged from 2-4mm in diameter.  Reasonably homogenous, calibrated, clean from debris, round and preferably siliceous available from river bed, free from soil and other materials; including supply, delivery, casting and cleaning. Sufficient amount of gravel pack shall be installed to completely cover the uppermost screen and yonder by an additional 2-metres to allow for settling. A good supply of water should be introduced with the gravel to prevent bridging. The gravel pack shall be capped with a 2-metre vertical column of clay seal to prevent any seepage that may contaminate aquifers with subsequent pollution of ground water | LS | 1 |  |  | | | ***GROUTING*** |  | | | | | | Grouting with clay or with a mixture of bentonite and cement.  The first clay grout of 2 meters length must be placed on top of the gravel pack in order to stop the grout from plugging the gravel pack. Including supply, delivery, fitting and fixing.  Clay back filling for the intermediate space between the clay plug and the concrete plug, fill up with sand and clay.  The last 10 meters should be filled up with a mixture of water and cement grout up to the ground level.  The procedure involves filling the annular space up to the ground level and then leaving to set for a minimum of 12 hours before starting further development; all costs including supply, delivery, casting and cleaning. | M | 10 |  |  | | | ***BOREHOLE DEVELOPMENT*** |  | | | | | | The service provider shall carry out development and cleaning of borehole by airlifting and air jetting methods upon completion of installation of casing and gravel pack. This shall be done to remove silts, clays and fluid residues deposited on the borehole wall and adjacent portions of the aquifer during the rehabilitation process. The service provider should make arrangement of water level measuring kits including transportation of air compressor unit to site (For the purpose of air compressor of evaluation 24 hrs is considered) | Item | 1 |  |  | | | ***TEST PUMPING*** |  | | | | | | Establish borehole parameters by test pumping the borehole for 12 hours and provide borehole data such as yield, draw-down. The following elements will be contained in the test pumping;  a) A period of recovery after production pumping/development;  b) A pre-test (calibration, typically 2 to 3 hours);  c) A period of recovery after pre-test  d) A step draw-down test (typically five steps, each of 2 hours duration; total 10 hours);  e) A period of recovery after step draw-down test | Item | 1 |  |  | | | ***WATER QUALITY TEST*** |  | | | | | | A minimum of 2 litres each for chemical and bacteriological analysis shall be collected by the contractor in the presence of the Engineer or his representative. (3) Water samples should be collected in clean, sterilized properly sealed and protected plastic containers from the borehole for reference to a Water Testing Authority recognized and authorized by Mercy Corps for laboratory analysis, after completion of test pumping. One sample will be used for each of these tests; physical, chemical and bacteriological analyses. The samples so collected should reach the authorized Water Testing Laboratories (Ministry of Water Resources and National Agency for Food and Drug Law and Control (NAFDAC)), within 6 hours from the time of collection from the borehole unless otherwise. Specific parameters to be measured shall include;   * **Physical Parameters** – Colour, Odour, Taste, Turbidity, pH Value, Electrical Conductivity, Temperature * **Chemical Parameters** – Nitrate, Nitrite, Total Hardness, Fluoride, Chloride, Sulphate, Copper, Manganese, TDS, Total Iron, Arsenic * **Biological Parameters** – Faecal Coli form Counts | No | 2 |  |  | | | ***BOREHOLE COMPLETION REPORT*** |  | | | | | | A full borehole completion report shall be prepared by the service provided and submitted to the Mercy Corps within ten days of the completion of the pumping tests. The borehole completion report shall include