

# **BROADBAND SYSTEMS CORPORATION (BSC PLC)**

Remera Airport Road (KN5 Rd)  
Opposite Chez Lando  
PO Box 7229, Kigali, Rwanda  
Email : [procurement@bsc.rw](mailto:procurement@bsc.rw)

## **TENDER DOCUMENT**

**NATIONAL TENDER NOTICE N°: 002/W/NOT/BSC/2023**

**PROVISION OF CIVIL WORKS: BSC OFFICE MODIFICATION**

**OCTOBER 2023**

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## NATIONAL TENDER NOTICE N°: 002/W/NOT/BSC/2023

### TITLE: PROVISION OF CIVIL WORKS: BSC OFFICE MODIFICATION

1. Broadband Systems Corporation PLC ("BSC") is a licensed Internet Service Provider (ISP) that is incorporated under the laws and regulations of the Republic of Rwanda. The company is engaged in the business of providing advanced Information and Communication Technology ("ICT") services based on broadband connectivity.
2. BSC PLC invites qualified bidders to submit bids for the **PROVISION OF CIVIL WORKS: BSC OFFICE MODIFICATION**
3. Participation to this tender is open on equal conditions to all companies specialised in the field and qualifying bidder must present the following documents and requirements in their bids;
  - i. Company profile with full address of company indicating Country, Province, District, Sector, Cell, Village, Street number, E-mail, Post office box and Bank account details.
  - ii. Certified copy of trade license
  - iii. A valid copy of the tax clearance certificate
  - iv. Original or certified copy of the Rwanda Social Security Board certificate
  - v. References of 5 similar tenders accomplished with other relevant Public institutions (good completion certificates)
  - vi. RPPA categorization F
4. The tender documents can be downloaded from [www.bsc.rw](http://www.bsc.rw) or obtained free of charge from **BSC PLC procurement office** at Remera, Airport Road (KN5 Rd) Opposite Chez Lando.
5. Well printed, properly bound bids presented in 3 copies one of which marked original, must reach BSC PLC's Procurement office at Remera, Airport Road (KN5 Rd) Opposite ChezLando not later than **20<sup>th</sup>**

**October 2023 at 10:00 a.m.** late bids shall be rejected. The public opening will take place at **10h30 a.m.** on the same day at BSC PLC conference room.

6. The copies should be put in 'inner envelopes' having the name and address of the company. All copies should be put in other envelope called "outer envelope" marked with the reference number of tender notice with the following mentions:
7. Site visit is mandatory on 11<sup>th</sup> October 2023 at 11:00A.m. at BSC offices

**To: Chairperson of the Tender Committee BSC PLC**

**Tender title: "PROVISION OF CIVIL WORKS: BSC OFFICE MODIFICATION".**

**Broadband Systems Corporation PLC (BSC PLC),**

Remera Airport Road (KN5 Rd), Opposite Chez Lando

P O Box 7229, Kigali, Rwanda

E-mail: [procurement@bsc.rw](mailto:procurement@bsc.rw)

8. The bids must have a validity period of **one Hundred Twenty (120) days** from the bids opening date.

Done at Kigali, on 03/10/2023

Sincerely,

**Mr. Christian MUHIRWA**  
**Chief Executive Officer**

## **Instructions to Bidders (ITB)**

### **A. General Information**

#### **1. Introduction**

Broadband Systems Corporation, PLC ("BSC PLC") is a licensed Internet Service Provider (ISP) that is incorporated under the laws and regulations of the Republic of Rwanda. The company is engaged in the business of providing advanced Information and Communication Technology ("ICT") services based on broadband connectivity.

In order to carry out its mission, BSC PLC would like to work with one of the competent companies specialized in civil works. The purpose of this tender document is to solicit proposals from qualified contractor who fulfill the requirements highlighted in the technical requirements. The information contained in this document is subject to change. Revisions will be issued to the legitimate copy holders only.

#### **2. Eligible Bidders**

- a. The company must be legally registered and operational in Rwanda.
- b. A Bidder that is under a declaration of ineligibility by the RPPA (blacklisted), at the date of contract award, shall be disqualified. The list of such debarred firms will be checked at RPPA website address, [www.rppa.gov.rw](http://www.rppa.gov.rw).

#### **3. Qualifications of the Bidder**

- a. All bidders shall include the following information and documents within their bids:
  - i. Company profile with full address of company indicating Country, Province, District, Sector, Cell, Village, Street number, E-mail, Post office box and Bank account details.
  - ii. Certified copy of trade license
  - iii. A valid copy of the tax clearance certificate

- iv. Original or certified copy of the Rwanda Social Security Board certificate
- v. References of 5 similar tenders accomplished with other relevant corporate institutions (good completion certificates) followed by pictures of the work done
- vi. RPPA categorization F

#### **4. Cost of Bidding**

The bidder shall bear all costs associated with the preparation and submission of his Bid, and the BSC PLC shall in no case be responsible or liable for those costs.

#### **5. Site Visit**

The Bidder, at the Bidder's own responsibility and risk, is obliged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

### **B. Bidding Documents**

#### **6. Clarification of Bidding Documents**

A prospective bidder requiring any clarification of the bidding documents may notify BSC PLC in writing at P.O. Box 7229, Kigali-Rwanda, or E-mail: [procurement@bsc.rw](mailto:procurement@bsc.rw). BSC PLC shall respond to any request for clarification received earlier than three (3) days prior to the deadline for submission of bids. Copies of the BSC PLC's response shall be forwarded to all bidders, including a description of the inquiry, but without identifying its source.

#### **7. Amendment of Bidding Documents**

- a. Before the deadline for submission of bids, BSC PLC may modify the Bidding Documents by issuing addenda.
- b. Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the BSC PLC.
- c. BSC PLC may extend the deadline for submission of tenders to give Bidders sufficient time to take modifications into account when preparing their tenders.

## C. Preparation of Bids

### 8. Language of Bid

All documents relating to the bid shall be in English language.

### 9. Documents Composing of the Bid

The Bid submitted by the Bidder shall comprise of the following additional documents:

- (a) The Bid;
- (b) Proposed Architectural designs;
- (c) Priced Bill of Quantities;
- (d) Any other materials required to be completed and submitted by bidders;
- (e) All documents mentioned in article 3.

### 10. Bid Prices

- a. The Contract shall be for the whole civil works based on the unit priced for Bills of Quantities submitted by the Bidder.
- b. The Bidder shall fill in rates and prices for all items of the Works described in the Bills of Quantities.
- c. All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, prior to the deadline for submission of bids, shall be included in the rates, prices, and total Bid price submitted by the Bidder.
- d. The prices quoted by the Bidder shall not be subject to changes during the performance of the Contract, except when the contract exceeds a period of **one year**.

### 11. Currencies of the Bid and Payment

The unit rates and prices shall be quoted by the Bidder entirely in Rwandan Francs.

### 12. Bid Validity

- a. Bids shall remain valid for the period **120 days**.

- b. In exceptional circumstances, the BSC PLC may request that the bidders extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing. If a Bid Security is requested, it shall be extended up to 30 days after the deadline of the extended bid validity period. A Bidder may refuse the request without forfeiting the Bid Security. A Bidder agreeing to the request shall not be required or permitted to modify his/her Bid.

### **13. Bid Security N/A**

- a. The Bidder shall provide a bid security issued by a reputable bank or a registered insurance company. N/A
- b. The Bid Security shall:
  - (a) Be in the form of either, a bank guarantee from a banking institution, or surety issued by an financial institution, as the bidder would wish;
  - (b) Be substantially in accordance with one of the forms of Bid Security or other form approved by the BSC PLC prior to bid submission;
  - (c) Be payable promptly upon written demand by the BSC PLC in case the conditions listed in the tender document are invoked;
  - (d) Be submitted in its original form; copies shall not be accepted;
  - (e) Remain valid for a period of 30 days beyond the validity period of the bids.
- c. If a Bid Security is required, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the BSC PLC as non-responsive.
- d. The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the performance security.
- e. The Bid Security may be forfeited :
  - (a) if a Bidder withdraws its bid during the period of bid validity or
  - (b) If the Bidder does not accept the correction of its Bid Price.
  - (c) if the successful Bidder fails within the specified time to:
    - (i) Sign the Contract; or (ii) furnish the required performance security.

## 14. Format and Signing of Bid

- a. The Bidder shall prepare one original document composing the Bid, bound with the volume containing the Form of Bid, and clearly marked “**ORIGINAL.**” In addition, the Bidder shall submit three copies of the Bid and clearly marked as “**COPIES.**” In the event of discrepancy between them, the original shall prevail.
- b. The original and all copies of the Bid shall be typed in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder. All pages of the Bid where entries or amendments have been made shall be initialed by the person or persons signing the Bid.
- c. The Bid shall contain no alterations or additions, except those to comply with instructions issued by the BSC PLC, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

### D. Submission of Bids

## 15. Submission, Sealing and Marking of Bids

- a. Bidders will only submit their bids by hand. The Bidder shall seal the original and all copies of the Bid in two inner envelopes and one outer envelope, duly marking the inner envelopes as “**ORIGINAL**” and “**COPIES.**”
- b. The inner and outer envelopes shall be marked with the reference number of tender notice with the following mentions:

**To: Chairperson of the Tender Committee BSC PLC**

**Tender title: “PROVISION OF CIVIL WORKS: BSC OFFICE MODIFICATION”.**

**Broadband Systems Corporation PLC (BSC PLC),**

Remera, Airport Road (KN5 Rd), Opposite Chez Iando

P O Box 7229, Kigali, Rwanda

E-mail: [procurement@bsc.rw](mailto:procurement@bsc.rw)

- c. In addition to the identification required, the inner envelopes shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared late.

- d. If the outer envelope is not sealed and marked as above, BSC PLC shall assume no responsibility for the misplacement or premature opening of the Bid.

## **16. Deadline for Submission of Bids**

- 16.1. Bids shall be delivered to BSC PLC's Procurement office at Remera Airport Road (KN5 Rd), Opposite Chez lando not later than the date mentioned in the tender notice.
- 16.2 BSC PLC may extend the deadline for submission of bids by issuing an amendment, in which case all rights and obligations of the BSC PLC and the bidders previously subject to the original deadline shall then be subject to the new deadline.

## **17. Late Bids**

Any Bid received by the BSC PLC after the deadline mentioned in the tender notice shall be returned unopened to the Bidder.

## **18. Withdrawal, Substitution and Modification of Bids**

- a. Bidders may withdraw, substitute or modify their Bids by giving notice in writing before the deadline of submission.
- b. Each Bidder's withdrawal, substitution or modification notice shall be prepared, sealed, marked, and delivered with the outer and inner envelopes additionally marked or "**WITHDRAWAL,**" **SUBSTITUTION,**" OR "**MODIFICATION**" as appropriate.
- c. No Bid may be substituted or modified after the deadline for submission of Bids.
- d. Withdrawal of a Bid between the deadline for submission of bids and the expiration of the period of Bid validity of **90 days**.
- e. Bidders may only offer discounts to, or otherwise modify the prices of their bids, by submitting Bid modifications in accordance with this clause or included in the initial Bid.

### **E. Bid Opening and Evaluation**

## **19. Bid Opening**

- a. The BSC PLC shall open the bids, including modifications made, in the presence of the bidders' representatives who choose to attend at the time and in the place of opening the bids. Electronic bidding is not permitted.
- b. Envelopes marked "**WITHDRAWAL**" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted shall not be opened.
- c. The bidders' names, the Bid prices, the total amount of each Bid, any discounts, Bid withdrawals, substitutions, or modifications, the presence or absence of Bid Security, if required, and such other details as the BSC PLC may consider appropriate, shall be announced by the BSC PLC at the opening. No bid shall be rejected during bids opening except for the late bids. Substitution Bids and modifications submitted that are not opened and read out at bid opening shall not be considered for further evaluation regardless of the circumstances. Late, withdrawn and substituted bids shall be returned un-opened to bidders.
- d. The BSC PLC shall prepare Minutes of the Bid Opening, including the information disclosed, to those present.

## **20. Confidentiality**

No Information concerning checking, explanation, opinion and comparison of tenders and recommendations concerning the contract award, will be disclosed to Bidders or any other person not officially involved in the process until the name of the successful Bidders has been announced. Any attempt by a Bidder to contact any member of the Evaluation committee directly or indirectly during the evaluation period will be automatically disqualified upon presenting valid facts.

## **21. Clarification of Bids**

To assist in the examination, evaluation, and comparison of Bids, the BSC PLC may, at the BSC PLC's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to

confirm the correction of arithmetic errors discovered by the BSC PLC in the evaluation of the Bids.

## **22. Examination of Bids and Determination of Responsiveness**

22.1 Prior to the detailed evaluation of Bids, the evaluation committee shall determine whether each Bid (a) meets the eligibility criteria defined in this bidding document; (b) has been properly signed; (c) is accompanied by the Security, if required; and (d) is substantially responsive to the requirements of the Bidding Documents.

22.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding Documents, the BSC PLC's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

22.3 If a Bid is not substantially responsive, it shall be rejected by the evaluation committee, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

## **23. Correction of Errors**

23.1 Bids determined to be substantially responsive shall be checked by the evaluation committee for any arithmetic errors. Errors shall be corrected by the evaluation committee as follows:

- (a) Where there is a discrepancy between the amounts in figures and in words, the amount in words shall govern; and
- (b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted shall govern, unless in the opinion of the BSC PLC there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted shall govern, and the unit rate shall be corrected.

23.2 The amount stated in the Bid shall be adjusted by the evaluation committee in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid shall be rejected, and the Bid Security may be forfeited.

#### **24. Currency for Bid Evaluation**

Bids shall be evaluated as quoted in the Rwandan Franc currency.

#### **25. Evaluation and Comparison of Bids**

25.1 The evaluation committee shall evaluate and compare only the bids determined to be substantially responsive.

25.2 In evaluating the bids, the evaluation committee shall determine for each Bid the evaluated Bid price by adjusting the Bid price as follows:

- (a) Making any correction for errors;
- (b) Excluding provisional sums and the provision, if any, for contingencies in the Bill of Quantities, but including Day work, where priced competitively;
- (c) Making an appropriate adjustment for any other acceptable variations, deviations and
- (d) Making appropriate adjustments to reflect discounts or other price modifications offered.

25.3 The BSC PLC reserves the right to accept or reject any variation, or deviation. Variations, and deviations offers and other factors which are in excess of the requirements of the Bidding Documents or otherwise result in unsolicited benefits for BSC PLC shall not be taken into account in Bid evaluation.

25.4 The estimated effect of any price adjustment conditions during the period of implementation of the Contract shall not be taken into account in Bid evaluation.

### **F. Award of Contract**

#### **26. Award Criteria**

BSC PLC shall award the Contract to the Bidder whose Bid has been selected as being substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid price, provided that such Bidder has been determined to be (a) eligible and (b) qualified.

### **27. BSC PLC's Right to accept any Bid and to reject any or all Bids**

BSC PLC reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, in compliance with the relevant provisions of the Procurement manual and its application texts.