the following:  a. A borehole log, showing: borehole location, ground surface elevation, measuring point elevation, soil strata, static water level and dimensions of casing, screen, grounding and cap.  b. Pumping tests reports  c. Result of analysis of water  d. All other records as specified | Report | 1 |  |  | | | ***BOREHOLE CLEANING AND DISINFECTION*** |  | | | | | | Provide for the disinfection of well by introducing granular Calcium Hypo-chlorite or Sodium Hypochlorite into the annular space along with the gravel pack material at a concentration of 500grammes per cubic meter of pack. | LS | 1 |  |  | | | ***SANITARY SEAL AND CAPPING*** |  | | | | | | To provide an effective seal to the entry of contaminants, up to 10-metres depth of the borehole from the surface shall be grouted using cement slurry 1.85-2.15 kg / liter  For Sanitary seal and well head construction, the top of the casing shall be a minimum of 0.5m above the original ground level and there shall be a flange for connection of the wellhead assembly. The conductor pipe (surface casing) around the inner casing shall be raised at least 30 cm above the inner casing and then capped properly by welding 6mm Ø thick 8-inch steel plate to secure the well. Around the casing, there shall be a 1.5m x 1.5m x 1m concrete slab. | No | 1 |  |  | | | **Sub Total** | | | |  | | | 1. **Supply and Installation of Solar Pump** | | | | | | | **DESCRIPTION** | **Unit** | **Qty** | **Unit Rate** | | **Total** | | Depending on yield of borehole supply and install suitable size of solar pump grundfos or equivalent submersible, vertical turbine pump with stainless steel impellers, overheat protection, run-dry protection including a well water level sensor tied to a shut-off to prevent aquifer and/or pump damage which will be approved by MC before procurement. | no | 1 |  | |  | | Provision for the well head including air valve, sluice valve, non-return valve, flow meter and support anchor as directed by the Engineer | Item | 1 |  | |  | | **Sub Total** | | | | |  | |  | | | | | | | 1. **Supply and Installation of Solar Powered System** | | | | | | | **DESCRIPTION** | **Unit** | **Qty** | **Unit Rate** | | **Total** | | Depending on power requirement, Solar photovoltaic panels, 240-300 watts “Siemens” or approved equivalent, complete with accessories, to be executed in whole or part all installed steel frames above ground based on designed to be submitted and approved by MC: All solar panels approved to IEC/EN61215 and 61730 or UL 1703 certified.  a) Hybrid inverter 4kw  b) Charge controller  c) Solar panel steel frame  d) Solar panel  e) Set up connector  f) DC disconnection 16A/16, to be executed in whole or part all installed steel frames above ground accessories. | Item | 1 |  | |  | | Drop cable HT-TKN-F | M | 120 |  | |  | | Supply and install 50mm diameter rising main GMS water pipe, Class C. | M | 120 |  | |  | | 50mm diameter gate valve as ‘pegler’ or approved equivalent | No | 1 |  | |  | | **Sub Total** | | | | |  | |  |  | | | | | | 1. **Supply And Installation of 20M3 PVC Overhead Tank** | | | | | | | **DESCRIPTION** | **Unit** | **Qty** | **Unit Rate** | | **Total** | | Supply and Installation of 4 No. 5 cubic meters black PVC tank installed on a 9 meters above the ground steel stanchion with 32mm outlet pipe, gate valves, water gauge and float valves. Provide for disinfection of the tanks after installation. Provide steel name plate branded with Mercy Corps logo. | No | 1 |  | |  | | **Sub-total** |  |  |  | |  | |  | | | | | | | 1. **Construction of Tap Stands and Soak Pit** | | | | | | | **Description** | **Unit** | **Qty** | **Unit Rate** | | **Total** | | Provide for water distribution network 2 tapstands with 6 taps each complete with concrete slabs and soak pit according to specification. | No | 1 |  | |  | | **Sub-total** | | | | |  | |  | | | | | | | 1. **Security Fencing and Landscaping** | | | | | | | **Description** | **Unit** | **Qty** | **Unit