### **28. Notification of Award and Signing of Agreement**

- 28.1 Before the expiry of the bid validity period, BSC PLC shall simultaneously notify the successful and the unsuccessful bidders of the provisional outcome of the bids evaluation. The notification shall specify that the major elements of the procurement process would be made available to the bidders upon request and that they have seven (3) days in which to lodge a protest, if any, before final negotiations are done and a contract is signed with the successful bidder. When there is no protest from other bidders, BSC PLC shall notify the successful bidder with the final notification and after shall sign the procurement contract.
- 28.2 After the final negotiation, negotiation minutes shall be duly signed by both parties and integrated as part of the contract document.
- 28.3 The notification letter to the successful bidder shall state the sum that BSC PLC shall pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").
- 28.4 Only the signed contract will constitute an official commitment on the part of BSC PLC, and activities may not begin until the contract has been signed by the contracting authority and the successful bidder.

### **29. Performance Security**

- 29.1 Within 7 days after receipt of the notification Letter, the successful Bidder shall deliver to BSC PLC a Performance Security equivalent to 10% of the total value of the contract before signing the contract.
- 29.2 If the Performance Security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued at the Bidder's option, by a bank located in the Republic of Rwanda.
- 29.3 If the Performance Security is to be provided by the successful Bidder in the form of a Bond, it shall be issued by a surety who the Bidder has determined to be acceptable to BSC PLC.
- 29.4 Failure of the successful Bidder to comply with the requirements of article 29.1 shall constitute sufficient grounds for cancellation of the tender award and forfeiture of the Bid Security. Upon the successful Bidder's, signing of the contract and furnishing the Performance Security, BSC PLC shall discharge the Bid Securities of the unsuccessful bidders.

### **30. Advance Payment and Security**

BSC PLC shall provide an Advance Payment on the Contract Price, subject to a maximum amount stated in the contract. The Advance Payment shall be guaranteed by a bank guarantee equivalent to the advance amount given to the bidder.

## **3. TECHNICAL REQUIREMENTS**

### **I. Firm Experience**

The Bidder must demonstrate a minimum of 5 years of experience in Civil works Construction

The Bidder must provide a list and detailed information on a minimum number of 7 similar successful projects supported by previous contracts and good completion certificates. Each project should be above 100,000,000Rwf.

### **II. Key Personnel**

The key personnel to be presented by the bidder for the execution of this tender are:

1. **Site Engineer:** A certified Civil Engineer **A0** level with 7 years of experience and having participated in at least 5 projects related to construction of buildings justified by service certificates (Attestation de service rendu) issued by the employer.
2. **Site Foreman:** A2 technician in public works or construction with 5 years of experience and having participated in at least 5 projects related to construction of buildings justified by service certificates (Attestation de service rendu) issued by the employer.
3. **Electrical Technician:** having A2 in electricity with 7 years of experience participated in 3 projects related to construction of buildings justified by service certificates (Attestation de service rendu) issued by the employer.
4. **Interior Designer:** An experienced interior designer with 5 years of experience and having participated in at least 5 projects related to design and justified by service certificates (Attestation de service rendu) issued by the contractor and samples of work previously done.

**NB: Key personnel must have well-detailed CVs, signed and updated by the holder with notified degree, a certificate of availability, copy of the identity card or passport of the staff, a valid certificate of being in the engineers' association in Rwanda for the Head of mission and Site engineer still valid and an equivalence for those with degree issued outside of Rwanda.**

**The successful bidder shall be responsible for applying and acquiring a construction permit for the work.**

## **SECTION III Technical specifications**

### **1. General**

#### **1.1. General considerations**

On the technical viewpoint and before any execution,

The Contractor in charge of the implementation of the works in the present project, should take knowledge of all the specific parts of the work specified in the whole of document that form in all a homogeneous and complete work. This implies that all works and supplies must be completed in a perfect manner.

In a way to avoid other contentions the contractor shall inform the engineer, in a separate note to his/her Bid, all mistakes, omission or contradiction sighted in the document during studies. In case of omissions in the description of certain particular works, the contractor shall in all cases execute all necessary works to the perfect completion.

### **1.2. The unit prices of the Contractor**

Prices for the replacement of damaged materials and/or equipment must always include the dismantling and the evacuation of materials and /or the equipment including the repair of the works damaged during the dismantling of work and other surroundings.

The descriptive bills of quantities in the technical clauses do not alone make up contractual statements. The contractor shall not signal out any alterations in the present document, be it in the different sections or plans or other documents relating to this tender document.

The contractor should be conscious and verify all quantities during the time of Bid preparation. If he finds out that some quantities indicated in the descriptive and quantitative clauses are improper or missing the contractor shall correct them in a separate note joined to his/her Bid and shall not in any way ask for any price modifications.

### **1.3. During works execution**

The contractor shall signal out all expenses, materials and other equipments or plans and diagrams that he judges necessary for the perfect execution of the works. These documents shall be submitted to the Engineer for approval who replies in 8 days following the receipt of the requests.

All details of supplies leading to the performance of principle plans must be submitted inevitably for approval by the engineer before the beginning of works execution, he shall always make sure that he gives his reactions in 8 days' time.

The contractor shall not ask for any prolongation or compensation in terms of time for any modification he will have been asked to do. The contractor must always present to the client for testing and approval any material or equipment before they are put to use.

### **1.3.1. Security**

The Contractor must always know the working environment and should adhere to the existing laws, should always adhere to the conditions of the security and police. The contractor shall always be liable to any losses caused by fire and shall always be responsible for the entire security of the site.

### **1.3.2. Water and electricity**

The contractor shall be responsible for all the water and electricity consumption at the site.

### **1.3.3. Access to the Site**

The utilization of the existing routes by trucks and by other equipment should not cause any nuisances to the environment (dusts, noises, ruts etc.). All deterioration of surface caused to the adjacent works shall be repaired to the expense of the contractor.

### **1.3.4. Implantation of works**

All the Works and parts of works implantations will be done by the contractor and at his expenses. Before commencement of works execution or implantation, the contractor shall begin by a sub – implantation in order to verify the leveling of the land and inform the client of any possible inaccuracy. The representative of the client should first verify the implantation before works execution commences. A statement to the implantation shall be pronounced and given to the contractor. Before all beginning of works, the enterprise must precise in the presence of the engineer, the pegging defining the time of works on the basis of data provided by the engineer: bench mark, origin of each intervention zone. He will be responsible for all accidents and should always endeavor to prevent them.

### **1.3.5. Utilization of materials**

Materials to be used should be in conformity with the norms and laws in Rwanda and should conform to the present tender document. The conditions stipulated here shall always be considered as the required minimum required for the implementation of the works.

### **1.3.6. Environment Protection**

The contractor must respect the norms and prescriptions in relation to environment protection. On this note he is supposed to remove all garbage and unused materials out of the site and deposited far away in conformity with environmental regimes.

### **1.3.7. Consistence of unit prices**

The contractor should be well versed with the conditions that would influence the execution of the works especially:

- The nature and the quality of soils and grounds,
- The conditions of transport and access to the site,
- The water and rain regimes in the region,
- The conditions of accessing water to the site,
- Any other particular conditions relative to the present site,

He should not therefore, raise any claims relative to the difficulty or other eventualities except in case of major un expectations, fully recognized by all parties. He should therefore calculate all the unit prices on the basis of the complete execution of the works and in accordance with the techniques of high labor intensity.

The unit prices of the present tender covers all the contractors expenses, without any exceptions, in order to achieve the total completion of the foreseen works, this includes , the profit as well as other rights, taxes, general expenses, and all expenses done in Rwanda as a result of this work , mainly ,:

- All expenses (wages, social security funds, holidays, lodgings, transport etc), of supplies, renting, depreciation of equipment and upkeep of the material,
- All expenses for the edible matters bought in Rwanda or abroad, materials for site implantation and quarries
- All insurances of any nature, access to quarries, repair of roads, laboratory expenses, storage of materials.

Prices also include expenses of site debarking and any other cost that is not to be incurred by the client.

## **2. Specifications of materials**

### **2.1. General**

All materials must be the best quality and free from any shortcoming that might compromise the solidity and durability of the work for all its life time.

The contractor at the request of the client should justify their origin either by presentation of the invoice or any other document agreeable upon by both parties. The contractor must present to the client the results to all tests or exams that were requested.

All materials and tests requested will be done at the contractor's expenses and delivered to their designated places. If the quantity of materials refused exceeds 10% of the materials submitted for testing, then all the materials submitted will be disqualified. The contractor, on a permanent basis, should facilitate for easy access, the client's personnel to all quarries, factories, laboratories, workshops in order to follow up and monitor closely the execution of the tender document in whatever concerns the origin and quality of the materials.

The time allowed for tests is 10 days from the time of sample submission, but if this time is passed due to the clients request the time will be prolonged to an equal number of days to the delay. The engineer can allow the use of the similar products to those that are prescribed, if he judges that these products' value is of equal value in quality and efficiency. In case of doubt, he will proceed for tests.

## **2.2. Prescription of materials**

### **2.2.1. Stone size and gravel**

Stones and gravel shall always be collected from the best places identified. They will have qualities of healthy sandstone. Their density must be near to 2500 kg/m<sup>3</sup> and their resistance equal or greater than 30 N/mm<sup>2</sup>.

Before beginning all stones must be curved to the required shape with uniform surfaces

The quarry stones will have, as much as possible, a width doubles their height and a length doubles the width. The minimal length is 20 cm, the other measurements varying according to the relative drawing.

### **2.2.2. Gravels and sands.**

Gravels and sands will be extracted from the best quarries. These gravels and sands can also be extracted from bottom of the rivers, but should be well washed and purified to remove silt before their utilization. The Prescriptions fix minimal qualities, for their granular metric spindles and their utilizations. Their minimal resistance is 30 N/mm<sup>2</sup>s.

### **2.2.3. Bricks.**

The bricks should be of the size of 20cm x 10 cm x 10 cm and of high quality. The bricks to be used will be confirmed after the following two tests:

**Crushing test:** the brick should remain intact after 24 hours of immersion in water

**Hardness test:** the brick should remain intact after falling on a hard surface from 2m

### **2.2.4. Forged laminated Iron and steel, griddles**

Iron and steel bars to be used shall be approved by the engineer; they should be strong, resistant to cold weather and with the following characteristics:

- Apparent elasticity limit: 4200kg/cm<sup>2</sup> (420mpa) (> 480 N/mm<sup>2</sup>)
- Tensile stress: 5000kg/cm<sup>2</sup> (500mpa) (240 N/mm<sup>2</sup>)
- Compressive stress: 14% (< 10%)

Steels for reinforced concrete must be able to bend in cold weather without changing the diameter of the rod.

The griddle hovers must be united, shiny, of uniform thickness, without cracks nor rips. Clippings must detach themselves without breaking.

The wavy griddle will be in sheets whose measurements are those on market. The quality remains the one marketed locally by the TOLIRWA factory or similar ones.

The works for putting on protective layers like galvanization, aluminum layers are made exclusively in the factory and according to the manufacturer's specifications.

### 2.2.5. Prescription of materials for concrete

#### a) Sand 0-4 mm:

The sand for concrete must come from natural layers or a crushing station. It must be free from all foreign bodies like organic matters, dusts, oxides, pyrites or silt or adhesive clays. It must not contain grains bigger than 5 mm. The equivalent of sand must be greater than 75%. The engineer can, if necessary, prescribe the washing of the sands. The granulometric test should be continuous with the following picture:

Sieve opening in mm (square mesh)	Percentage of weight passing through the sieve
5	100
2	50
0.5	20
0.08	5

#### b) Gravel 5-25 mm

The intended gravels to the concrete must be free from foreign bodies like organic matters, dusts and adhesive clays. They must come of layers whose sites are proposed by the contractor but must be approved by the engineer. Gravels should present a regular shape and should neither be long nor flat. Their toughness and origin should be from proven tests with the following granulometry picture:

Sieve opening in mm (square mesh)	Percentage of weight passing through the sieve
25	100
20	75
15	50
10	15

**c) The Cement**

The cement must come from factories accepted by the client. The contractor will provide a certificate showing the origin of the cement. The recommended cement is the Portland type Cement class P 32.5. In case of doubt on the quality of the cement, the client shall request for tests at the expense of the contractor.

The engineer reserves the right to exercise his control in factory on the manufacture, conservation and the expedition of the cements that will be provided for works. The cement will be delivered in intact sacks and stored in water tight stores. The delivery of cement in a jumble as well as the utilization of set cement is forbidden.

In the case that there would be cements of several qualities or several origins, the different supplies should be stored separately. Sacks will rest on the stilted boards and will be stacked in approximate blocks of 20 tons. A rotation of stocks must be respected. All cement presenting traces of humidity or hold at the time of work will be rejected.

**d) Water**

The Water for concrete mixing must be clean, clear and odorless. It must not contain matters in abeyance beyond 2 grammes of liter. It must not provoke, on the cement, any chemical reaction that would prevent it from holding.

**e) Reinforcement steel bars**

The steels chosen by the contractor for the execution of the market will be firstly approved by the representative of client. They should have a diameter of not less than 40 mm in calculations; the characteristics of the reinforcements with high binding are as follows:

- Apparent elasticity limit: 4200kg/cm<sup>2</sup> (420mpa)
- Tensile stress: 5000kg/cm<sup>2</sup> (500mpa)
- Compressive stress: 14%

The properties of round and smooth reinforcement bars are as follows:

- Normal elastic limit: 2200kg/cm<sup>2</sup> (220 mpa)
- Tensile stress: 3400kg/cm<sup>2</sup> (340mpa)
- Compressive stress: 25%

The reinforcement iron bars for concrete are the high tensile and high adherence type with a diameter of not less than 40mm, with the following characteristics:

- Elastic limit : 400 N/mm<sup>2</sup>
- Tensile stress : 480 N/mm<sup>2</sup>

They should always be free from any spot of oil, painting or soil particles; they will be ridded entirely of the adhesive rust. They will be stowed by ligatures of appropriate solidity and in sufficient number so that they can displace themselves during the setting up of the concrete.

### **f) Making and setting up of concretes**

All concretes are made mechanically, except if the quantity of the concrete to be made on the site is lower than 1 m<sup>3</sup>. All precautions should be taken such that the temperature at the time of concrete setting is not greater than 40 ° C. The tightening should be tidy and without provoking a beginning of segregation. The casting of concrete should be completed in an hour following the mixing and before it begins to set. Concretes should be maintained in good condition of humidity for at least 15 days and should be protect from direct sunshine.

### **g) Casing frames and their removal**

All reinforced concrete will be made in casings of wooden frames. Framings will be strong enough to resist the weight and to the thrust of the concrete works. The vertical part of the frames can be removed 48 hours after setting but the horizontal ones should never be removed in less than 15 days. The contractor is not allowed to remove the frames before the guarantee of the client's representative.