Rate** | | **Total** | | Provide and fix perimeter fence, complete with gate and lock according to specification. | LS | 1 |  | |  | | Landscape fenced area and finish with 12/15mm granite chippings | LS | 1 |  | |  | | **Sub Total:** | | | | |  | | |  |  | | --- | --- | | **Total summary for all works** | **Price in NGN** | | **Total summary for A** |  | | **Total summary for B** |  | | **Total summary for C** |  | | **Total summary for D** |  | | **Total summary for E** |  | | **Total summary for F** |  | | **Total for one (1) borehole construction & completion works at Gwoza LGA:** |  | | **Total for eight (8) borehole construction & completion works at Gwoza LGA** |  | | | | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Construction of 6m high (1Nos. x 20,000 Capacity PVC water storage Tank) Elevated Steel Stanchion at Bama LGA – Borno State** | | | | | | | **S/N** | **Description** | **Unit** | **Qty** | **Rate** | **Amount** | |  | Initial mobilization and final demobilization of equipment, labour and materials for contractors base office to site. | Ls | 1 |  |  | |  |  |  |  |  |  | | **1.0** | **Sub - Structure (All Provisional)** |  |  |  |  | | **1.1** | **Mobilization and Earth works** |  |  |  |  | |  | Excavate for foundation to a depth of 1800mm and cart away | m3 | 12.5 |  |  | |  | Backfill selected excavated material; well consolidated in 150mm layers around foundation and level the entire area | m3 | 10.36 |  |  | |  | **Sub –Total** |  |  |  |  | | **1.2** | **Installation and Casting of foundation** |  |  |  |  | | **A** | **Reinforced insitu concrete (1:2:4 - 20mm aggregate) poured into and vibrated in formwork around reinforcement;** |  |  |  |  | |  | Supply material, prepare and placed concrete Grade 15/19mma aggregates as blinding layers, 300mm thickness with mix ratio 1:2:4 | m3 | 2.19 |  |  | |  | Supply material prepare and cast reinforced in-situ concrete Grade 20/19mm aggregate for column base with mix ratio of 1:2:4 and Y16 bar@ 150mmc/c T/B. Price includes steel reinforcement and formwork. Refer to technical specification for more details in foundation footings. | m3 | 2.7 |  |  | |  | Supply materials prepare and cast reinforced in-situ concrete grade 20/19aggregate for column with mix ratio 1:2:4 Y16 bar. Links for column R6 150mm c/c. Price includes steel reinforcement and form works. Refer to technical specification for more details in foundation footings | m3 | 0.864 |  |  | |  | Install a set of diam. 16mm anchor bolts (6pcs) and metal plate (size :35x35cm and 10mm thick) accurately in position for steel tower column complete with all necessary accessories. | set | 6 |  |  | |  | **Sub –Total** |  |  |  |  | | 1.3 | **SUPER STRUCTURE (STEEL WORKS)** |  |  |  |  | | B | **Elevated Steel Tower welded, bolted, and grinded joints, including paintings to engineers detailed design and specifications** |  |  |  |  | |  | Fabrication and mounting of steel member for water tower. Refer and follow technical specification, manufactures instructions, site instructions, approved scope of work and working drawings. | L/S | 1 |  |  | |  | **Sub –Total** |  |  |  |  | | C | **Installation of platforms, ladders, staircase, level indicator, hand rails and piping as per drawings. Refer and follow technical specification and approved scope of work.** |  |  |  |  | |  | Provide a protected walkway around the tanks as per specification. | L/S | 1 |  |  | |  | Install a ladder to the walkways station as per specification | L/S | 1 |  |  | |  | **Sub –Total** |  |  |  |  | | D | **Plumbing Works. Connect water tanks to fetching points following approved work method and working drawings.