### **h) Composition of concretes**

<b>Type of concrete</b>	<b>Dosage and application</b>	<b>Composition of granulates (in litres)</b>	<b>Resistance to the compression in 28 days</b>
<b>Concrete B 150</b>	Reinforced concrete to be spread under the foundations and the	Cement: 200kg Sand : 400litres Gravel : 800 litres	10 N/mm <sup>2</sup>

	base of excavation dose of 150 kg/m <sup>3</sup>		
<b>Concrete B 250</b>	Reinforced concrete for the slab at a dose of 250 kg/m <sup>3</sup>	Cement : 250kg Sand : 400litres Gravel : 800 litres	16 N/mm <sup>2</sup>
<b>Concrete B 300</b>	Slightly reinforced concrete for pit covers dose of 300 kg/m <sup>3</sup>	Cement: 300kg Fine Sand : 400litres Coarse Gravel : 800litres, Gros sable : 800	16 N/mm <sup>2</sup>
<b>Concrete B 350</b>	Reinforced concrete for columns slabs, and lintel. Dose at 350 kg/m <sup>3</sup>	Cement : 350kg Sand: 400litres Gravel : 800littres	16 N/mm <sup>2</sup>

### 2.2.6 Prescriptions of materials for mortar

#### a) Sand 0, 03–3 mm:

The sand for mortar should come from natural layers or crushing stations. It should be free from all foreign bodies like; organic matter, dusts, silt or adhesive clays. Spindle granulometry is continuous, sieving through meshes between 0.03 mm and 3 mm

#### b) Cement

The cement must come from factories accepted by the client. The contractor will provide a certificate showing the origin of the cement. The recommended cement is the Portland type Cement class P 325, CIMERWA kind or similar. In case of doubt on the quality of the cement, the client shall request for tests at the expense of the contractor.

The engineer reserves the right to exercise his control in factory on the manufacture, conservation and the expedition of the cements that will be provided for works. The cement will be delivered in intact sacks and stored in water tight stores. The delivery of cement in a jumble as well as the utilization of set cement is forbidden.

In the case that there would be cements of several qualities or several origins, the different supplies should be stored separately. Sacks will rest on the stilted boards and will be stacked in approximate blocks of 20 tons. A rotation of stocks must be respected. All cement presenting traces of humidity or hold at the time of work will be rejected.

**c) Water**

The Water for concrete mixing must be clean, clear and odorless. It must not contain matters in abeyance beyond 2 grammes of liter. It must not provoke, on the cement, any chemical reaction that would prevent it from holding.

**d) Composition and preparations of mortors :**

<b>Destination</b>	<b>Cement Dosing (kg/m<sup>3</sup>)</b>	<b>Sand (litres)</b>
Masonry of Cement bloc	250	1.200
Masonry of quarry stones ( gravel)	300	1.200
Block masonry	300	1.200
Rough casting of walls (Plastering)	350	1.200
Joining works	500	1.200

It is important to protect the mixed mortar from wind, rain and the sun. The prepared mortar must be put to use within 45 minutes of mixing. The mortar that has set should not be used.

**2.2.7. Prescriptions of brick masonry**

**a) Execution of masonries:**

All finished walls must be flat. Foundations must be horizontal. Joints have a uniform thickness of 1 cm. The vertical joints alternate themselves. Brick are joined by a back fill of M 250 mortar.

**b) The joints**

The thickness of joints won't exceed 30 mm. The masonry should be executed according to rules of the art with the very full joints that are regulars; care

should be taken not to make the bricks dirty with the mortar. The external walls will be re-pointed with smooth cement mortar.

### **2.2.8. Description of quarry stone masonries**

#### **a) Stone Masonry**

The stones to be used for masonry are those without visible fissures. The masonry will be executed according to rules of the art and the prescribed mortar is the M 300. Bigger sized stones will be put in the horizontal sense. At least not more than a third of the stones should be put to protrude through the thickness of the wall.

The big volumes of mortar should be avoided; the spaces between quarry stones should not exceed 6 cm, and should be filled with mortar. All direct contact between quarry stone should be avoided.

Before the temporary receipt, all the masonry work will be cleaned brushed and washed with water. Joints and the masonry work will be revisited in order to be made clean in appearance.

#### **b) Dry Masonry**

The dry stone masonries are identical to masonries in stones, but their joints are not joined by mortar.

### **2.2.9. HDPE Pipes and parts**

Pipes and couplings will be made of HDPE (High Density Polyethylene Pipes). They comply with HDPE pipe and fittings Standard Specification ASTM D 3350 and EN 12201, BS 12201.

They are defined by their external nominal diameter (ED) in millimetres and by their maximal pressure in service (PN) expressed in bars: PN 10 and 16.

They are made for adhesive bonding for interlocking diameters inferior to 63 mm (ED < 63) and for elastomeric seals coupling for interlocking diameters superior or equal to 63 mm (ED >= 63).

Seals and dope necessary for the assembly are part of the supplies. They will be delivered according the quantities foreseen by the provider (evidence) and increased by 20%.

The measurement unit is the meter of pipe, measured in effective length (without the jointing part).

### ***HDPE pipes for adhesive jointing***

The pipes comply with the quality requirements of the European standard EN 12201. They are of dark with coloured lines.

All the pipes with external diameter inferior to 63 mm are for male and female joints (adhesive jointing). They are part of the series 10 (PN10) or 6,3 (PN 16).

Their jointing is made by adhesive bonding.

### ***HDPE pipes to be jointed***

Pipes with an external diameter superior or equal to 63 mm are push-fit fittings. Joints are made with lip seals for underground works. Resistance to pressure of pipes and joints is identical.

All the products must be checked by the producer on a regular basis according to the quality requirements of ISO 1167-1:2006.

### ***HDPE parts for adhesive bonding***

For diameters inferior to ED 63, coupling parts are of HDPE for adhesive bonding. They comply with standard ISO 1167-1:2006, ASTM F1962 and AWWA M55.

## **2.2.10. PVC Pipes**

Materials to be used of polyvinyl chloride (PVC) shall have the following characteristics:

- **Lightness:** they are light, easy to manipulate and portable in big quantities.
- **Flexibility:** flexibility permits them to adjust to curviness of trenches on the hill sides, in shallow bottoms and in other curves as according to the tracing.
- **Low prix:** they are the cheapest of all the PVC types.
- **Resistance to waters corrosiveness:** they are not attacked by the chemical agents and offer the best known resistance known.
- **Locally Available:** they are produced locally, consistently to the international norms. The recommended types are the SONATUBES Product

- **Resistance to shocks, to sunburns and chlorine:** Since they are destined to be used underground, they are protected against all shocks.

### **3. Particular Technical Specifications.**

#### **3.1. Site Installation**

##### **3.1.1 Access**

There is an existing access path and roads to the site.

##### **3.1.2 Local office**

A local office shall be established by the contractor and shall be placed in a place agreed upon by the client. The shape and materials in the office shall be approved by the engineer, this office shall provide good working environment as all documents relating to the present tender and reports on the progress of work on the site shall be consulted from here by the client, besides this site meetings shall be held here.

##### **3.1.3 Shelter for workers, Toilets and site shed**

The contractor shall construct an appropriate shelter that can be closed and locked; it shall be made of materials accepted by the engineer. This shelter shall not be used as a store of materials it shall be used by the workers as a resting shelter and must be supplied with temporary sanitary equipments. All shall be done to keep to the local hygienic standards.

Areas for storage of material shall be well prepared in order to avoid their contact with unwanted materials.

##### **3.1.4 Various connections**

###### **3.1.4.1 Water and electricity**

The contractor shall endeavor to get connected to the main water and electricity supply, all the costs for getting connected shall be at his expense. In case there is no public water distribution available he will have to get a permanent storage of water at the site.

#### **3.1.4.2 Telephone and radio**

The contractor shall ensure to have a fixed telephone or mobile at the site in order to have permanent link between the sites, headquarter and the client.

#### **3.1.5 Security and site protection**

The contractor is responsible for the site security. He must take all necessary measures to avoid accidents on the site and must respect all labor laws in relation to the protection of the workers. He must protect the site against theft or damages to installations or materials. He will be responsible for all this until temporary receipt of works

#### **3.1.6 Water diversion**

The contractor shall take necessary measures to insure the out- flow of rain water and other exhaust.

#### **3.1.7 Temporary enclosure**

The contractor shall insure a temporary enclosure of the site up to the end of the works, this will be demolished and the surrounding restored.

### **3.2. Felling and Extraction of Trees**

The felling and uprooting of trees concerns all trees being in the surrounding of works. This work applies to trees with a circumference of 1 to 1.50 m above soil. Remnants of deforestation will be evacuated out of the site and taken to a place accepted by the engineer. Holes created by these works will be filled and compacted. In any case the engineer reserves the right to show which trees should or should not be removed.

### **3.3. Bush Clearing**

#### **3.3.1. Removal of Vegetation**

Only bushes and vegetation in the surrounding of works shall be removed. The contractor arranges their removal and evacuates them out of the site or destroys them at his expense.

#### **3.3.2. Protection of vegetation**

The contractor must protect efficiently, by means accepted by the District, trees and bushes planted along the limits of the site, as well as those of which the client asks for their conservation. He is prohibited from either cutting or pruning trees without the agreement of the District. Penalties, in case of no observation by the contractor of the instructions of the client, are envisaged and shall follow regulations in Rwanda in matters of environmental protection. Besides, trees or plants removed or damaged without the consent of the client shall be replaced by the contractor at his expense.

### **3.4. Supply and Leveling of Soil on the Site**

#### **3.4.1. Supply of arable soil**

The mode of removal is left at the initiative of the contractor provided he respects the clauses in the tender document and that their removal shall not damage the existing infrastructures.

#### **3.4.2. Leveling of arable soil**

The arable soil is leveled to a thickness of 20 cm especially for the soil in which some plantations will be done. The contractor shall ensure that no rubbish or garbage is mixed in this soil.

### **3.5. Transport and Evacuation of the Soil**

The means of transport to be utilized on site for the evacuation and transport of the excess soil should not provoke or cause any damage to the excavations in progress, or to the existing infrastructures and other facilities. The excess soil becomes a property of the contractor and shall be deposited on a site of his choice provided it is in accordance with environmental regulations

### **3.6. Excavations**

#### **3.6.1 Excavation of the top soil**

Terracing and excavation of the top soil shall conform to the following:

- the removal of the soil and its evacuation
- Works and supplies necessary to the good execution of works and the security of the site.
- Cleaning, sorting and temporary stocking of some materials whose reuse is envisaged.

### **3.6.2. Excavation for the embankments**

Excavations for embankments should conform to:

- The weeding and garbage removal on the land to embank, as well as the evacuation of these products outside of the site.
- The filling of the pits with the soil, in case it is not enough soil from another identified site is brought provided it got prior approval by the engineer.
- The compaction of embankments

Before the constitution of embankments, the contractor must clean the area and must get it free of roots, stumps etc.

Embankments will be executed by successive layers of 10 to 15 cm to the maximum and according to the suitable compaction material. Soil will be added progressively and leveled horizontally watered and compacted.

The prescribed compactness must be at least equal to 90% of the optimum modified Proctor.

Materials used in embankments, must be free from any organic matters and other impurities.

## **3.7. Common Prescriptions to all Excavations**

### **3.7.1. Measurements of excavations**

Excavations for foundations, pipeline, drainage, ditches, etc., are opened according to measurements that permit works verification without difficulties. The calculation of quantities in cubes shall be made in accordance to the planned measurements for the excavations.

### **3.7.2. Partitions of excavations**

Partitions of excavations will be vertical; however, if crumbling is feared during works, they will be sloped.

### **3.7.3. Depth of excavations**

The depths of excavations are leveled according to the plan or the horizontal successive plans, in the steps form and consistently to plan.

#### **3.7.4. Access to excavations**

The appropriate accesses to the bottom of the excavation are established and maintained in good state, and should conform to security norms.

#### **3.7.5. Control measures**

The work is consistently traced from the plan by the contractor. With the completion of terracing works the engineer proceeds to the control of levels and the tracings for the excavations. However, these controls do not remove any responsibility of alignment, levels or corners from the contractor.

#### **3.8. Surface Concrete**

The surface concrete is constituted by the concrete B 200. It will be poured into the excavations, consistently to plan. It should have a thickness of 5cm and its width equal to the size of the excavations.

#### **3.9. Stone masonry**

##### **3.9.1. Destination of masonry**

Foundations shall be made of stone Masonries. This uses mortar of M 300. Different levels of the plan shall indicate where they should be used.

#### **3.10. Cement mortar tread on the foundation**

The stone foundation should be followed on its top by a tread of concrete covering its entire periphery. This layer serves as anti-termites; it should have a thickness of 5 cm and a width equal h to the thickness of the wall (40 cm.). Its composition is the concrete of sand B 250.

#### **3.11. Protection against the ascending humidity:**

An asphalt layer to prevent the rise of the humidity in the masonry is utilized; it covers the surface between the base of the stone masonry and the burnt bricks masonry.

### **3.13. Ventilation**

Ventilation will be achieved by using confined ventilators preferably made of burnt soils or other available materials having the engineer's approval before utilization.

### **3.14. Reinforced concrete lining.**

The reinforced concrete utilized is the B 350 type. The frames will be made up of at least 4 steel bars of Ø 12 mm in the longitudinal sense and Ø 6 mm for the horizontal all 15 cm. However plans will be describe the frames in details.

### **3.15. Frameworks**

#### **3.15.1. Timber frameworks.**

The timber frameworks shall be made in accordance to plans. All the timber to be utilized for these frames should be of eucalyptus or any other with the same mechanical characteristics. Frameworks will have the exact measurements indicated on plans; they should be assembled in a regular and a proper manner. They will immediately be raised tom the top as soon as their assembling is completed and protected against attacks by termites. The contractor shall ensure that they are well positioned. They must be strongly attached to the other elevated structures and the lintel, they are held to the wall by an intermediate timber of 20 cm x 20 cm. All structures (Frameworks, rampant, rafters etc ) must be tightened together to avoid their being flown up by wind estimated at 110 kg/m<sup>2</sup> and to be able to support a weight equal to 100 kg, representing a worker's weight intervening on top of them . The different elements of the framework will have the following minimal measurements:

- Major frames and rampant:10 cm x 15 cm
- Pannes : 05 cm x 15 cm
- Rafters : 05 cm x 07 cm

**NB** Rafters will be used if the covers are made of tiles, but if it is to be covered by iron sheets they will be directly fixed on the panes.

### **3.15.2. Metallic frameworks**

If metallic frame works are to be utilized, linear steel, bars prefabricated and will be brought to the site, they will be held together by welding and they should be welded according to plan and the dimensions in the plan. Always the contractor must seek approval of the engineer.

### **3.15.3. Welded Assemblies: constructive Arrangements to respect**

The height of welding cords won't be lower than 3mm.it should have even accumulation of soldering in one point.

In the case of welding tip to tip or conjugation of a welding boils to tip and a welding of angle, meetings of assemblies in shape of T are admitted, while meetings in shape of cross are to be avoided.

In the case of an assembly of piece angle forming tried, it is recommended to truncate the top of the secondary piece of the assembly

Except special justifications, recommended are:

- Not to bring back some perpendicular welding cords to the axial effort on the surface of a tense wing
- Not to weld dishes of superior thickness to 30mm

### **3.15.4. Drawings of execution**

For the execution of all metallic construction, the contractor will design all drawings including their details to define all elements of the construction precisely.

On the detailed drawings, the contractor will consign complete way:

- Arrangements of assemblies
- The adjusted ends
- Measurements of welding cords and their order of execution
- Beams.

In case the project id modified during the execution of works, drawings and calculations will be rectified so that the finished work is defined precisely by these pieces.

### **3.16. Roofing**

#### **3.16.1. Roofing is done by using galvanized iron sheets (28 BG).**

Roofing will be by pre-painted TOLIRWA iron sheets or similar ones with a thickness of: 0,40mm (BG 28)

The uniform weight distributed for a scope of 2, 75 ms between supports must be able to reach 95 kg/m<sup>2</sup> for 2 continuous bays, with a lower arrow to 1/200 of the reach.