** |  |  |  |  | |  | Supply and Install 20,000 (4No. Of 5000 liters capacity)PVC GEEPEE Tank with all fittings and accessories. | set | 1 |  |  | |  | **Sub –Total** |  |  |  |  | | **Total for Construction of one (1) set of 6m high (1Nos. x 20,000 Capacity PVC water storage Tank) Elevated Steel Stanchion at Bama LGA – Borno State (sub-total summary for A+B+C+D)** | | | | |  | | **Total for Construction of five (5) sets of 6m high (1Nos. x 20,000 Capacity PVC water storage Tank) Elevated Steel Stanchion at Bama LGA – Borno State** | | | | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **BoQ for Construction of One Fetching Points & a Soak Pit at Bama LGA – Borno State** | | | | | | | **S/N** | **Description** | **Unit** | **Qty** | **Rate (NGN)** | **Amount (NGN)** | | **A** | ***PRELIIMINARY WORK*** |  |  |  |  | | 1.0 | Mobilization and site clearing of site | m2 | 1 |  |  | |  | **Total section 1 carried to summary** |  |  |  |  | | **B** | ***SECONDARY NETWORK DISTRIBUTION*** |  |  |  |  | | 1.0 | GI 1¼" pipe 6m long | Pcs | 3 |  |  | | 1.1 | GI 1¼" -1" Tee connector | Pcs | 5 |  |  | | 1.2 | GI 1¼" -1" 90 degrees elbow | Pcs | 1 |  |  | | 1.3 | GI 1" pipe | M | 7 |  |  | | 1.4 | GI reducer 1¼" x ¾" | Pcs | 6 |  |  | | 1.5 | GI faucet ¾" high quality tap heads | Pcs | 6 |  |  | | 1.6 | GI elbow 1"-¾" | Pcs | 6 |  |  | | 1.7 | Teflon tape (thread tape) | Pcs | 5 |  |  | | 1.8 | 2" GI socket | Pcs | 3 |  |  | | 1.9 | GI pipe 2" 6m long | Pcs | 4 |  |  | | 2.0 | PVC pipe 2" (10 bars) 6m long | pcs | 2 |  |  | | 2.1 | PVC pipe 1" x ¼" (10 bars) 6m long | pcs | 2 |  |  | | 2.2 | Trench on natural soil not less than 0.6m for pipe laying | m3 | 1.8 |  |  | | 2.3 | 2"-1¼" GI reducer | pcs | 1 |  |  | |  | **Total section 2 carried to summary** |  |  |  |  | | **C** | **CONCRETE WORK-WATER POINT** |  |  |  |  | | 1.0 | Excavation | m3 | 2.8 |  |  | | 1.2 | Foundation in two courses of 9" sandcrete block | pcs | 150 |  |  | | 1.3 | Concrete blinding (ratio 1:2:4) 50mm thickness | m3 | 1.5 |  |  | | 1.4 | Plastering/Rendering of surface/ flooring (ratio 1:4) 20mm thickness | m3 | 0.45 |  |  | |  | **Total section 3 carried to summary** |  |  |  |  | | **D** | **SOAK PIT** |  |  |  |  | | 1.0 | Excavation | m3 | 9.5 |  |  | | 1.1 | Blinding in excavated pit (ratio 1:5) 50mm thickness | m3 | 0.18 |  |  | | 1.2 | Pit lining with 9" sandcrete blocks | pcs | 150 |  |  | | 1.3 | Backfill and compact | m3 | 1.2 |  |  | | 1.4 | UPVC pipe 4" | pcs | 2 |  |  | | 1.5 | 4" PVC Union | pcs | 1 |  |  | | 1.6 | PVC Elbow 4" 90 degrees | pcs | 1 |  |  | | 1.7 | PVC pipe 2" (10 bars) 6m long | pcs | 6 |  |  | | 1.8 | Precast concrete service slab (400x400x75mm) | m3 | 0.12 |  |  | | 1.9 | Precast concrete service slab (1500x1500x100mm) | m3 | 0.225 |  |  | | 2.0 | Anchor for service slab (quarter rod) | pcs | 2 |  |  | | 2.1 | 2"x 3" hard sawn wood for formwork | m | 10 |  |  | | 2.2 | Plastering of surfaces above ground 50mm thick (ratio 1:4) | m3 | 0.18 |  |  | |  | **Total section 4 carried to summary** |  |  |  |  | | **D** | **SECTION SUMMARY** | | | | | | 1 | section 1 Mobilization & clearing of site |  | | | | | 2 | section 2 Secondary network distribution |  | | | | | 3 | section 3 Concrete work-water point |  | | | | | 4 | section 4 Soak pit |  | | | | | **Total for Construction of One(1) set of Fetching Points & a Soak Pit at Bama LGA – Borno State** | |  | | | | | **Total for Construction of ten (10) sets of Fetching Points & a Soak Pit at Bama LGA – Borno State** | |  | | | |   **Total Summary of all works stated**   |  |  |  | | --- | --- | --- | | **Work Description** | **Location** | **Amount** | | **Total for four (4) borehole construction & completion works at Bama and Mafa LGAs** | **Bama & Mafa (Zannari) LGAs – Borno State** |  | | **Total for eight (8) borehole construction & completion works at Gwoza LGA** | **Gwoza LGA – Borno State** |  | | **Total for Construction of five (5) sets of 6m high (1Nos. x 20,000 Capacity PVC water storage Tank) Elevated Steel Stanchion at Bama LGA – Borno State** | **Bama LGA – Borno State** |  | | **Total for Construction of ten (10) sets of Fetching Points & a Soak Pit at Bama LGA – Borno State** | **Bama LGA – Borno State** |  | | **Total summary for all works (NGN)** | |  | | | | | | |