The fixing of the iron sheets to the metallic frames will be by Ø 63mm hooks, with small discs in PVC hoods. The longitudinal recoveries will follow the manufacturer's prescriptions according to the product and the slope of the roofing. All measurements shall assure the strict tightness. They are notched according to the profile of ferries with tilted wings to 10%. Their development is 610 mms and the recovery of 260 mm wings. Joint foams to closed cells cut up according to the profile will assure the tightness.

#### **3.16.2. Gutters for the descending water**

Steel gutters will be used to collect water from the roof while the PVC pipes of 110mm will be installed for the descending water. They will end, in an elbow at the lower end towards the discharging end into a plastic tank.

### **3.17. Doors & Windows**

#### **3.17.1. Frames for doors & windows**

In general, doors and windows will be provided of first quality frame, they are to execute with the biggest care according to details of execution plans. All settings of doors are profiled HS.

#### **3.17.2. Metallic doors & windows**

Doors and all their accessories must be of the first quality (with a metallic frame for doors), and with metal external locks, all double coast painted with rustproof and another color approved by engineer, for toilets. The contractor shall ensure that all doors and windows are well set and that they close correctly. The upside of the doors has to be opened in a trapezoidal form in order to allow for enough ventilation.

A sample of the door will have to be approved by Clients' representative/ engineer before implanting.wor

### **3.18. Plastering**

#### **3.18.1. Cement mortar plaster**

Plastering is usually executed when all hard work on construction is finished and should be done immediately when the masonry work has dried up. It is important to understand the following preparations before plastering and coatings or painting

- removal of any dirt, grease, dusts, clay etc
- removal of protruding nails and other non-smooth foreign bodies
- cleaning and leveling flat all objects that are not flat

After this apply the single layer of coating made of cement mortar with a 350 kg/m<sup>3</sup> composition. The thickness of the plaster should be between 1.5 cm to 2 cm and the wall surface must be flat.

The following have to be plastered: all internal walls, all sinks, urinals, lintels

#### **First layer**

This layer, called layer of grappling, has 5 mm of thickness. Its mortar is prepared with the thick sand.

#### **Second layer**

A second layer or layer of smoothing has 5 cm of thickness. It is executed with a mortar prepared with the thin sand (lower diameter to 0.2 mms).

#### **3.18.2. Coating of local flat stones**

The surface of the layer must be compacted and leveled. It must receive a layer of sand of 5 cm of thickness. Stones are carved and are thinned until a regular thickness of 15 to 20 cm.

The organized coating of layers on burnt soil is identical to the coating in local flat stones, but it has a uniform thickness of 10 cm.

#### **3.18.4. Plinth of cement mortar**

Plinth of cement mortar have a thickness of 1, 2 cm, a height of

15 cm, with a dosage in cement 350 kg/m<sup>3</sup>s.

### **3.19. Flooring**

#### **3.19.1. Stone under floor with tread of thin cement**

The under floor made of stones should be of 10 to 20 cm in which concrete is put. The first layer should not exceed a thickness of 15 cm. This shape can be achieved while mixing stones of different sizes, gravel and sand. On top of the under floor with a thin tread of cement of about 5cm of thickness can be put and thin polyethylene of not less than 90 µm of thickness. This thin layer of polyethylene will play the role blocking the upcoming humidity.

The cement for this layer is made at a concentration of 250kg/m<sup>3</sup>. After this a smoother layer of nearly 1.5cm of thickness will be put. Some times on top of the mixture of the different sizes of the stones can be put burnt brick pieces that will facilitate the better binding of the cement.

Veranda floor shall be of 60 cm to 180 cm of width making a 40 cm channel and will put all around the building. Its upper layer will be smoothed with cement and protected at its sides by small bricks or stones according to availability.

### **3.20. Water and sanitary installations**

#### **3.20.1. Water connection and distribution**

The water connection to the external distribution point shall be at the expense of the contractor. The internal and external water pipes shall be UPVC and shall be laid at least 80 cm deep on top of a layer of sand with a thickness of 15 cm. The backfilling shall be done in layers; the first layer shall be that of sand with 15 cm of thickness followed by successive layers of compacted materials free of organic matter.

#### **3.20.2. Water Distribution**

The interior water pipes should be only galvanized tubes and should be laid technically. The state of laid and conned pipes should always be verified for any malfunctions before speeding up to finish the whole work.

#### **3.20.4. Water Drainage**

The water to be drained away from the building should be:

- Rain water from the roofs
- Water and other residues from toilets, washing places.

### **3.20.5. Drainage of used water.**

The drainage system for used water and rain waters should be separated and this is achieved by use of PVC pipes of different sizes in diameters (Ø63mm to Ø110mm).

### **3.20.6. Sanitary equipments to be fixed**

All anticipated devices shall be well fixed; these shall include pipes, taps and other accessories needed for better adjustments. They must be obtained from the same manufacturer, white in color and first choice. Joints between devices and partitions against which they will be fixed will be achieved by adhesive and elastic putty. They will be connected to conductors made of chromium-plated copper. Taps shall be chromium-plated with protrusion of the tap nozzle of about 85mm.

### **3.20.7 Accessories for people living with disabilities**

The entrance to the room reserved for people living with disabilities will be equipped with an access ramp constructed in concrete with rough cement surface and a specific sign drawn on the floor.

The interior room should be equipped with stainless steel supports to facilitate the access to the toilet sit.

### **3.20.8 Urinals**

The interior walls of the urinals will be made of strong and smoothed cement plaster. They will also have a slopping channel paved in the same materials.

### **3.20.9 Segregation of block by sex**

The entrance of each toilet bloc should bear a steel plate which clearly indicates the sex for which the bloc is reserved for.

### **3.21. External clearing**

Areas that are left free are planted with postpartum. This involves bringing in fresh soil that is spread over the whole area to make a thickness of at least 5cm into which the postpartum is planted and watered until it fixes and germinates well

## SECTION IV. FLOOR PLAN

NOTE: Bidders will be required to provide their proposed architectural designs according to the above floor plan.

## SECTION V. BSC OFFICES PARTITIONING AND MODIFICATION WORKS

### BILLS OF QUANTITIES

NO	DESCRIPTION	UNIT	QTIES	UNIT PRICE	TOTAL PRICE
<b>I</b>	<b>PARTITION WORKS</b>				
	<b>Preliminary works</b>				
	<b>Site installation</b>				
1	Provision the installation of site with the required equipment and tools to perform the work, insurance for workers, site safety and cleaning and other necessary provisions	LS	1		-
	<b>Demolition work</b>				-
1	Safely demolition of internal existing wall partition and ceiling Cleaning the site and evacuation of debris to the appropriate dumping area	LS	1		-
	<b>S/TOTAL</b>				-
	<b>Partition work and other supplies</b>				
1	Construction of ceiling gypsum board, the plaster board is constructed easily by nailing, cutting, planning, and decoration materials	m2	117.8		-

2	supply and fix powder coated aluminium partition comprising of 1.5mm aluminium section with 5mm clear glasses	m2	16.2		-
3	supply and fix gypsum partition wall for both sides fixed on the hollow metal tubes 40x40x1.5cm	m2	17.7		-
4	Provision of 10mm thick laminated full glass at the reception area on which informing and advertising stickers are to be applied	m2	14.25		-
5	Fixing in working space inbuilt storage 0.5*8.0 m and 1.2m of height made in lubuyu together with metal shelves and drawers and fixing accessories	LS	1		-
	<b>S/TOTAL</b>				-
	<b>Door and windows</b>				
1	Supply and fix with doorcloser 2mm alluminium double glazed door 2100x1800 mm, 8mm thick of glass.	pc	1		-
2	Supply and fix with doorcloser 2 mm alluminium simple glazed door 2100x900 mm, 8mm thick of glass.	pc	2		-
	<b>S/TOTAL</b>				-
	<b>Electrical works</b>				
1	Additional wiring Cables of 1.5mm	roll	4		-

2	Additional Wiring cables of 2.5mm	roll	4		-
	Supply and installation of 18 watt ceiling light	pc	9		-
3	Supply and installation of spotlight for ceiling	pc	10		-
4	Provision of smoke detectors in offices and nursing rooms	pc	8		-
5	Supply and installation of emergency light system	pc	1		-
6	Supply and installation of fire exit signs	pc	2		-
	<b>S/TOTAL</b>				-
	<b>Flooring(tiles)</b>				
1	Demolition and evacuation of debris, screeding and Construction of new floor granite tiles.	m2	175.1		-
	<b>S/TOTAL</b>				-
	<b>Painting work</b>				
1	Surface preparation and painting of silk vinyl paint on internal existing wall after work.	m2	152		-
2	Plastering works on the gypsum ceiling	m2	117.5		-
3	Apply Ceiling paint(mat) after works	m2	117.8		-
4	Plastering works on the gypsum wall partition	m2	17.7		-
5	Painting on gypsum wall partition	m2	17.7		-
	<b>S/TOTAL</b>				-

	<b>TOTAL OF PARTITION WORKS</b>				-
<b>II</b>	<b>CONSTRUCTION OF KITCHENETTE &amp; CAFETERIA</b>				
	<b>Excavation, foundation, walling &amp; flooring</b>				
1	Excavation work for foundation and small footings	m3	5.506		-
2	Blinding concrete	m3	0.551		-
3	Construction of stone masonry foundation	m3	7.708		-
4	200mm Floor hardcore with stone masonry	m3	10.8		-
5	Dump Proof coarse (DPC)	lm	27.53		-
6	Construction of burnt brick masonry wall for kitchenette	m3	12.65		-
7	cafeteria:1.2 m height curtain wall built in Ruliba bricks well finished at the top to prevent the other people to see inside	m3	2.97		-
8	Metal roof structure covered by bg 28 ironsheets for cafeteria	m2	54		-
9	PVC ceiling for kitchen and cafeteria	m2	54		-
10	Provision of an appropriate Transparent hanging catain tent working above the 1.5 m height Ruliba bricks half wall to prevent the inside of house against the rain or sunlight for cafeteria	ls	1		-
	<b>S/TOTAL</b>				-
	<b>Concrete</b>				
1	100mm thick ordinary concrete for receiving floor tiles	m3	5.4		-

2	RC for lintel	m3	0.96		-
	<b>S/TOTAL</b>				-
	<b>Plastering and painting</b>				
1	Internal & external cement Plastering	m2	72		-
2	Internal silk vinyl painting	m2	48		-
3	Apply external wall master coat	m2	32.4		-
	<b>S/TOTAL</b>				-
	<b>Tiles</b>				
1	Construction of 250*400*8 mm wall tiles in kitchen with mortar cement	m2	28.62		-
2	Construction of 300*300*8 mm floor tiles in kitchen	m2	14.26		-
3	Construction of non slip granite floor tiles 500*500*8mm in cafeteria	m2	39.74		-
	<b>S/TOTAL</b>				-
	<b>Doors and windows</b>				
1	Supply and fix 2500x900 mm external alluminium glazed door with doorcloser for kitchenette with the accessories	pc	1		-
2	Supply and fix 2100x900 mm internal wooden door for store room	pc	1		-
3	Supply and fix the 1500x1500mm alluminium window for the aeration of kitchen and serving the persons in cafeteria	pc	1		-
	<b>S/TOTAL</b>				-
	<b>Plumbing</b>				

1	water supply to the kitchen from nearest water pipe	ls	1		-
2	Supply and installation of double sink in kitchen with its accessories	pc	1		-
3	Provision of hand wash in cafeteria and accessories	pc	1		-
4	Creation of wastewater evacuating pipe, from sink and hand wash to the nearest existing manhole	ls	1		-
	<b>S/TOTAL</b>				-
	<b>Electricity</b>				
1	5/8 pipes	pc	10		-
2	Cables 1.5 mm approved quality	roll	2		-
3	cables 2.5 mm approved quality	roll	2		-
3	Switches	pc	2		-
4	economic Led light	pc	5		-
5	Three phases sockets	pc	2		-
6	one phase socket	pc	4		-
7	Provision of heat detectors in kitchen	pc	2		-
	<b>S/TOTAL</b>				-
	<b>TOTAL FOR KITCHENETTE AND CAFETERIA</b>				-
<b>III</b>	<b>NURSING ROOM &amp; CHANGING ROOM</b>				
	<b>NURSING ROOM with CHANGING ROOM</b>				

1	Demolution of old tiles and reconstruction of 50x50x.8cm new ones	m2	45		-
2	Construction of burnt brick wall	m3	2.013		-
3	Provision of simple wooden door for the toilet room	pc	1		-
4	Construction of pvc ceiling of good quality in changing room	m2	7.36		-
5	Silk vinyl Painting works	m2	43.5		-
6	Supply and installation of double sink with necessary accessories	pc	1		-
7	Excavation, supply pipes for evacuation of used water to the nearest manhole	ls	1		-
8	Plastering work for the inserted wall	m2	16.1		-
9	Cement screed on the floor surface	m2	8.32		-
10	Construction of 50x50x.8cm ceramic Floor tiles and plinth	m2	9.76		-
11	Construction of 25x40x0.8 cm ceramic wall tiles near the toilet and handwash and shower area	m2	12		-
12	Supply and fix the handwash and accessories(tap, siphon, etc)	pc	1		-
13	Supply and fix the english toilet and accessories	pc	1		-
14	Provision of complete shower bath and all accessories	pc	1		-
15	Creation of manhole and evacuation toilet pipes to the nearest appropriate manhole	pc	8		-
16	Supply and fix the toilet paper holder	pc	1		-

17	Prepare the wall and apply wall Paint (silk vinyl)	m2	38.4		-
18	Provision of 2 m of length 1.5 m of height with shelves and drawers cupboard store in approved wood with five places with the accessories	pc	1		-
19	Provision of economic LED lights	pc	2		-
20	Supply and installation of switches	pc	2		-
21	Supply and installation of sockets	pc	2		-
22	Supply and fix in kitchen with storage inbuilt the marbre table 1800x600 mm on wich they prepare the food( the colour is to approved by the client)	pc	1		-
	<b>S/TOTAL</b>				-
	<b>S/TOTAL</b>				-
	<b>GRAND TOTAL (PARTITION +KITCHENETTE+NURSING ROOM) VAT INCLUSIVE</b>				-

**Implementation should be within 45 days**

#### **4.1. Bid Contents**

Bids shall contain both technical and financial information and should be submitted in a **sealed envelope**. Non-compliance with this requirement will lead to summary rejection of the Proposal.

#### **4.2. Financial information**

Bidders must quote for unit price and total prices taxes inclusive based on the quantities above.

Terms and Conditions must be clearly brought out in the Financial Proposal.

Bidders shall quote itemized figures against each of the Items as per the specifications above.

Detailed price break-down of components against each item must be provided.

### **4.3. Parameters for the selection of the Bidder**

Bidders are required to provide a solution based on the Technical Requirements of BSC PLC as brought out in this document. Bidders are encouraged to provide more than one solution where possible. Selection will be made based on the following:

- Soundness of the Proposed technical requirements & services
- Track Record for similar services executed
- Completeness of the Proposal
- Financial Status of the Bidder
- Price & Payment Terms
- Delivery Schedule